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THE MANAGEMENT INFORMATION SYSTEMS AND HUMAN RESOURCE PLANNING OF DEPOSIT MONEY BANKS IN RIVERS STATE, NIGERIA

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Abstract

The study examines the relationship between management information systems and human resource planning in deposit money banks in Rivers State, Nigeria. The paper adopts a correlation survey research design. The population for the study was all the deposit money banks in Rivers State which are listed in the Nigerian Stock Exchange statistical bulletin 2020 edition. However, the population was used as a sample of the study while 98 respondents were chosen to represent the (14) quoted deposit money banks. The five (5) point Likert scale was used to measure responses through structured copies of the questionnaire. The face validity of the survey instrument was achieved through the supervisor's scrutiny and approval. Data was analyzed using descriptive statistics such as mean and standard deviation and inferential statistic techniques such as Pearson Product moment correlation coefficients techniques while the partial correlation coefficients were used to test the moderating variable. The findings showed a strong relationship between

management information systems and human resource planning in the deposit money banks under study. It, therefore, concluded that information quality influences demand forecasting. System quality influences demand forecasting. The study recommends that deposit money banks under study should provide quality system when developing and or should consider system quality as a priority in using management information system in order to avoid breach of communication process between departments, managers and employees to deliver reliable services in the organization.

Keywords: Management Information System, Human Resource Planning, System quality, Information quality, Demand forecasting, Supply forecasting.

Introduction

The starring role of a management information system (MIS) is to manage information, consolidate, and repossess the data which helps the organization to deliver services quicker, and market more precise and stress-free, which affect the level of human assets performance (AL-Gharaibeh & Malkawi, 2013). Parson (2012) clearly defined a management information system as an information system that uses data collected by a transaction handling system and deploys such data into information for superiors increasing predictable business assessments in reaction to organized hitches. According to Lucey (2005) management information system is a system that translates data from internal and external sources into information and communicates that information in an appropriate form to managers at all levels in all functions to enable them to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible.

However, several empirical studies have been documented in the

literature on management information systems and human resource planning (Barksdale and Werner, 2001, Seok & Chiew, 2013). The study of **Young-harry, Oparanma and Ejo-Orusa, (2018)** *reveals that there is a positive significant relationship between the management information systems and organizational performance of Seven-Up bottling companies in Aba and Port Harcourt.* The study by Khresat, (2015) examined the relationship between MIS that involves (software, devices, and databases) and organizational human resource practices in Jordan. The outcome of the study detected that there is a statistically important relationship between MIS and organizational performance in telecommunication firms in Jordan. Furthermore, Anya, Umoh and Worlu (2017) found that human resource planning has a strong influence on industrial harmony in forecasting future demand for workforce mutually beneficial to and environment which helps to manage human resource demand as required. The study by Ndlovu, (2015) depicted the term of MIS in measuring organizational performance in government organizations. The study concluded that the function of MIS in measuring organizational performance was limited in the KwaZulu-Natal Department of Arts and Culture. Also, further studies have examined the relationships between personal characteristics and employee attitudes, management information systems and human resource planning in the manufacturing sector and oil and gas industry in Nigeria and the United Kingdom (Michael, 2006). Few comprehensive studies of the possible antecedents of management information systems and human resource planning in the telecommunication industry and retail contexts are also reported in the literature (Merchant & Vander Stede, 2007). It has been observed that there are a lot of research on the approaches, techniques and technologies for the design and development of management information system. However, few studies had

covered the impact of management information systems on organizational human resource practices in different contexts. Therefore, this present study is carried out to fill this gap in the existing body of knowledge by examining how management information systems affect human resource planning in deposit money banks in Rivers State, Nigeria.

Statement of Problem

Like many other parts of the world, organizations in Nigeria of which the banking sector are not exception, are facing looming challenges in attracting and retaining skilled and valuable employees to meet changing service delivery needs. Together with rapid advances in communication technology, these factors are already having a profound effect on what and how services are provided, to whom, and at what cost. This has made the need for effective human resource planning of the organization's most valuable asset (Byars & Rue, 2004). It has been observed that information systems are basic technological tools to take advantage in effective service delivery by financial institutions. Research has indicated that the effective and efficient use of information systems is a major factor differentiating successful organizations from their less successful equivalents (Robert, 2006). Furthermore, challenges such as reducing cost, increasing efficiency and improving planning have led organizations today to implement new organizing mechanisms to improve performance which include management information systems. Thus, MIS represents a practical response from organizations to overcome these challenges (Akata, 2003). From this practical viewpoint, the importance of MIS to organizations is very clear, especially when it affects the organizational process, human resource inflow and outflow mechanisms, and the ways the organization functions. Thus, this dynamic mechanism pressures organizations to become

digital so as to better respond to external environments more rapidly than traditional organizations, giving them more flexibility for survival in the turbulent environment. The study therefore, operationalized management information systems as a non-financial factor to address the problems of human resource planning in the Nigerian financial institutions, specifically the deposit money banks in Nigeria.

