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Enterprise Resource Planning and Organisational Performance in the Nigerian Banking Industry

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ABSTRACT

This study examined the effect of Enterprise Resource Planning (ERP) on organisational performance in the Nigerian banking industry. *The study adopted a descriptive survey research design.* Access Bank Plc and Guarantee Trust Bank Plc *in Lagos State were purposively selected from the industry, and the study population include 755 employees of the two banks. Purposive sampling technique was used to gather information from two hundred and sixty-one (261) employees of the organisations and questionnaire served as data collection tool. Descriptive statistic such as the mean, frequency distribution, and percentage of data collected to analyse data collected, whereas, structural equation modeling was employed to test hypotheses. Result of the study showed that human resource planning has a significant and positive effect on productivity and financial performance. Specifically, information technology has a significant and positive effect on productivity, quality planning has a significant and positive effect on productivity and financial performance, and productivity does not mediate the relationship between ERP system and financial performance. The research recommends that enterprise resource planning system should be considered an important tool for improving organisational performance, as it produces organisational synergies and stimulate development of highly efficient procedures that are critical to organisational success.*

Keywords: Banking Industry, Enterprise Resource Planning, Firm Performance, Human Resource Planning, Information Technology, Quality Planning

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1. INTRODUCTION

Globalisation has increased the demand for businesses to shift quickly by extending markets, raising customer requirements, as well as increasing competition. Enterprise Resource Planning (ERP) systems have made a substantial contribution to an organisation's effectiveness in today's highly competitive business climate and the emergence of skilled professionals. They have evolved into a crucial tool in today's commercial environment, without which the vast majority of companies would cease to exist (Nawaz & Channakeshavalu, 2013). The corporate world has fully transitioned from the industrial to the informational era, and the premise for organisational rivalry has switched from physical assets to intangible information (Perri, Mbreshtani & Maloku, 2014). As a result, business executives need a unified system that can handle all of their business activities and meet global criteria (Tapang, & Azubike, 2018).

ERP systems are the main backbone of information systems that help a company flourish in today's economic environment. ERPs are used by businesses to get visibility into company operations and to be prepared to play a significant role in turbulent environments. ERPs are business systems that bring all of the data from a firm's business operations and functional departments together. ERP systems allow a corporation to create one (logical) database, common graphical user interface, and integrated application for managing its information and transactions by integrating functional areas within the corporate organisation (Candra, 2012). The successful application of enterprise resource planning systems produces organisational synergies, which stimulate the development of highly efficient procedures that are critical to a company's success. ERP system's application has gained a foothold in all types of businesses and at all levels of corporate structure (Misita, Lapcevic & Tadic, 2016).

ERP is one of the most prominent concepts in modern business, as results of its studies revealed that it is responsible for 30% of the changes in companies today in terms of daily system operations and decision-making speed. The majority of studies have found that using an ERP system in a company helps to increase workflow compatibility, performance, and forecasting of new business activities in various marketplaces (Al-Nimer, Omush & Almasarwah, 2017). ERP systems encourage precise and dependable information webs by ensuring active and cohesive application systems. Implementing ERP system has numerous benefits, including streamlining various processes and workflows, increases efficiency and productivity, data storage and sharing, better tracking and forecasting, and improve customer satisfaction, to mention but a few (Chauhan, & Singh, 2017). ERP systems are being utilised by numerous businesses as part of their corporate goals, making its deployment one of the fastest-growing functional tools in the information technology industry.

Many techniques for ERP deployment exist, and they may differ from one firm to the other based on the capabilities and requirements of the organisation. Organisations will save money and reduce the time it takes to finish a business development and make routine operations' decision-making easier by using this technique. However, resources must be dedicated, and implementation cost and duration should be reasonable and not excessive (Ahmad, Ibrahim & Garba, 2015).

Furthermore, existing researches are yet to concluded on the causes of ERP systems' deployment failure. International experiences differ across countries, and there has yet to be identified common denominator of failed implementations (Misita *et al.,* 2016). Even though much have been written about how ERP installation leads to more effective, efficient, and adaptable business processes, the impact of these improved processes on organisational performance has not been thoroughly examined by past studies. moreover, existing literature showed that majority of ERP studies in developing nations are concentrated in Asia and the Middle East, with only a relatively small fraction focusing on Africa, specifically, Nigeria. In addition, only relatively few studies had been conducted on ERP systems in the service industry in Nigeria, thus, additional study is desired to assess the effect of ERP systems on commercial bank performance in emerging economies like Nigeria. Also, the dearth of studies on ERP system and its effect on performance of banks in Nigeria has created a gap for this study. Therefore, this study attempt to examine the effect of ERP system on the financial and operational performance of Nigeria Banking Industry.

The drive of the research is to establish associations between ERP and organisational performance with focus on the banking industry in Nigeria. To achieve this, specific objectives were to examine how productivity and financial performance reacts to human resources planning; determine the relationship between information technology and productivity; establish the effect of quality planning on productivity and financial performance; assess the indirect outcome of ERP systems on financial performance through productivity.

