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Effect of E-Payment on Competitiveness of Quoted Foods and Beverages Manufacturing Firms in Nigeria

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Abstract: *This study empirically examined the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. The study adopted survey design, primary data and secondary data was used. Apopulation of 10,094 employees of quoted food and beverages manufacturing firms was arrived at where the Yamane (1967) formula was used, to determine the sample size of 384 employees. A Likert scale-typed questionnaire was used as the main tool for data collection and was administered to 384 respondents out of which 354 were retrieved and appropriately filled. Data were analyzed using descriptive statistics (percentages, frequency, mean, standard deviation, skewness and kurtosis) and inferential statistics (correlation and regression analysis). The hypothesis was tested using regression estimates computed with the Statistical Package for Social Sciences (SPSS, Version 25) at 5% level of significance or 95% confidence level. Findings revealed that e-payment has positive and significant effect on competitiveness of quoted foods and beverages manufacturing firms in Nigeria (β=0.284, t=3.842; p=0.000<0.05). The study, therefore recommended among others that given the positive impact of e-payment on competitiveness, foods and beverages manufacturing firms in Nigeria and other organizations should make efforts to further expand and secure e-payment systems. Policies should encourage the use of secure e-payment gateways and ensure that all transactions are protected against fraud and cyber threats. Moreover, offering incentives for early adoption and compliance with best practices in e-payment can drive broader acceptance and usage across the industry.*

Key words: *e-procurement, e-payment, e-auctioning, competitiveness, innovativeness, operational efficiency..*

1.0 INTRODUCTION

1.1 Background to the Study

The evolution of technology with the rapid growth in Information and Communication Technology (ICT) across the globe, techniques for completing business transactions are quickly moving from a conventional system to an electronic payment system. E-payment systems (EPSs) are the operating procedures, information and communication systems employed to initiate and transmit payments from a payer to a payee and for settling payments that is, transfer money (Imafidon, 2013). The E-payments channels are the apparatus used to safely and efficiently transfer monetary value in exchange for goods and services as well as financial assets (Oloruntoyin and Olanloye, 2012). Over the last decade, the EPS has grown increasingly because of increased use of internet-based banking and online shopping websites. E-payment is a mechanism used to transfer money electronically or digitally between two entities, which could be a bank, business, government, or an individual customer. The transfer of money is due to many reasons, such as obtaining services or goods or as compensation. An e-payment transaction includes any payment in which paper instruments have not been used. In some nations, cheques are e-payment instruments due to technological improvements (Al-hosani & Tariq, 2020). The latest communication and information technology has changed people's daily life, including their social and professional activities. New, cheap technologies are connecting people worldwide. These advancements raise global awareness of this technology.

Acceptance of new technologies has made it easier for businesses to grow nationally and internationally. Technology is now essential to market survival (Roozbahani et al. 2015). Internet and technology have eliminated time, distance, and geographical obstacles, helping firms grow abroad and form long-term partnerships. Organizations all over the world and across all sectors are today experiencing unprecedented pace of change, occasioned by diverse challenges including competition. As a result, businesses are rapidly re-evaluating their operating models and market strategies needed to both withstand these market forces and capitalize on them. Clearly, electronic-payment has a significant role to play in helping their organizations achieve their objectives and prepare for the uncertainty ahead. The rise of Information and Communication Technology (ICT) has driven companies to transition from traditional operations to e-business, e-payment practices, and e-Supply Chain philosophies to remain competitive (Shahin, Balouei, and Shahin, 2022). Additionally, e-payment fosters competitiveness among firms worldwide by facilitating real-time information about demand changes, which is crucial for maintaining optimal production schedules and inventory levels.

Most African countries including Nigeria have resorted to legal reforms and adoption of e-payment. E-payment has proved to be one of the most effective tools used by manufacturing firms to bring good governance and to improve the procurement practices. While the level of adoption of several technologies is lower compared to that in developed nations, it is worth noting that manufacturing firms in Africa are striving to utilize the available technologies to boost their procurement practices among other business functions (Springer, Cham and Chan, 2022). It has been confirmed that e-payment not only benefits organizations on cost reduction but also helps organizations to operate with few chosen suppliers of which the

implementation will involve the use of Electronic Data Interchange (EDI) and the internet, whereby organizations will be able to search for suppliers while suppliers will get information on what is required by their customers (Berndt, 2022). In addition, it has been revealed that organizations that make maximum use of internet technology are in a better position of reducing non-value-added tasks through the increased speed of information transfer which helps to link all members within a supply chain (Morosan and Jeong, 2008). Another striking result realized by firms which have adopted e-payment is that successful e-procurement implementation can improve long term competitiveness which means, most organizations see e-procurement as a long-term investment for their entities (Springer, Cham and Chan, 2022).

Competitiveness simply means a company's ability to produce a product or service in a better way than its competitors. This ability is essential in world of globalized markets, where the customer can usually choose what he or she needs from a variety of options (Christian and Juan 2021). Competitiveness is seen as a state in which organizations addresses dynamism in the external environment and continue to provide satisfactory products/services to customers which are better than the products offered by other players in the industry (Li and Liu 2014). Competitiveness is evidently a decisive factor for survival in the business world and requires setting priorities, which can be defined as a set of options of varying importance that a firm needs to have to compete in the market over a determined time frame (Santos et al., 1999) as cited in (Obuba and Omoankhanlen 2022). In this study, competitiveness is the firm's ability to produce a product or services in better way than its competitors in an industry which reflects innovativeness and operational efficiency. Innovativeness has been described as the extent to which firm markets new or improved products and invests in research and development, as well as openness to new ideas, creativity, flexibility, willingness to change, experimentation, and propensity to take risks in the firm's culture (Sommer *et al* 2017). Operational efficiency portrays the proficiency of firm to curtail the unwelcome and maximizes unique resources capabilities so as to deliver quality products services to its customers in the most effective and efficient manner than its competitors (Adudu *et al* 2020).

The foods and beverages manufacturing industry (FBI) refers to those companies involved in processing raw food materials, alcoholic and non-alcoholic, packaging, and distributing them. This includes fresh, prepared foods as well as packaged foods, and alcoholic and non-alcoholic beverages. Furthermore, manufacturing firms refers to industries concerned with transformation, changing of raw materials, processing and making of new goods or in value addition to existing goods, which the final products can either be sold as finished product or be used as an intermediate product for further processing of other product (Njagi, 2014). The choice of manufacturing firms is credence to their strategic importance to economic growth and development for greater industrialization to the general competitive environment. Nigerian food and beverage manufacturers are increasingly adopting digital procurement strategies to bolster their competitive edge in the market. In addition, business climate like the foods and beverages, firms that are creative, innovative and are able to take risk by focusing on the target markets will thrive and have an edge over and above their rivals by carefully adopting e-procurement strategies in their business firms. Ishikawa and Nakagawa (2013), established that firms that understand their environment, competitors, and build e-procurement that will succeed because access to information and environmental

awareness are crucial components for firms' existence and survival. In real life situation, a firm is said to be competitive if it is dynamic, adaptable to change, innovative, and able to provide greater economic value than its rivals in industry (Wilfred *et al*., 2014). In an environment that is very dynamic and economic objective. In order to remain competitive and keep a competitive edge, quoted foods and beverages manufacturing firms ought to make strategic decisions based on reliable, relevant and timely information on their disposal. Therefore, this study seeks to examine the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

1.2 Statement of the Problem

Over the years, the use of EPSs in Nigeria has been increasing considerably but its impact has not been adequately translated to the economy. One of the main reasons for this is the reluctance and ignorance of Nigerian's to use the 4 internet for transactions due to the fear of fraud. Some payment systems are too tech-savvy to reach most people. Banking and finance's capacity to attract most people to these platforms is another big obstacle to payment systems. ATMs, POS, mobile banking, and other mediums must dramatically grow to cover at least 80% of Nigeria before efficient financial intermediation can be realized by Nigeria's banks. ATM and network outages frustrate customers. Implying the network and ATM machines must be greatly enhanced to facilitate financial transactions.