Objectives of the Study

The main objective of this research is to find out the relationship between management information systems and human resource planning of Deposit Money Banks in Rivers State, Nigeria. Specifically, the objectives are:

1. To examine the relationship between information quality and human resource planning in the Deposit Money Banks in Rivers State, Nigeria.
2. Ascertain the relationship between system quality and human resource planning in the Deposit Money Banks in Rivers State, Nigeria.
3. Determine the association between information quality and supply forecasting in the Deposit Money Banks in Rivers State, Nigeria
4. Examine the association between system quality and supply forecasting affect team collaboration in the Deposit Money Banks in Rivers State, Nigeria
5. Determine the moderating influence of bureaucratic culture on the relationship between management information systems and human resource planning in the Deposit Money Banks in Rivers State, Nigeria.

Research Hypotheses

Ho₁: There is no significant relationship between information quality and demand forecasting in the Deposit Money Banks in

Rivers State, Nigeria

Ho₂: There is no significant relationship between system quality and demand forecasting in the Deposit Money Banks in Rivers State, Nigeria

Ho₃: There is no significant relationship between information quality and supply forecasting in the Deposit Money Banks in Rivers State, Nigeria

Ho₄: There is no significant relationship between system quality and supply forecasting affect team collaboration in the Deposit Money Banks in Rivers State, Nigeria

Ho₅: Bureaucratic culture does not moderate the relationship between management information systems and human resource planning in the Deposit Money Banks in Rivers State, Nigeria

Conceptual framework

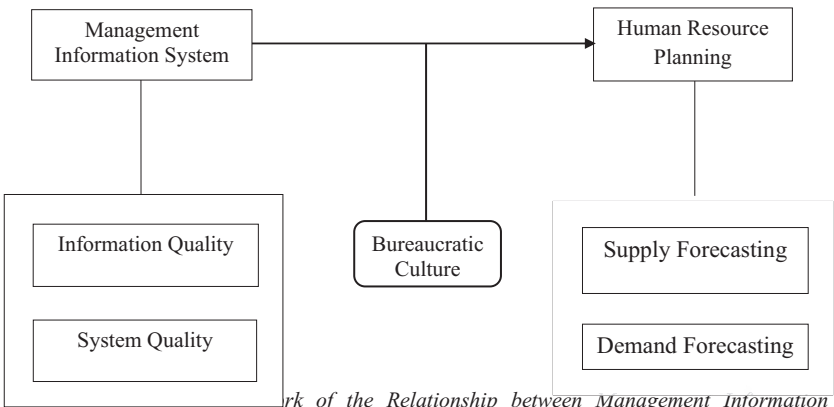


Figure 1: Conceptual Framework of the Relationship between Management Information Systems and Human Resource Planning of Deposit Money Banks in Rivers State, Nigeria.

Source: Desk Research, 2022. The study adopted two variables from the work of Reyath, and Kamarul (2019) and the measures were adapted from the work of De-Cenzo and Robbins, 1988).

Literature Review

The Concept of Management Information System

That is management information system is characterized by the production of periodic reports that managers use for structured and routine tasks. One of the major goals of a management information system is to increase the efficiency of managerial activity; different levels of management have different needs and MIS can produce scheduled reports or ad hoc reports.

The term management information systems, popularly abbreviated as MIS according to Lucey (2005) has become synonymous with computers yet, both concepts are not exactly the same because management information systems existed in the life of pre-modern organizations long before the advent of computer technology. This argument is substantiated by the fact that computer was not in use when organizations kept records using traditional and manual mechanisms to manage information. Management information systems are very elemental in improving company securities (Davenport & Short, 2008). Yusuf (2014) described a management information system as a subset of the overall internal control of a business covering the application of people, documents, technologies and procedures by management accountants to solve business problems such as costing a product, service or business-wide strategy. MIS is a formalized procedure to provide management at all levels and in all functions with the appropriate information from all relevant sources to enable them to make informed, timely and effective decisions for planning, directing, and controlling the activities for which they are responsible (Malobi and Onwuka, 2019). MIS plays a strategic role in all businesses through the integration of people, processes and information technology (Guzman, Ramirez-Correa, Grandon & Alfaro-Perez, 2018).

Dimensions of Management Information System

Information Quality

The study of Al-Mamary, Shamsuddin, and Aziati, (2014) stated that a number of researchers consider information quality as an important factor in the management of information system success in an organization. Information quality (IQ) has become a critical concern of organizations and an active area of management information systems (MIS) research literature. Therefore, it is important for a company to pay attention not only to the system quality to improve the quality of the information produced but also to improve the organization's performance (Al-Mamary, Shamsuddin, & Aziati, 2014).

System Quality

According to Gorla, Somers, and Wong (2010) it is assumed that system quality is positively associated with information quality and organizational effect. Furthermore, Raymond & Bergeron, (2008) confirmed that the quality of the information outputs is strongly related to the technical and service aspects of the system, i.e. to the quality of the system.

Human Resource Planning (HRP).

Whatever the nature of the organization, if it is of a size where changes in the workforce will have a significant effect on business results, then it will need some kind of human resource planning activity. HRP is a process which anticipates and maps out the consequences of business strategy on an organization's human

resource requirement (Gerald and Phil, 2011). Apparently, human resource planning is the entry point of human resource management concerned with the determination of human resource requirements, job analysis, recruitment, selection and socialization (Mondy & Noe, 2006). Forecasting human resource requirements, effective management of change, realizing organizational goals, promoting employees and effective utilization of human resources are the main objectives of human resource planning. Human resource planning is a process that put one organization in a suitable place by having the correct number and desired human resource that meets the purpose of the organization (Jahanian, 2009).