2. LITERATURE REVIEW

2.1 Conceptual Review

Enterprise Resource Planning

Enterprise resource planning is a system that allows businesses to manage and organise the most important aspects of their operations. ERP solutions have changed over time, and are now web-based software that users could use from anywhere. An ERP system may be unproductive if it is not strictly enforced by a company (Labaree, 2020). ERP is a technique of dealing with company's procedures using a unified approach that is largely software. Literature has emphasised the worth of an ERP system, specifically, its place as software that integrates and controls the echelons of management in a company through a solitary system. An ERP system may also connect top, middle, and lower-level management, allowing all layers of management and their divisions (such as human resources, quality control, finance, marketing, and logistics) to work together through an integrated system (Aremu, Shahzad, & Hassan 2015),

Human Resource Planning

The goal of Human Resource Planning (HRP) is to offer staff to meet customer needs, while attempting to predict the organisation's future. It is a process that assurances that an organisation's human resource needs are identified and that plans and procedures are created to meet those requirements. Transforming the organisation's strategies and objectives into a scheduled personnel needs is the problem that HRP faces on a global scale (Dimba, 2013). Due to the current state of business, a company's ability to hire the best workers who can satisfy its unique demands and align with its organisational vision and objectives is essential to its success. HRP is necessary because managers too frequently choose the incorrect candidates, which results in poor employee performance and subsequently poor business performance.

Information Technology

Production, maintenance, application systems, and networks are all included by the umbrella term Information Technology (IT). IT is used for data processing and delivery. Data refers to facts, figures, statistics and other information that have been compiled for use, storage, or analysis. Businesses rely on IT to save costs and automated processes to improve employees' performance. IT is a crucial facilitator for achieving strategic flexibility. Bharadwaj, Sawy, Pavlou, and Venkatraman (2013) state that IT fosters business models for enterprises to supports or modifies policies, and improve the connections among businesses, partners and clients. It provides businesses with better analytical, information management, and empowering skills as well as advance computing capability, empowering them to develop into new markets and implement innovative business strategies. Imudeen and Bao (2018) argue that effective IT management improves Financial Performance (FP) by restructuring operational procedures, letting down development costs, organising units, controlling IT properties, and conveying IT resources on timely.

Quality Planning

Quality planning is a crucial component of management philosophy. It enhances the quality of processes/products to achieve clients' satisfaction. Planning for quality guarantees that a given set of quality requirements are met by a given product or service and that it satisfies consumers' needs (Oloo, 2017). There are a number of ways to look at service quality. However, when seen from the standpoint of the consumer, service quality refers to the ability to distinguish between anticipated and perceived quality, identify the dimensions of quality, and gauge customer satisfaction. The establishment of a quality management system by the provider is to make sure that the needs of the client are recognised and taken into account, while designing and delivering the service.

Organisational Performance

Organisational performance is the capacity and aptitude of an organisation to effectively utilise the existing resources to accomplish goals following the company's established objectives, while also taking into account their relevance to its clients (Taouab & Issor, 2019). The outcomes of a firm's management actions are used by the company as a standard criterion to evaluating the success of its management. The company's performance measuring system is expanding, and it now comprises both qualitative and quantitative measures. According to Al-Shboul, Al-Shboul, Barber, Garza-Reyes, Kumar, and Abdi (2017), market and financial performance are indicators of performance. Financial performance is judged by ROI, the company's capacity to grow ROI, the profit margin, and the company's attractiveness at the moment. Market share increase,

sales growth, and other competitiveness advances are used to measure market performance in comparison. The ability of a corporation to gain market share, increase market share, and increase sales are all used to evaluate its market performance.

2.2 Review of Related Theories

2.2.1 System Theory

System theory was popularised in the early 1950s by Ludwig von Bertalanffy. The idea was the groundwork for what is today known as systems theory. The theory allows for an understanding of the connections amongst parts of an organisation and how they depend and interact with one another towards goals accomplishment. Systems theory of organisation emphasises that organisations are composed of many sub-systems that are not necessarily related to one another and yet work together to form the whole. In business, a system is referred to a cohesive collection of resources, activities and information toward common goals accomplishment.

Furthermore, ERP system allows managers and other decision-makers to look at things like organisational change and organisational development from a broader perspective. Looking at the big picture instead of looking just at the separate roles and facets of an organisation can be an appreciated tool for those who want to make changes in an organisation. System approach to organisational management helps managers to account for the interdependency amongst parts of an organisation towards attainment of collective goals. Systems theory of management emphasises that an organisation is a single unified system of interrelated fragments or subsystems. Therefore, if challenges are present that unpleasantly affect one sub-system in an organisation, it will adversely affect other sub-systems. This also affect the organisation as a whole. This requires wholistic approach to organisational problem-solving or decision-making.

An ERP system allows departments, sub-units or sub-system of an organisation such as human resource, quality control, finance, marketing, and logistics, information sub-unit and others to work together through an integrated system towards goal accomplishment. Furthermore, ERP system unifies organisational activities; human resource planning, product quality planning, and information management towards effective goal attainment.