In Nigeria, manual systems have been confirmed as a source of major inefficiencies in the regulation and operations of the payment function. Therefore, there is need to adopt ICT in order to ensure proper functioning of the e-payment system. To meet today's operating challenges, technical institutions are turning to ICT to improve their services for suppliers and other customers in order to lower operating costs and improve competitiveness. The contributions of e-procurement to the competitiveness of quoted foods and beverages manufacturing firms in Nigeria has attracted a lot of studies and reviews from researchers, academics, practitioners and professionals. Yet, there are still gaps in the previous studies that demands further investigation on the subject matter including the fact that previous studies have failed to arrive at a common conclusion among many other identified gaps. Nevertheless, it is observed that these quoted foods and beverages manufacturing firms are adopting e-payment that could enhance their competitiveness in the industry, some quoted foods and beverages manufacturing firms are reaping the benefits there in, while some are still grappling with competitiveness issues most especially innovativeness and operational efficiency. Whether or not e-payment has a significant effect on competitiveness of quoted foods and beverages manufacturing firms in Nigeria, and to what extent? This study seeks to investigate.

Even though previous studies examining the impact of e-payment on the competitive position of firms have been conducted in various developed and developing countries beyond the borders of Nigeria (Chepkoech, *et al*, 2022; Munyao, 2020; Gathima and Njoroge (2018), there is a dearth of research conducted within Nigeria specifically addressing the competitiveness of quoted foods and beverages manufacturing firms. Instead, the focus of studies conducted within Nigeria including; (Ehiedu, *et al*., 2023; Chinyere and Sabina (2020), has primarily been on organizational performance indicators other than competitiveness, thus revealing a significant gap in the literature pertaining to the

investigation of e-payment and its effect on the competitiveness of quoted foods and beverages manufacturing firms in Nigeria. It is against this backdrop that this study aims to fill this gap by empirically examining the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

1.3 Objective of the Study

The main objective of this study is to examine the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. The specific objectives are to:

i. Ascertain the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

1.4 Significance of the Study

This study will empirically examine the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. The study is significant to a good number of stakeholders including: Government, Procurement entities, competitors, investors, owners and managers of enterprises, policy makers, researchers, academics etc. In pursuance of the stated objectives, the study is divided in to five major components. Having addressed the first part of the components which is introduction, part two focuses on review of related literature covering the theoretical, concepts of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. The third section is on methodology employed in carrying out the study. Component four is on results and discussion of findings, component five provides the conclusion and recommendations accordingly. The results and recommendations of the study would contribute towards the unveiling of the contributions of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

2.0 LITERATURE REVIEW

The section explores the theoretical framework, conceptual framework and review of the related empirical studies and summary of literature reviewed on the researcher topic.

2.1 Theoretical framework

Theoretical framework guides the researcher in the data gathering procedure of the research as it throws light on areas to explore and or the questions to be asked (Quinlin, 2011). This study is however grounded on the Resource Advantage Theory. The theory is explored to create an understanding on the interaction between e-payment and competitiveness of quoted foods and Beverages Manufacturing firms in Nigeria.

2.1.1 Resource Advantage Theory

Resource advantage theory was propounded by Conner (1991), postulates that organizations are expected to be able to explain factors that constrain them as well as reasons for their existence. This viewpoint is based on resource-based theory that focuses on heterogeneous demands and moving resources. Second, a competitiveness theory for differential advantage from Alderson (1957); and Alderson (1965). Hunt and Madhavaram's 2006 and 2012 studies propose that resource advantage is capable of explaining important strategies in organizations, including resource-based strategy, competency-based strategy, industrial-based strategy, market-oriented strategy, brand equity strategy, market segmentation strategy, and relational marketing strategy. The resources referred to resource advantage are those available (tangible or intangible), which, in turn, are produced effectively and efficiently to be offered to particular market segments (Hunt and Madhavaram, 2012).

Resource advantage theory is built on mistakes in focus on organizational strategies in the pursuit of organizational advantage. Traditionally, the organizations have tended to focus on industrial competition. It is only after research from Hunt and Morgan (1999) and Hunt (2011) that organizational leaderships have started to focus on distinct product and service development strategy, which the competitors are unable to imitate. The ability to create these three conditions will result in advantage and improvement of organizational performance (Ferdinand, Widiyanto, and Sugiarto, 2012).Structure and foundation of resource advantage lie within ability of the organization to innovate and differentiate by means of available resources. Differentiation and innovation are implemented to accomplish the optimal advantage, in which organizational advantage shall enhance it to learn to maintain its advantage and to improve its product value. Resource advantage is an evolution of the absence of equilibrium during the competitive process, in which organizational innovation and learning stem from its internal resources. Both organization and customers have incomplete information, in which entrepreneurship, agencies, and government policies will affect the economic performance.

Resource advantage theory is relevant in this study because it emphasizes the importance of building values through resources, which organization internally possesses. It will differ from neoclassical theory, which posits that internal resources are within three dimensions: land/soil, employment, and capital. The resource advantage theory explains the internal resources more broadly, i.e. financial, legal, legality, human, organization, and relation**.**

2.2 Conceptual Framework

This section presents a comprehensive clarification of the concepts used in this study as well as in the form they are used. The aim here is to lay a foundation for clear understanding of the study.

2.2.1 Concept of Electronic-Payment

E-payment is a mechanism used to transfer money electronically or digitally between two entities, which could be a bank, business, government and an individual customer. The transfer of money is due to many reasons, such as obtaining services or goods or as compensation. An e-payment transaction includes any payment in which paper instruments have not been used. The latest communication and information technology has changed people's daily life, including their social and professional activities. New, cheap technologies are connecting people worldwide. These advancements raise global awareness of this technology. Acceptance of new technologies has made it easier for businesses to grow nationally and internationally. Electronic - payment systems (EPSs) are the operating procedures, information and communication systems employed to initiate and transmit payments from a payer to a payee and for settling payments that is, transfer money (Ehiedu *et al* 2023). The e-payments channels are the apparatus used to safely and efficiently transfer monetary value in exchange for goods and services as well as financial assets. Electronic payment is a form of financial exchange that takes place between the buyer and seller facilitated by means of electronic communication. The value of electronic payment goes way beyond the immediate convenience and safety of cards to a greater sphere of contributing to overall economic development. The term electronic payment can be referred narrowly to e-commerce for buying and selling goods and services offered through the internet, or broadly

to any type of electronic funds transfer. It encompasses electronic transfer of cash via online transactions. Typically, this involves the use of computer networks such as the internet and digital stored value system. This system allows bills to be paid directly from bank, and without the use of writing and mailing cheques. It is a credit card details, or some other electronic means, as opposed to payment by cheque and cash. It is also defined as a payer's transfer of monetary claim on a party acceptable to the beneficiary.