According to Khadka (2009) human resource planning must be linked to the overall strategy of the organization. It evaluates human resource requirements in advance keeping the organizational objectives, operation schedules, and demand fluctuation in the background. Thus, human resource planning should be future-oriented, system-oriented, and goal-directed.

Demand Forecasting

Noe (2012) revealed some factors that influence forecasting demand for personnel which include budget constraint, turnover due to resignations, contract terminations, transfers and relocations, retirement, new technology in the field, decisions to upgrade the quality of services provided and minority hiring goals. Failure to anticipate future manpower needs leads to last minute decision making which is not always advisable for managers in organizations. It is proper that managers take their time to forecast future manpower needs which helps to save money and time in future. Noe (2012) explained that when it comes to the human resource planning context, a mathematical formula is used to

project future demands of human resources based on an established relationship between an organization's employment level and some measurable factors of output such as revenue, sales or production level.

Supply Forecasting

Pradeesh, (2011) revealed that Supply forecasting measures the number of people likely to be available from within and outside the organization, having allowed for absenteeism, internal movements and promotions, wastage and changes in hours and other conditions of work. Randal (2000) further stated that supply analysis covers areas like: existing number of people employed by occupation, skill and potential, source of supply from within the condition and effect of changing conditions of work and absenteeism. The purpose of supply forecasting is to determine the size and quality of present and potential human resources available from within and outside the organization to meet the future demand for human resources. Supply forecast is the estimate of the number and kind of potential personnel that could be available to the organization.

Empirical Review

Reyath and Kamarul, (2019) studied the effect of management information systems on organizational performance: A Survey Study at Missan Oil Company in Iraq. The quantitative method used the questionnaire survey and structural equation modeling (SEM). A total of 250 questionnaires were distributed and a high rate of return (87.6%) has been achieved. After initial data screening, 201 responses were utilised to analyse the final data. From the management information system indicators such as information quality, user satisfaction and net benefits are directly

linked with the organizational performance the findings of this study are useful for the Iraqi oil sector to enhance their organizational performance through the use of appropriate MIS indicators.

Young-harry, Oparanma and Ejo-Orusa, (2018) carried out a study to examine the relationship between management information systems and organizational performance of Seven-Up bottling companies in Aba and Port Harcourt. The study used a cross sectional survey method. The population of the study was 156 and a sample size of 117 was obtained through the Taro Yamane formula for sample size determination with the simple random technique used. Descriptive statistics and Spearman's rank correlation were used for data analysis and hypothesis testing. The study findings reveal that there is a positive significant relationship between management information system and organizational performance of Seven Up bottling company in Aba and Port Harcourt. The study concludes that management information system bears a positive and significant influence on organizational performance.

Information Quality and Human Resource Planning

Garrett, Spreitzer, and Bacevice (2014) in their study of manpower supply and forecasting of workforce in small and medium business owners and their performance impacts: the case of paint manufacturing SMEs in South-Western Nigeria examined the choice of supply forecasting and labour force strategies by paint manufacturing SMEs in southwestern Nigeria and their impact on the sales growth, revenue growth, frequency of customer grievances and growth in customer base and observed that supply forecasting of manpower and workforce forecasting is highly adopted by the sampled paint manufacturing firms and that all of them affect one another in very positive ways.

System Quality and Human Resource Planning

Pimtong, Hanqin and Hailin (2012) investigated the influence of forecasting manpower demand and organizational success on hotel performance and to explore whether organizational structure has a moderating effect on the relationship between forecasting manpower demand and the hotel performance. The results revealed that forecasting manpower demand to have a direct effect on hotel performance, and a demand forecasting to have a direct effect on organization financial performance.

Bureaucratic Culture as a Moderating Variable

Culture is integral to the identity of an organization and reflects the fundamental values important to that organization (Bellou, 2010). Workers are unique, have different backgrounds, therefore different cultural attributes are deemed desirable by different people. Each worker has a unique perspective which is a function of their individual personality and preferences (Bellou 2010 Johnson and Johnson 2002; Palthe & Kossek 2003).

Research Methods

The study adopted the survey research design. The target population for this study is the regional head offices of the fourteen (14) quoted deposit money banks in the Nigerian Stock Exchange that has operational base in Rivers State whose authentic list was obtained from the Nigerian Stock Exchange fact book as at 2020. This study adopts the entire population as the sample. The population of the study will be fully studied as a census. However, seven (7) representatives were chosen from each of the (14) Quoted Deposit Money Banks, these are: Regional Manager, Marketing, Operations, Human Resources, Asset Management, Teller, and Research and Planning formed the respondents of the study. Thus, ninety-eight (98) respondents were used from the

seven departments across the banks. The method of data collection was collated with the aid of a structured questionnaire which was the major instrument used for the study. The research instrument was subjected to content and face validity. Reliability was tested with the aid of the Statistical Package for the Social Sciences (SPSS 23). The test of hypotheses was done using inferential statistics such as the Pearson Product Moment Correlation Coefficient.

Data Analysis and Findings

Demographic Analysis

In this study the output of the demographic analysis was presented. These presentations further enable the understanding of the demographic distribution of the respondents in the money deposit banks under study.