2.2.2 Cybernetic Approach Theory

According to Hatch and Cunliffe (2006), cybernetic theory adopts a system perspective, which asserts that if goals and standards are defined, feedback mechanisms are built to compare performance to objectives (performance measures and performance assessment systems), and changes are made based on the results, individual and organisational goals can be matched. The cybernetic theory is a dynamic information processing theory that can process relevant data by investigating the underlying principles for system control and regulation, and the important aspects of the system, to effectively manage technology in organisations (Schuh & Kramer, 2016). Cybernetics is used to provide feedback on system work standards, measure system performance, and compare the company's performance criteria.

The creation of control systems in technology management practices is linked to comprehending cybernetic theory. To thrive in its business environment, an organisation or corporation must keep up with technological changes and assure efficiency and sustainability, one of which is through the use of information technology resources. According to the cybernetic theory, for a company to adapt and thrive in its environment, decision-makers must get feedback from performance metrics. If there is not sufficient time to identify unanticipated variations, suitable action must be taken and system response observed (Vancouver, 1996). The cybernetic theory was used in this study to look at the implementation of ERP systems in an organisation. The deployment of an ERP system allows businesses to record, process, and give broad guidance for performance metrics in real-time (Markus & Robey, 1998). As a result, a good ERP system deployment may increase organisational skills such as information dissemination, product diversity, and financial flexibility.

2.3 Empirical Review

Exploring the Lahore manufacturing sector, Tayyab and Ahmad (2023) investigated the effect of top management supports on organisational performance via ERP assimilation. The study developed as well as evaluate a theoretical framework to investigate the ways enterprise's systems are integrated into companies once they are introduced. Data were acquired from 300 industrial enterprises in Lahore via questionnaire. The results of the study showed that top management support for ERP system's absorption has significant effect on organisational success. The result emphasised the importance of senior management assistance in the effective adoption and integration of ERP frameworks, as well as their favourable influence on organisational performance.

Data were provided descriptively. Questionnaire were administered randomly on Egyptian tourist company personnel. The results of the structural equation modeling showed that all of the characteristics used to assess the impact of the ERP system (represented by the system components) had a direct and indirect impact on operational performance and, as a consequence, on the quality of tourism services supplied.

Ursacescu, Popescu, State, and Smeureanu (2019) looked at the interaction between ERP systems and green IT practices to see how green IT may help businesses enhance their ERP systems to be more environmentally conscious. To that end, they conducted an empirical analysis of four Romanian economic sectors using an online poll that included criteria for determining organisational knowledge of the development of green ERP systems. The results revealed that organisations are primarily concerned with the operational benefits of ERP systems and less concerned with the long-term benefits. Tapang and Azubike (2018Moreover, Harun, Dorasamy and Ahmad (2022) employed a qualitative case research technique to understand ERP system and natural phenomenon. A semi-structured interview was used to obtain data from respondents. Result of the study indicates that end-users' assistance is crucial to the everyday functioning and deployment of an ERP system, specifically, when it is new. End-users might simply utilise an ERP system that has been efficiently developed and distributed. ERP implementation improves an organisation's capability as well as productivity.

Applying ERP system in an organisation constitutes a component of an organisation's internal business improvement plan and strategy to professionally manage a firm and enhance its competitiveness. However, in certain circumstances, deploying ERP system is regarded as a failure if the organisation does not meet up with its objectives. To this effect, Fauzi, Adnani, and Jamaludin (2022) carried out a study to ascertained if ERP system's deployment in an organisation has influence on performance of employees. Evaluative and analytic qualitative technique were used to examine the influence of ERP system adoption on firm performance in food enterprises in West Java. Result of the study showed that ERP deployment has a beneficial impact on personnel quality, work quality and quantity, knowledge, teamwork, dependency, creativity, and initiative.

Furthermore, Adejare, Arfan, and Shahizan (2020) evaluated the effects of ERP system deployment on the link between medium-sized company performance and organisational structure, communication processes, technology infrastructure support, and technological advances, which was moderated by top management support. Data were gathered from medium-sized firms in South Western Nigeria. Structural equation modeling was employed to analysed the data collected. Results showed that organisational structure, communication processes, technology infrastructural support, and technological advances impacted medium enterprises' implementation of ERP performance. The result further suggest that senior management support was key in facilitating the association between ERP system and medium organisation performance.

Through supplier integration, green supply chain management, and internal integration, Tarigan, Siagian and Jie (2021) evaluated the influence of enterprise resource planning on firm performance. Smart PLS software was used to analyse the data collected. All eight of the preset hypotheses were found to be true. Internal integration, green supply chain management, and supplier integration, all benefit from improved ERP system. Green supply chain management and business performance are influenced by internal integration. Green supply chain management and business performance are influenced by supplier integration. Green supply chain management has an impact on a company's success. Green supply chain management, internal integration, and supplier integration mitigate the influence of improved ERP on company performance, which was an intriguing discovery.

Moreover, using organisational capacities as a mediating variable, Putra, Rahayu, and Putri (2021) investigated the influence of ERP system deployment on corporate performance. SEM-PLS was used in the study's analysis and testing to examine the influence of ERP system deployment on corporate performance, using organisational skills as a mediating variable. Result showed that ERP system's adoption had a considerable favorable impact on corporate performance and organisational capacities. Organisational capability had a favorable impact on firm success as well.