Electronic payment can also be defined as convenient, safe and secure methods for payment of bills and other transactions by electronic means such as card, telephone, internet, EFT and etc. Electronic payment gives consumers an alternative to paying bills and debts by cash, cheque, money order etc. Its main purpose is to reduce cash and cheque transactions. In the Nigeria context, e-payment entails effecting payments from one end to another and through the medium of the computer without manual intervention beyond inputting the payment data, it is the ability to pay the suppliers, vendors and staff salaries electronically at the touch of a computer button (Doerfler, 2016). Electronic Payment Systems (EPS) apart from their convenience and safety also have a significant number of economic benefits which include mobilizing savings and ensuring most of the cash available in the country are with banks. This will make funds available to borrowers both businesses and individuals. Furthermore, an electronic payment system has the ability to track individual spending; to facilitate the design of products by the banks. This information is also useful to the government when making decisions.

2.2.2 Concept of Competitiveness

Competitiveness, as defined by Kaur and Mehta (2016), refers to a state in which organizations effectively navigate the dynamic external environment and consistently deliver superior products to customers, surpassing the offerings of their competitors within the industry. This definition underscores the importance of addressing dynamism and satisfying customer needs in order to achieve competitiveness. Moreover, competitiveness can also be viewed as a valuable and difficult-to-replicate capability that enables a firm to outperform its rivals. In order to thrive in a rapidly changing environment, firms are expected to develop the necessary competencies to adapt to environmental shifts. By formulating and implementing effective strategies, organizations can position themselves favorably within the marketplace, enabling them to excel. Conversely, poor strategies can have detrimental effects on a firm's performance, underscoring the significance of strategic decision-making (Wang, 2012).

The globalization of the economy, the dynamic nature of the business environment, the proliferation of competitive firms, and the advancements in information and communication technology, along with its widespread application, have given rise to escalating challenges that compel firms to adopt strategies aimed at enhancing their competitiveness in the markets (Uzoma *et al*., 2021). This is because the survival and success of firms operating in turbulent and dynamic environments increasingly hinge upon their ability to remain competitive. In such environments, firms must constantly strive to stay ahead of the curve, anticipating and adapting to changes in the market landscape and customer preferences. By doing so, they are able to maintain their relevance and secure a competitive edge over their peers. A world lacking competition would result in a dearth of innovation and survival, as the human species has historically demonstrated their ability to adapt to environmental

pressures stemming from uncertainty and change. Consequently, organizations are compelled to pursue innovations, cost reduction, and quality improvement in order to not only withstand competition, but also to enhance their overall performance (Uddin and Oserei, 2019). Competitiveness encompasses the capability to effectively compete with others, and is determined by several key parameters such as technology, staff knowledge and skills, level of strategic and operational planning, quality of management systems, and communication (Kireeva et al., 2018).

2.2.3 Measures of Competitiveness

Schniederjans *et al* (2014) have identified various factors that can be used to measure competitiveness, such as price leadership, sustainability, innovativeness, service effectiveness, operations efficiency, and product differentiation. In their study, Schniederjans *et al* (2014) have specifically chosen to focus on innovativeness and operational efficiency as the measures of competitiveness, which is also supported by the findings of Chalofsky and Krishna (2012). The selection of these particular measures of competitiveness was based on the rationale that they are highly significant and relevant within the context of the foods and beverages sector, while also aligning with the overall objectives and purpose of the study. In addition, it is important to note that innovation plays a crucial role in driving competitiveness. This is further highlighted by the work of Joseph Schumpeter, a renowned economist, who emphasizes the significance of creative destruction and entrepreneurship in facilitating innovation (Schumpeter, 1942). In recent times, the concept of sustainable competitiveness has gained prominence, which encompasses various factors such as environmental, social, and governance (ESG) considerations. Notably, Michael Porter and Mark Kramer advocate for the creation of shared value as a strategy to attain sustainable competitive advantage (Porter and Kramer, 2011). Their proposition suggests that by aligning business activities with societal needs, organizations can foster long-term success and outperform their competitors. Overall, it is evident that innovation, along with its associated components, is crucial for organizations to thrive in today's highly competitive landscape.

i. Innovativeness: Innovativeness address specific practice applications derived from research as well as scientific and technological advancements (Hana, 2013). According to Khajeheian (2013), innovation is a factor that builds competence. Innovation is a process that leads to the creation and introduction of anything new, creative, or technologically advanced with goal of adding value or providing a benefit (Kearney and Hisrich, 2014). It is a procedure that starts with a fresh idea and ends with product launch. In the knowledge economy era, innovation is a crucial driver of competitive advantage since it creates difference that helps business maintain their advantage longer, innovation, according to Chen *et al*., (2009), has a favorable impact on competitive advantage and is a key strategic instrument for gaining an advantage in complicated (Akman and Yilmaz, 2008). According to Schniederjans *et al* (2014), innovation introduces completely new or notably better products or services with the intention of disrupting competitors' businesses by obsolescing the current market entries with breakthrough products or service offerings. Al-Nsour (2018), explored e-procurement and its determinants are key sources of innovation in marketing communication activities in Saudi service organsitions. The study found that there are no statistical differences in the level of competitive intelligence while the difference in the level

of innovation. In this study. Innovativeness is the ability of firms embracing the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering good or services.

ii. Operational Efficiency: According to Schniederjans *et al*. (2014), operational efficiency means improving the internal business operation and activities over competitors, lessening the cost to the customer so as to provide a lower price advantage based on efficiency. According to Kalluru and Bhat (2009), operational efficiency means improving the internal business operation and activities over competitors, lessening the cost to the customer so as to provide a lower price advantage based on efficiency. According to Kalluru and Bhat (2009), operational efficiency (OPE) is the proficiency of a corporation to curtail the unwelcome and maximize resource capabilities so as to deliver quality products and services to customers. Because of the intense of change in the business operating environment, firms face serious completion and that is why a good operating performance is critical for successful business (Goel, 2012). If firms operate more efficiently, they might expect improved productivity and consequently profitability. Consequently, the consumer could expect better and fair prices, quality service, better security (Ndolo, 2015). The key to create value and achieve competitive edge among other lies in the better operational efficiency and productivity of these institutions under such conditions. The company should also be able to be innovative Nand have efficient internal operating and control system (Adudu *et al*., 2021). In this study, operational efficiency is the ability and proficiency of a firm to curtail unwelcome in term of cost savings, cost reduction so as to maximize unique resources capabilities in order to deliver quality products and services to its customers.

