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OFFICE PROCESS AUTOMATION AND ORGANIZATIONAL PERFORMANCE OF COMMERCIAL BANKS IN PORT HARCOURT RIVERS STATE NIGERIA.

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ABSTRACT

This study investigated the relationship between office automation and organizational performance of commercial banks in Rivers State. The objective was to examine the extent to which office automation affects the performance of commercial banks. The study adopted the cross sectional survey research design. The population of the study comprised of 225 Managers and Administrative staff in 22 commercial banks in Port Harcourt, Rivers State. The sample of the study was 144. This was drawn using the Tayo Yamene formula. The instrument for the study was a questionnaire designed in the modified Likert scale format with four response options. It was validated by experts in Office automation and tested for reliability using the Cronbach Alpha method. A coefficient of 0.70 was ascertained. Descriptive statistics (mean, standard deviation, and percentages) were used as statistical tool for analyzing the data, while Spearman correlation was used as statistical tools to test the hypotheses with the Statistical Package for Social Sciences (SPSS) while the moderating effects of firm factors was carried out using the regression analysis. It was found amongst others, that there is strong positive relationship between robotic/artificial intelligence automation and process performance of commercial banks in Rivers state. It concluded that office automation to a large extent, relate with organizational performance of commercial banks in Port Harcourt, Rivers State. It therefore recommended that more policies should be adopted for wide application of modern information technologies to simplify and increase the productivity of employees.

Key words: Process Automation, Organizational Performance

INTRODUCTION

In the last decades, researchers and managers all over the world have started to study different ways to improve business performance like finance, customers, processes, internal business processes, customers' satisfaction or employees' satisfaction. They have analyzed various dimensions of performance. Performance is a key concept for any organization, and lately, it has begun to become a priority for both business management and researchers. Managers want to provide the best products and services to customers, increasing the company's revenues, but at the same time, they aim to streamline their internal operations, reduce costs and increase the company's productivity. Therefore, in this modern age, organizations have no choice than implementing computer systems, Information technology, and advanced media. The future belongs to those who consider and analyze advantages and disadvantages of these systems through accurate recognition as well as learn from the experience of others, without having to bear the costs of that experience again. Having access to computer systems, information technology, and advanced media leads to an increasing acceleration; the acceleration makes each saved unit of time more valuable than previous unit (Yaghoubi & Sargazi, 2014). Existing in global markets and even remaining in domestic markets need to compete with strong competitors. Due to expansion and complexity of objectives, processes, and organizational structure in competitive environments, only organizations can survive which are accountable toward customers' and stakeholders' demands and expectations; they also consider profitability and wealth creation as critical and excellent organizational indicators A glance to the future indicates that decision-making, financial planning, and organizational communication

and interactions will be done through computer systems; managerial and specialized jobs will be influenced more than before (Goodenough, 2017).

Office automation is applying computer and communication technology to facilitate office affairs in the organization so as to enhance their efficiency. The idea of paperless offices and its beneficial results will be achieved only through the application of office automation systems. As observed by Yaghoubi and Sargazi, (2014), since 1960s, due to expansion of more aspects in functions and activities of business and offices, the need for an appropriate integrated office system which involves huge amount of information, communications, and correspondence has been considered. These systems have been called with different names; but the most popular ones, especially for highest level of automation systems, are called office automation.

The business environment in any industry has a lot of challenges resulting from competitive pressure which is growing at an ever faster pace due to growing customer expectation, globalization and technological development. For organizations to remain in business competitively there is need for them to consider performance improvements in their work processes. Organizations need to undergo radical changes in the way they work as steady products and services improvement is not sufficient to survive in the business environment. There are many business performance improvement techniques which have been developed over the years and they include; quality management, process improvement, balanced scorecard, Benchmarking and process reengineering methodologies all focusing on improvement of existing process (Macdonald, 1995).