Furthermore, organisational capacity was shown to have had moderate association with ERP system deployment and corporate performance. It shows that implementing ERP system creates an integrated operating system that boost organisational capacity by using existing resources and ultimately boosts firm's performance.

Pirmanta, Tarigan, and Basana (2021) used a google form link to acquire a questionnaire from Indonesia's manufacturing business, which they then circulated over social media platforms. Partial least square method was used to analyse the data from 285 manufacturing business respondents. Result of the study showed that long-term viability of ERP system has an impact on supply chain integration (internal and external). Internal integration does not affect the quality of information,

whereas external integration does. Increased business performance is influenced by supply chain integration and information quality.

In Jordan, Mohammadnour (2021) investigated the influence of the enterprise resource planning system on employee performance appraisal. It looks into the connections between information quality, service quality, user satisfaction, and performance evaluation. Results showed that information quality, system quality, and user satisfaction had a substantial impact on performance appraisal, whereas, service quality has no impact. As a result, the key advice is to improve the system's service quality and to provide users encouragement and confidence in the system's performance.

Enterprise Resource Planning system is a technology that has been utilised in businesses to assist employees in fulfilling their responsibilities. On this note, Najadi, Jannat, Ismaili, and Jabri (2021) looked into ERP system's influence on accountants' performance as well as the obstacles and hurdles that accountants in Oman encounter while utilizing it. The study utilised qualitative data, as well as within-company and cross-company analysis. The study found that ERP systems have an influence on accountants' performance and that while ERP systems may assist reduce costs and improve accountants' performance and job efficiency, they are costly to establish and require correct training and understanding.

Marsudi and Pambudi (2021) wanted to know how technological capabilities influenced the impact of ERP system deployment on operational performance. Secondary data from firms that have adopted ERP system in Indonesia was used in the study. By using technical competence as a moderating variable. Results of the study showed that ERP system adoption has an influence on operational performance, but that technical competency has no effect as a moderating variable on that effect. Similarly, Meiryani, Fernando, Lindawati, Siagian, and Desyanti (2021) Carried out a study on company's financial performance. Data collected were studied by associating various ratios before and after the ERP systems were applied for three years. Results revealed a productivity improvement but no gain in profitability once the ERP system was introduced. As a result, the study recommended additional at the level of ERP system deployment, because organisations may lack experience in this area.

AlMuhayfith and Shait (2020) investigated the influence of ERP system deployment on Saudi SMEs' financial and non-financial performance. The elements that contribute to the effective and successful implementation of an ERP system were identified through exploratory research. There were seven contingency variables identified in the study. Three hypotheses were formulated and evaluated in quantitative research based on the findings of the exploratory investigation. The study was conducted on 200 Saudi SMEs who have implemented ERP systems. A structural equation modeling (SEM) tool was used for data analysis and hypothesis testing. User satisfaction, management support, and training had substantial influence on ERP system utilisation. Another important conclusion was that ERP systems improve performance of SMEs. The goal of Mohamed and Farahat (2019) was to determine the link between using the enterprise resource planning system and operational performance, as well as to build a recommended framework to meet the ERP system's needs and to assess its availability inside tourist businesses) investigated the impact of enterprise resource planning system deployment on commercial banks' financial performance in Nigeria. Data for the study were acquired from both primary and secondary sources using an ex-post-facto research approach and a cross-section panel from 2008 to 2017. Results showed that implementing enterprise resource planning system has a considerable impact on financial performance as measured by return on assets, gross profit margin, and return on investment. However, Al-Nimere, Omush, and Almasarwah (2017) revealed that there was no influence on the financial performance of Jordanian banks while deploying the ERP system in terms of ROI and DPS; nonetheless, the ERP system has an influence on the banks' performances.

Research Hypotheses and Conceptual Framework

The study formulated and tested the following hypotheses:

H_1 Human resource planning has a significant effect on productivity.

H_2 Human resource planning has a significant effect on financial performance

H_3 Information technology has a significant effect on productivity.

H_4 Quality planning has significant effect on productivity.

H_5 Quality planning has significant effect on financial performance.

H_6 ERP systems have an indirect effect on financial performance through productivity.

The conceptual framework below was developed for test of hypotheses through a structural equation model.