2.3 Review of Related Empirical Studies

Ehiedu, *et al*, (2023), investigated the effect of e-payment system (EPS) on the efficiency of banks in Nigeria. The study particularly examines the effect of e-payment system (EPS) on the efficiency of banks in Nigeria. The study specific objectives are to ascertain the implication of mobile payment, Automated Teller Machine (ATM) and POS on the efficiency of Nigerian banks, by collecting data from the Central Bank of Nigeria (CBN), from the year 2012 to 2016. The study used linear regression analysis via SPSS to carry out the analysis, at a significance level of 0.05. The result from the analysis obtained a P-Value significance of 0.333 which connotes that there is no discernible effect of EPS on the efficiency of banking in Nigeria. The current study focused on efficiency of banks in Nigeria. The present study focused on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

Chepkoech, *et al*, (2022), examined the effect of e-payment systems on sustainable revenue collection in Nairobi city county government. Kenya. Particularly the study examines the effect of e-payment systems on sustainable revenue collection in Nairobi city county government. Kenya. The study was anchored on three theories information systems success theory, Diffusion Innovation Theory and Resource Based theory. The study adopts a cross sectional research design. The study target population comprised of 98 middle level management employees and 143 low-level management employees. The study used Descriptive statistics which comprised of means, frequencies, percentages and standard deviation. Inferential statistics were Pearson's product moment correlation and multiple regression analysis. The study findings revealed that e-receipting improves county revenue collection, usage of e-services enhances revenue collection, e-billing facilitates revenue

collection of the county and e-invoicing enhances sustainability in revenue collection in Nairobi City County Government. The current study focused on e-payment systems on sustainable revenue collection in Nairobi city county government. Kenya. The present study used e-payment as one of the dimensions on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

Chinyere and Sabina (2020), examined the effect of electronic payment on the performance of SMEs in Abia State, Nigeria. Particularly the study assesses the effect of electronic payment on the performance of SMEs in Abia State, Nigeria. The study specific objectives are to: Determine the effect of accountability and revenue generation on SMEs in Nigeria. The study used a questionnaires method to administer by the researchers, which were analyzed using tables, percentages and Pearson correlation with the aid of SPSS version 22.0. The study adopted a survey research design. The study findings revealed that E-payment has a negative significant effect on Accountability of SMEs in Nigeria. More so there is a negative insignificant relationship on effect of e-payment on revenue generated by SMEs in Nigeria. The current study focused on electronic payment on the performance of SMEs in Abia State. The present study focused on quoted foods and beverages manufacturing firms in Nigeria.

Munyao (2020), assessed the effectiveness of electronic payment system on revenue performance in Kenya's Hotel industry: A case of Sarova Hotels. The study specific objectives are; to establish the benefits of e-payment system on revenue performance of Sarova Hotels, to investigate on the challenges of e-payment system on revenue performance of Sarova Hotels and to determine the effect of e-payment strategies on revenue performance at Sarova Hotels. The study used descriptive research design. The study Population consisted of 65 respondents at Sarova Hotels. The study employs a stratified sampling technique. The study used the entire population as their sample size of 65 respondents. Both descriptive and inferential statistics were employed for the study. The aim is to establish whether there is a relationship on the benefits of e-payment system on revenue performance. The study findings revealed that there exists a significant relationship between e-payment benefits, e-payment challenges, e-payment strategies and revenue performance, Sarova Hotels. This study focused on Hotel industry in Kenya. Case of Sarova Hotels. The present study focused on quoted foods and beverages manufacturing firms in Nigeria.

Gathima and Njoroge (2018), examined the effect of e-payment on the performance of County Government of Nairobi. Kenya. Particularly the study investigates effect of e-payment on the performance of County Government of Nairobi. Kenya. The study anchored on transaction cost theory. The study used Descriptive research design and explanatory design. The study population comprised of 750 respondents drawn from the three Department finance, payment and information technology department. The study sample size comprised 75 respondents selected from the three Departments using stratified random sampling technique. The data was administered through questionnaires to the selected sample. The collected data was sorted and coded and analyzed through descriptive statistics and inferential statistics, for the purposes of establishing relationship between the variables, with the help of the Statistical Package for Social Sciences (SPSS) version 21. The study found at 95% confidence interval, the study revealed that E-payment practices had positive and significant relationship with the performance in public sector of Nairobi City County Government at 0.481 and $P=0.000 < 0.05$. This study examine the effect of e-payment on the

performance of County Government of Nairobi. Kenya. The present study focused on quoted foods and beverages manufacturing firms in Nigeria.

3.0 METHODOLOGY

The study used a survey research design. Survey research design is chosen for this study on electronic payment and competitiveness of quoted foods and beverages manufacturing firms in Nigeria because it allows for the efficient collection of data from a large number of respondents, ensuring a broad and representative sample of the industry. The area of study for this research work is food and beverages manufacturing companies that are quoted on the Nigerian Exchange Group (NGX). In this study, the target population consisted of employees of all the twenty-four (24) quoted foods and beverages manufacturing firms in Nigeria, on Nigerian exchange market as at December, 31, 2022. The preference on the twenty-four (24) quoted foods and beverages manufacturing firms in Nigeria was based on purposive and convenience (see Appendix B). All the twenty-four quoted food and beverage manufacturing firms in Nigeria were studied in order to have a representative sample size. To this end, Yamane (1967) formula was used to compute the sample size from a population of 10,094 management staff of these companies. Thus, the sample size for this study is 384 employees of foods and beverages manufacturing firms in Nigeria. The study adopted purposive sampling technique. Data for this study was collected using structured questionnaire emanating from primary source of data collection. The validity index of 0.571 stood at and overall reliability of 0.813.

A multiple regression model was employed to determine whether a set of independent variable (e-payment) together predict the dependent factor (competitiveness) of quoted foods and beverages manufacturing firms in Nigeria. In keeping with the research objectives, research questions and hypotheses, the implicit model of the study takes the following form:

$CMP=f\ (E\text{-}Payment)$ (1)

CMP=f (EPY) (2)

Where: CMP = Competitiveness

EPY = e-payment

When Equation (3) is stated explicitly in regression form, we have:

$CMP = b_0 = b_1 EPY + u$

Where: β_o = the constant or intercept

β_{1-5} = parameter estimates

μ = the error term

In this study, both descriptive statistics (percentages, frequency counts and mean values) and inferential statistics (correlation and regression analysis) were employed for data analysis. While descriptive statistics were focused on assessing the respondents' characteristics and responses to study questions, inferential statistics was used for test of hypotheses. Multiple Regression analysis was used to test the three hypotheses in order to determine the effect of electronic payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. These analytical tools were computed using a computer-based Statistical Package for Social Sciences (SPSS) version 25. The Multiple Regression Analysis technique aids in determining the extent of the influence exerted by the independent variables on the

dependent variable. Furthermore, the research hypotheses formulated were tested through the use of t-statistic at a significance level of 5% (0.05), allowing for an evaluation of the statistical significance of the findings. **Decision rule:** The following decision rule will be used for accepting or rejecting hypotheses. If the p -value (sig.) is greater than 0.05 ($p > 0.05$), the null hypothesis (Ho) will be accepted. However, if the p -value (sig.) is less than 0.05 ($p < 0.05$) the null hypothesis (Ho) will be rejected and the alternative hypothesis (H_1) will be accepted.

