

Impact of ICT Usage on Financial Performance of Quoted Manufacturing Companies in Lagos State, Nigeria

Akinboade Abiodun Akinrinade
Faculty of Social Sciences, Ajayi Crowther University, Oyo,
Nigeria.
Email: akinakinrinade1@gmail.com

ABSTRACT

Although studies have been carried out over the years on the impact of ICT usage on financial performance of organizations, it is however imperative to state that their resultant effect is still very much in dispute. This study was therefore conducted to investigate the usage of ICT and its impact of ICT on financial performance manufacturing companies in Lagos State, Nigeria. The study focused on quoted manufacturing companies in Lagos State, Nigeria. Survey design was adopted in conducting this study. To achieve the objective of this research primary and secondary data were used. Primary data was collected via interview and questionnaire, while secondary data for 10 years was retrieved from the published annual reports of the companies. In all, 44 companies were sampled in this study. Although 44 companies were sampled, questionnaires from only 31 of the companies were returned. It was found that quoted companies sampled in this study have deployed ICT to different departments in these organizations; the level of usage however differs. Data collected from the questionnaire was analyzed, using a calculating device. Using the device, Pearson Correlation, Paired Sample T-Test and Linear Regression Analysis were used to test the hypotheses at 0.05 level of significance. Data from interviews were analyzed by transcribing and grouping similar responses. Finding showed that investment in ICT had positive relationship with financial performance. Also, it has been empirically established that the use of ICT has brought about a significant difference in the sales turnover, profit before tax, profit after tax and net asset/shareholders fund. However, the use of ICT has not brought about any significant difference in the earnings per share of these companies. It is recommended that future studies can be conducted using other financial variables and more financial data to determine the effect of ICT use on pre ICT adoption and post ICT adoption of quoted manufacturing companies in Nigeria.

Keywords: *Financial Performance; Quoted Manufacturing Companies; ICT Use*

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I. INTRODUCTION

From the early 1980s and with the advancement of semi-conductor technologies, organisations in the developed world have worked on jumping onto the ICT bandwagon quite early. The work-flow in organisations became mechanized, paperless work process followed, thereafter, ICT departments were established within organisations, ICT maintenance services became warranted, and many new electronic business tactics evolved. Organisations saw lucrative economic future by investing in ICT, believing that by adopting ICTs in the organisation, there will be an improvement in the work process, major cuts in cost, enhancement in quality, and higher productivity [1]. ICT is used within organisation not just to accelerate production process but new whole process chains are targeted for elimination or speeding up [2].

The emergence of ICT has made the task of managing the mass information existing in business environments easy for individuals and organizations globally. In recent decades, ICT has become the major driver of innovation, growth and social change [3]. It has become a potent force in transforming social, economic, and political life globally. Without the incorporation of ICT into daily activities, there is little chance for countries, or organisations to develop [4]. ICT also plays a tremendous role in all areas of today's organisations, by offering a wide range of possibilities for improving organisational competitiveness both in the service and manufacturing sectors. ICT also provides mechanisms for getting access to new market opportunities and achievement of competitive advantage [5].

Since the adoption of ICTs in organisations, its use has changed the shape of businesses unlike what it was once known to be, while organisations with support for the strategic use of ICT are found to perform better than others [1; 6]. Studies have shown that ICT use covers two primary areas in organisations; ICTs is being used for internal activities (production, administration and business operation) and external activities. The internalization of ICT applications affects business operations directly. The internal use of ICT includes the transfer of information seamlessly through shared electronic files and networked computers; this has improved the efficiency of business processes such as documentation, data processing, and other back-office functions [7].

The common uses of ICT within organisations include-storing customer, stock, membership and employee details; Creating advertisement and promotional

materials, mailing lists management, Building management, Accounts preparation and Payroll preparation. Some of the sophisticated uses of ICT in organisations are:

1. Logistics: The application of ICT for logistics functions can be classified into transaction system or electronic data interchange (EDI), operational planning systems, and control system.
2. Facilitation of Effective Knowledge Management: ICT has served a tool that helps organizations in management of information flow and knowledge sharing. Application of ICT in knowledge management can be in form of video-conferencing, listservs, newsgroup, groupware, virtual team rooms, e-mail, voicemail, etc.
3. Production Process Enhancement which includes Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), and Product Data Management (PDM).