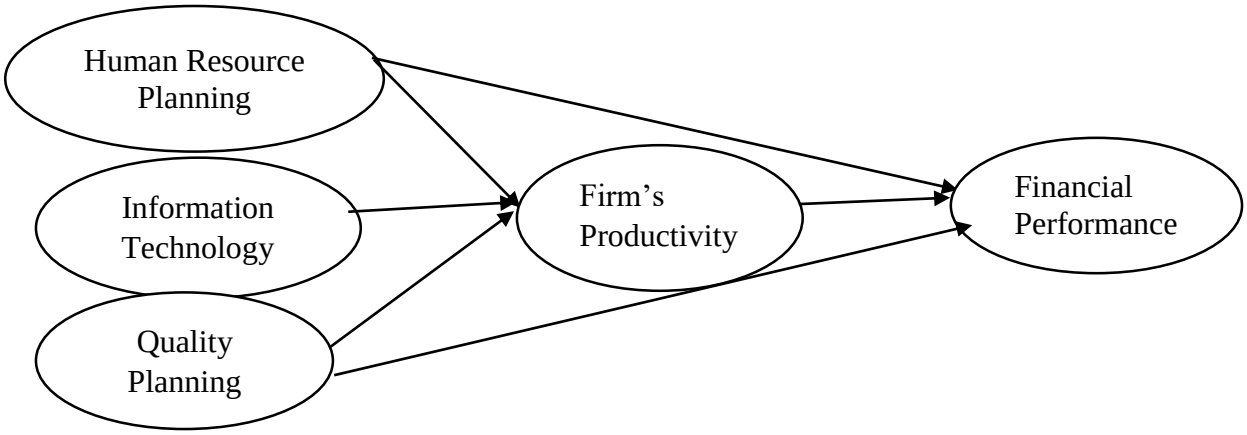

Figure 1: Conceptual framework for the study on Enterprise Resource Planning and organisational performance.

3. RESEARCH METHOD

Survey design method was deployed to examine the consequence of enterprise resource planning on organisational performance in the Nigerian Banking Industry. It is also justified in that it is an explorational study that collect data from sample of population at a point in time. Access Bank Plc and Guarantee Trust Bank Yaba, Lagos, were purposively selected from the industry and their staff were used as the sample of the study. The total number of staff of Access Bank Plc Yaba, Lagos is two hundred and five (205). The total number of staff of Guarantee Trust Bank Plc Yaba, Lagos is five hundred and fifty (550). Access Bank Plc and Guarantee Trust Bank Plc were chosen because of their competitiveness in the Nigerian banking industry and their level of implementation of ERP systems for effective operational performance. A purposive sampling method was used to select the respondents from the firms studied. Yamane (1967) sampling size method was deployed:

$$n = \frac{N}{1 + N(e)^2}$$

Such that n represents the sample statistic; N remains the population parameter, and e is the margin of allowable error of 5 percent. Thus,

$$n = \frac{755}{1 + 755(0.05)^2} \qquad n = 261$$

Hence, the study used 261 sample size.

The study utilised primary data, which were collected through a primary source with the aid of a primary tool (questionnaire). The use of a questionnaire is justified as it assures the confidentiality of the respondents, couple with the fact that it elicits honest answers. The questionnaire was made up of two parts- Section A addressed respondents' profiles such as gender, age, qualification, years of experience, department, and management cadres; Section B focused on the questions related to ERP system and performance variables. The questions in section B were structured on a Five-Point Likert Scale: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD) for ease of responses and data scrutiny.

For test validity and reliability of the instrument prior field work, the Confirmatory Factor Analytics was deployed. Both descriptive and inferential statistical approaches were used for data analysis. Software deployed were Statistical Package

for Social Sciences (SPSS-23), Analysis of Moments Structures (AMOS) Graphics version 22. To justified the effect of ERP system on organisational performance, the study's model is hereby specified:

DY = f (HRP, IT, QP) …….. eq. (i)

Above function in a linear mathematical form:

DY = β_0+ β_1 HRP + β_2 IT+ β_3QP + e…… (ii)

Where:

DY: Dependent variable represented by productivity, and financial performance.

HRP: Human Resource Planning

IT: Information Technology

QP: Quality Planning

E: Error terms

4. RESULT

Respondents' personal information was presented with the use of confirmatory factor analysis for the validity and reliability assessment as shown below:

Table 4.1 Respondents' Profiles

Gender	Frequency	%	Age Group	Frequency	%
Male	122	52.4	21-30yrs	82	35.2
Female	**111**	47.6	31-40yrs	108	46.4
Qualification			41yrs and above	43	18.4
ND/Equivalent	23	9.9	**Department**		
HND/B.Sc.	156	67.0	IT	46	19.7
MBA/MSc	54	23.2	Marketing	73	31.3
Years of service			Accounting	42	18.0
3-6yrs	66	28.3	Customer service	41	17.6
7-10yrs	142	61.0	Human resource	31	13.3
11yrs and above	25	10.7			
Managerial Cadres			**N = 233**		
Top-level Managers	53	22.8			
Middle-level Managers	118	50.6			
Lower-level Managers	62	26.6			

Source: Field Survey, 2022

Confirmatory Factor Analysis

Table 4.2 Dimension Estimation

Construct	Item	Factor Loading	Sig
Enterprise Resource Planning Systems	Human resource planning is carried out to a greater extent in my firm.	0.902	0.000
	Information technology is greatly adopted in my firm.	0.705	0.000
	Quality planning is carried out to a greater extent in my firm.	0.910	0.000
	Effective customer service is practiced to a larger extent in my firm.	0.616	0.000
Human Resource Planning	There is career planning and development in my firm.	0.723	0.000
	Employees are periodically trained for effective performance.	0.616	0.000
	My firm has a workable succession plan	0.739	0.000
	Employees are engaged in enterprise resource planning process in my firm.	0.917	0.00
	My firm make accurate forecast for the manpower needed to minimise cost of operations.	0.809	0.000
Information Technology	There is high-quality of information sharing in my firm.	0.693	0.000
	My firm uses intricate technology to track hackers.	0.757	0.000
	The information management system of my firm is effective.	0.793	0.000
	Information systems are integrated and configured in my firm.	0.799	0.000