4.0 RESULTS AND DISCUSSIONS

This section deals with data presentation and analysis, test of hypotheses and discussion of findings.

4.1 Data Presentation and Analysis

The response rate, demographic characteristics of respondents and descriptive statistics of research questions and inferential statistics are presented in this section.

4.1.1 Response Rate by Category of Employees

The copies of the questionnaire were distributed to different categories of employees of quoted food and beverages manufacturing firms in Nigeria. The results presented in Table 5 show that the copies of the questionnaire distributed to executive officers, general managers, managers, heads of department (HODs), sectional heads, and procurement officers were 24, 24, 120, 120, 72 and 24, respectively, totally 384. However, only a total of 354 copies were retrieved from these employees that is the response rate of 92.19%.

4.1.2 Demographic Characteristics of the Respondents

This section provides the details of demographic characteristics of the respondents. The respondents who participated in the study were required to indicate their gender, age bracket, educational qualifications, work experience and their position in the organization.

Table 6: Demographic Characteristics of Respondents

Characteristics	Distribution	Frequency	Percentage (%)
Gender	Male	189	53.39
	Female	165	46.61
	Total	**354**	**100.0**
Age Range	18-27years	73	20.6
	28-37years	115	32.5
	38-47years	86	24.3
	48-57years	70	19.8
	58years & above	10	2.8
	Total	**354**	**100.0**

Educational Qualification	SSCE	25	7.1
	OND/NCE	78	22.0
	HND/B.SC.	168	47.5
	PG	65	18.4
	Others	18	5.1
	Total	**354**	**100.0**
Work Experience	1-10years	191	54.0
	11-20years	36	10.2
	21-30years	47	13.3
	31-40years	49	13.8
	40years & above	31	8.8
	Total	**354**	**100.0**
Position in the Organisation	Executive officer	20	5.6
	General manager	21	5.9
	Manager	108	30.5
	HODs	109	30.7
	Sectional Heads (P)	72	20.3
	Procurement officers	24	6.7
	Total	**354**	**100.0**

Source: *Researcher's Computations, 2024*

Table 6 has presented the demographic characteristics of the employees working in selected quoted food and beverage manufacturing firms in Nigeria. The analysis reveals that majority of the respondents are males accounting for 53.39% while their female counterparts accounts for 46.61% of the workforce among quoted food and beverage manufacturing firms in Nigeria. The table also shows that significant proportion of these employees, accounting for 32.5%, falls within the age range of 28 and 37 years. This age group is followed closely by employees between the ages of 38 and 47 years, constituting approximately 24% of the total workforce. Furthermore, it is worth noting that employees aged between 18 to 27 years; 48 to 57years and those who are 58 years and above represent 20.6%, 19.8% and 2.8% of the employee population, respectively. The dominant of a young age range of 28 and 37 years

underscores the existence of able-bodied workforce among quoted food and beverage manufacturing firms in Nigeria.

Details analysis of the data presented in Table 6 revealed that individuals with different levels of education contribute to the workforce in varying proportions. Specifically, employees with Senior Secondary School Certificate Examination (SSCE) qualifications make up 7.1% of the total workforce. Those with Ordinary National Diploma (OND) or National Certificate of Education (NCE) qualifications constitute 22.0% of the employee population. The majority of the employees, accounting for 47.5%, hold Higher National Diploma (HND) or Bachelor of Science (B.Sc.) degrees. Lastly, individuals with postgraduate degrees and those with other qualifications represent 18.4% and 5.1%, respectively of the total employee count. These findings highlight the prevalence of graduate employees within the quoted foods and beverages manufacturing firms in Nigeria.

Regarding the position held in the organization by respondents in their various quoted food and beverage manufacturing firms in the study area, the results presented in Table 6 show that executive officers, general managers, managers, Heads of Department (HODs), sectional heads and procurement officers, accounted for 5.6%, 5.9%, 30.5%, 30.7%, 20.3% and 6.7% respectively. This clearly shows that majority of the respondents who participated in the survey are equity holders of these quoted foods and beverages manufacturing firms in Nigeria.

4.1.3 Presentation of Responses on Research Variables

Responses collected from the respondents on the research variables namely: e-procurement – e-tendering, e-sourcing, e-invoicing, e-payment, e-auctioning; and competitiveness were presented in this sub-section. The results were presented by utilizing a five-point Likert scale, which gauged the level of agreement among the respondents in relation to the posed questions. The scale ranged from strongly agrees, agree, not sure, disagree, to strongly disagree.

Table 10: Responses on the Effect of E-Payment on Competitiveness

	Responses				
E-Payment	**SA(%)**	**A(%)**	**NS(%)**	**D(%)**	**SD(%)**
E-payment helps my food and beverage manufacturing firm to initiate and implement a sound payment system which is compatible with all that it takes to achieve performance.	21(5.9)	175(49.4)	74(20.9)	4(1.1)	80(22.6)
The adoption of e-payments in my food and beverage manufacturing firm has positive correlation with the company's competitiveness	45(12.7)	8(2.3)	75(21.2)	93(26.3)	133(37.6)
In my Food and beverage manufacturing firm, the value of electronic payment goes beyond the immediate ease and safety in the company. It is also an essential	96(27.1)`	103(29.1)	136(38.4)	3(0.8)	16(4.5)

contributing factor to the company's overall competitiveness.					
Electronic payment employed in my food and beverage manufacturing firm has a significant positive impact on organizational performance and is vital to my company's current information technology driven-economy.	136(38.4)	25(7.1)	70(19.8)	45(12.7)	78(22.0)
E-payment generally provides new ways and opportunities for my food and beverage manufacturing firm to broaden its knowledge, implement ease of accountability and generate more revenue and enhances the competitiveness of these entities.	156(44.1)	53(15)	33(9.3)	39(11.0)	73(20.6)
The key to adopting e-payment system in my food and beverage manufacturing firm lies in extending traditional commercial strategies to the business's entire extended social network, which is a dynamic and evolving organism encompassing its customers and suppliers.	152(42.9)	14(4.0)	110(31.1)	10(2.8)	68(19.2)
In my Food and beverage manufacturing firm, business begins with the common model of payment methods where they initially offer a unique experience in exchange for the customers patronage by making it easy to add their shopping cart features with various online payment methods in an official commercial web site.	194(54.8)	40(11.3)	45(12.7)	45(12.7)	30(8.5)
Using the E-payment System in my food and beverage manufacturing firm has many benefits for payers and payees as it leads to enhanced performance as information is always template driven which make transactions to be standardized and traceable.	135(38.1)	53(15.0)	121(34.2)	28(7.9)	17.(4.8)
My food and beverage manufacturing firm has adopted E-payment as a strategy that ensures integration and as improvement between departments as important ingredient for withstanding competition among the industry players.	18(5.1)	216(61.0)	40(11.3)	80(22.6)	0(0)

E-Payment assists my food and beverage manufacturing firm in decision making process due to its ability to ensure that the relevant information is neat, organized and timely stamped.	142(40.1)	38(10.7)	60(16.9)	87(24.6)	27(7.6)

