2026 Volume: 02 Issue: 09 www.ijrpa.com ISSN 2456-9995 Research Article

International Journal Research Publication Analysis

Page: 01-32

BUSINESS INTELLIGENCE AND COMPETITIVE ADVANTAGE OF FOOD AND BEVERAGE FIRMS IN SOUTH-WEST NIGERIA

***Otung Okon Otung, Dr. Kingsley L. Uwa, Prof. Christabel Brownson**

Department of Business Administration Faculty of Adminitrations and Management Sciences.

Article Received: 29 July 2026
Article Revised: 19 August 2026
Published on: 09 September 2026

***Corresponding Author: Otung Okon Otung**
Department of Business Administration Faculty of Adminitrations and Management Sciences.

DOI: https://doi-doi.org/101555/ijrpa.9366

ABSTRACT

This study examined the influence of business intelligence on the competitive advantage of food and beverage firms in South-West Nigeria. The study specifically investigated the influence of knowledge sharing and data management systems on the competitive advantage of selected food and beverage firms. The study adopted a survey research design. The population comprised 14,230 managers, senior staff, and junior staff of selected food and beverage firms, namely Nestlé Nigeria Plc, Cadbury Nigeria Plc, Guinness Nigeria Plc, Nigeria Breweries Plc, and Flour Mills of Nigeria Plc. Using the Krejcie and Morgan sample size determination approach, a sample size of 370 respondents was obtained. Proportionate allocation was used to distribute the sample across the selected firms, while simple random sampling was adopted for the selection of respondents. Data were collected through a structured questionnaire using a five-point Likert scale, and 362 completed questionnaires were retrieved and used for analysis. Descriptive statistics were employed to answer the research questions, while simple linear regression was used to test the hypotheses at a 0.05 level of significance. The findings revealed that knowledge sharing has a significant positive influence on competitive advantage of food and beverage firms in South-West Nigeria ($R = .871$, $R^2 = .759$, $F = 1138.559$, $p < .05$). The findings further showed that data management system has a significant positive influence on competitive advantage ($R = .872$, $R^2 = .760$, $F = 1144.388$, $p < .05$). The study concluded that effective knowledge sharing and data management systems are important business intelligence capabilities for strengthening the competitive advantage of food and beverage firms in South-West Nigeria. The study recommended that firms should promote a culture of knowledge sharing through effective

internal collaboration platforms and communication mechanisms, while also investing in advanced data management systems to facilitate efficient data collection, storage, retrieval, and utilisation for data-driven strategic decision-making.

KEYWORDS: Business intelligence, knowledge sharing, data management system, competitive advantage, food and beverage firms, South-West Nigeria.

1. INTRODUCTION

The contemporary business environment is characterised by rapid technological development, intense competition, changing customer expectations, and increasing volumes of organisational data. Organisations are therefore under growing pressure to make timely and evidence-based decisions rather than relying solely on managerial intuition or historical experience. In this context, business intelligence (BI) has emerged as an important strategic management resource through which organisations collect, integrate, analyse, and interpret data to support planning, decision-making, performance monitoring, and competitive positioning. Business intelligence encompasses the technologies, processes, and analytical practices used to transform large and diverse datasets into meaningful information that managers can apply to strategic and operational decisions. By integrating information from customers, suppliers, production activities, financial transactions, marketing operations, and other internal and external sources, BI enables organisations to identify patterns, monitor business conditions, anticipate changes, and respond more effectively to competitive pressures (Rob & Coronal, 2020). Thus, the strategic value of BI extends beyond generating reports to strengthening an organisation's ability to convert information into actionable knowledge.

The effectiveness of business intelligence depends on several interconnected capabilities, particularly data warehousing, data analytics, data visualisation, and knowledge sharing. Data warehousing provides an organised environment for consolidating and storing information from different organisational sources, allowing managers to access historical and current data for reporting, comparison, trend analysis, and performance assessment. Developments in data storage technologies have further increased organisations' capacity to manage structured and unstructured information and support advanced analytics (Alexeas et al., 2021). Data analytics complements data warehousing by enabling organisations to examine information systematically to identify relationships, trends, opportunities, and potential problems. Through analytics, managers can obtain evidence concerning customer behaviour,

operational efficiency, sales performance, market developments, and resource utilisation, thereby improving the quality and timeliness of managerial decisions (Richards, 2022). Similarly, data visualisation enables complex information to be presented through dashboards, charts, graphs, and interactive reports, making important patterns and deviations easier to recognise. Knowledge sharing is equally important because BI-generated information must circulate among employees and managerial levels before it can contribute effectively to organisational learning and decision-making. Leadership support and appropriate incentives can facilitate the sharing and application of valuable organisational information (Alexeas et al., 2021).

The relevance of these business intelligence capabilities is particularly evident in the manufacturing sector, where firms must coordinate production, procurement, inventory, distribution, marketing, finance, customer relationships, and quality management while responding to changing market conditions. Manufacturing firms generate substantial volumes of operational and market data, and their ability to integrate and analyse such information can assist them in identifying inefficiencies, forecasting demand, understanding customer preferences, monitoring performance, and improving resource allocation. This is especially important in Nigeria, where manufacturing firms operate amid infrastructural deficiencies, regulatory challenges, economic uncertainty, inconsistent policies, and changing consumer and market conditions (Rao, 2021). The Nigerian food and beverage subsector is particularly competitive because firms must continuously respond to variations in consumer preferences, product demand, input costs, pricing, distribution conditions, and competitor activities. In such an environment, business intelligence can provide managers with timely information for production planning, pricing, marketing, product development, distribution, and customer relationship decisions. Effective utilisation of data warehousing, analytics, visualisation, and knowledge sharing can consequently strengthen the ability of food and beverage firms to understand their operating environment and respond more rapidly to emerging opportunities and threats.

The strategic importance of business intelligence is ultimately reflected in its potential contribution to competitive advantage, which refers to the distinctive capabilities or attributes that enable an organisation to outperform its competitors and achieve superior market outcomes (Chalman, 2016). Competitive advantage may arise through cost efficiency, product differentiation, innovation, superior customer service, responsiveness, effective resource utilisation, and other organisational capabilities. In an increasingly data-driven business environment, the ability to generate and utilise high-quality information can

therefore become an important source of competitive strength. Firms that can identify customer needs, detect market opportunities, monitor operational problems, and respond rapidly to environmental changes may be better positioned to outperform competitors. Nevertheless, possessing BI technologies does not automatically guarantee competitive advantage, as the benefits depend on the quality of data, analytical capabilities, information-sharing practices, technological infrastructure, and managerial ability to translate intelligence into strategic action. This makes it necessary to examine how business intelligence contributes to competitive advantage within the Nigerian manufacturing context, particularly among food and beverage firms whose operations are strongly influenced by changing consumer preferences, market competition, and operational pressures. It is against this background that the present study examines business intelligence and competitive advantage in selected food and beverage manufacturing firms in Nigeria.

1.2 Statement of the Problem

Business intelligence is essentially a framework created to extract information for sound decision-making in the cutthroat corporate environment of today. Without a competitive edge, contemporary manufacturing companies currently face tremendous obstacles in surviving and growing. Recent economic downturns have had a detrimental impact on manufacturing organisations' operations, resulting in decreased performance in areas such as revenue losses, low market shares, poor service quality, and higher employee turnover, low returns on business investment, and low profit levels.

Many organizations, particularly those in the food and beverage industry, appear to have faced worse scenarios than anticipated, which is an indication that, they have not yet fully integrated business intelligence into their operations due to lack of potential for large expenditure required throughout its implementation. Other issues with BI adoption, especially for manufacturing firms, include data silos, lack of proper knowledge sharing, and organisational structures. Additionally, despite BI's increasing significance, an organisation may sometimes struggle to fully utilise its potential in order to gain significant market shares from competitors, and obtain a competitive advantage. The above mentioned lacunars necessitate this study hence, investigating the relationship between Business Intelligence and competitive advantage of food and beverage Firms in South-West, Nigeria.