	Quality goals and plan are integrated with the overall strategic plan in my firm.	0.797	0.600
	We carry out inspection plan to prevent deviation from set-standard.	0.854	0.000
Quality	There is continuous improvement in our service operations.	0.766	0.000
Planning	There is effective quality management system in my firm.	0.948	0.000
	Service rendered in my firm conformed to customer requirements.	0.967	0.000
	The productivity rate of my firm has increased	0.699	0.000
Productivity	The customer satisfaction rate is excellent in my firm.	0.723	0.000
	There is quick service delivery in my firm.	0.820	0.00
Financial	Our profitability level is encouraging	0.819	0.000
Performance	The cost of operations is minimized in my firm.	0.619	0.000

The instrument is valid due to the fact that the factor loading for each of the items > 0.50 and are significant.

Unidimensionality

In order to ensure Unidimensionality, the Confirmatory Factor Analysis (CFA) was used and as presented on the table 4.3 below:

Table 4.3 Dimension of fit

Fit Guides	Values	Recommendation
$\chi 2/df$	2.665	< 3
GFI	0.843	< 0,80
RMSEA	0.071	
TLI	.0.918	< 0,90
NFI	0.901	< 0,90
CFI	0.931	< 0,90

The result proved unidimensionality and acceptable which implies the content validity of the research instrument.

Table 4.4 Consistency and Convergent Soundness Test

Construct	CR	Cronbach's Alpha	AVE
Human Resource Planning	0.876	0.871	0.588
Information Technology	0.866	0.867	0.618
Quality Planning	0.929	0.930	0.727
Productivity	0.897	0.822	0.622
Financial Performance	0.781	0.711	0.519

Note: CR is composite reliability; AVE is average variance extracted

Table 4.5 Discriminant Validity

Latent Variables	HRP	IT	QP	Pro	FP
HRP	0.767				
IT	0.732	0.762			
QP	0.675	0.594	0.870		
Pro	0.089	0.351	0.245	0.749	
FP	0.041	0.442	0.354	0.034	0.726

The diagonal elements (bold) are the square root of AVE between the latent variables and the off-diagonal elements are correlations between concepts

Construct discriminant validity explains the expanse to which a concept or construct is dispersed from other constructs. Outcome in Table 3.62 revealed the association between diagonal and square root of AVE, and the results satisfied the discriminant validity threshold. The outcome of the analysis aligns with Lin and Chen (2008) who suggests that the square root of the AVE be more than association between the concepts in the model.

Test of Hypotheses

To test the stated research hypotheses, structural equation model was used in line with the path analysis conducted to ascertain the causal impact of the hidden external variables on the internal variables of this research. Acceptance cut off for

each of the hypotheses; if critical value (CR) > 1.96 and $p < 0.05$ significance level, the null hypothesis is rejected, while it is accepted if CR < 1.96 with $p > 0.05$ significance level.