Source: *Field Survey Data & SPSS Output, 2024*

In Table 10, the responses of participants regarding the effect of e-payment on competitiveness are presented. Details analysis of the table has revealed that the responses of the participants regarding the statement "E-payment helps my food and beverage manufacturing firm to initiate and implement a sound payment system which is compatible with all that it takes to achieve performance", show that the responses for strongly agree, agree, not sure, disagree and strongly disagree, accounted for 5.9%, 49.4%, 20.9%, 1.1% and 22.6%, respectively. This demonstrates that e-payment helps to initiate and implement a sound payment system which is compatible with all that it takes to achieve performance. However, the responses revealed that majority of the respondents responded negatively to the claim that the adoption of e-payments has positive correlation with the company's competitiveness, this could be due to the fact that details on whether there is positive correlation among these variables can only be ascertained through statistical data, which might not be readily available at the disposal of the participants as at time of filling this questionnaire. The results further suggested, as revealed by majority of the participants (56.1%) that the value of electronic payment goes beyond the immediate ease and safety in the company. It is also an essential contributing factor to the company's overall competitiveness. More so, electronic payment employed in quoted food and beverage manufacturing firms has a significant positive impact on competitiveness and is vital to the companies' current information technology driven-economy. This is because, majority of the participants (45.5%) responded positively to this claim. It is further shown from the responses that e-payment generally provides new ways and opportunities for my food and beverage manufacturing firm to broaden its knowledge, implement ease of accountability and generate more revenue and enhances the competitiveness of these entities. This is revealed by the positive responses of majority of the participants (59.1%).

In Table 10, the responses on the statement "the key to adopting e-payment system in my food and beverage manufacturing firm lies in extending traditional commercial strategies to the business's entire extended social network, which is a dynamic and evolving organism encompassing its customers and suppliers", show that the responses of strongly agree, agree, not sure, disagree and strongly disagree, accounted for 42.9%, 4.0%, 31.1%, 2.8% and 19.2%, respectively. This suggests that the key to adopting e-payment system lies in extending traditional commercial strategies to the business's entire extended social network, which is a dynamic and evolving organism encompassing its customers and suppliers. The responses in Table 10 also show that amongst quoted food and beverage manufacturing firms in Nigeria, business begins with the common model of payment methods where they initially offer a unique experience in exchange for the customers' patronage by making it easy to add their shopping cart features with various online payment methods in an official commercial web site, as revealed by majority of participants (66.1%) who responded positively to this claim.

Furthermore, it can be deduced from the responses that using the E-payment System in quoted food and beverage manufacturing firms has many benefits for payers and payees as it leads to enhanced performance as information is always template driven which make transactions to be standardized and traceable, because most of the respondents (53.1%) positively responded to this statement. Also, the responses of majority of the participants (66.1%) were positive to the statement that "my food and beverage manufacturing firm has adopted E-payment as a strategy that ensures integration and as improvement between departments as important ingredient for achieving performance", suggesting that quoted food and beverage manufacturing firms have adopted e-payment as a strategy that ensures integration and as improvement between departments as important ingredient for withstanding competition among the industry players. Finally, the responses regarding e-payment shows that respondents who strongly agree, agree, were not sure, disagree and strongly disagree to the statement that "E-Payment assists my food and Beverages Company in decision making process due to its ability to ensure that the relevant information is neat, organized and timely stamped", accounted for 40.1%, 10.7%, 16.9%, 24.6% and 7.6%, respectively. This suggests that e-payment assists quoted food and beverage manufacturing firms in decision making process due to its ability to ensure that the relevant information is neat, organized and timely stamped.

Table 12: Responses on Competitiveness

Statements on Competitiveness	**Responses**				
	SA(%)	**A(%)**	**NS(%)**	**D(%)**	**SD(%)**
The e-procurement system in our food and beverage manufacturing firm significantly reduces the time required to complete procurement processes, thus enhancing competitiveness.	144(40.7)	54(15.3)	48(13.6)	25(7.1)	83(23.4)
The implementation of e-procurement has resulted in noticeable cost savings for our food and beverage manufacturing firm in terms of procurement-related expenses.	101(28.5)	40(11.3)	197(55.6)	14(4)	2(0.6)
Our e-procurement system facilitates effective communication and collaboration with our suppliers, contributing to positive and strategic	82(23.2)	119(33.6)	94(26.6)	38(10.7)	21(5.9)

relationships that enhance competitiveness					
The e-procurement system seamlessly integrates with other components of our supply chain, enhancing coordination and visibility.	13(3.7)	182(51.4)	67(18.9)	0(0)	92(26.0)
E-procurement tools and practices in our food and beverage manufacturing firm contribute to innovative procurement practices and enhance overall productivity galvanizing competitive advantage	130(36.7)	98(27.7)	90(25.4)	12(3.4)	24(6.8)
The e-procurement system effectively identifies, analyzes, and mitigates risks associated with the procurement process in our food and beverage manufacturing firm.	96(27.1)	43(12.1)	66(18.6)	87(24.6)	62(17.5)
Our e-procurement system ensures robust data security and compliance with relevant data protection and privacy regulations.	112(31.6)	76(21.5)	118(33.3)	1(0.3)	47(13.3)
The e-procurement system provides valuable decision support tools and analytics that enhance informed and strategic decision-making in our procurement processes.	175(49.4)	34(9.6)	91(25.7)	20(5.6)	34(9.6)
Our e-procurement system demonstrates flexibility and adaptability to changing business requirements, market dynamics, and technological advancements.	91(25.7)	35(9.9)	136(38.4)	12(3.4)	80(22.6)
The implementation of e-procurement has positively influenced our organization's competitive position in the	127(35.9)	102(28.8)	48(13.6)	30(8.5)	47(13.3)

market, as reflected in metrics like market share and customer satisfaction.	

Source: *Field Survey Data & SPSS Output, 2024*

In Table 12, the responses on the effect of e-procurement on competitiveness are presented. A cursory look at the results show that the responses of strongly agree, agree, not sure, disagree and strongly disagree, to the statement "the e-procurement system in our food and beverage manufacturing firm significantly reduces the time required to complete procurement processes"; accounted for 40.7%, 15.3%, 13.6%, 7.1% and 23.4%, respectively, which suggests that the e-procurement system in the quoted food and beverage manufacturing firms significantly reduces the time required to complete procurement processes, thus enhancing competitiveness. Regarding the statement "The implementation of e-procurement has resulted in noticeable cost savings for our food and beverage manufacturing firm in terms of procurement-related expenses", many of the participants' responses were positive (39.8%), even though majority (55.6%), claimed not to be sure about the claim. The results of responses of competitiveness also show that e-procurement system facilitates effective communication and collaboration with our suppliers, contributing to positive and strategic relationships that enhance competitiveness, as opined by majority positive responses (56.8%) of the participants. Furthermore, the responses results presented in Table 12 show that majority responses (55.1%) of the participants suggest that the e-procurement system seamlessly integrates with other components of supply chain, enhancing coordination and visibility. On the statement "e-procurement tools and practices in our food and beverage manufacturing firm contribute to innovative procurement practices and enhance overall productivity", the responses of strongly agree, agree, not sure, disagree and strongly disagree, accounted for 36.7%, 27.7%, 25.4%, 3.4% and 6.8%, of which the positive responses (strongly agree and agree) accounts for majority of the responses (64.4%); suggesting that e-procurement tools and practices in quoted food and beverage manufacturing firms contributes to innovative procurement practices and enhance overall productivity galvanizing competitive advantage.