1.3 Objective of the study

The major objective of the study was to investigate the effect of Business Intelligence on Competitive advantage of food and beverages firms in south-west, Nigeria. Specifically, the study is guided by the following objectives, to:

1. Examine the influence of knowledge sharing on competitive advantage of food and beverage Firms in South-West, Nigeria
2. Evaluate the influence of data management system on competitive advantage of food and beverage Firms in South – West, Nigeria

1.4 Research Questions

The following research questions were formulated to guide the study

1. What is the level of influence of knowledge sharing on competitive advantage of food and brewage Firms in South – West, Nigeria
2. What is the degree of influence of data management system on competitive advantage of food and beverage firms in South – West, Nigeria?

1.5 Research Hypotheses

In line with the objectives of this study, the following hypotheses were formulated to guide the study.

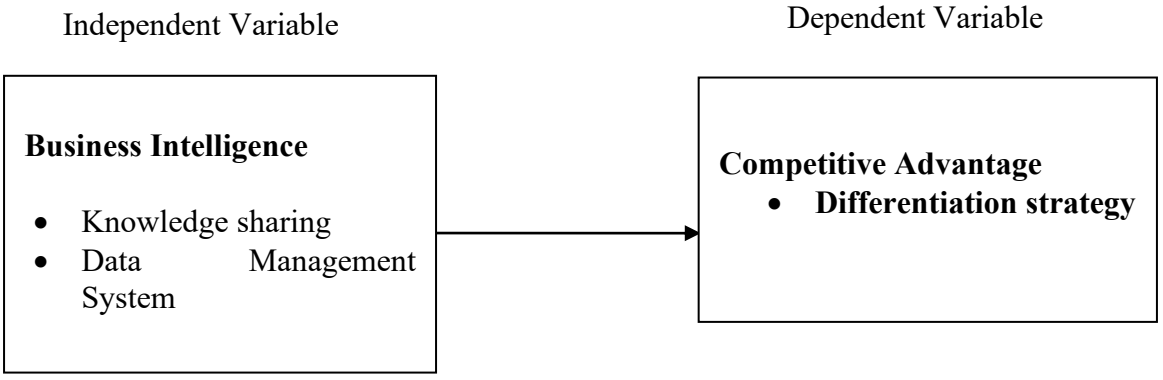
Ho_1: There is no significant influence of knowledge sharing on competitive advantage food and beverage Firm in South – West, Nigeria.

Ho_2: There is no significant influence of data management system on competitive advantage of food and beverage Firms in South – West, Nigeria.

2. REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

The conceptual issues of the study is addressed in this section.



Source: Variables of Business Intelligence and Competitive Advantage by the Researcher (2026)

2.1.1 Business Intelligence

Business Intelligence is referred to as the techniques, technologies, systems, practices, methodologies, and applications that analyze critical business data to help an enterprise better understand its business and market and make timely business decisions ((Pourshahid *et al.,* 2021). As summarized by Chugh and Grandhi(2018), the key benefits of implementing business intelligence solutions in an enterprise includes: Equipping the company with the ability to analyze data from multiple sources and using different dimensions; Enabling managers to make informed business decisions through identifying important patterns of behaviour captured in the data; improving accuracy in predictions; helping the company to identify root causes of problems so as to improve operational efficiency. Aspects involving being able to be more efficient with the management of the full range of information, referring to a better management level supported by technological tools, is a scenario in which business intelligence and its use help to facilitate the administration of such management. Indeed, it has been noted that business intelligence is extremely positive for effective decision making (Pourshahid *et al.,* 2021).

Apart from above mentioned antecedents, Organizations culture also plays an important role in BI success. Large percentage of BI applications fails not because of technology but organizational culture and infrastructure dysfunctions. Firms that instill the right organizational culture are foreseen to be successful in deploying BI initiatives. Creating a learning organization culture has become an important strategic objective for many firms that hinges on the acquisition of information. Weir (2021) added that knowledge sharing culture is also critical in ensuring the success of BI deployments. For BI to work, the entire organization must participate in intelligence gathering and sharing. Utilization of BI tools is also being mentioned in literature as an important criterion in deploying and using BI. Chung *et al.,* (2021) defined two classes of BI tools, the first class of tool is used to manipulate massive operational data and to extract essential business information. Examples include Decision Support Systems (DSS), Executive Information Systems (EIS), data warehouse and data management systems. They are built from database management systems (DBMS) and are used for query and reporting, statistical analysis and to reveal trends and patterns that would otherwise be buried in their huge operational databases. BI tools now have additional

functions of forecasting capability that uses mathematical formulas to manipulate historical data and prediction capability. When such situations occur in an organization, employees as well as organizations do not just compete for the limited resources, they fight for it (Etim, Brownson & Akpaetor, 2023).

2.1.2. Knowledge Sharing

Human labour and knowledge are examples of intangible kinds of capital (Yang *et al.,* 2021). The exchange of information, skills, and intangible assets is necessary for such capital to be effective. Under some circumstances, organisations can gain from having access to the knowledge and experience they require without having to employ professionals on a full-time basis. For instance, while corporate organisations require solutions for complicated issues that are frequently above their own capabilities, university research workers and students look for chances to apply or develop theories. Accordingly, cooperation between organisations and universities is one of the strategies that greatly encourages both sides to exchange intellectual property and thereby help each other get better (Bstieler *et al.,* 2023).

According to Teece (2018), an organization's competitive advantage is enhanced by its capacity to produce, disseminate, and apply knowledge assets. Teece (2018) makes it clear that knowledge and expertise are found within the organization's divided units and that skills and knowledge from various units are frequently needed to develop and enhance new products and services or to solve problems. As a result, it becomes crucial to integrate certain units or establish routes for knowledge transfer among units. When knowledge from various organisations within a same area is needed, the same rule applies. The information base of distinct firms within privatised industries has somewhat fractured into distinct, specialist knowledge domains as a result of privatisation. Collaboration between individuals with different identities and possibly little in common is usually complicated as a result of these considerations. The aforementioned argument demonstrates the significance of intra-, inter-, and cross-functional partnerships for the UK's modern privatised sectors.

2.1.3 Data Management System

A study by Olaniyi *et al.* (2020) highlights that firms implementing structured data management systems can better analyze market trends and consumer preferences, which ultimately enhances operational efficiency and responsiveness. This capability allows firms to swiftly adapt to changing consumer demands, a critical factor in a fast-paced market. The digitization of the food and beverage sector has intensified the focus on data management.

With the growing adoption of e-commerce platforms and digital marketing strategies, businesses generate substantial amounts of data that require careful management.

Effective data management plays a vital role in strategic decision-making. Nwokedi*et al.* (2022) emphasize that organizations with robust data management practices are better equipped to forecast demand, assess product performance, and allocate resources efficiently. This proactive approach reduces uncertainties and enhances operational effectiveness, crucial in the Nigerian food and beverage market, where economic volatility can pose significant challenges. By making informed, data-driven decisions, firms can better capitalize on emerging opportunities and solidify their competitive positions.

Lastly, the regulatory landscape in Nigeria presents both challenges and opportunities for effective data management. Onuoha and Okwudili (2019) suggest that firms with comprehensive data management systems are better positioned to navigate regulatory complexities, thereby minimizing risks associated with non-compliance. In a diverse market where consumer preferences can vary widely, effective data management enables firms to adapt their offerings to meet local demands while maintaining compliance. Thus, integrating robust data management practices is essential for food and beverage firms in Nigeria seeking to achieve and sustain competitive advantage in an increasingly competitive environment.

2.1.7 Competitive Advantage

The concept of competitive advantage 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. Organizations seek to maintain its position and multiply efforts to continue to excel and progress in sustaining its competitive advantage among organizations in the same sector (Al-Alaq, 2016). Some writers believe that the progress and failure of some organizations depends on competition, and by setting the competitive strategies of the organization that lead it to dominate the market, as it works diligently to increase its market share or control of the business market (Clar *et al.,* 2018). When developing the organization's strategic plan, the organization's strengths and weaknesses are studied and the external and internal environment is defined. During the development of the plan, a competitive advantage is established as a goal that the organization seeks to reach by implementing the strategy through the focus strategy, which is relied upon to achieve competitive advantage (Diderrich, 2019).