Automation involves the use of IT, the allocating of customer Information from the database, facilitation of information flow and programming a device or machine to function without frequent interaction of an operator (Mile, et al, 2002, HE, 2005). Organizational effectiveness and efficiency have become virtually a loosed word in every lips and bound of modern businesses that is characterized by competition. Organizations work hard to improve business processes for enhanced organizational performance while meeting customer's expectations. Authors, Xu et al., (2018) and Zhulenev, (2018) observed that a huge wave of emerging technologies such as Artificial Intelligence, Robotics, Virtual Reality, Nanotechnology, 3D Printing to name a few, are integrating with one another combining to deliver higher value than they could on their own. The breadth and depth of these changes are poised to transform the entire system of production, management and governance. However, concerns have also been raised that humans may eventually lose their economic and military usefulness and the economic and political systems may not be of value to them in the future (Harari, 2016).

Document automation on the other hand imply transforming the way work gets done, from the front office, where sales and marketing work, to the back office, where the most notable contributors are finance and legal (Frost & Sullivan, 2018). One of the easiest and most effective ways to embrace digital transformation is to rethink document creation and management (Frost & Sullivan, 2018). In agreement, Felix and Hamilton, (2019) has it that the capacity to meet these customers' need and secure the customer loyalty for sure has been of great worry to firms and has therefore, called for organizations to be responsive. Such a fundamental shift toward process innovation does more than just identify opportunities for improving the next quarter's bottom line. It can strategically reposition the firm for the long term. Customer–value driven reengineering offers new prescriptions for integrating marketing and operations strategies, thereby providing a significant competitive advantage.

The "Age of Data" is currently thriving, with new data being produced from all industries and public bodies at an unprecedented rate. This phenomenon has resulted in a massive hype, with organizations striving to leverage big data analytics in order to create value (Constantiou & Kallinikos, 2015). As a result, there is much attention from both academics and practitioners on the value that organizations can create through the use of big data analytics (Manyika et al., 2011). McAfee, Brynjolfsson and Davenport, (2012) posit that, following the rapid expansion of data volume, velocity, and variety, substantial developments have been documented in terms of techniques and technologies for data storage, analysis, and visualization. Nevertheless, there is

significantly less research on how organizations need to change to embrace these innovations, and what business value can be derived by them.

In discussing office process automation, we also need to look at business data analytics as it enables competitive advantage. Business data analytics has become an area of great interest for organizations, as it has been recognized as a means by which organizations can obtain valuable insights from data; supporting more informed business decision-making. As a result, more organizations are investing in business data analytics as a means to deliver on their strategic imperatives, innovate, and obtain competitive advantages in the marketplace. Such investments are driving the demand for more skilled professionals with business data analytics knowledge and experience.

Another variable in process automation is innovation. Innovation is considered a dominant factor in firm competitiveness and the ability to innovate the single most important factor in enhancing and sustaining competitiveness (Tidd, 2001). Drucker (1985), describes innovation as "the explicit tool for entrepreneurs and firms" leading to the growth of a strong and vibrant SME sector. Porter (2002) describes innovation as "a business practice that firms can employ to achieve their objectives by the implementation of better methods and processes for competitiveness. They maintain that firm's ability to compete is largely determined by its capability to create a specific and durable differentiating factor and be achieved through innovation among other firm activities. Increasing global competitive pressure, shortened product lifecycles and ease of imitation make it necessary for firms to innovate to sustain competitiveness. Hamid and Tasmin, (2013) aver that as an essential tool for firm strategies, innovation enables firms to achieve sustained profitability and growth, to access new markets, enhance their market share hence compete effectively. As such innovation has become central to firm strategies and government policies in the pursuit of firm competitiveness and ultimately national competitiveness. Innovation in pursuit of competiveness remains a credible goal of many firms, national policies and is central in many firms' competitiveness (Cantwell, 2003; Aikeli, 2007).