The reasonable integration of ICT into administration and production process of manufacturing organisations has given rise to new forms of work organisation, management and planning, which can help master the process of production operations, information transfer and facilitate the process of adaptation to the on-going evolution of the economic, social and cultural environment [2]. The revolution in information technology and information system is bringing a drastic change in manufacturing, trading and service industry all over the world. It opens new horizons for business enterprises and enables them to carry out their commercial activities by using advanced technologies. Even in large commercial projects, ICT is used to identify, measure, monitor and control the potential risks to meet its strategies and objectives, and it has also positive influence on time [3].

ICT has the potential of becoming the major driving force behind the economic growth of any nation or organisation because of its potentially-strong restructuring impact on existing economic activities and the ability to affect economic activities in a variety of ways. These include improving the quality of existing services, creating new services, raising labour productivity, increasing capital intensity, enhancing economies of scale, and creating new economic structure, and improvement of financial performance of organizations through modernization of manner in which transactions are conducted [8].

It is however important to note that the mere availability of ICT in organisations does not necessarily lead to success. Its success can be determined after it has been

complemented with other factors of production and integrated into the system, it can then be decided whether the objective of its adoption has been realised in the organisation [3]. The primary objective of organisations is usually the foundation upon which other activities are built. The major objectives of organisations include profitability or improved financial performance [9].

To ascertain the financial performance of an organization, there are certain variables used by organizations as seen in audited financial report. These include profitability, sales turnover, return on investment, net asset, profit before tax, profit after tax and cash flow; while the non-financial ways are market share, number of employees, and the number of products. However, profitability is the most substantial criteria for financial performance of an enterprise [9]. The key standard measuring profitability of an organisation are gross profit margin, operating margin, net profit margin and net asset or shareholders fund [10].

In the summary of financial performance presented in the published annual report of major organisations, particularly quoted companies, sales turnover, operating profit, profit before tax, taxation, profit after tax, dividend, retained profit for the year, and earnings per share are the common components that organisations use in assessing their financial performance. The use of different measures in measuring financial performance, needless to say, complicates the comparison of the results of different studies. In other words, accounting measures capture only historical aspects of firm performance [11].

The use of ICT has revolutionized and transformed organizations, becoming the largest component of capital investment in many industrialized societies [12]. The decision to deploy ICT tools and devices as strategic tools for competition belongs to top management, who must have adequate understanding of the benefits accruable from such huge investment, and how it helps them to achieve organisational objectives. Studies have been carried out in time past measuring the influence of ICT on financial performance of organizations, including manufacturing companies [13; 9; 14]. It has been observed that there is still a serious debate about how ICT use improves firm performance [3], and whether investments in ICT actually bring real benefits to the organisations is still a matter of debate as seen in literature [13]. Most of the researches on the influence of ICT on financial performance were based on ratios, while little studies have been carried out on variables used by organisations in presenting their financial report such as sales, profit before and after tax, shareholders fund and earnings per share. Due to this observed gap in literature,

it therefore becomes imperative to examine how the use of ICT has influenced financial performance using variables quoted companies use in preparing their financial reports.

II. LITERATURE REVIEW

The manufacturing sector is embedded with the potential of transforming the economy of any nation. Its place in economic development can never be downplayed. In a developing nation such as Nigeria, the sector has diverse potential for development, which will invariably reduce the dependence of the economy of the country on crude oil. The major products of manufacturing companies in Nigeria include beverage, footwear, chemical and pharmaceutical products, wood and wood products, and non-metallic products [15]. Over 60% of the major manufacturing companies in Nigeria are operating around Lagos State. These companies operate either as a Micro Enterprises, Small and Medium Scale Enterprises or large organisations.

The manufacturing sector in Nigeria has shown strong growth in recent years. Nonetheless, the sector faces on-going challenges, including an increasing cost of production emanated from high tariff, inadequate electricity supply and increased cost of energy input, insufficient working capital, insecurity of lives and properties, reliance on poor and inadequate public sector infrastructures and rising cost of import, non-implementation of government policies, and heavy dependency on agricultural inputs, which themselves are vulnerable to shocks [16].