Table 1. Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	57	58.8	58.8	58.8
	Female	40	41.2	41.2	100.0
	Total	97	100.0	100.0	

Source: SPSS Output, version, 23 (2022)

Table 1 showed the response rate and distribution category of respondents' gender in the study. Out of the returned copies, 57(58.8%) of the respondents were male officers, while 40(41.2%) of the respondents were female officers in tier 1 deposit money banks under study, therefore, it indicates that head offices of the banks under study were dominated by male officers which were deemed appropriate because of the critical and sensitive decisions.

Table 2. Age of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 30 years	12	12.4	12.4	12.4
	31-40 years	37	38.1	38.1	50.5
	41-50 years	33	34.0	34.0	84.5
	50 years and Above	15	15.5	15.5	100.0
	Total	97	100.0	100.0	

Source: SPSS Output, version, 23 (2022)

Table 2 showed the response rate and distribution of respondents' age bracket in the tier 1 deposit money banks under study. Out of the copies retrieved, 12(12.4%) of the respondents were under 30 years of age, 37(38.1%) of the respondents were within the age bracket of 31-30 years that responded to the questionnaire, 33(34.0%) of the respondents were within the age of 41-50 years, while 15(15.5%) of the respondents are 50 years and above that was responding to the study in the Banks under study.

Table 3. Showed Respondents' Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	HND/ND and above	20	20.6	20.6	20.6
	B.Sc/B.Ed	46	47.4	47.4	68.0
	PG Degree	26	26.8	26.8	94.8
	Professional Certificates	5	5.2	5.2	100.0
	Total	97	100.0	100.0	

Source: SPSS Output, version, 23 (2022)

Table 3 indicates the respondents' educational category in the tier 1 deposit money banks under study, out the number retrieved, 20(20.6%) of the respondents are Higher National Diploma/National Diploma holders, 46(47.4%) of the respondents are bachelor of science/bachelor of education degree holders, 26(26.8%) are post-graduate degree holders, finally 5(5.2%) of the respondents are professional certificates holders. From the respond category, it indicates that the respondents are qualified to answer the research questions in the study.

Univariate Analyses

Table 4. Descriptive Statistics on Information Quality

		Descriptive Statistics							
		SA	A	N	D	SD	N	Mean	Std. Deviation
1.	In the organization the system presents information in a useful format and is understandable for personnel forecasting	27	5	22	33	10	97	3.06	1.391
2.	The information system often makes information available at a time suitable for its use in the manpower planning process	15	3	30	25	24	97	2.59	1.321
3.	The information system in the organization provides the user and beneficiaries with reliable accurate information	18	9	34	21	15	97	2.94	1.298
Valid N (listwise)							97		

Source: SPSS Output, version, 23 (2022)

The table above illustrates the response rates on information quality as a dimension of management information system and measure with three items and scale in 5-point response category. The first item was to ascertain if in the organization the system presents information in a useful format and is understandable for personnel forecasting has a mean value of ($x = 3.06$ and $\text{std.dev.} = 1.391$) which indicates a moderate extent in the response category. Similarly, the second item was to ascertain if information system often makes information available at a time suitable for its use in the manpower planning process has a mean value of ($x = 2.59$ and $\text{std. dev.} = 1.321$) which indicates a moderate's extent in the response category. Also, the third research item was to ascertain if information system in the organization provides the user and beneficiaries with reliable accurate information has a mean value of ($x = 2.94$ and $\text{std.dev.} = 1.298$) which indicates a moderate extent in the response category. From the response rate in the scale, it affirmed that information quality is a strong character in the study of management information systems in the tier 1 deposit money banks under study.

Table 5. Descriptive Statistics on Information Quality

		Descriptive Statistics							
		SA	A	N	D	SD	N	Mean	Std. Deviation
1.	The information system in the organization is easy to use in carrying out internal analysis	27	5	30	25	10	97	3.14	1.354
2.	The organization has specialists in information systems to address technical problems and emergency issues.	18	9	34	21	15	97	2.94	1.298
3.	The management information system of the organization has improved the way and manner of handling worker's information	43	7	33	10	4	97	3.77	1.237
Valid N (listwise)							97		

Source: SPSS Output, version, 23 (2022)

The table above illustrates the response rates on system quality as a dimension of management information system and measure with three items and scale in 5-point response category. The first item was to ascertain if the information system in the organization is easy to use in carrying out internal analysis and has a mean value of ($x= 3.14$ and $\text{std.dev.}=1.354$) which indicates a moderate extent in the response category. Similarly, the second item was to ascertain if the organization has a specialist in information systems to address technical problems and emergency issues has a mean value of ($x= 2.94$ and $\text{std. dev.}=1.298$) which indicates a moderate extent in the response category. Also, the third research item was to ascertain if the management information system the banks have improved the way and manner of handling workers' information has a mean value of ($x= 3.77$ and $\text{std.dev.}= 1.237$) which indicates a high extent in the response category. From the response rate in the scale, it affirmed that system quality is a strong character in the study of management information systems in the tier 1 deposit money banks under study.