Workplace psychological safety is demonstrated when employees feel able to put themselves on the line, ask questions, seek feedback, report mistakes and problems, or propose a new idea without fearing negative consequences to themselves, their job or their career. A psychologically safe and healthy workplace actively promotes emotional well-being among employees while taking all reasonable steps to minimize threats to employee mental health.

The Problem

Automation is gradually becoming a new management lingo for scholars in Office and Information Management science at large. The concept of office automation though often misquoted and misused by many, misapplied by some but properly understood by very few. For some oriented profit-making organization, the concept has paid off its relevance while for some organization that lacks the basic knowledge about the concept; it has led them to paradigm blindness. Part of the reason is that most of these organizations who has not achieved much using office automation is due to extremely poor staff training about how automation works.

Again, the ineffectiveness of some commercial banks in handling ICT in today's ever-changing techno-office seems conspicuous. One of the main causes of poor performance among banks is their abject lack of integrated system. Many of them do not possess integrated system required in the various offices and have continued to negatively affect their general performances. Failure to develop a large collection of highly specialized equipment dedicated to specific tasks may prove to be costly in the future. Furthermore, the lack of skills in the area of data management, data storage and manipulation, data exchange, office application, networking, proficiency in accessing the internet, etc. of commercial banks in Rivers State have often been a source of worry to the management. Despite the introduction of these emerging technologies to organizations like banks, some commercial banks are still being subjected to old method of handling office tasks. Such old method of operation leads to ineffectiveness and unproductivity among the commercial banks.

Hence, the need for the study to examine the influence of office automation on organizational performance of commercial banks in Port Harcourt. There is currently little conclusive evidence on the adoption of office automation by firms, governments, and non-profit organizations. This has led to a fair bit of uncertainty around what big data analytics capability analytics especially on data to collect, how best to collect, process, analyze and interpret it as well as how to transform it into value. Hence, this research intends to seek explanation on how office automation in terms of robotic and artificial intelligence, business documentation automation and big data capability analytics can help organizational performance of commercial banks in Port Harcourt, Rivers State.

Apart from the above loopholes identified in the organization on which this study was investigated, one of the major problem and perhaps the biggest of them all is that very few scholar has attempted to studying office automation and organizational performance in commercial banks in Rivers State and Nigeria at large, Fubara, (2019), modern office technologies and office manager's effectiveness, Kalaiti and Onuoha, (2016), Secretary's competencies and performance Onuoha, Okeke and Ibekwe, (2016). However, few studies have only attempted to investigate on office automation and organizational performance of commercial banks in Port Harcourt. In consideration of these problems therefore, the study has located critical research gap which is a problem that need to be addressed. It is based on this fact that this research intends to examine how office automation could address the above issues in the commercial banks in Port Harcourt, Rivers State as depicted in the conceptual framework below:

Conceptual Framework

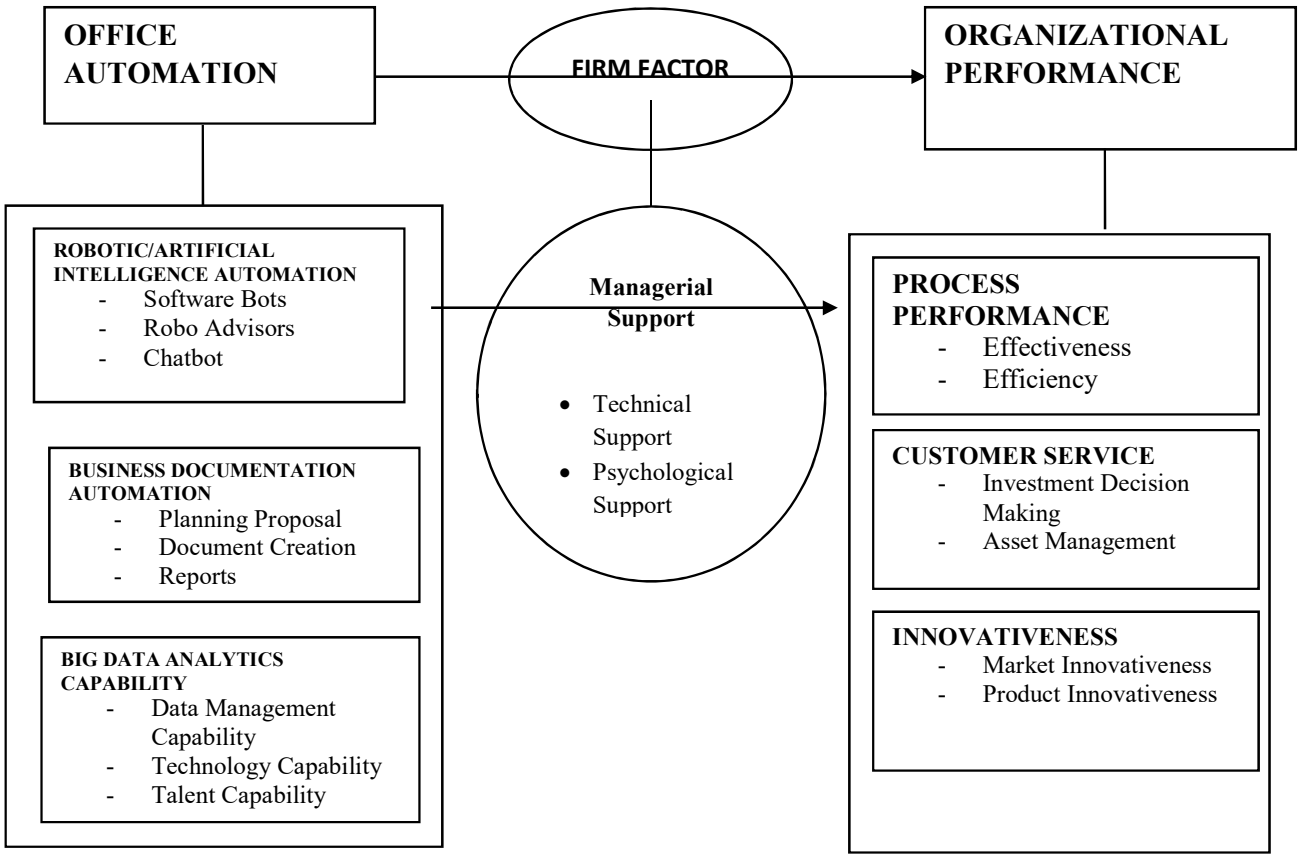

Figure 1.1: Conceptual framework on Office Process Automation and Organizational Performance.

Source: Adapted from: Akter, (2016), Researcher's Desk (2022).

Objectives

The aim of this research work was to determine the nexus between office automation and organizational performance of commercial banks in Port Harcourt Rivers State in terms of the relationship between robotic/artificial intelligence automation and process performance of commercial banks in Port Harcourt, Rivers State; the relationship between robotic/artificial intelligence automation and customer service of commercial banks in Port Harcourt, Rivers State etc.

Research Questions

In order to guide the study and achieve the above objectives, the following research questions were formulated:

1 What is the relationship between robotic/artificial intelligence automation and process performance of commercial banks in Port Harcourt, Rivers State?
2 What is the relationship between business documentation automation and customer service of commercial banks in Port Harcourt, Rivers State?
3 What is the relationship between big data analytics capability and innovativeness of commercial banks in Port Harcourt, Rivers State?
4 How does firm factor relate to office automation and organizational performance of commercial banks in Port Harcourt, Rivers State?

Research Hypotheses

HO_1: There is no significant relationship between robotic/artificial intelligence automation and process performance of commercial banks in Port Harcourt, Rivers State.

HO_2: There is no significant relationship between business documentation automation and customer service of commercial banks in Port Harcourt, Rivers State.