Nigerian Stock Exchange

The Nigerian Stock Exchange (NSE) was established in 1960 as the Lagos Stock Exchange. It however became the Nigerian Stock Exchange in December, 1977. At present, the NSE has 13 branches in major cities in Nigeria. These branches are located at Abeokuta, Abuja, Bauchi, Benin, Ibadan, Ilorin, Kaduna, Kano, Onitsha, Owerri, Port-Harcourt, Uyo and Yola. The NSE started operations in Lagos with 19 securities listed for trading; this figure as of date has risen to 382 securities, which is made up of 154 bonds, 53 memorandum listing, 166 equities, 9 Exchange Trade Funds, all with a total market capitalization above ₦28 trillion as at January 2020. Most of the listed securities have foreign/multinational affiliations and represents cross-section of the economy; the various sections in NSE are Consumer goods, Industrial goods, Agriculture, ICT, Healthcare/Pharmaceutical, Conglomerates, Natural resources, Financial services, Manufacturing, Services, Oil and Gas, and Service sectors. Majority of these companies are located in Lagos State, Nigeria.

Measures of Financial Performance

Financial performance presented in the financial statements prepared periodically by companies is meant to provide users reliable information about the company's performance and financial position [17]. Although measuring financial performance is considered a simpler task, it also has its specific complications. In measuring financial performance of organisations, many researchers use market measures, others put forth accounting measures and some adopt both of these [11]. Broadly, financial performance of an entity can be measured in two ways, financial and non-financial. The two measures which represent different perspectives of how to evaluate a firm's financial performance, have different theoretical implications [18] and each are subject to particular biases [11].

The financial indicators of financial performance of an organisation include profitability, sales turnover, return on investment, shareholders fund/net asset, profit before tax, profit after tax and cash flow; while the non-financial ways are market share, number of employees, and the number of products. Standard measuring profitability of an organisation are gross profit margin, operating margin, net profit margin and net asset or shareholders fund [10]. In the summary of financial performance presented in the published annual report of organisations, Sales turnover, Operating Profit, Profit before taxation, taxation, Profit after taxation, Dividend, Retained profit for the year, and Earnings per share are the common components that organisations use in assessing their financial performance. The use of different measures in measuring financial performance, needless to say, complicates the comparison of the results of different studies. In other words, accounting measures capture only historical aspects of firm performance. They are subject, moreover, to bias from managerial manipulation and differences in accounting procedures. Market measures are forward looking and focus on market performance. But the stock-market-based measures of performance also yield obstacles. The use of market measures suggests that an investor's valuation of firm's performance is a proper performance measure [11]. Studies on financial performance of organisations have been mostly based on ratios, with little studies focusing on measures used by organisations in their financial summary report.

Review of Previous Studies

Many researchers have conducted studies in times past, measuring the impact of ICT on organisational performance; some of which are reviewed in this study. While some research works concluded that ICT does not make a significant contribution to performance of manufacturing industry, others posited that the contribution is significant.

In an earlier study, Adewoye and Akanbi conducted a study aimed at evaluating the effects of ICT investment on the profitability of sachet water companies in Oyo State, Nigeria. The study concluded that ICT investment had positive effects on the profitability of selected sachet water companies in Nigeria. Ayatse carried out a study on the Impact of ICT on corporate performance on the cement manufacturing firms in Nigeria. Data for the study was obtained strictly from employees of the 6 cement firms, and he found out that ICT has positively contributed to corporate performance of the firms studied [12]. Sam and Hoshino carried out a study to compare the performance of ICT industry between ASEAN and Japan by analysing sales growth ratio and profitability by using financial database and the linkage between these outputs with either Sales Maximization or Profit Maximization model. The findings revealed that Japan and ASEAN had no significant difference with each other in their sales growth performance. Meanwhile, ASEAN shows better performance in profitability when compared with Japan's ICT industry [9].