Table 6 Descriptive Analysis of Management Information System

	Descriptive Statistics				
	N	Sum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Std. Error	Statistic
Information Quality	97	833.00	4.5876	.31966	1.14826
System Quality	97	956.00	4.8557	.30601	1.01382
Valid N (listwise)	97				

Source: SPSS Output, version, 23 (2022)

The table above illustrates the summary of descriptive statistic on the dimensions of management information system which is information quality and system quality used under study. The mean value of ($x= 4.58$) information quality indicates a very high response rate in the scales while the mean value of ($x=4.85$) system quality indicates a very high response rate in the measurement scales in the tier 1 deposit money banks under study.

Analysis on Measures of Human Resource Planning

Table 7, Response Rate on Demand Forecasting

		Descriptive Statistics							Std. Deviation
		SA	A	N	D	SD	N	Mean	
1.	Does the bank retrench those that are not qualified and recruit them to fill the gaps?	29	7	35	20	6	97	3.34	1.274
2.	Does the bank estimate the future numbers of people required and the likely skills and competences?	38	7	40	14	8	97	3.34	1.266
3.	Does the bank rely on experts who assist in preparing the selection process to anticipate staffing requirements?	44	7	32	10	4	97	3.79	1.241
Valid N (listwise)							97		

Source: SPSS Output, version, 23 (2022)

The table above illustrates the response rates on demand forecasting as a measure of human resource planning and measure with three items and scale in 5-point response category. The first item was to ascertain if the bank retrenched those that are not qualified and recruit to fill the gaps has a mean value of ($x = 3.34$ and $\text{std.dev.} = 1.274$) which indicates a moderate extent in the response category. Similarly, the second item was to ascertain if the bank estimated the future numbers of people required and the likely skills and competencies to occupy a position has a mean value of ($x = 4.34$ and $\text{std. dev.} = 0.266$) which indicates a high extent in the response category. Also, the third research item was to ascertain if the bank relies on experts who assist in preparing selection process to anticipate staffing requirements for effective forecasting has a mean value of ($x = 3.79$ and $\text{std.dev.} = 1.241$) which indicates a high extent in the response category. From the response rate in the scale, it affirmed that demand forecasting is a strong character in the study of human resource planning in the tier 1 deposit money banks under study.

Table 8.

Descriptive Statistics								
	SA	A	N	D	SD	N	Mean	Std. Deviation
1. Does the bank promote, and retired employees when it due to achieve harmony in the workplace	25	7	27	29	9	97	3.10	1.335
2. Does the bank transfers workers from one branch to the other when it needed to improve efficiency?	27	7	29	31	3	97	3.25	1.259
3. Does the bank recall laid-off employees when their services are needed?	30	7	31	23	6	97	3.33	1.305
Valid N (listwise)						97		

Source: SPSS Output, version, 23 (2022)

The table above illustrates the response rates on supply forecasting as a measure of human resource planning and measure with three items and scale in 5-point response category. The first item was to ascertain if the bank promotes, and retired employees when it due to achieve harmony in the workplace has a mean value of ($x = 3.10$ and $\text{std.dev.} = 1.335$) which indicates a moderate extent in the response category. Similarly, the second item was to ascertain if the bank transfers workers from one branch to the other when it needed to improve efficiency has a mean value of ($x = 3.25$ and $\text{std. dev.} = 1.259$) which indicates a moderate extent in the response category. Also, the third research item was to ascertain if the bank recall laid-off employees when their services are needed has a mean value of ($x = 3.33$ and $\text{std.dev.} = 1.305$) which indicates a moderate extent in the response category. From the response rate in the scale, it affirmed that supply forecasting is a strong character in the study of human resource planning in the tier 1 deposit money banks under study.

Table 9. Showed Summary of Management Information System

Descriptive Statistics					
	N	Sum	Mean	Std. Deviation	
	Statistic	Statistic	Statistic	Std. Error	Statistic
Demand Forecasting	97	1016.00	4.4742	.30709	.02453
Supply Forecasting	97	939.00	4.6804	.36537	.59846
Valid N (listwise)	97				

Source: SPSS Output, version, 23 (2022)

The table above illustrates the summary of descriptive statistics on the measures of human resource planning which is demand forecasting and supply forecasting used under study. The mean value of ($x=4.47$) demand forecasting indicates a high response rate in the scales while the mean value of ($x=4.68$) supply forecasting indicates a very high response rate in the measurement scales adopted in the tier 1 deposit money banks under study.

Table 10. Response Rate on Bureaucratic Organizational Culture

		Descriptive Statistics							Std.
		SA	A	N	D	SD	N	Mean	Deviation
1.	Our firm has clearly spelt out structures and procedures that govern what we do	28	7	22	37	3	97	3.21	1.307
2.	Our managers are generally considered to be coordinators, organizers, and efficiency experts	26	7	34	25	5	97	3.25	1.250
3.	The glue that holds our firm together is formal rules and policies	27	7	27	29	7	97	3.19	1.325
Valid N (listwise)							97		

Source: SPSS Output, version, 23 (2022)

The table above illustrates the response rates on bureaucratic organizational culture as a moderating variable and measure with three items and scale in 5-point response category. The first item was to ascertain if the firm has spelt out structures and procedures that govern what we do has a mean value of ($x=3.21$ and $\text{std.dev.}=1.307$) which indicates a moderate extent in the response category. Similarly, the second item was to ascertain if the managers are generally considered to be coordinators, organizers, and efficiency experts has a mean value of ($x=4.25$ and $\text{std. dev.}=0.250$) which indicates a high extent in the response category. Also, the third research item was to ascertain if the glue that holds our firm together is formal rules and policies has a mean value of ($x=3.19$ and $\text{std.dev.}=1.325$) which indicates a moderate extent in the response category. From the response rate in the scale, it affirmed that bureaucratic organizational culture is a strong phenomenon in the study of management information system and human resource planning in the tier 1 deposit money banks under study.