Figure 1: Structural Model for ERP system and Organisational Performance

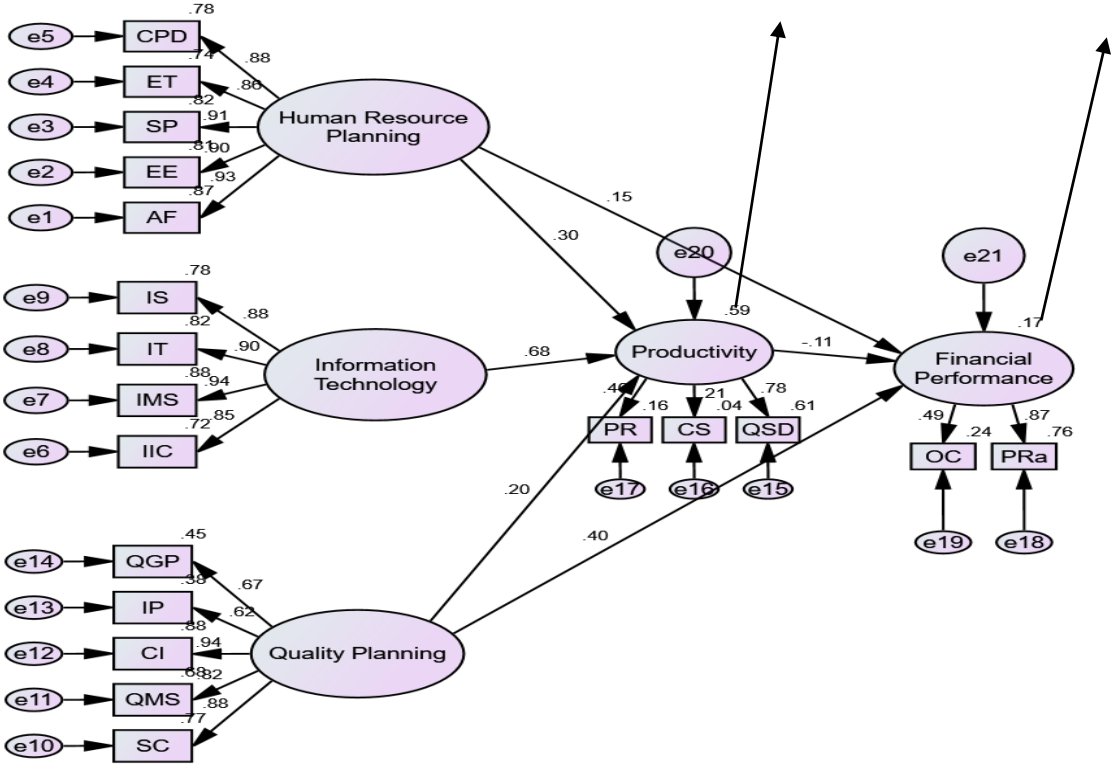

Figure 1: Structural Model for ERP system and Organisational Performance

The study utilised AMOS software to carry out the analysis for structural equation modeling to assess the relationships between the external and the internal variables in the model. The effects of external hidden concepts on internal hidden concepts were illustrated with the use of SEM. The model also illustrates the indirect effect of human resource planning, information technology, and quality planning on financial performance through productivity (mediator variable). The model's explanatory power is determined by two values: R^2 (squared multiple correlations) and path coefficient. The path coefficients demonstrate the strength of links between constructs, whereas R^2 reveals the proportion of variance an endogenous represents in the model. In the path diagram, the R^2 value for productivity is 0.59, which shows that human resource planning, information technology, and quality planning accounted for 59.0% variation in productivity. The R^2 value for financial performance is 0.17, which indicates that human resource planning, productivity, and quality planning accounted for a 17.0% variation in financial performance. The results also demonstrated that all of the measurements have substantial loadings on the constructs they correspond to.

Table 4.6 Test for model Fitness

Indices	Value	Values for fit
χ2 /DF	3.473	< 5.00
P- value	.000	< .05
N FI	.903	> .9
T LI	.914	> .9
C FI	.923	> .90
R MSEA	.051	< .08

Table 4.6, results of NFI, TLI, CFI and RMSEA showed that model for the hidden concepts satisfies the standards for measuring model's fitness. Therefore, the model is considered fit because it satisfies all the standards for measuring model's fitness.

Table 4.7 Direct effect of ERP systems on organisational performance

Model Link	Hypotheses	Path Coefficient	Critical Ratio	p-value	Results
HRP ----> Pr	H_1	0.30	2.406	0.016	Supported
HRP ----> FP	H_2	0.15	2.837	0.005	Supported
IT ----> Pr	H_3	0.68	4.966	0.000	Supported
QP ----> Pr	H_4	0.20	2.626	0.009	Supported
QP ----> FP	H_5	0.40	5.783	0.000	Supported
Pr ----> FP	H_6	-0.11	-0.665	0.506	Not Supported

Table 4.7 shows the direct effect of ERP systems on organisational performance, couple with effect of productivity on financial performance. The path coefficients reveal that HRP accounts for 30.0% variation in productivity and 15.0% variation in financial performance; Information technology accounts for 68.0% variation in productivity; Quality planning accounts for 20.0% variation in productivity and 40.0% variation in financial performance; Productivity accounts for -11.0% variation in financial performance.

Table 4.8 Indirect effect

S/N	Indirect Effect	Effect	Conclusion
1	Human resource planning **---->** Productivity **---->** Financial performance	-.074	No indirect effect
2	Information technology **---->** Productivity **---->** Financial performance	-.033	No indirect effect
3.	Quality planning **---->** Productivity **---->** Financial performance.	-.021	No indirect effect

Table 4.8 shows the indirect effect of ERP variables on financial performance through productivity as mediating variable. The result shows no indirect effect of ERP variables on financial performance through productivity. It implies that productivity does not mediate between ERP systems and financial performance.

Table 4.9 Summary

S/N	Hypotheses of the study	Path's description	Study's findings
H_1	Human resource planning has significant effect on productivity	HRP**--->** Pr	Supported
H_2	Human resource planning has significant effect on financial performance	HRP**--->** FP	Supported
H_3	Information technology has significant effect on productivity	IT **---->** Pr	Supported
H_4	Quality planning has significant effect on productivity	QP **---->** Pr	Supported
H_5	Quality planning has significant effect on financial performance	QP **---->** FP	Supported
H_6	Productivity mediates the relationship between ERP system and financial performance.	ERP system **---->**Pr **----> FP**	Not Supported

Summary of the results of hypotheses tested: H_1 is supported, thus, accepting the alternate hypothesis that human resource planning has significant effect on productivity; H_2 is supported, thus, accepting the alternate hypothesis that human resource planning has significant effect on financial performance; H_3 is supported, thus, accepting the alternate hypothesis that information technology has a significant and positive effect on productivity; H_4 is supported, thus, accepting the alternate hypothesis that quality planning has a significant and positive effect on productivity; H_5 is supported, thus, accepting the alternate hypothesis that quality planning has a significant and positive effect on financial performance; while, H_6 is not

supported, thus, accepting the null hypothesis that productivity does not mediate the relationship between ERP systems and financial performance.