Razavizade and Jafari also conducted a research to investigate the Impact of IT on Profitability, Productivity and Customer Satisfaction in Manufacturing Firms in Iran. The result showed that investment in information system is contributing towards increased market share, reducing operating cost, improved customer services and assisting the firms in introducing new products and services. Generally, the adoption of ICT by organizations is for the purpose of enhancing their business processes, competitiveness and performance [14]. The use of ICT has the potential of significantly influencing the quality and quantity of production of its goods or services [19]. ICT also has the potential to be a major driving force behind the economic growth of any nation or organization because of its potentially strong restructuring impact on existing economic activities and the ability to affect economic activity in variety of ways. These include improving the quality of existing services, creating new services, raising labor productivity, increasing capital intensity, enhancing economics of scale, and creating new economic structure [20], contributing significantly to effectiveness, quality of service rendered to customers, and customer of satisfaction in manufacturing companies [21].

The use of ICT has a significant positive correlation, as well as a strong causal relationship on the financial performance of organisations; this implies that a marginal change in the level of the investment and adoption of ICT will result to a proportionate increase in the profit level of organisations as it positively affects customer satisfaction [22]. Increased ICT expenditure can also improve the net profit, but not performance ratio such as Return on Asset

(ROA), and Return on Equity (ROE), especially in firms with decreased vertical integration and higher diversification [9]. The use of ICT is also contributing towards increased market share and reducing operating cost of manufacturing firms in Iran [14]; adoption and use of ICT is also affecting Return on Equity (ROE) and Return on Capital Employed (ROCE) positively which further justifies positive impact of ICT investment on company profitability [13]. In addition to impacting financial performance, the use of ICT (hardware and software components) has also been found to positively impact the productivity of organizations [23].

III. RESEARCH METHODOLOGY

This study adopted a survey research approach. The population of this study comprises all manufacturing companies quoted in the Nigeria Stock Exchange (NSE) in Lagos State, where majority of the quoted companies in Nigeria are situated. Total enumeration sampling technique was used to select all the 44 manufacturing companies in Lagos State listed in the NSE, however, of the 44 administered questionnaires, only 31 were returned, and were subsequently analyzed. It is imperative to note that majority of the quoted manufacturing companies in Nigeria are in Lagos State, Nigeria, the result presented in this study therefore is a reflection of what operates in Nigeria. The sectors and products of these companies are presented in Table 1a.

The 31 quoted manufacturing companies with complete data, both primary and secondary, whose data were available for analysis are presented in Table 1b.

To achieve the research objectives, both primary and secondary sources of data were employed. Primary data was collected questionnaire and interview. Heads of the ICT departments were interviewed, however, in an organisation with no ICT department; the head of the Accounts Department was interviewed. Secondary data was sourced from the published annual report of these companies. Data collected from the questionnaire was analysed, using a calculating device. Using this device, Pearson Correlation, Paired Sample T-Test and Linear Regression Analysis were used to test the hypotheses at 0.05 level of significance.

Data from interviews were analysed by transcribing and grouping similar responses. Ten (10) years financial data were used, 5 years for ICT pre-adoption years, and another 5 years to represent ICT post adoption period. Critical analysis was done on the accounting report to extract information on the sales turnover, profit before and after tax, net asset and earnings per share. Data

collected from the questionnaire were analysed using descriptive statistics, Pearson Correlation, Paired Sample T-Test and Linear Regression Analysis; while data from interviews were analysed by transcribing and grouping similar responses.

IV. RESULT

Organisational Characteristics

In all, 44 quoted manufacturing companies were to be sampled; however complete data were available for 31 of these companies. Therefore, data analysed was for 31 companies that returned the questionnaire administered on them. Table 2 below presents the frequency distribution of the quoted manufacturing companies from which data was collected in this study through questionnaire.

Majority of the companies (71.0%) in this study have been in business for over 50 years, while 16.1% and 12.9% have been in business for 10-20 years and 30-50 years respectively. Result also shows that majority of the companies (71.0%) have been listed from a period of 30 to 50 years, while the minority group covered in this study (3.2%) have been listed in the Nigerian Stock Exchange between one and five years. In addition, majority of the companies (35.5%) have between 201 and 300 employees, followed by 22.6% of the companies with employees ranging from 501 to 1,000; while 19.4% of the employees have between 100 and 200 employees.