HO_3: There is no significant relationship between big data analytics capability and innovativeness of commercial banks in Port Harcourt, Rivers State.

HO_4: Firm factor does not significantly relate to office automation and organizational performance of commercial banks in Port Harcourt, Rivers State.

Benefit of the study

It is hoped that the findings of the study will help managers to understand the true concept and purpose of office automation and how to go about it. The findings of this study will also help employers to understand the importance of office automation and the consequences of not putting it in place. Thus, this study will provide solutions to the problems arising as a result of poor workplace automation and how organizations can use it to edge other organizations. Again, this study will help different banks to ascertain whether bank automation is of advantage regarding cost reductions and hence leading to right decisions to either promote it or not according to the results obtained. More so, the study will also be of significant benefits to employees as it will be an eye opener due to the benefits and experiences that they can derive from the use of automation in the organization. The study will serve as a secondary data for individuals and scholars who wish to delve into a research on this area. The study is a step further in the body of existing knowledge on office automation and organizational performance. Hence, the study will be used as a source of reference on which other research topics will be chosen.

Area of coverage

The content scope of the study is previewed on literature on office automation and organizational performance. Specifically, office automation was dimensionalized into robotic/artificial intelligence, business documentation automation and big data analytics capability; organizational performance was measured in terms of process performance, customer service and innovativeness.

Geographically, it covered all the commercial banks operating in Port Harcourt, Rivers State while the units of analysis as a macro study, covered key managers in commercial banks.

Conceptual Review

Authors are in agreement that automation is a tool that can be used to facilitate office processes and archival functions. In other words, automation is the use of machines or systems to perform tasks normally performed or controlled by people. Many functions in life can be automated, including washing clothes or dishes using washing machines or dishwashers, transporting goods using cars or trucks, or adding up lists of numbers using calculators. In this regard, automation refers to the use of computers to manage the administrative and information processing tasks in records offices, records centers, and archival institutions (Olugu, 2016).

Office automation refers to all processes that integrate computer and communication technology with the traditional manual processes. According to Kontos (2015) office automation is a conglomerate of all the separate office information processing technologies which include: word processing, data processing, micrographics, reprographics and telecommunications. It also refers to the various automated electronic methods by which information is gathered, processed, reproduced, communicated, stored or protected and retrieved. This includes not only the methods through which office information is processed by the resources applied to capture, process, deliver and or store office information. Abang (2009) reported that secretaries have vital roles to play in enhancing the attainment of organizational goals. Though secretaries of nowadays would not necessarily be expected to understand as much about the business in hand as their executives, they are increasingly being expected to have some understanding of the significance and effective management of the correspondence, reports and instructions which normally pass through their desks. The trained secretaries with state-of-the-art materials and equipment are expected to be gainfully employed in the labour markets or even create jobs and become self-reliant despite the present hardship in the Nigerian economy.

Robots, artificial friends, can perform low paid hard jobs in unsocial hours, generating a tremendous amount of comfort for the world. There is a high possibility that future generations will see robots as teachers and careers as soon as the robots are successfully learning feelings like compassion and complex response sensing. Robots perform jobs with faster speed as studies suggest that one robot functions similarly to 70 fulltime human workers (Lewicki, Tochowicz and Genuchten, 2019). The rise in robotic adoption results in falling into employment opportunities (De Vries et al. 2020). However, the next generations can only be able to achieve the fundamental advances of the robots after investing in this field for years (Chung and Lee, 2018).

Artificial intelligence (AI) is effective in describing machines, systems, and software, efficient in achieving human-like intelligence for problem-solving decisions or individuals' support (De Geofroy & Evans,2017). Jain (2018) quoted that most of the companies are adopting modern technology in various HR processes like recruitment process, performance appraisal process, cloud-based HR systems. Jarrahi (2018) identifies Artificial intelligence (AI) to be supportive in decision making, dealing with uncertainty, and especially equivocality of decision-making in an organization.