Discussion of Findings

The links between ERP system and firm performance are examined in this study with focus on the banking industry in Nigeria. SEM was employed to test the hypotheses formulated to achieve objectives of the study. Results of the study agree with previous studies. As revealed in the structural model, human resource planning has significant effect on productivity and financial performance of firms studied. Results showed that human resource planning accounted for 30.0% variation in productivity and 15.0% variation in financial performance. These results indicate that the studied firms are involved in career planning and development and periodically train their employees for effective performance. A workable succession plan was also in place to boost productivity and increase the effectiveness of the studied banks in Nigeria. It further indicated that employees are actively engaged in the enterprise resource planning process which increases the ability of the banks to strengthen their competitiveness. This finding is in line with Ubah and Ibrahim (2021)'s results, which demonstrated that good human resource planning in terms of expected workforce need, recruiting, and selection will help organisations to acquire appropriate sort of people in the right quality and quantities, increase workers' knowledge, skills, abilities and retain them in the organisation. The finding also supports the findings of the study conducted by Kalu and Emerole (2017) at the national root crops research institute which found that conferences, seminars/workshops, orientation for new workers, and formal training courses are the institute's career development programs for developing the careers of its employees and that there is a high association between the institute's development programmes and the performance of its employees.

The findings further reveal that information technology has a significant and positive effect on employee and firm productivity. This is corroborated by result of the path coefficient accounted for 68.0% variation in productivity. The results indicates that an effective use of technology and an appropriate application of technology will improve staff productivity in the banking industry. Given the fierce rivalry in Nigerian banking sector. Information technology application is linked to increased staff productivity (Mutuku & Nyaribo. It is self-evident that increasing the use of technology leads to higher staff productivity. Employees use of technology, according to Rezaei, Zare, Akbarzadeh, and Zare. (2014), enhances productivity indices. Employees are more inclined to fulfill their responsibilities as a result of increased use of IT. Furthermore, IT will play a big part in human resource development as a collection of produced ideas sent to employees and companies via software processes.

Productivity and financial performance of the studied firms improved through quality planning. This is substantiated by the result of the path coefficient which reveals that quality planning accounted for 20.0% variation in productivity and 40.0% variation in financial performance. This could be that quality goals and plans were integrated with the overall strategic plan of the banks investigated to deliver quality service to customers. This indicates that the banks surveyed are committed to implementing inspection plans to prevent deviation from set standard and ensure continuous improvement in their service operations. By implication, the service delivery would conform to customer requirements and impact positively on the financial growth of the banks. This finding corroborates with the findings of Nuryani, Windia, Susrusa, and Samba 2016; Khudhair, Husseini, and Fam et al., 2019), which indicate that quality management implementation is associated with improved financial performance. The influence of quality management on financial performance is more severe in smaller enterprises, according to Bu and Cao (2015).

Finally, the findings reveal that productivity does not mediate the relationship between enterprise resource planning system (human resource planning, information technology, and quality planning) and the financial performance of banks. This implies that ERP systems have no indirect effect on financial performance through productivity. However, the EPR systems investigated results showed a direct effect on financial performance.

5. CONCLUSION

The study has been able to fill the gap on how enterprise resource planning systems affect the productivity and financial performance of banks. Based on the study's findings, it is concluded that human resource planning has a significant effect on productivity and financial performance of banks in Nigeria. Employees are actively engaged in the enterprise resource planning process, which enhances employees' productivity and increases ability of the banks to compete favourably. Information technology has a significant effect on both the employees and firms' productivity. The use of IT by banks

facilitates their operations and activities of hackers could be tracked down to guarantee the safety of customers' deposits. Similarly, quality planning has a significant effect on productivity and financial performance of banks in Nigeria. Quality goals and plans are integrated in the overall strategic plan of the banks investigated to deliver quality service to the customers.

Furthermore, that productivity does not mediate the relationship between enterprise resource planning systems and financial performance of banks in Nigeria. It implies that human resource planning, information technology, and quality planning have no indirect effect on financial performance through productivity.

In all, ERP system has a significant and positive effect on the performance of banks in Nigeria. The research shows that implementing ERP system creates an integrated operating system that may boost firms' capacities by using existing resources and ultimately, boosts their financial performance. This is in line with Marsudi and Pambudi's (2021) conclusion that ERP adoption positively affects the operational performance of firms.

5.1 Implication and Contributions to Knowledge and Limitation of the study

The implication is that management of banks will pay adequate attention to the implementation of ERP systems in their business operations to maintain their competitiveness, arising from the result of this study. ERP system's specialists can use the techniques of the ERP system examined in this study to select the best ways to deliver quality services and achieve improved productivity and profitability. This study makes practical and theoretical contributions by demonstrating how the application of the ERP system facilitates employees' productivity and financial performance of banks, including the development of a conceptual model that aids the understanding of an ERP system and Performance of banks in Nigeria. This emphasises the need for businesses to adopt ERP system and comprehend its systems such as human resource planning, information technology, and quality planning. The study also contributes to knowledge for academics and future researchers by adding to existing literature on the application of ERP systems in the Nigerian banking industries.

The study was limited to only two banks. Therefore, further studies in this area should expand the sample size, including conducting similar studies in other sectors of the Nigerian economy.

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