Existence of a fully computerized information system During the interview conducted in this study, all the companies interviewed all agreed that they use ICT in all departments; however, it was discovered that the level of computerization of information system differs. All the organisations have functional IT department expect one. According to a respondent,

“Yes we have a fully computerized system. However, we upgrade our system as the need arises or a better technology is available”.

Another respondent asserted that:

“We don’t have IT department in our company, because the management does not value ICT. All our IT functions have been contracted to a company that comes in whenever we need them”.

Year of ICT Adoption

All the manufacturing companies in Nigeria have been using ICT at various levels since incorporation. Some of

the companies have been using ICT in production, accounting human resource and general administration as far back as 1976, especially the multinational corporations. However, the use of ICT did not cover customer service delivery in all the companies until when mobile telecommunication was introduced into Nigeria in 2001. One of the respondents said that:

“The use of ICT in production date back to 1976, all we do as an organisation is to update our program”.

Another respondent also stated that:

“Since the establishment of this company over 10 years ago, we have been using ICT, just that we have been updating it to modern technology over the years”.

Major policies or organisational restructuring since the adoption of ICT

The major policy in all the manufacturing companies based on the responses obtained during the interview was the decision of the board of directors to increase share capital of the company at various times since ICT was adopted. The major restructuring in the companies was the acquisition and merger; also, some organisations increased their investment in subsidiary companies.

Types of ICT Used

The types of ICT used by manufacturing companies as mentioned by the respondents in the course of the interview conducted are Computer System, Server, Website, Internet, Oracle Database, High Performance Liquid Chromatography (HPLC), Accounting Software, Human Resource Software, SAGE and Enterprise Resource Planning (ERP). The head of the IT department of a company stated that:

“There are different types of ICT in use in our company. We have computer system, scanner, server, internet, HPLC, and Oracle Database”.

Influence of ICT usage on Financial Performance

Table 3 presents the result of responses on the influence of ICT use on the financial performance of the manufacturing companies examined in this study.

Responses obtained on the influence of ICT use on financial performance indicated that the use of ICT promotes openness, transparency, and accountability in the organisations (96.8%) and has also reduced the time spent in preparing financial statements (96.8%); the use of

ICT has also led to an increase in sales turnover (96.8%), reduced production cost (84%), reduced administration cost (87.2%), reduced marketing cost (96.8%) and reduced distribution cost (90.4%). More responses on influence of ICT use on financial performance revealed that the use of ICT can be linked to increased market share (61.6%) and has also increased net asset (61.6%); respondents in this study were also of the view that the use of ICT has brought about increase in profit (90.4%). This was further buttressed by one of the respondents who said that:

“ICT is used in determining the pay of an employee automatically as the system has been used over time to capture the necessary data required for computation. Also, the use of ICT has made computation easy and financial statement is prepared faster than in a manual system”.

Benefit of ICT to Organisation

All the respondents during the interview agreed that ICT use has been beneficial to their companies. Some of the benefits they feel they enjoy are – reduction in number of workers which results in reduction in cost to the organisation. They are also of the opinion that the use of ICT has increased the productivity and sales of their organisations. According to one of the respondents:

“ICT has really been beneficial to us in this organisation, because with the use of tracker, we can monitor our trucks all over the country, and this has helped us reduce the cases of accidents and diversion of our company’s product.”

Another respondent also said that with the use of ICT:

“...reports can be generated with just one click”.

Test of Hypotheses

Hypothesis One

H₀: There is no significant relationship between Investments in ICT and Financial Performance of Manufacturing Companies in Nigeria

H₁: There is significant relationship between Investments in ICT and Financial Performance of Manufacturing Companies in Nigeria

Table 4 presents the result of the correlation of Investment in ICT and Financial Performance of

Manufacturing Companies in Lagos State. The variables used in measuring financial performance are Sales Turnover, Profit before Tax, Profit after Tax, Net Asset and Earnings per share.

The result presented in table 4 shows the relationship between investment in ICT and financial performance, and it reveals that of the five variables used in measuring financial performance, Profit before Tax (0.485) has the highest relationship with investment in ICT, followed by profit after tax (0.439), shareholders fund/net asset (0.434), sales (0.423) and earnings per share (0.018). The result further shows that investment in ICT has significant relationship with profit before tax, profit after tax and shareholders fund; while the relationship is insignificant with sales and earnings per share.