The results of the responses presented in Table 12, however show that majority of the respondents disagreed that e-procurement system effectively identifies, analyzes, and mitigates risks associated with the procurement process in their organizations. On whether e-procurement system ensures robust data security and compliance with relevant data protection and privacy regulations, majority respondents (53.1%) agreed. Furthermore, the responses of strongly agree, agree, not sure, disagree and strongly disagree, to the statement "The e-procurement system provides valuable decision support tools and analytics that enhance informed and strategic decision-making in our procurement processes", accounted for 49.4%, 9.6%, 25.7%, 5.6% and 9.6%, respectively. This suggests that the e-procurement system provides valuable decision support tools and analytics that enhance informed and strategic decision-making in procurement processes of quoted food and beverage manufacturing firms in Nigeria. The results also show that the responses of strongly agree, agree, not sure, disagree and strongly disagree, to the statement "Our e-procurement system demonstrates flexibility and adaptability to changing business requirements, market

dynamics, and technological advancements", accounted for 25.7%, 9.9%, 38.4%, 3.4% and 22.6%, respectively; with majority of the responses (38.4%) being for the response of 'not sure', however, a significant proportion of the responses (35.6%) were for the responses of strongly agree and agree. Finally, the results show majority of the responses (64.7%) support the claim that the implementation of e-procurement has positively influenced competitive position of quoted food and beverage manufacturing firms in the market, as reflected in metrics like market share and customer satisfaction.

4.1.4 Descriptive Statistics

The descriptive statistics, which encompass key measures such as the mean, median, maximum, minimum, standard deviation are presented in Table 13. By including such a diverse array of statistical indicators, the researcher has effectively captured the essence of the data and provided a comprehensive overview of its various properties, enabling subsequent analysis and interpretation.

Table 13: Descriptive Statistics

Statistic	EPY	CMP
Minimum	1.000	1.000
Maximum	5.000	5.000
Mean	3.9322	4.2768
Std. Dev.	1.0353	0.9414

Source: *Researcher's Computations from SPSS Version 25 output 2024*

Table 13 presents the descriptive statistics for the variables used in the study. The results show that the mean values for the variables of e-payment (EPY), and competitiveness (CMP) are recorded as 3.9322 and 4.2768, respectively. It is worthy to note that the standard deviation values being smaller than two suggest that the datasets remain in close alignment with the expected values.

4.1.5 Diagnostic Tests

As a preliminary to regression test, the assumptions underlying the test must be met in order to avoid incorrect regression estimates, which policy outcomes cannot stand the test of time. To this end, the normality test were conducted, and the results discussed in this section. The tests of normality relate to skewness and kurtosis while the test of multicollinearity was done using correlation matrix and the variance inflation factor (VIF).

Table 16: Collinearity Statistics

	Collinearity Statistics	
Variables	**Tolerance**	**VIF**
EPY	.256	3.900

Source: Researcher's Computation from SPSS Version 25, output 2024.

The results of the VIF statistics in Table 16 confirms that of the correlation matrix that there are no multicollinearity problems among the independent variables (e-payment) of the study, because the VIF values are less than 5. According to Field (2009), VIF values of less

than 10 and tolerance values of less than 0.2 are an indication of the presence of multicollinearity.

4.1.6 Regression Analysis

This sub-section presents the outcomes of regression analysis for the model under study. The outcomes of the regression model elucidate the extent of impact of the independent variables, namely; e-payment and e-auctioning, on the dependent variable, which is competitiveness. The outcomes are presented in the form of a model summary, analysis of variance, and parameter estimates (coefficients). The model summary was utilized to ascertain the degree to which the independent variables account for the variations in the dependent variable. The overall significance of the model under study, that is, the significance of the combined impact of the independent variable on the dependent variable, was assessed using the analysis of variance (ANOVA). This was accomplished by comparing the F-statistic with the predetermined significance level (5% significance level). Consequently, if the p-value of the F-statistic is less than 0.05, it can be concluded that the model is significant and can be employed for further statistical analysis, and vice versa. Lastly, the coefficients were calculated.

Table 17: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.826[a]	.682	.675	0.72932	1.821

a. Predictors: (Constant), ESO, EPY
b. Dependent Variable: CMP
Source: Researcher's Computation from SPSS Version 25, output2024.

The results presented in Table 17 show that the R is 0.826 – which implies that there is positive and statistically significant relationship between the dependent variable and the explanatory variables. The R-square (R^2) is the square of the multiple correlations coefficient which is used for judging the explanatory power of a model, and often called the coefficient of determination or a measure of the goodness of fit. For a regression model with many explanatory variables, the adjusted R^2 provides a more reliable measure of the goodness of fit because over-parameterization of a model affects the degrees of freedom. Hence the use of the R^2 adjusted takes into cognizance the degrees of freedom that are affected by the over-parameterization of a model which occur in the process of model building. The adjusted R-square value of 0.675 implies that even with adjustment, 67.5% of changes in competitiveness are been explained by e-payment. The unexplained variation in competitiveness of quoted foods and beverages manufacturing firms is 32.5%, this is attributed to other factors affecting competitiveness not included in the model of the thesis as well measuring error termed in the model as e–the stochastic term. The Durbin Watson statistic is used for testing for serial correlation in least-squares regression. In this case, the Durbin-Watson value of 1.821 implies that there is no autocorrelation among the variables of the study.

Table 18: Analysis of Variance (ANOVA)[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1096.295	5	219.259	73.318	.000[b]
	Residual	1040.706	348	2.991		
	Total	2137.000	353			

a. Dependent Variable: CMP
b. Predictors: (Constant), EPY
Source: Researcher's Computation from SPSS, 2024.

Table 18 presents the results of the analysis of variance (ANOVA). The F-statistic value of 73.318 with a significant value of 0.000 implies that e-payment; collectively exert significant influence on competitiveness in the study area.

Table 19: Regression Coefficients

Unstandardized Coefficient			Standardized Coefficient		
Model 1	**B**	**Standard Error**	**Beta**	**T**	**Sig.**
(constant)	3.266	.855		3.822	.000
EPY	.421	.110	.284	3.842	.000

a. Dependent Variable: CMP
Source: Researcher's Computation from SPSS, 2024
The results of the regression coefficients presented in Table 19 further show that in line with expectations, e-payment (EPY) has a positive effect on competitiveness of quoted food and beverages manufacturing companies in the study area. The reported coefficient of 0.421 indicates that a unit increase in e-payment platforms will lead to 0.421 units increase in competitiveness. This effect is statistically significant at 5% level of significance, because the significant value of 0.000 is less than the 0.05 (5%) level of significant, which is further substantiated by the low standard error (0.110) and the t-statistic of 3.842.