On the other hand, document automation commonly referred to as document assembly involves the use of systems and software technologies to produce electronic documents with minimal human dependency. Or simply, document automation is using software to create automated workflows for the entire end-to-end document management workflow which includes scanning, data extraction, data capture, data storage, conversion from unstructured to structured data, and document classification. Document automation allows organizations to ensure that all materials — whether it's a quote, contract, or presentation are on brand, including elements like your company logo, fonts, color scheme, and core messaging, ensuring a cohesive experience across all customer engagements. Intelligent document automation allows teams to pull insights from a range of connected sources and instantly generate content that tells a story through personalized data points. This helps organizations

to quickly demonstrate the value of their offer, improving buyer engagements and moving them closer to the close.

Big data analytics has been regarded as the next frontier for innovation, competition, and productivity (Manyika et al., 2011). As a result, there is much attention from both academics and practitioners on the value that organizations can create through the use of big data analytics. A commonly accepted definition in the literature regards big data analytics as "a new generation of technologies and architectures, designed to economically extract value from very large volumes of a wide variety of data, by enabling high velocity capture, discovery and/or analysis" (Mikalef, Pappas, et al., 2017). Despite the vast majority of claims on the value of big data analytics being anecdotal, the few empirical research studies in the areas have documented a positive relationship between the decision to invest in firm-wide deployment of big data analytics and performance (Gupta & George, 2016; Wamba et al., 2017). Through the deployment of big data analytics, firms are able to make sense of vast amounts of data, generate critical insight, and reconfigure their strategies based on trends that are observed in their competitive environment (Chen, Chiang, &Storey, 2012). As such, the major contribution of big data analytics lies in the fact that it enables better informed decision-making, which is subject to less bias and based on empirical evidence (Abbasi, Sarker, & Chiang, 2016). The hype surrounding big data analytics is evident from the increasing investments made from firms, and particularly those working in complex and fast-paced environments (Wang, Gunasekaran, Ngai, & Papadopoulos, 2016). Managers nowadays are relying ever more on big data analytics to inform their decision making in real-time, and direct their future organizational initiatives (Constantiou & Kallinikos, 2015). Although the impact of big data analytics can be identified in many different areas, the overall value is clearly reflected in a recent article by Liu (2014), who notes that big data analytics constituted a major differentiator between high-performing and low-performing firms, as it enables firms to be more proactive and swift in identifying new business opportunities. In addition, the study reports that big data analytics have the potential to decrease customer acquisition costs by 47% and enhance revenues by about 8%. Adding to this, a recent article by MIT Sloan Management Review shows that companies that are leaders in the adoption of big data analytics are much more likely to produce new products and services compared to those that are laggards (Ransbotham & Kiron, 2017).

Performance is the valued productive output of a system in the form of goods or services. To achieve performance through employees, the organization must consider them as assets and must be treated with attention so that the employees become productive (Kimani, 2016). The performance of any business organization is affected by the strategies that the organization has chosen. Organization performance requires selection and measuring key variables that can allow the organization to detect and monitor its competitive position in the business. Performance is the outcome of all of the organization's operations and strategies.

According to Li, (2006), organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals. Corporate performance is not often described in detail by academics. Performance measurement is very important for the effective management in organizations. According to Deming without measuring something, it is impossible to improve it. The traditional approach to performance measurement using solely financial performance measure was found to be flawed. A number of prior studies have measured organizational performance using both financial and market criteria, including return on investment (ROI), market share, profit margin on sales, the growth of ROI, the growth of sales, and the growth of market share as it will be adopted to measure organizational performance in this study. Performance can be described as the accomplishment of a given task measured against preset standards of accuracy, completeness, cost effectiveness and efficiency. In other words, it refers to the degree to which an achievement is being or has been accomplished. As opined by Yeniyurt, (2003), performance measurement systems play a key role as a source of information about financial outcomes and the internal operations shown in the financial statements. This type of information is useful for decision making process in aspects of planning, directing and controlling. The selection of performance measures depends on