Hypothesis Two

H_0 : There is no significant difference in the pre and post ICT investment financial performance of manufacturing companies in Nigeria

H_1 : There is significant difference in the pre and post ICT investment financial performance of manufacturing companies in Nigeria

In testing this hypothesis, Paired Sample T-Test was used to determine the existence of any significant difference in the use of ICT and financial performance of manufacturing companies or not. This result of this analysis is presented in Table 4. Sales turnover, profit before tax, profit after tax, net asset and earnings per share were used as indicators of financial performance of the manufacturing companies. Sales, profit before tax (PBT), profit after tax (PAT), shareholders fund (SHF) and earnings per share (EPS) before represents the average figure for 1998-2002, while Sales, PBT, PAT, SHF and EPS after represents the average figure for 2003-2007.

The result presented in Table 5 signifies that there is statistic evidence to suggest that the use of ICT has brought about a significant difference in the sales turnover, profit before tax, profit after tax and net asset/shareholders fund. However, the use of ICT has not brought about any significant difference in the earnings per share of the manufacturing companies.

Hypothesis Three

H_0 : There is no significant relationship between the influence of ICT use on financial performance and organisational productivity of manufacturing companies in Nigeria

H_1 : There is no significant relationship between the influence of ICT use on financial performance and organisational productivity of manufacturing companies in Nigeria

Using secondary data, the study also examined the relationship between the financial performance and productivity of manufacturing companies, the result is presented in Table 5. Financial performance is measured in terms of Sales Turnover, Profit before Tax (PBT), Profit after Tax (PAT), Shareholders Fund (SHF) and Earnings per share (EPS).

Result as presented in Table 6 reveals the existence of negative and insignificant relationships between organisational productivity and sales, PBT, PAT, shareholders fund, as well as EPS.

V. DISCUSSION OF FINDINGS

ICT Use and Financial Performance

Outcome of data collected via questionnaire and interview which was based on the perception of employees indicated that the use of ICT has influenced the financial performance of manufacturing companies in Lagos State, Nigeria. The existence of positive relationship between investment in ICT and financial performance, represented by Sales Turnover, PBT, PAT, SHF and EPS, as found in this study supported some findings from earlier studies; however, the relationship is only significant for PBT, PAT and SHF. This is quite similar to the finding in some previous studies where it was reported that investment in ICT has been impactful on financial performance of organizations. It can therefore be seen that investment in ICT and its use positively affects the financial performance of manufacturing companies [24, 25]. The level of investment and use of ICT will determine the financial performance of these companies.

Furthermore, finding reveals that the use of ICT has brought about a significant difference in the financial performance of manufacturing companies. A comparison of pre and post ICT investment and use on the financial performance of manufacturing companies in Lagos State Nigeria revealed that the use of ICT has brought about a significant difference in the Sales, PBT, PAT and SHF. It was however found out that, the use of ICT has no significant relationship with EPS of manufacturing companies, which is a key variable relied upon by investors in determining the financial soundness of the firm [26]. This can be caused by increase in the number of shares of these companies, because EPS increases when profit increases or when there is reduction in number of

shares. However, when there is increase in the profit and increase in number of shares, the EPS will most likely reduce.

The use of ICT brings about increase in sales turnover; which has a multiplier effect on capital base and asset value of the organisation [27]. However, to achieve the expected impact from investment in ICT, organizations need a strong commitment from stakeholder groups [28]; when firm financial performance is measured by returns on assets (ROA), returns on investments (ROI) and returns on sales (ROS), the results show that “stakeholder orientation” impact positively in the relation between ICT and financial performance.

Organisational Productivity and Financial Performance

Analysis of secondary data to determine organizational productivity was computed using Solow’s growth accounting technique. Growth accounting is a technique used in measuring the contribution of the different factors of production to total productivity of an organization through the decomposition of total productivity according to the various factors of production. These factors of production as examined in this study are labor, fixed assets and investment in ICT [29]. The examination of the relationship of the relationship between organizational productivity and financial performance (measured by Sales, PBT, PAT, SHF and EPS) reveals that there is negative and insignificant relationship between productivity and financial performance of manufacturing companies.