Competitive advantage refers to the unique attributes or capabilities that allow an organization to outperform its rivals and achieve superior performance in the marketplace (Nguyen & Kwan 2019). Foon and Nair (2010) define competitive advantage as a kind of distinction that gives the organization something of positive progress and distinction over others in the same sector and this does not mean continuity for a specific period but rather the continuation to an indefinite period of time and the goal of the organization is to continue and repeat same. There are those who believe that the competitive advantage depends on the exploitation of resources through adopting rapid movement strategies through rapid learning and dealing with the rapid and lasting changes that take place in the environment in which the organization operates (Liu & Atuahene-Gima, 2018). Achieving competitive advantage is due to several important factors, one of which is the use of technology in its various forms. It helps the organization to analyze accurately and quickly communicate, in addition to linking it with the outside world in which it influences and deals with (Vivek, 2017). In other words, businesses with organizations competing for attention and shared customer attention will join the competition or see themselves as competitors (Ekanem et al. 2023).

In the Nigerian food and beverage industry, maintaining consistent manufacturing output is often challenged by factors such as inadequate infrastructure, supply chain disruptions, and regulatory compliance issues. However, firms that successfully navigate these challenges by optimizing their production processes can achieve a significant competitive edge. For example, implementing advanced manufacturing technologies and practices can lead to higher efficiency, reduced production costs, and improved product quality, which directly influence a firm's market position (Uche *and Eke ,* 2020). Such advancements not only boost output but also enhance a company's reputation as a reliable supplier.

The relationship between manufacturing output and competitive advantage is also evident in pricing strategies. Moreover, high manufacturing output facilitates innovation and responsiveness to changing consumer preferences. Firms that can produce larger quantities are often better positioned to experiment with new product formulations and flavors, thereby capturing emerging trends in the food and beverage sector (Okoro, 2025). As the industry continues to grow amidst challenges, firms that prioritize their manufacturing outputs will likely lead the market and set benchmarks for quality and consumer satisfaction. This focus on output optimization will be essential for sustaining competitive advantage in the dynamic Nigerian food and beverage landscape.

1. Differentiation

One of the numerous tactics that may have been employed for marketing objectives is differentiation strategy. The study's stance is that differentiation strategies can account for Nigerian consumers' high levels of satisfaction. It goes without saying that a product with unique value can improve the customer experience, which will encourage recurring business and greater loyalty. Vera (2016) found that customer satisfaction can be somewhat predicted by differentiating approach. In the context of Nigerian industrial companies, this warrants further examination. Geographical, psychographic, and demographic factors are reflected in the segmentation plan.

Geographical location has a major impact on a firm's success and profit margin, claims Schiele (2018). This could be caused by factors including labor and raw material availability and closeness, customer and competition proximity, infrastructure, and transportation expenses.

Differentiation strategy summarizes the various efforts and actions taken by manufacturers to crate significant differences in the products and services they offer. The main focus of this strategy is to create added value that can be accepted and appreciated by consumers (Sarah et al., 2009). Through various methods such as product innovation, unique designs, special features or superior quality, manufacturers strive to provide something more than just the basics. This not only creates uniqueness in the product, but also implies a higher level of service and quality (Spitzeck & Chapman, 2012).

2.1.8 Business Intelligence and Competitive Advantage

Business intelligence provides competitive advantage by transforming data into actionable insights, enabling companies to optimize operations, make better decisions, and better understand customers and market trends, ultimately driving profitability, cost efficiency and sustained success in a data-driven world. Ibrahim et al. (2021). Organisations leverage Business intelligence systems, integrating data from various sources and employing analytical tools, to gain deeper insights, identify opportunities, and adapt to dynamic market conditions, thereby staying ahead of competitors. Business intelligence helps identify and eliminate operational bottlenecks, leading to higher productivity, reduced cost, and more efficient supply chains.

Business intelligence creates competitive advantage through enhanced customer experience. By analysing customer data, businesses can understand preferences, personalize offerings and anticipate needs, which fosters loyalty and a superior customer experience that set them apart.

Business intelligence can enhance competitive advantage through strategic agility. In a dynamic market, business intelligence enables organisations to quickly adapt to changing conditions by providing comprehensive views of their internal performance and market landscape. Business intelligence creates competitive advantage by providing real time, data driven insights that reduce uncertainty, allowing firms to make faster and more accurate decisions. Business intelligence also creates competitive advantage by highlighting unmet needs and emerging opportunities, guiding products development and service innovations. The word performance is derived from job performance or actual performance, which refers to an individual's actual accomplishment at work (Ekanem et al. 2026). Performance is a fundamental measure of an organization‟s ability to achieve its strategic objectives effectively and efficiently (Ekanem & Efi, 2025). Performance is not a mere finding of an outcome, but rather it is the result of a comparison between the outcome and the objective (Ekanem, 2021)

2.1.9 Knowledge Sharing and Competitive Advantage

Knowledge sharing is widely recognized as a critical driver of competitive advantage in today's knowledge-based economy. At its core, knowledge sharing involves the dissemination of information, insights, and expertise across organizational boundaries, fostering a collaborative environment where individuals and teams can leverage collective knowledge to innovate and excel (Yang *et al.,* 2017). Organizations that effectively promote and facilitate knowledge sharing are better positioned to achieve sustainable competitive advantage through several key mechanisms. The growth of management not only involves the acquisition of knowledge, competence and experience, but also the development of resilience (Imagha, Ugwunwanyi & Akpaetor, 2021) but not only do strategically agile organizations anticipate change well, but they also thrive on it, using uncertainty as a driving force for innovation and ongoing development (Bassey, Uwa, & Okurebia, 2023).

Firstly, knowledge sharing enhances organizational agility and responsiveness. By breaking down silos and enabling seamless communication, organizations can more swiftly adapt to changing market conditions, customer needs, and technological advancements (Bstieler, *et al.,*2017). This agility allows for quicker decision-making and the ability to capitalize on emerging opportunities before competitors, thereby gaining a competitive edge. Secondly, knowledge sharing fuels innovation. When employees freely exchange ideas, best practices, and lessons learned, it cultivates a fertile ground for creativity and problem-solving. Cross-pollination of knowledge across different departments and functional areas often leads to the

generation of new ideas and approaches. This continuous innovation not only drives product and service differentiation but also enhances the organization's ability to stay ahead of market trends and customer expectations (Teece, 2018). Furthermore, knowledge sharing contributes to organizational learning and capability development. By disseminating expertise and lessons from past experiences, organizations can accumulate valuable intellectual capital that transcends individual contributions. This collective learning enables continuous improvement and the refinement of processes, ultimately enhancing operational efficiency and effectiveness. Other issues that businesses confront include the incapacity of some managers to possess technological skills and managerial qualities, as well as irregular power supplies (Uwa & Akpaetor, 2018).

2.1.9 Data Management System and Competitive Advantage

In today's data-driven world, organizations across various sectors are increasingly dependent on vast amounts of data to support decision-making, improve operations, and gain competitive advantage. As the volume, variety, and velocity of data continue to grow, managing data efficiently has become a critical organizational need (Ibrahim *et al.* 2021). A Data Management System (DMS) provides a structured and systematic approach for collecting, storing, organizing, securing, and retrieving data. The concept of data management systems emerged in the mid-20th century with the development of early file systems and evolved significantly with the advent of relational database management systems in the 1970s. Over the years, technological advancements have led to the development of more complex and scalable systems, including cloud-based and big data solutions. These systems support not only data storage but also data governance, quality control, integration, and analytics. Today, effective data management systems are fundamental to ensuring data accuracy, accessibility, and security. They play a crucial role in enabling organizations to meet regulatory requirements, improve customer service, streamline operations, and harness the full value of their data assets.