organization's objectives, a clear calculation method to compare, and these should be selected through people who are involved in the organization (Neely, 1999).
Firm factors can be considered a very important element in determining organizational effectiveness. To achieve success, managers should make known the knowledge of their organization at the tip of their finger. Also, environmental variables and analysis must necessarily be identified and appropriate measures taken to deal with them. This requires having the internal and external information and enables optimal utilization of them. Any organization that has the correct accurate, timely and comprehensive in its possession less time and be able to locate data access to be more successful. The role of information and data in enterprise management, the role is critical. The information space of an organization, more accurate, more consistent and more systematic organization can better achieve its goals. Inaccurate information space, dull, confused, contradictory, ill-structured are key factor in the lack of progress in the management of organizations. Microcomputer common in offices, increasing the release of new products, communications, computing and information storage and changes in administrative procedure has been followed. At the beginning of the computer system used for correspondence independently but over time, computers were linked together. It allows users to communicate not only the common files of correspondence can use it to send messages to each other.

Method

The study adopted cross-sectional survey research design because it helps to investigate relationship between office automation and organizational performance of the commercial banks in Port Harcourt, Rivers State. The population comprised of all the twenty-two (22) commercial banks in Rivers State with a total of two hundred and twenty-five (225) key Managers of the banks out of which a sample size of One Hundred and forty-four (144) was drawn using the Taro Yamane (1967) while the Bowley proportionate allocation formula was used to calculate the sample size for each of the branch location.
The instrument employed for data collection in this study was structured questionnaire. The questionnaire was designed after an extensive review. In designing the instrument, the researcher took cognizance of the research questions as well as the hypotheses. Structurally, the questionnaire was made up of two sections: (Section A and section B). Section "A" section for demographical details about the respondents such as their sex, educational qualification, job experience and the current position, while section "B" derived information on the study variables such as the dimensions of office process automation (Robotic/Artificial Intelligence, Business Documentation Automation and Big Data Analytics Capability) and Organizational Performance (Process Performance, Resource Utilization and Innovativeness). The questionnaire was structured on a four (4) point rating scale as: Strongly Agree, Agree, Disagree, and Strongly Disagree. Numerical values were assigned to each scale to show their weight. The numerical values were assigned as follows: Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The questionnaire was designed in this manner in order to enable the researcher measure the effect of the independent on the dependent variables of the study.
To ascertain the validity of the instrument, copies of the questionnaire was submitted to three experts in Office and Information Management. The comments and adjustments made were properly reflected before administration of the questionnaires to the respondents. The instrument was further tested reliability using the Cronbach Alpha Reliability Test of 1951. As an intra-rater test, the Cronbach alpha assesses the consistency of data and indicates levels of instrument reliability with regards to instrument clarity, data consistency and replication. A reliability coefficient of 0.70 was obtained and accepted as reliable.

Administration and Data Analysis

A total of one hundred and forty-four (144) copies of the questionnaire were distributed to the target sample elements with the help of two (2) research assistants. Out of which a total of one

hundred and thirty-one copies were retrieved and used for analysis. The data generated for the study was presented in frequency tables analyzed in percentages. Furthermore, the hypotheses was tested using the Spearman Rank Correlation Coefficient and with the aid of the SPSS statistics techniques while the moderating effects of firm factors was carried out using the regression analysis.