This implies that productivity of the quoted manufacturing companies has no relationship with financial performance. This finding is supported by the finding of a previous study that measured the total factor productivity by Fisher index of productivity, and financial performance by three profitability ratios: return on equity, return on assets and return on sales [30]. The study found that productivity and financial performance do not necessarily move in the same direction, even though ICT usage has significant impact on organizational productivity [23]. Organizations can be productive and yet have poor financial performance.

V. CONCLUSION

The influence of ICT use on financial performance of firms has been discussed extensively in literature. In addition to existing knowledge, the outcome of this study has provided empirical evidence on the existence of significant relationship between investment in ICT and

PBT, PAT and SHF/Net Asset. Also, it was discovered that the use of ICT has brought about significant difference in the pre and post Sales Turnover, PBT, PAT and Net Asset. The use of ICT not being felt on EPS could be caused by the increase in the number of shares of the manufacturing companies.

The use of ICT by manufacturing companies has also affected productivity. Productivity computed using growth accounting method revealed that the use of ICT has positively and significantly contributed to productivity of manufacturing companies. Although the use of ICT has significantly affected financial performance and productivity, however, evidence from productivity computed using total factor productivity shows that there is negative and insignificant relationship between organizational productivity and financial performance of manufacturing companies. The outcome of this study has indicated that manufacturing companies can use ICT to influence productivity of the organizations, which invariably translate to improved financial performance.

Research Implications

Based on the outcome of this study, it is recommended that manufacturing companies should improve on their use of ICT particularly in dealing with customers; this will help to improve their financial performance, particularly sales, as ICT use currently has no significant relationship with sales of manufacturing organizations.

Future Work

It is recommended that future studies can be conducted using other financial variables and more financial data to determine the effect of ICT use on pre ICT adoption and post ICT adoption of quoted manufacturing companies in Nigeria.

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Table 1a: List of Quoted Companies with Head Office in Lagos State, Nigeria

	Sector	Number of Companies	Products
1	Agriculture	1	Animal feeds
2	Conglomerates	5	Consumer food pastry and bakery; printer ink; industrial chemicals; food and beverage; animal feeds and other edibles
3	Consumer Goods	20	Food and beverage; confectionaries; flour; sugar; salt; alcoholic and non-alcoholic drinks; beauty and personal care, skin care, baby and bath products, fragrances, cleaning agents, oral, skin, and health care; enamelware products; mattress; tyre and rubber; tooth brush, air freshener, sparkle furniture polish, and insecticide
4	Pharmaceutical	6	Pharmaceutical Products
5	Industrial Goods	9	Cement; aluminium; ropes; paints and coatings; steel drum and plastic container
6	Natural Resources	3	Aluminium; school and office furniture, and large scale printer; and gas cylinders, turnkey industrial plants

Table 1b: List of Quoted Companies and their Average Turnover

S/N	Company	Average Turnover ₦'000
1.	7up Bottling Company Plc.	19,177,400
2.	Nigerian Breweries Plc.	82,954,094
3.	Guinness Nigeria Plc.	49,619,355
4.	PZ Cussons Nigeria Plc.	39,520,569
5.	Cadbury	22,267,033
6.	Nestle Nigeria Plc.	33,975,845
7.	UACN Plc.	27,727,367
8.	Unilever	29,041,425
9.	U.T.C. Nigeria Plc.	1,362,979
10.	A.G. LEVENTIS	8,070,700
11.	CHELLARAMS	5,834,556
12.	IPWA	812,673
13.	Berger Paints	2,045,453
14.	DN Meyer	1,543,332
15.	CAP Plc.	6,575,258
16.	Portland Paints & Products Nigeria Plc	1,879,250
17.	FAN	7,349,525
18.	Flour Mills Nigeria Plc.	70,971,846
19.	GSK Pharmaceuticals	8,343,203
20.	May & Baker	3,358,285
21.	NEIMETH	1,186,433
22.	FIDSON Healthcare Plc.	14, 200,909
23.	VITAFOAM	4,254,794
24.	VONO Products	598,058
25.	NASCON	1,257,998
26.	ROKANA Industries Plc.	
27.	Honeywell Flour Mills Plc	34,575,450
28.	Dangote Flour	39,775,000
29.	Livestock Feeds Plc.	6,434,018
30.	Aluminium Manufacturing Company Plc	6,878,470
31.	Nigerian Enamelware Plc.	2,479,325