Bivariate Analysis

Table 11. The Description of the Range of Correlation (r) values and the corresponding level of association

Range of r with positive and negative sign values	Strength of Association
$\pm 0.80 - 0.99$	very strong
$\pm 0.60 - 0.79$	Strong
$\pm 0.40 - 0.59$	Moderate
$\pm 0.20 - 0.39$	Weak
$\pm 0.00 - 0.19$	Very weak

The positive (+) sign in the values of (r) indicates a positive relationship, while the negative (-) of (r) indicates an indirect/negative or inverse relationship. Thus, the sign of the r explains the direction of association between the two variables. Therefore, in this section, the analysis was carried out to determine the direction and strength of the relationship (if any) between the predictor and criterion variables.

Diagram showing the relationship between study Variables

Asawo (2009) posits that scatter graph is one of the techniques used in deciding whether a bivariate relationship does exist between interval-scaled variables. The present study was to determine if there is any relationship between management information systems and human resource planning, the plotted scatter diagram is presented in Figure 4.5 showing management information system as a predictor variable is plotted on the X axis whereas human resource planning as the criterion variable is on the Y axis.

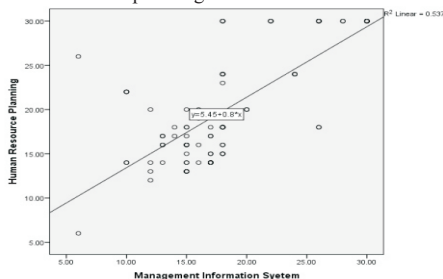


Fig 2. Above showed the scatter plot diagram and the regression line on the relationship between management information systems and human resource planning.

The scatter plot observed from the linear value ($R^2 = 0.537$) indicates a moderate and positive relationship between the two main constructs in the study. The coefficients indicate that an increase in management information system explains 53.7% increase in human resource planning in the tier 1 banks under study. The scatter diagram has provided a clear evaluation of the closeness of the relationship among the pairs of variables through the nature of their concentration. The positive relationship is evidenced by the pattern of the points moving upwards from left to right. This positive relationship indicates that a higher value of the dependent variable is associated with higher values of the independent variables.

Hypothesis 1

Table 12. Showed Correlations Analysis on Information Quality and Demand Forecasting

		Information Quality	Demand Forecasting
Information Quality	Pearson Correlation	1	.621**
	Sig. (2-tailed)		.000
	N	97	97
Demand Forecasting	Pearson Correlation	.621**	1
	Sig. (2-tailed)	.000	
	N	97	97

**. Correlation is significant at the 0.05 level (2-tailed).

H₀₁: There is no significant relationship between information quality and demand forecasting in the Deposit Money Banks in Rivers State, Nigeria.

Table 12, indicates a strong correlation between information quality and demand forecasting using Pearson product-moment correlation coefficients. The result showed that information quality is statistically positive and significant with ($r = 0.621$, at $P-v = 0.000 < 0.05\%$). Thus; the null hypothesis is hereby rejected and restated that there is a strong positive and

significant relationship between information quality and demand forecasting in the tier 1 deposit money banks under study in Rivers State, Nigeria.

Hypotheses 2

Table 13. Showed Correlations Analysis on System Quality and Demand Forecasting

		System Quality	Demand Forecasting
System Quality	Pearson Correlation	1	.790**
	Sig. (2-tailed)		.000
	N	97	97
Demand Forecasting	Pearson Correlation	.790**	1
	Sig. (2-tailed)	.000	
	N	97	97

** . Correlation is significant at the 0.01 level (2-tailed).

Ho₂: There is no significant relationship between system quality and demand forecasting in the Deposit Money Banks in Rivers State, Nigeria

Table 13, indicates a strong correlation between system quality and demand forecasting using Pearson product-moment correlation coefficients. The result showed that system quality is statistically positive and significant with ($r = 0.790$, at $P-v = 0.000 < 0.05\%$). Thus; the null hypothesis is hereby rejected and restated that there is a strong positive and significant relationship between system quality and demand forecasting in the tier 1 deposit money banks under study in Rivers State, Nigeria.

Model 1 summary on the extent of the relationship between management information systems on demand forecasting in the tier 1 deposit money banks under study.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.791 ^a	.626	.618	1.86898

a. Predictors: (Constant), System Quality, Information Quality

Source: SPSS Output, version, 23 (2022)

Model 1, above showed the empirical result of regression analysis (R-value = 0.791) on the predictor variable: management information system: (information quality and system quality) taken together. The result showed a strong effect on the criterion variable (demand forecasting). The coefficient of determination (R^2 -value 0.626) indicates that management information system explains 62.6% increase in demand forecasting in the tier 1 Deposit Money Banks in Rivers State, Nigeria while the remaining 37.4% could be due to the effect of extra variables that is not included in the study.