4.2 Test of Hypotheses

In this section, the two hypotheses formulated earlier were tested. The results of the multiple linear regression analysis show that all the explanatory variables; e-payment, and e-auctioning have significant effect on competitiveness. The hypotheses were tested using the t-statistics and p-values of each of the variable. The hypotheses were tested at 5% level of significance and the decision rule is that if the calculated t-statistic lies between the negative and positive critical values (∓1.960, for a two-tailed test; see Appendix F for the critical value of t-statistic) or p-value is greater than 0.05, 5% level of significance, we accept the null hypothesis. On the other hand, if the calculated t-statistic is less than the negative critical value or greater than the positive critical value (∓1.960) or p-value less than 0.05, 5% level of significance, we reject the null hypothesis.

Test of Hypothesis One

H_{01}: E-payment has no significant effect on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

Furthermore, to test the effect of e-tendering on competitiveness of quoted foods and beverages manufacturing firms in Nigeria, the results of Table 19 were also used. The results

show that the coefficient of e-payment with a standardized coefficient of 0.284 has a t-statistic value of 3.842 and a probability value of 0.000. Since the p-value is less than 0.05 (0.000<0.05) and the t-statistic is greater than 1.960 (3.842 > 1.960), e-payment has significant effect on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. Thus, we reject the null hypothesis four and accept the alternative, and conclude that e-payment has significant effect on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

4.3 Discussion of Findings

The discussion of findings of this thesis are done in line with the specific research objectives which translated to research hypotheses that were tested to examine the effect of e-procurement on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. This discussion is done in this section.

In the first objective, this study sought to ascertain the effect of e-payment on competitiveness of quoted foods and beverages manufacturing firms in Nigeria. To test the hypothesis formulated from this objective, the results of the multiple regression coefficients presented in Table 19 were used. Upon the evaluation of the multiple regression coefficients, the findings unveiled that e-payment has positive and significant effect on competitiveness of quoted food and beverages manufacturing firms in Nigeria. The research finding that e-payment, as a dimension of e-procurement, has a positive and significant effect on the competitiveness of quoted food and beverages manufacturing firms in Nigeria is a significant insight into the impact of digital payment systems on businesses in the country. This finding raises important implications for the adoption of e-payment systems and e-procurement strategies in the food and beverages manufacturing sector in Nigeria. It suggests that the implementation of digital payment solutions is contributing to the competitiveness of these firms, potentially by streamlining transactions, reducing costs, and improving overall efficiency. Furthermore, this research finding underscores the importance of leveraging e-payment systems as a means to enhance the competitiveness of businesses, particularly in industries such as food and beverages manufacturing. Additionally, the finding signals the potential for similar positive effects in other sectors, prompting a broader conversation about the role of digital payment systems in enhancing the overall competitiveness of businesses in Nigeria. The finding of this thesis that e-payment exerts positive and significant effect on competitiveness collaborate those of Munyao (2020); Ehiedu, Onuorah and Chiejina (2023); Chepkoech, Gichana and Agong (2022) and Gathima and Njoroge (2018); who found their separate studies that e-payment practices have positive and significant relationship with the performance.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

Conclusions and recommendations that are in line with these specific objectives of the study presented here.

5.2 Conclusion

In conclusion, the comprehensive findings of this research provide valuable insights into the intricate effect of e-payment on the competitiveness of quoted foods and beverages manufacturing firms in Nigeria. The research also highlights the positive and significant

influence of e-payment on competitiveness. These findings underscore the importance of embracing digital payment systems as integral components of the overall procurement strategy of quoted firms in the foods and beverages manufacturing industry. By incorporating e-payment into their operations, these firms can further enhance their competitive position and capitalize on the benefits offered by these electronic payment. Given the complex nature of the effect of e-payment on competitiveness, it is of utmost importance for stakeholders in the foods and beverages manufacturing sector in Nigeria to adopt a nuanced and sophisticated approach when incorporating this e-payment into their business operations.

5.2 Recommendation

Based on the research findings, several recommendations emerge from foods and beverages manufacturing firms and other industries in Nigeria aiming to optimize the impact of e-procurement practices on competitiveness.

i. Given the positive impact of e-payment on competitiveness, foods and beverages manufacturing firms in Nigeria and other organizations should make efforts to further expand and secure e-payment systems. Policies should encourage the use of secure e-payment gateways and ensure that all transactions are protected against fraud and cyber threats. Moreover, offering incentives for early adoption and compliance with best practices in e-payment can drive broader acceptance and usage across the industry.

5.4 Limitations of the Study

There is no research without its inherent limitations, thus this research is not an exception. This study relied on the responses of the participants from the foods and beverages under study, which may be affected by perceptual biases in answering the questionnaire. Thus, the findings were influenced by inherent problems with the use of primary data such as negative attitude of the respondents which culminated in poor response rate from respondents and loss of questionnaires above the determined sample size for the study. Another notable challenge of the study was the questionnaire administration in terms of distribution and retrieval. The process of distribution and retrieval of questionnaires was not easy due to the study area. However, this challenge was overcome by employing research assistants to help distribute and retrieve questionnaires accordingly. To make this study a very viable one, some vital information were requested from firms' employees which the management were not willing to release since they consider such information as being sensitive. However, the researcher through his persuasive ability was able to get some vital information needed for the study. The cross-sectional nature of the research design has the limitation that some respondents and information owners among the people were slow and reluctant to give answers to probes. The limitation was minimized via persuading the respondents by giving a cover letter. The researcher has the limitation of scarce research materials. This limitation is solved by subscribing for materials online from advanced countries like USA, United Kingdom, Kenya and Germany among others and also searching the internet for related journals and other resource materials. The questionnaire research instrument has the limitation that its structured nature compelled the respondents to give answers that they do not fully endorsed and are predetermined. The limitation is minimized by using secondary information from previous researchers in textbooks, journals and online materials. Finally,

time, funds and logistics posed a serious threat to the intensity of the spread or the area of coverage of the study.

5.5 Suggestions for Further Studies and Contribution to Knowledge

The identified limitations in the current study open up promising avenues for future research, inviting scholars to explore and enhance our understanding of the intricate relationship between e-payment and competitiveness of organizations. The effect of e-payment on competitiveness of unquoted foods and beverages manufacturing firms in Nigeria needs attention in order to see how the adoption and practice of e-payment will enhance competitiveness in their firms. Further, it is possible to extend the scope of the study to cover a larger geographical area other than the Nigerian exchange group as this would ensure the generalizability of the research conclusions. Addressing participant bias is another vital aspect that warrants attention in future studies. Employing advanced methodologies, such as qualitative approaches or experimental designs, could mitigate biases in participant responses, leading to more accurate and reliable insights. Exploring innovative data collection methods and third-party interventions may further enhance the credibility of findings, ensuring a more authentic reflection of the impact of e-payment on competitiveness.

Expanding the scope of investigation to include diverse industries and regions is crucial for developing universally applicable insights. Comparative studies across sectors and countries could reveal contextual nuances influencing the relationship between e-payment and competitiveness. Additionally, longitudinal studies tracking changes over time would provide a dynamic perspective on the evolving impact of technology and market conditions, aiding in anticipating future trends and adapting strategies accordingly. The study revealed that e-payment with a beta coefficient of 0.284 has a greater effect on competitiveness of quoted foods and beverages manufacturing firms in Nigeria.

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