2.2 Theoretical Review

The theory upon which this study is anchored is explained in this section.

2.2.1 Resource Based View Theory (Penrose, 1959)

The resource-based view theory was used for this study. It was originally postulated by Penrose in 1959. The theory postulates that given that business controls its resources, then it will achieve superior performance. It was later advanced to fit the growing usage (Wernerfelt,

1984; Rumelt, 1984; Barney, 1986). The theory states that a company's resources such as tangible assets (like equipment and capital), intangible assets (like brand reputation and intellectual property), human resources (such as skills and knowledge), and organizational capabilities (such as innovation and operational efficiency) are key determinants of its ability to compete effectively in the market. According to the RBV theory, not all resources are equally valuable or rare. Firms can achieve sustainable competitive advantage when they possess resources that are valuable (they contribute to exploiting opportunities or mitigating threats), rare (not easily available to competitors), inimitable (difficult for competitors to replicate), and non-substitutable (no equivalent resources can provide the same benefits) (Barney, 1991). These resources and capabilities form the core competencies of a firm, enabling it to develop unique products or services, lower costs, or deliver superior customer value compared to rivals.

The RBV theory contrasts with traditional industry-based views of competitive advantage, which focus on external factors such as market structure, competitive forces, and industry attractiveness. Instead, RBV emphasizes that sustainable competitive advantage derives primarily from internal resources and capabilities that are valuable, rare, and difficult to imitate or substitute. This perspective has influenced strategic management practices by encouraging firms to identify and develop their distinctive competencies, invest in resource development and protection, and leverage these strengths to achieve long-term success in their respective markets.

These authors explain that to be able to sustain the performance of a firm, it was useful to focus on the characteristics of the resources. Resource-based view perspective emphasizes that exclusive capabilities and resource of a firm is the basic source of competitive advantage and higher performance (Barney, 1986). Every firm owns numerous intangible and tangible resources (Barney, 1986). Barney (1986) maintained that there would be no difference in firms‟ profitability if all firms were equally endowed. However, when a firm develops unique, distinct and implicit capability defining its strategy, it would be successful in future competitiveness (Rumelt, 1984. Resources that accord a company superior performance are enabled through competitive advantage and must be non-substitutable, imperfectly imitable, valuable and very rare (VRIN) to provide sustainable competitive advantage that yields better or higher performance (Barney,1986). Competencies and skills allow firms to respond to customer needs with differentiated services and products by innovating technology systems for competitive advantage (Rumelt, 1984). As used in the current study, RBV theory facilitated an evaluation of business intelligence and competitive advantage of food and

beverage companies. From this theoretic al lens, it is reasoned that in order to achieve competitive advantage in present-day dynamic and increasingly complex business space, food and beverage companies should utilize relevant business intelligence as an important resource in its service delivery and gain competitive edge over rival companies.

Porter points out that sustainable competitive advantage is based on strategic positioning of firms within the industry and mobility barriers within an industry is the first major factor that sustains competitive advantage. The second model is the Resource based Theory (RBT), which centers on the firm's resources and is driven by factors that are internal to the firm. Resources include assets, capabilities, organizational processes, firm attributes, information, and knowledge and can be classified in terms of physical, human or organizational capital (Chaudhuri *et al.,* 2011). RBT, which is the most prominent model used in strategic management, links firm's competitive advantage with resources and capabilities that are firm specific, and difficult to imitate or substitute (Choi & Lee, 2020).

As used and related to the current study, RBV theory facilitated an evaluation of business intelligence and competitive advantage of food and beverage companies. From this theoretical lens, it is reasoned that in order to achieve competitive advantage in present-day dynamic and increasingly complex business space, food and beverage companies should utilize relevant business intelligence as an important resource in its service delivery and gain competitive edge over rival companies.

2.3 Empirical Review

Hasan *et al.* (2025) investigated the impact of business intelligence adoption and ambidextrous innovation in the UAE health sector. The objective of the study was to examine how business intelligence adoption influences ambidextrous innovation in health care organisations in the UAE. Quantitative cross-sectional survey was adopted for this study. The population of study was professionals in the UAE`s health sector and the sample size was 510. Data were collected using structured questionnaire and analysed using structural equation modeling. Findings indicated that business intelligence adoption has a positive direct effects on ambidextrous innovation in health care organisations in the UAE. It was recommended that healthcare leaders should leverage business intelligence systems not just for data analytics, but also as tools to improve decision making, ultimately driving innovation. This study is related to the present study in terms of the method of data collection as they both used questionnaire.

Dogho and Ojoawo (2025) investigated the role of Data analytics in food safety: Improving quality control and preventing contamination in USA. The objective of the study was to examine the growing need for the application of data analytics in making food quality control easier, better, and safer. It looks into how new tools like predictive modeling, machine learning, and blockchain-based traceability systems can help prevent contamination and reduce foodborne outbreaks. The research design used was case study: A detailed review of existing literature, case studies, and relevant industry reports between 2019 and 2025 was carried out to assess the existing and potential impact of data analytics on food quality control and food safety. The research employs a qualitative approach. Results: Findings revealed a disturbing trend of repeat contamination incidents linked to dairy, poultry, and fresh produce. It also established that the rise in foodborne outbreaks was due to a number of reasons, like poor data infrastructure, low use of predictive technology, and disconnected traceable systems. The use of analytics and data analytics tools effectively helps us detect issues early, track contamination before it happens, and maintain a strong supply chain. It was concluded that the application of data analytics is no longer a luxury; it is now a necessity that must be maximized to make food safer. As the global food industry becomes more complex and prone to contamination, using AI-driven predictive systems, blockchain traceability, and real-time analytics can significantly reduce outbreak risks. The future of food quality control relies on active data management, collaboration across sectors, and increased investment in smart farming technologies. This study is related to the present study as they both examined data management system in food and beverage Firms.

Obukor *et al.* (2024) examined business intelligence and competitive advantage of food and beverage firms in South-South geo-political zone, Nigeria. The objective was to evaluate the influence of knowledge sharing, organizational culture and organizational structure on competition advantage of food and beverage firms. A survey research design was adopted for the study. The population of the study consisted of 3081 with sample size of 354 which was ascertained using Taro Yamane formula for sample size determination. Data were collected using questionnaire and analysed using simple linear regression analysis. Findings indicated that knowledge sharing, organizational structure and culture have significant influence on competitive advantage of food and beverage firms in South-South Geo-political Zone, Nigeria. It was concluded that the dimensions of business intelligence such as knowledge sharing, organsiational culture and organisational structure significantly and positively correlated with competitive advantage. Thus, it was recommended that organization should ensure that they invest adequately in data cleaning. This study is in line with the present study

in terms of the variable used as they adopted knowledge sharing and its influence on competition advantage. However, the study was different in terms of sample size determination, previous study used Taro Yamane formular but current study adopted Krejcie & Morgan of 1970.

Adeniran et al. (2024). Investigated the effect of capacity utilization on productivity in Nigeria's food manufacturing sector. The objective of the study was to assess the effect of capacity utilization on productivity in Nigeria's food manufacturing sector. Quantitative research design using cross-sectional data was adopted for the study.