Hypotheses 3

Table 14. Showed Correlations Analysis on Information Quality and Supply Forecasting

		Information Quality	Supply Forecasting
Information Quality	Pearson Correlation	1	.593**
	Sig. (2-tailed)		.000
	N	97	97
Supply Forecasting	Pearson Correlation	.593**	1
	Sig. (2-tailed)	.000	
	N	97	97

** . Correlation is significant at the 0.01 level (2-tailed).

H₀₃: There is no significant relationship between information quality and supply forecasting in the Deposit Money Banks in Rivers State, Nigeria

Table 14, indicates a moderate correlation between information quality and supply forecasting using Pearson product moment correlation coefficients. The result showed that information quality is statistically positive and significant with ($r = 0.593$, at $P-v = 0.000 < 0.05\%$). Thus; the null hypothesis is hereby rejected and restated that there is moderate positive and significant relationship between information quality and supply forecasting in the tier 1 deposit money banks under study in Rivers State, Nigeria.

Hypotheses 4

Table 15. Showed Correlations Analysis on System Quality and Supply Forecasting

		System Quality	Supply Forecasting
System Quality	Pearson Correlation	1	.702**
	Sig. (2-tailed)		.000
	N	97	97
Supply Forecasting	Pearson Correlation	.702**	1
	Sig. (2-tailed)	.000	
	N	97	97

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output, version, 23 (2022)

H₀₄: There is no significant relationship between system quality and supply forecasting affect team collaboration in the Deposit Money Banks in Rivers State, Nigeria

Table 15, indicates a strong correlation between system quality and supply forecasting using Pearson product moment correlation coefficients. The result showed that system quality is statistically positive and significant with ($r = 0.702$, at $P-v = 0.000 < 0.05\%$). Thus; the null hypothesis is hereby rejected and restated that there is strong positive and significant relationship between system quality and supply forecasting in the tier 1 deposit money banks under study in Rivers State, Nigeria.

Model 2. Summary on the extent of relationship between management information systems on supply forecasting in the tier 1 deposit money banks under study.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.703 ^a	.494	.483	2.58730

a. Predictors: (Constant), System Quality, Information Quality

Source: SPSS Output, version, 23 (2022)

Model 2, above showed the empirical result of regression analysis (R-value = 0.703) on the predictor variable: management information system: (information quality and system quality) taken together. The result showed a strong effect on the criterion variable (supply forecasting). The coefficient of determination (R^2 -value 0.494) indicates that management information system explains 49.4% increase in supply forecasting in the tier 1 Deposit Money Banks in Rivers State, Nigeria while the remaining 50.6% could be due to the effect of extra variables that is not included in the study.

Moderating Effect of Bureaucratic Culture (Partial Correlation Analysis)

Hypotheses 5

Table 16. Showed Correlations Analysis on the Influence of Bureaucratic Culture on Management Information Systems and Human Resource Planning

Control Variables			Management Information System	Human Resource Planning	Bureaucratic Culture
-none- ^a	Management Information System	Correlation	1.000	.733	.701
		Significance (2-tailed)	.	.000	.000
		Df	0	95	95
	Human Resource Planning	Correlation	.733	1.000	.945
		Significance (2-tailed)	.000	.	.000
		Df	95	0	95
	Bureaucratic Culture	Correlation	.701	.945	1.000
		Significance (2-tailed)	.000	.000	.
		Df	95	95	0
Bureaucratic Culture	Management Information System	Correlation	1.000	.302	
		Significance (2-tailed)	.	.003	
		df	0	94	
	Human Resource Planning	Correlation	.302	1.000	
		Significance (2-tailed)	.003	.	
		df	94	0	

a. Cells contain zero-order (Pearson) correlations.

Source: SPSS Output, version, 23 (2022)

H₀₅: Bureaucratic culture does not moderate the relationship between management information system and human resource planning in the Deposit Money Banks in Rivers State, Nigeria

The partial correlation coefficients result in the above table 16 showed that there was a strong positive and partial correlation between management information system ($r_v = 0.733$) and human resource planning while controlling for bureaucratic organizational culture ($r_v = 0.701$ at $P-v = 0.000 < 0.05$). The result indicates a strong positive moderating influence of bureaucratic organizational culture on the relationship between management information systems and human resource planning. The result of zero-order correlation revealed a weak positive relationship between management information systems and human resource planning, ($n = 97$), $r = 0.302$, at $P-v = 0.003 < 0.05\%$) the value indicates that bureaucratic organizational culture had a weak influence on the relationship between management information system and human resource planning in the tier 1 deposit money banks under study in Rivers State, Nigeria.

Discussion of Findings

The research hypothesis was tested using Pearson product moment correlation coefficients and results from the empirical analysis revealed that there was positive and significant association between information quality and the two measures of human resource planning: with $r = 0.621$; $P-v = 0.000 < 0.05\%$) on demand forecasting and ($r = 0.593$; $P-v = 0.000 < 0.05\%$) on supply forecasting in table 12 and 14 respectively in the tier 1 deposit money banks under study. The findings from the present study corroborate with previous research works from various scholars and researchers in information system literature of human resource management practices.