Table 2: Frequency Distribution of Organisational Characteristics

Variable	Range	Frequency	Percentage (%)
Age of business since incorporation	10 – 20 years	5	16.1
	30 - 50 years	4	12.9
	Above 50 years	22	71.0
	Total	31	100
Year of listing on the Nigerian Stock Exchange	1 – 5 years	1	3.2
	6 - 10 years	3	9.7
	11- 20 years	3	9.7
	30-50 years	22	71.0
	Above 50 years	2	6.4
	Total	31	100
Number of Employees in Lagos State	100 – 200	6	19.4
	201 – 300	11	35.5
	301 – 500	5	16.1
	501 – 1000	7	22.6
	1001 & above	2	6.4
	Total	31	100

Table 3: Influence of ICT Use on Financial Performance

Variable	Agreed	Undecided	Disagreed	Total
ICT promotes openness, transparency and accountability	30(96.8%)	1(3.2%)	Nil	31(100%)
ICT use has reduced the time spent in preparing financial statements	30(96.8%)	1(3.2%)	Nil	31(100%)
The use of ICT has increased sales turnover	30(96.8%)	1(3.2%)	Nil	31(100%)
The use of ICT has brought about reduction in production cost	26(84.0%)	3(9.6%)	2(6.4%)	31(100%)
The use of ICT has brought about reduction in administration cost	27(87.2%)	2(6.4%)	2(6.4%)	31(100%)
The use of ICT has reduced marketing cost	30(96.8%)	1(3.2%)	Nil	31(100%)
The use of ICT has reduced distribution cost	28(90.4%)	1(3.2%)	2(6.4%)	31(100%)
The use of ICT has increased the market share price	19(61.6%)	6(19.2%)	6(19.2%)	31(100%)
The use of ICT has brought about increase in net asset	19(61.6%)	4(12.8%)	8(25.6%)	31(100%)
The use of ICT has brought about increase in organisational profit	28(90.4%)	1(3.2%)	2(6.4%)	31(100%)

Table 4: Correlation of Investment in ICT and Financial Performance

		Investment in ICT
Sales	Pearson Correlation	.423
	Sig. (2-tailed)	.056
Profit before Tax	Pearson Correlation	.485*
	Sig. (2-tailed)	.026
Profit after Tax	Pearson Correlation	.439*
	Sig. (2-tailed)	.046
Shareholders Fund/Net Asset	Pearson Correlation	.434*
	Sig. (2-tailed)	.049
Earnings per Share	Pearson Correlation	.018
	Sig. (2-tailed)	.938

Table 5: Regression Analysis of Pre and Post ICT Investment Financial Performance

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Sales Before-Sales After	-8875763.7	11552576	2408878.6	-13871472	3880055.2	3.685	22	0.001
PBT Before-PBT After	-1347819	2276361	474654.1	-2332192	-363447	-2.84	22	0.01
PAT Before-PAT After	-718566	1266812	264148.6	-1266376	-170755	-2.72	22	0.012
SHF Before – SHF After	-2294427	2944521	613975.1	-3567734	-1021121	3.737	22	0.001
EPS Before – EPS After	-21.24739	105.40889	21.97927	-66.82961	24.33483	-.967	22	.344

Table 6: Correlation of Financial Performance and Organizational Productivity

		Organizational Productivity
Sales	Pearson Correlation	-.258
	Sig. (2-tailed)	.334
PBT	Pearson Correlation	-.262
	Sig. (2-tailed)	.327
PAT	Pearson Correlation	-.342
	Sig. (2-tailed)	.194
SHF	Pearson Correlation	-.349
	Sig. (2-tailed)	.186
EPS	Pearson Correlation	-.370
	Sig. (2-tailed)	.158