Data were obtained from the World Bank Enterprise Survey**,** covering a large number of food manufacturing firms in Nigeria. Multiple regression analysis was used to estimate the relationship between capacity utilization and productivity indicators. Findings indicated that Capacity utilization showed an insignificant relationship with total factor productivity (TFP)**.** However, material efficiency and other operational factors significantly influenced performance. The study concluded that capacity utilization alone may not guarantee improved productivity unless supported by other operational efficiencies and firm-specific factors performance. The study concluded that capacity utilization alone may not guarantee improved productivity unless supported by other operational efficiencies and firm-specific factors**.** This study is related to present study because it utilizes food manufacturing firms in Nigeria

Umoh *et al.* (2023) examined business intelligence and competitive advantage of Hotels in Akwa Ibom state, Nigeria, the objective was to evaluate the influence of data management system and mobile devices on competitive advantage of Hostels in Akwa Ibom state, Nigeria. Survey research design was used for the study, and the population of the study consisted of 1,806 respondents with a sample size of 327 employees which were determined using Taro Yamane formula for sample size determination. A primary source of data collection was used for the study such as questionnaire which had a response rate of 73.7% respectively. Data collected were analysed using simply linear regression analysis. Findings indicated that data management systems and mobile devices have significant and positive influence on competitive advantage of Hotels in Akwa Ibom state. Based on the finding, it was concluded that data management system and mobile devices significantly interacted positively to influence competitive advantage of Hotels in Akwa Ibom state. It was recommended that organization should leverage mobile devices to enhance effective deployment and implementation of business intelligence and improve operations efficiency. Therefore, this study is related to the present study in term of variables and methodologies used as they both

sought to evaluate business intelligence and competitive advantage. However, the study was different in terms of organization used because the present study used food and beverage manufacturing companies while the previous study used service industry such as Hotels.

3. METHODOLOGY

3.1 Research Design

The survey design was used for this study. This method was used because of the nature of the study and statement of the problem. It enabled the researcher to collect data for the purpose of describing and interpreting existing condition, attitudes and on-going process. It helped the researcher to find answers to questions, collect first-hand information, elicit information from the respondents, obtain data from primary sources, collect data from the target population regarding business intelligence and competitive advantage of food and beverage Firms.

3.2 Population of the Study

The accessible population of this study consisted of 2,502 staff of Nestle Nigeria Plc, 1,216 staff of Cadbury Nigeria Plc,1504 staff of Guinness Nigeria Plc, 3006 staff of Nigeria Breweries Plc, and 6002 staff of Flour Mills of Nigeria Plc. Therefore, the total population of 14,230 accessible population was used for this study and formed the basis of this study. Also, the units of analysis comprised of managers, senior staff, and junior staff of the selected food and beverage Firms in south-west geo-political zone of Nigeria to ensure precision of results.

Table 3.2.1 NUMBER OF STAFF IN THE FIRMS.

Names of Firms	Number of Staff	Proportional Distribution
Nestle Nig. Plc.	2,502	65
Cadbury Nig. Plc.	1,216	32
Guinness Nig. Plc.	1,504	39
Nig. Breweries Plc.	3,006	78
Flour Mills Nig. Plc.	6,002	156
Total	**14,230**	**370**

Source: Human Resources Management Department of each firm, (2025).

3.3 Sample size Determination and Sampling Procedure

For calculating sample sizes, this study used Krejcies and Morgan Formula, which is stated as follows: $s=[x^2 np (1-p)] / [d^2 (n-1) + x^2 p (1-p)]$ model 3.1

Where:

n = require sample size

X^2= the table value of chi-square for 1 degree of freedom at the desired confidence level

(3.841), same as (1.96). (1.96)

N= the population size

P= the population proportion (assumed to be .50 since this would provide the maximum sample size)

d= the degree of accuracy expressed as a proportion (.50)

Since **N = 14,230**

n = [3.841 (14,230) (0.5) (1-0.5)/ [0.05^2 (14,230 -1)/ [3.841(0.5) (1-0.5)

3.841 (14,230) (0.5) (0.5) / [0.0025(1001) + [3.841(0.5) (0.5)

= 962.1705 / (2.5025 + 0.96025)

= 962.1705/3.46275

= 370

Sample size (n) = 370.

3.4 Sampling Technique

The sampling technique that was used for this study is simple Random Sampling.

Since the population of the study was not collected from a particular organization, Proportional sample allocation formula was used to allocate the sample respondent to each of the organization selected for the study for the purpose of ensuring precision of results. The formula is given as

$$P = \frac{sxn}{N}$$

Where:

P = Proportional Allocation

S = Staff strength

n = sample size

N = Population of the study

$$\text{Nestle, PLc} = \frac{2502 \times 370}{14230}$$

P =65

$$\text{Cadbury, PLc} = \frac{1216 \times 370}{14230}$$

P= 32

$$\text{Guinnes, PLc} = \frac{1504 \times 370}{14230}$$

P =39

$$\text{Nigeria Breweris, PLc} = \frac{3006 \times 370}{14230}$$

P= 78

$$\text{Flour Mills, PLc} = \frac{6002 \times 370}{14230}$$

P= 156

3.5 Sources and Nature of Data Collection

Data for this study was collected from primary source through the use of questionnaire. This is because questionnaire helped to collect first-hand information and elicit responses from the respondents who will be selected to participate in the study. Nominal data was used in this study.

3.6 Method of Data Collections

This study adopted questionnaire with 5-point likert scale which included, Strongly agreed ,SA (5), Agreed, A (4), Strong Disagreed ,SD (3), Disagreed ,D (2) and Neutral, N (1). The questionnaire was divided into section A (which reviewed the demographic variables of respondents) and section B which contained some research questions relevant to the problem at hand. A total of 370 questionnaire was distributed among the staff of the selected foods and beverages firms in south-west Nigeria. In order to obtain the precise opinion, the questionnaire was designed in a way that enabled respondents to choose the most appropriate option out of the alternative questions.

3.7 Validity of the Instrument

The validity of the instrument used was face and construct validity. Face validity means the transparency of a test as it appears to test participants. Also, construct validity is the degree to which a test measure what it intends to measure. A pre-test instrument was used to validate the instrument. Few copies of the questionnaire was administered to some staff of Nestle Nigeria Plc , Cadbury Nigeria Plc, Guinness Nigeria Plc, Nigeria Breweries Plc, and Flour Mills of Nigeria Plc for completion and during the exercise, observations and criticisms was

made and corrections was done before preparing the final copies. However, the supervisor made adjustments and gave guidelines on the validation.

3.8 Reliability of the Instrument

Reliability means the consistency and stability of result when a measuring scale is repeated on the study on the same group of respondents. Reliability is then the ability of instrument and precision of a measuring instrument. Therefore, to measure the reliability of the instrument, the test-retest measure was used on 10 respondents in each of the firms used for the study. It was administered on interval of two weeks. Cronbach Alpha statistics was used to calculate and to measure the reliability of the instrument; the value of the alpha coefficient as presented by Mohsen and Dennick (2011) is shown below:

The result of analysis of Cronbach Alpha coefficient is also shown below:

Table 3.8.2: The Reliability Indexes of Cronbach Alpha.

Variable	Items	Cronbach Alpha	Test-retest	Internal consistency
Knowledge Sharing	3	.83	.81	Good
Data management System	3	78	.76	Acceptable

Source: Researcher's computation (2026)

The result on Table 3.8.2 shows the alpha coefficient of each variable and the overall clustered mean, indicating that the instrument was reliable for used.

3.9 Model Specification

In order to ascertain the combined influence of business intelligence model and competitive Advantage, the composite model is given for objective 1, 2, 3, 4.5 and 6 as follows:

$CA = f(KS, DMS, DW, DV, DA)$ Model 3.1

Equations 1-5 are rewritten in its explicit form as follows:

$CA_{it} = \beta_0 + \beta_1 KS + \varepsilon$ Equation 3.1

$CA_{it} = \beta_0 + \beta_1 DMS + \varepsilon$ Equation 3.2

$CA_{it} = \beta_0 + \beta_1 KS + \beta_2 DMS + \varepsilon$ Equation 3.3

Where:

KS = Knowledge Sharing

DMS = Data Management System

β1, β2, = Coefficients of the independent variables

e = Error term

3.10 Measurement of Variables

Competitive Advantage: Market share, specialization, differentiation and cost leadership

Knowledge Sharing: Employee engagement in knowledge-sharing activities, Usage of collaboration too, Number of cross-functional projects and Knowledge retention rates.

3.11 Method of Data Analysis

The data was analyzed using descriptive and inferential statistics. Descriptive statistics such as simple percentage was used to analyse the data while inferential statistics such as Simple Linear regression analysis was used to test the null hypotheses for the study, using statistical software programme known as Statistical Package for Social Sciences (SPSS), version 25. The basic aim of the linear regression models in this study was to examine empirically the extent to which the independent variables can explain the hypothesized performance variable in these firms along the regression line. The model was estimated using the coefficient of determination (R^2). It helped to measure the goodness of fit of the model while t-value was used to measure the differences in the mean at 5% (percent) level of significance.