The findings are in line with the conclusions of Al-Meetany, Yousef Abdul Rahman Yousef (2004) studies the impact of the information quality on how it improves the efficiency and effectiveness of the Jordanian Commercial Banks; he said that users of information systems

dictate information quality and the need highly skilled and qualifications and experience personnel to enable them to perform their work to the fullest and that an appropriate degree of information provided by the systems used very high and reflected thus on the effectiveness of decision-making that are meant to take, as evidenced by the study on the existence of a positive relationship between the linear size of investment in management information systems quality and the bank's profits greater the volume of investment in management information systems increased the bank's profits. The findings reinforce the study of Thomson and Perry (2006) observed a highly significant level of association between supply workforce forecasting and local content development. The results further suggest that through effective labor supply internal and external which is outside the organization, firms can be developed such that they are more effective and functional within the industry (Simonin, 1997; Wiklund & Shepherd, 2008). Also Garrett, Spreitzer, & Bacevice (2014) in his study of manpower supply and forecasting of workforce observed that supply forecasting of manpower and workforce forecasting is highly adopted by the sampled paint manufacturing firms and that all of them affect one another in very positive ways.

System Quality and Human Resource Planning

The research hypothesis was tested using Pearson product moment correlation coefficients and results from the empirical analysis revealed that there was positive and significant association between system quality and the two measures of human resource planning: with $r=0.790$; $P-v=0.000<0.05\%$) on demand forecasting and ($r=0.702$; $P-v=0.000<0.05\%$) on supply forecasting in table 13 and 15 respectively in the tier 1 deposit money banks under study. The findings from the present study corroborate with previous research works by Anna (2012)

concluded that the alignment between group forecasting and communication is limited, only one of the two subsamples presented a positive dependence among the variables. Nadkarni and Herrmann (2010) examined, with CEO personality, the relationships between manpower forecasting and business performance, by means of model of structural equality. As a result of the study, it was determined that there was a general and positive directional relationship and, also manpower forecasting and business performance, it was determined that there was a positive directional relationship. Pimtong, Hanqin and Hailin (2012) investigated the influence of forecasting manpower demand and organizational success on hotel performance and to explore whether organizational structure has a moderating effect on the relationship between forecasting manpower demand and the hotel performance. The results revealed that forecasting manpower demand to have a direct effect on hotel performance, and a demand forecasting to have a direct effect on organization financial performance.

Bureaucratic Culture as a Moderating Variable

The moderating influence of bureaucratic culture was tested using partial correlation coefficients and results from the result of zero-order correlation revealed a weak positive relationship between management information system and human resource planning, ($n= 97$), $r=0.302$, at $P-v =0.003<0.05\%$) the value indicates that bureaucratic organizational culture had a weak influence on the relationship between management information system and human resource planning in the tier 1 deposit money banks under study in Rivers State, Nigeria.

The findings reinforce previous studies Calori and Sarnin (1991 as cited by **Dwirantwi, 2012**) conducted a longitudinal study (over three years) of the relationship between corporate culture and economic performance amongst five French companies. The results indicated that a clear cultural profile was associated with

the company's growth. Values like personal fulfillment, listening to others, team spirit, responsibility, trust, quality, and consistency, seemed to be positively related to the firm's relative growth performance. The results, however, found inverse relationships between duty, experience, and authority.

Culture is integral to the identity of an organization and reflects the fundamental values important to that organization (Bellou, 2010). Indeed, organizational culture is a reflection of the organizations values which are then evidenced in the operational practices of the organization (Pratt & Beaulieu 1992). An organization's culture may make that organization a more or less attractive with regard to employment prospects to different individuals based on each person's value structure. Research reveals that individuals tend to seek out organizations that epitomize their personal values and morals (O'Reilly et al. 1991; Pratt and Beaulieu 1992). Thus, organizational culture has important implications for the retention of employees because it may be the most important factor in determining how well an individual fit with an organization (O'Reilly et al. 1991; Shadur, Kienzle, & Rodwel 1999). Indeed, previous research indicates that employees who fit well with their organization's culture are less likely to leave and are generally more satisfied with the conditions of their employment, while those that are poor are more likely to leave their organizations and less likely to be promoted (Jenkins et al. 2008). Workers are unique, have different backgrounds, therefore different cultural attributes are deemed desirable by different people.

Conclusion

The study examines the relationship between management information systems and human resource planning in the top banks in Rivers State, Nigeria. From the results and findings obtained in the cause of this study, it therefore, concluded that information quality influences demand forecasting in the deposit money banks

under study in Rivers State, Nigeria. System quality significantly influences demand forecasting in the deposit money banks under study in Rivers State, Nigeria. That information quality influences supply forecasting in the deposit money banks under study in Rivers State, Nigeria. System quality influences supply forecasting in the deposit money banks under study in Rivers State, Nigeria. That bureaucratic organizational culture had a strong influence on the relationship between management information systems and human resource planning in the deposit money banks under study in Rivers State, Nigeria.

Recommendations

Based on the findings and conclusion, the following were recommended:

1. Deposit money banks and directors should consider information quality as a criterion when developing or applying management information systems in order to create a reliable communication process between the departments, managers and subordinates, to deliver needed services and information in a cooperative atmosphere that makes the users feel connected in every respect to the organization.
2. Deposit money banks under study should provide quality systems when developing and should consider system quality as a priority in using management information systems in order to avoid breaches of communication processes between departments, managers and employees to deliver reliable services in the organization.
3. Managers and directors in deposit money banks should take bureaucratic organizational culture seriously because it has an influence on human resource planning.

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