3.12 Decision Criteria

The quantitative outcome was determined through linear regression model to test at a 95 per cent confidence level, therefore, where the p-value (significant value) is less than 0.05, the relationship is ruled to be statistically significant. In the quantitative analysis, the effect of the firms' actions on the environment was used to determine the firm performance.

4. DATA PRESENTATION, ANALYSIS AND FINDINGS

4.1 Data Presentation

Table 4.1: Questionnaire Administrations

Companies	**No. of questionnaire distributed**	**No. of questionnaire filled and returned**
Nestle Nigeria Plc	65	64
Cadbury Nigeria Plc Guiness Nigeria Plc Nigeria Beveries Plc Flour Mill Plc	32 39 78 156	30 38 76 154
Total	**370**	**362**

Source: Field survey (2025)

The Table 4.1 shows that 65 copies of questionnaire were distributed to Nestle Nigeria Plc, but 64 copies were filled and returned while 32 copies of questionnaire were distributed to Cadbury Nigeria Plc, but 30 copies of questionnaire were filled and returned, Also, 39 copies of questionnaire were administered to Guiness Nigeria Plc but 38 copies were filled and returned, 78 copies of questionnaire were distributed to Nigeria Breweries Plc but 76 copies were filled and returned while 156 copies of questionnaire were administered to Flour Mill Nigeria Plc but 154 copies were filled and returned. Therefore, 362 copies form the basis for the analysis.

4.2 Analysis of Research Questions

Research Question 1:

What is the influence of Knowledge Sharing on Competitive advantage of food and beverage firms in South-West, Nigeria?

Table 4.2: The Result of Percentage Analysis on Knowledge Sharing on Competitive advantage of food and beverage firms in South- West, Nigeria.

	Knowledge Sharing	SA	A	D	SD	Total
1.	I often use data from the system to inform my work decision	142 (39.2%)	130 (36.0%)	50 (13.8%)	40 (11.0%)	362
2.	We use collaboration platforms to pass information among colleagues	128 (35.4%)	144 (39.7%)	52 (14.4%)	38 (10.5%)	362
3.	My organization encourages collaboration and open communication	146 (40.3%)	126 (34.8%)	54 (15.0%)	36 (10.0%)	362

Source: Researcher's Computation (2026)

Table 4.2 shows that 142 respondents representing 39.2% strongly agree that they often use data from the system to inform their work decision while 130 respondents representing 36.0% agree but 50 respondents representing 13.8% disagree and 40 respondents representing 11.0% strongly agree that they often use data from the system to inform their work decision. Also, 128 respondents representing 35.4% strongly agree that they use collaboration platforms to pass information among colleagues while 144 respondents representing 39.7% agree but 52 respondents representing 14.4% disagree and 38 respondents which account for 10.5% strongly disagree. Furthermore, 146 respondents representing 40.3% strongly agree that their organization encourages collaboration and open communication among colleagues while 126 respondents representing 34.8% agree but 54 respondents representing 15.0% disagree and 36 respondents representing 10.0% strongly disagree that their organization encourages collaboration and open communication among colleagues

Research Question 2:

What is the influence Data management System on Competitive advantage of food and beverage in South- West, Nigeria?

Table 4.3: The Result of Percentage Analysis on influence Data Management System on Competitive advantage of food and beverage firms in South- West, Nigeria.

	Data management System	SA	A	D	SD	Total
1.	We use combination of automated and manual methods to collect data from various sources in my company	141 (40.0%)	131 (36.2%)	49 (13.5%)	41 (11.3%)	362
2.	Data collection help my company to understand customer preferences and market shares	127 (35.1%)	145 (40.1%)	53 (14.6%)	37 (10.2%)	362
3.	Data collection process provide real-time insights into production and inventory control	150 (41.4%)	126 (34.8%)	52 (14.4%)	34 (9.4%)	362

Source: Researcher's Computation (2026)

Table 4.3 reveals that 141 respondents representing 40.0% strongly agree that they used combination of automated and manual methods to collect data from various sources in their company while 131 respondents representing 36.2% agree but 49 respondents representing 13.5% disagree and 41 respondents representing 11.3 % strongly disagree that they used combination of automated and manual methods to collect data from various sources in their company. Also, 127 respondents representing 35.1% strongly agree that data collection help their company to understand customer preferences and market shares while 145 respondents representing 40.1 agree but 53 respondents representing 14.6% disagree and 37 respondents representing 10.2% strongly disagree that data collection help their company to understand customer preferences and market shares. Similarly, 150 respondents representing 41.4% strongly agree that data collection process provide real-time insights into production and inventory control while 126 respondents agree but 52 respondents representing 34.8% disagree and 34 respondents representing 9.4% strongly disagree that data collection process provide real-time insights into production and inventory control.

Test of Hypotheses

Hypothesis 1

$H0_1$: There is no significant influence of knowledge sharing on competitive advantage food and beverage Firms in South – West, Nigeria.

H_1: There is a significant influence of knowledge sharing on competitive advantage food and beverage Firms in South – West, Nigeria.

Table 4.4: The Simple linear Regression Analysis on the Influence of Knowledge Sharing on Competitive Advantage of Food and Beverage Firms in South – West, Nigeria.

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.871[a]	.759	.759	.57491	1.920

Model Fit						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	376.322	1	376.322	1138.559	.000[b]
	Residual	119.320	361	.331		
	Total	495.642	362			

Coefficients[a]					
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	KnowledgeSharing	.891	.026	.871	33.743	.000
	(Constant)	.203	.070		2.914	.004
Source: Researcher's Computation (2025)						

Table 4.4 indicates the simple linear regression analysis on the influence of knowledge sharing on competitive advantage of food and beverage Firms in South – West, Nigeria. The results yield R^2 –value of .759, F-value of 1138.559, Beta coefficients of 891,. Durbin Watson coefficients of 1.920 and P-value of .000. This means knowledge sharing can account for 75.9% change in competitive advantage of food and beverage Firms South – West, Nigeria. This was supported by Beta coefficients of .891 which implies that 1 unit increase of knowledge sharing would lead to .891 increases in competitive advantage. Therefore, to evaluate the goodness of fit of the model, an F-statistics was computed and results yielded F-value of 1138.559 which means that the model is fit to evaluate the influence of knowledge sharing on competitive advantage of food and beverage Firms in South – West, Nigeria. Also, to check the presence of autocorrelation in the model, the Durbin Watson statistics was computed and results yielded the coefficients of 1.920 which indicates that there is absent of serial correlation in the model since the result is greater than 3.00 and above, suggesting that the residual is not conflicting and that knowledge sharing operates independently to establish a significant influence on competitive advantage of food and beverage firms in South – West, Nigeria. Therefore, since an F-value of 1138.559 and P-value of .000 lies below the alpha

value of 0.05 level of significant in social sciences, it can be affirmed that the null hypothesis which states that there is a significant influence of data knowledge sharing on competitive advantage of food and beverage Firms in South – West, Nigeria is rejected and the alternative accepted, suggesting that knowledge sharing has significant influence on competitive advantage of food and beverage firms in South – West, Nigeria (P<0.05).

Hypothesis 2

H_{O2}: There is no significant influence of data management system on competitive advantage of food and Beverage Firms in South – West, Nigeria.

H_2: There is no significant influence of data management system on competitive advantage of food and Beverage Firms in South – West, Nigeria.

Table 4.5: The Simple Linear Regression Analysis on the influence of data management system on competitive advantage of food and Beverage Firms in South – West, Nigeria.

Model Summary[b]						
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**	
1	.872[a]	.760	.760	.57380	1.975	
Model Fit						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	376.784	1	376.784	1144.388	.000[b]
	Residual	118.858	361	.329		
	Total	495.642	362			
Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	.200	.070		2.870	.004
	DatamanagementSystem	.883	.026	.872	33.829	.000

Source: Researcher's Computation (2025)

Table 4.5 indicates the simple linear regression analysis on the influence of data management system on competitive advantage of food and beverage Firms in South-west Geo-Political Zone, Nigeria. The results yield R^2 –value of .760, F-value of 1144.388, Beta coefficients of .883, Durbin Watson coefficients of 1.975 and P-value of .000. This means data management system can account for 76.0% change in competitive advantage of food and beverage Firms South – West, Nigeria. This was supported by Beta coefficients of .883 which implies that 1 unit increase of data management system would lead to .883 increases in competitive advantage. Therefore, to evaluate the goodness of fit of the model, an F-statistics was

computed and results yielded F-value of 913.042 which means that the model is fit to evaluate the influence of data management system on competitive advantage of food and beverage Firms in South – West, Nigeria. Also, to check the presence of autocorrelation in the model, the Durbin Watson statistics was computed and results yielded the coefficients of 1.975 which indicates that there is absent of serial correlation in the model since the result is less than 3.00 and above, suggesting that the residual is not conflicting and the data management system operates independently to establish a significant influence on competitive advantage of food and beverage firms in South – West, Nigeria. Therefore, since an F-value of 1144.388 and P-value of .000 lies below the alpha value of 0.05 level of significant in social sciences, it can be affirmed that the null hypothesis which states that there is a significant influence of data management system on competitive advantage of food and beverage Firms in South – West, Nigeria is rejected and the alternative accepted, suggesting that data data management system has significant influence on competitive advantage of food and beverage firms in South – West, Nigeria ($P<0.05$)

4.3 DISCUSSION OF FINDINGS

Knowledge sharing and competitive advantage of food and beverage firms.

The findings of hypothesis one indicated that knowledge sharing has significant influence on competitive advantage of food and beverage firms in South – West, Nigeria. This implied that knowledge sharing has the explanatory power to predictive competitive advantage of Food and Beverage Firms in the south-west geo-political zone, Knowledge sharing has long been identified as a key determinant of competitive advantage in various industries. A growing body of literature suggests that the exchange of knowledge within organizations enhances innovation, operational efficiency, and decision-making, all of which are essential for gaining a competitive edge. The findings is in line with the work of Becerra *et al*. (2020) who highlighted that firms with robust knowledge-sharing practices are better positioned to leverage their intellectual capital, leading to more effective product development and a stronger market presence. Additionally, the work of Zhang *et al*. (2021) demonstrated that organizations that foster a culture of knowledge sharing are able to more rapidly adapt to changing market conditions, which enhances their competitive position. These findings align with the idea that knowledge sharing helps firms navigate challenges and seize opportunities more effectively than competitors that fail to facilitate such interactions.

The finding is in agreement with the work of Rakov and DeRidder (2022) who emphasized that knowledge sharing plays a critical role in driving competitive advantage for firms within

this sector. They found that food and beverage companies that encourage knowledge exchange among employees and between departments are able to optimize their production processes, innovate in product offerings, and improve customer satisfaction. This is particularly crucial in an industry marked by fast-changing consumer preferences and regulatory demands. Findings resonate with earlier studies, such as those by Riege (2005) and Kim and Park (2021), which similarly underscore the role of knowledge sharing in facilitating strategic flexibility and fostering sustainable competitive advantage. Thus, the evidence supports the notion that knowledge sharing is indispensable for food and beverage firms aiming to maintain a competitive edge in a dynamic and highly competitive environment.

Data Management System and competitive advantage of food and beverage firms in south-west, Nigeria:

The findings of hypothesis two indicated that data management system has significant influence on competitive advantage of food and beverage firms in South – West, Nigeria. The effective management of data is increasingly recognized as a pivotal driver of competitive advantage in the modern business environment. Data management systems (DMS) enable organizations to efficiently collect, store, and analyze vast amounts of data, providing valuable insights that inform strategic decision-making. The finding is supported by the work of Robinson and Chen (2022) who found out that firms with well-integrated data management systems are better equipped to leverage real-time data for optimizing operations, improving customer experiences, and responding quickly to market changes. Furthermore, they argue that data management plays a key role in enhancing business agility, which is essential for maintaining a competitive edge in fast-paced industries. Similar findings are presented by Gupta and Sharma (2020), who highlight that organizations with advanced data management systems can make data-driven decisions that improve their product offerings and operational efficiency, directly influencing their competitive positioning.

Also, the finding underscored the significant role that data management systems play in achieving competitive advantage. They found that food and beverage firms leveraging sophisticated data analytics and management platforms are able to better track consumer trends, optimize supply chains, and improve inventory management. These capabilities enable firms to make more informed decisions, reduce operational costs, and enhance customer satisfaction, all of which contribute to a stronger competitive position. Kim and Lee (2021) noted that data management is integral to achieving operational excellence and customer-centric innovations in the food sector.

5.2 CONCLUSION

In conclusion, the significant influence of knowledge sharing and data management systems, on the competitive advantage of food and beverage firms in the South – West, Nigeria underscores the critical role of information technology in modern business strategy. Knowledge sharing fosters collaboration and innovation, allowing firms to improve decision-making processes and enhance operational efficiency. Data management systems further strengthen this competitive edge by enabling firms to store, organize, and analyze vast amounts of data, providing insights that drive strategic decisions and optimize business operations. These tools allow companies to respond quickly to market dynamics, streamline their supply chains, and improve overall productivity.

5.42 Recommendations

1. Food and beverage firms should foster a culture of knowledge sharing within their organizations through the implementation of internal platforms for collaboration that will also help in improving communication and collaboration, leading to innovation and more effective problem-solving.
2. Firms should prioritize the implementation of advanced data management systems that allow for the efficient collection, storage, and retrieval of business-critical data enhancing operational efficiency and facilitating data-driven strategies that improve competitive positioning in the market.

REFERENCES

1. Adeniran, A. O., Yusuf, S. A., & Adeyemi, O. A. (2024). Capacity utilization and productivity in Nigeria's food manufacturing sector: Evidence from enterprise data. *Journal of Industrial Studies, 8*(2), 45–62.
2. Al-Alaq, B. (2016). Competitive advantage redefined: A new perspective on strategic positioning. *Strategic Management Review, 12*(3), 67–78.
3. Barney, F. (1986). *Firms capabilities and sustainable advantage*. Academic and Management, University Press.
4. Barney, J. B. (1991). Is the resource-based "view" a useful perspective for strategic management research? Yes. *Academy of Management Review, 26*(1), 41–56.
5. Becerra-Fernandez, I., & Sabherwal, R. (2020). *Knowledge management: Systems and processes* (2nd ed.). Routledge.

6. Bstieler, S., Hemmert, M., & Barczak, G. (2017). The changing bases of mutual trust formation in inter-organizational new product development teams. *Journal of Product Innovation Management, 34*(5), 651–667. https://doi.org/10.1111/jpim.12391
7. Chalman, M. (2016). Challenges and opportunities of business intelligence systems: A systematic review. *Information Systems Frontiers, 22*(2), 331–347.
8. Chaudhuri, S., Dayal, U., & Narasayya, V. R. (2011). An overview of business intelligence technology. *Communications of the ACM, 54*(8), 88–98.
9. Choi, O., & Lee, C. (2020). Manufacturing output and market competitiveness in Nigeria food and beverage companies. *International Journal of Production Economics, 2*(1), 21–36.
10. Chugh, R., & Grandhi, S. (2018). Why business intelligence? Significance of business intelligence tools and integrating BI governance with corporate governance. *International Journal of E-Entrepreneurship and Innovation, 4*(2), 1–14.
11. Chung, J., Choi, J., Yoon, J., Coh, B., & Lee, J. (2020). Social media analytics and business intelligence research: A systematic review. *Information Processing & Management, 57*(6), Article 102279. https://doi.org/10.1016/j.ipm.2020.102279
12. Diderrich, P. (2019). Competitive advantage in modern organizations: Strategies for sustainable growth. *Journal of Strategic Management, 22*(3), 45–60.
13. Dogho, M., & Ojoawo, B. (2025). Data analytics in food safety: Improving quality control and preventing contamination. *Current Journal of Applied Science and Technology, 44*(4), 245–256. https://doi.org/10.9734/cjast/2025/v44i44531
14. Eidizadeh, R., Salehzadeh, R., & Esfahani, A. (2017). Analysing the role of business intelligence, knowledge sharing and organisational innovation on gaining competitive advantage. *Journal of Workplace Learning, 29*(4), 250–267. https://doi.org/10.1108/JWL-07-2016-0070
15. Etim, U.O., Brownson, C. D. and Akpaetor, U.A. (2023) Organizational Politics: Scarcity of Resources, Employee's Personality & Employee's Diversity, Global Journal of Human Resource Management, Vol.11, No.3, pp.27-41
16. Gupta, A., & Sharma, A. (Eds.). (2020). *Data management, analytics and innovation: Proceedings of ICDMAI 2020* (Vol. 2). Springer.
17. Hasan, A. A., Kumar, A., & Riaz, Z. (2025). The impact of business intelligence adoption on ambidextrous innovation in the UAE healthcare sector: A serial mediation model. *International Journal of Islamic and Middle Eastern Finance and Management, 18*(1), 163–184. https://doi.org/10.1108/IMEFM-04-2025-0253

18. Ibrahim, A., Ali, B., & Usman, C. (2021). The impact of data management systems on organizational competitive advantage. *Journal of Business Systems, 15*(2), 123–145.
19. Imagha, O. A., Ugwunwanyi, A., & Akpaetor, U. A. (2021). Career Management Practice and its Influence on Organizational Citizenship Behavior amongst NonTeaching Staff in Federal University, Otueke, Bayelsa State, Nigeria. AKSU Journal of Administration and Corporate Governance, 1(2), 57-70.
20. Kim, E., & Park, S. (2021). Employees' perceptions of organizational learning: The role of knowledge and trust. *Kybernetes, 50*(5), 1521–1538.
21. Kim, M., & Lee, J. (2021). The role of data management in operational efficiency and competitive advantage in the food sector. *Journal of Food Systems, 18*(3), 231–245.
22. Liu, W., & Atuahene-Gima, K. (2018). Enhancing product innovation performance in a dysfunctional competitive environment: The roles of competitive strategies and market-based assets. *Industrial Marketing Management, 73*, 7–20.
23. Nguyen, D. K., & Kwan, H. M. (2019). Creating competitive advantage for Vietnamese manufacturing and service firms: The role of collaborative culture and innovation capability. *International Journal of Business Administration, 10*(2), 32–45. https://doi.org/10.5430/ijba.v10n2p32
24. Obukor, P., Akpan, P. L., & Ayandele, A. I. (2024). Business intelligence and competitive advantage of food and beverage firms in South-South geopolitical zone, Nigeria. *Journal of Applied Business Research, 40*, 215–226.
25. Okoro, A. M. (2025). Customer relationship management practices and their influence on the performance of Nigerian food and beverage firms. *International Journal of Contemporary Research in Marketing and Management Sciences, 13*(2), 1–13. https://doi.org/10.5281/zenodo.15374901
26. Olaniyi, E. O., Adewumi, A. O., & Misra, S. (2020). Data management and analytics for organizational decision-making: The role of structured data systems in firms. *International Journal of Information Management, 50*, 1–10.
27. Onuoha, E., & Okwudili, A. (2019). Regulatory compliance and data management: Challenges for food and beverage firms in Nigeria. *Journal of Food Products Marketing, 25*(7), 600–615.
28. Penrose, T. (1959). *The theory of the growth of the firm*. John Wiley.
29. Pourshahid, A., Richards, G., & Amyot, D. (2021). Towards goal-oriented, business intelligence decision-making framework. *MCTECH*, 100–115.

30. Rakov, M., & DeRidder, J. (2022). *Knowledge sharing in organizations: A present and future study* [Master's thesis, OCAD University]. Open Research Repository. https://openresearch.ocadu.ca/id/eprint/3623/1/Rakov_Maxim_DeRidder_Justine_2022_MDes_SFI_MRP1.pdf
31. Rao, P. S. (2021). *Principles of management*. Himalaya Publishing House.
32. Riege, A. (2005). Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management, 9*(3), 18–35. https://doi.org/10.1108/13673270510602746
33. Rumelt, R. P. (1984). Toward a strategic theory of the firm. In R. B. Lamb (Ed.), *Competitive strategic management* (pp. 556–570).
34. Sarah, X., Spencer, Y., Joiner, T. A., & Salmon, S. (2009). Differentiation strategy, performance measurement systems and organizational performance: Evidence from Australia.
35. Schiele, H. (2018). Purchasing and supply management. In C. Bode, R. Bogaschewsky, M. Eßig, R. Lasch, & W. Stölzle (Eds.), *Supply management research* (pp. 45–73). Springer Gabler.
36. Spitzeck, H., & Chapman, S. (2012). Creating shared value as a differentiation strategy: The example of BASF in Brazil. *Corporate Governance, 12*(4), 499–513. https://doi.org/10.1108/14720701211267838
37. Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51*(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007
38. Umoh, V. A., Udoh, M. A., & Inwang, I. U. (2023). Business intelligence and competitive advantage of hotels in Akwa Ibom State, Nigeria. *European Journal of Business and Innovation Research, 11*(1), 31–45. https://doi.org/10.37745/ejbir.2013/vol11n13145
39. Ukpong, A. M., Uwa, K. L. & Ekanem, U. A (2022) Business Innovation and Organizational Sustainability: A Cross Sectional Study of Entrepreneurial Business in Uyo Metropolis, European Journal of Business and Innovation Research, Vol.10, No.4, pp. 74-9.
40. Uttong, B. G., Ekanem, U. A., & Uwa, K. L. (2024). Blue ocean strategy and sustainable competitive advantage in fast moving consumer good industry in Nigeria. International Journal of Advanced Academic Research, 10(8), 71-87.
41. Uwa, K. L., & Akpaetor, U. A. (2018). Tourism/hospitality industry and socio-economic development in Nigeria: A case study of Akwa Ibom State. In *Proceedings of the 2018*

FMS National Conference (pp. 831-847). International Institute for Policy Review & Development Strategies.

42. Vera, J. (2016). Two paths to customer loyalty: The moderating effect of the differentiation level strategy in the performance-satisfaction-value-intentions relationship. *Journal of Product & Brand Management, 25*(2), 171–183.
43. Vivek, K. (2017). *Agile network business: Collaboration, co-ordination, and competitive advantage*. CRC Press.
44. Weir, J. (2021). Data warehouse in customer relationship management of food and beverage retail chains in Canada. *Journal of Production Economics, 2*(4), 1–8.
45. Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal, 5*(2), 171–180. https://doi.org/10.1002/smj.4250050207
46. Yang, J., Nguyen, P., & Le, H. (2017). Knowledge sharing serves as a mediator between collaborative culture and innovation capability: An empirical research. *Journal of Business & Industrial Marketing, 32*(5), 641–651. https://doi.org/10.1108/JBIM-10-2016-0249
47. Yang, J., Niu, Y., Ying, L., Bao, M., & Sivaparthipan, C. (2021). Organizational business intelligence and decision making using big analytics. *Information Processing & Management, 58*(6), Article 102725. https://doi.org/10.1016/j.ipm.2021.102725
48. Zhang, D. (2021). The influence of shared leadership on employees' knowledge sharing behavior. In *Proceedings of the 2021 International Conference on Public Relations and Social Sciences (ICPRSS 2021)* (pp. 888–891). Atlantis Press. https://doi.org/10.2991/assehr.k.211020.275
49. Zhang, W., Li, C., & Zhang, Y. (2021). Dynamic capabilities and knowledge sharing in achieving competitive advantage. *Strategic Management Journal, 42*(9), 1853–1869.