RESULTS

Univariate Analysis

Robotic and Artificial Automation

Table 1: Descriptive Statistics for Robotic and Artificial Automation

S/N	Robotic and Artificial Automation	N	Minimum	Maximum	Mean	Std. Deviation
1.	AI is safe, adequate and error-free.	131	1.00	4.00	3.343	1.07968
2.	Robots are competent and effective in processing difficult tasks	131	1.00	4.00	3.290	1.07767
3.	AI is capable and proficient in autonomously processing tasks without much supervision like humans.	131	1.00	4.00	3.5420	.94673
4.	I can forecast in advance how AI will work for a specific task	131	1.00	4.00	2.9160	1.20918
Valid N (listwise)		131				

Source: SPSS Output, (2023)

Table 1 above reveals mean scores above 2.9 cut across all the response items. This implies that respondents agreed that AI is safe, adequate and error-free. Also, respondents agreed that Robots are competent and effective in processing difficult tasks. Furthermore, they agreed that AI is capable and proficient in autonomously processing tasks without much supervision like humans.

Business Documentation Automation

Table 2 Descriptive Statistics for properties of Business Documentation Automation

S/N	**Business Documentation Automation**	N	Minimum	Maximum	Mean	Std. Deviation
1.	Documents can easily be preserved and retrieved through BDA.	131	1.00	4.00	3.4656	1.05464
2.	Heavy files are no longer being carried regularly because of the acceptance and the use of the computer	131	1.00	4.00	3.4046	1.142053
3.	Documents are saved for future references.	131	1.00	4.00	3.5954	.87511

4.	Multi-tasking can be effectively done because of the availability automation	131	1.00	4.00	2.6489	1.30044
	Valid N (listwise)	131				

Source: SPSS Output, (2022)

Table 2 above reveals mean scores above 2.6 which cut across all the response items. This implies that respondents agreed that Multi-tasking can be effectively done because of the document automation. Also, respondents agreed that heavy files are no longer being carried regularly because of the acceptance and the use of the computers. Furthermore, they agreed that Documents are saved for future references.

Big Data Analytics

Table 3: Descriptive Statistics for properties of Big Data Analytics Capability

S/N	Big Data Analytics Capability	N	Minimum	Maximum	Mean	Std. Deviation
1.	Our analytics personnel show superior ability to learn new technologies.	131	1.00	4.00	3.5878	.94356
2.	Our analytics personnel are very knowledgeable about the critical factors for the success of our organization.	131	1.00	4.00	3.3511	1.08786
3.	Our analytics personnel are very capable in the areas of data and network management and maintenance.	131	1.00	4.00	3.6336	.91320
4.	My organization is very knowledgeable about the role of big data analytics as a means, not an end	131	1.00	4.00	3.0382	.94356
	Valid N (listwise)	131				

Source: SPSS Output, (2023).

Table 3 above reveals mean scores above 3.0 cut across all the response items. This implies that respondents agreed that our analytics personnel show superior ability to learn new technologies. Also, respondents agreed that our analytics personnel are very knowledgeable about the critical factors for the success of our organization. Furthermore, they agreed that Our analytics personnel are very capable in the areas of data and network management and maintenance. Lastly, respondents agreed that my organization is very knowledgeable about the role of big data analytics as a means, not an end.

Cumulative Scores for Office Automation

Table 4 Summary of Descriptive Statistics for dimensions of office automation

		Robotic/Artificial Intelligence Automation	Business Documentation Automation	Big Data Analytics
N	Valid	131	131	131
		0	0	0
Mean		3.4027	3.2786	3.2729
Std. Deviation		.78482	.84218	.84435
Skewness		-1.321	-1.199	-1.150
Std. Error of Skewness		.212	.212	.212
Kurtosis		1.062	.446	.342
Std. Error of Kurtosis		.420	.420	.420

Source: SPSS Data Output, 2023

Table 4 illustrates the distribution for the three dimensions of employee benefits. The result shows that while all three appear to be evident and practiced within the companies of interest; robotic/artificial intelligence automation appears to have a more dominant position with a mean of x = 3.4027. This is followed by the practice of business documentation automation with a mean of x = 3.2786 and big data analytics with a mean of x = 3.2729. Results demonstrate the prevalence of these practices and their manifestations within the commercial banks in Port Harcourt, Rivers State.

Firm Factor

Table 5 Descriptive Statistics for properties of Firm Factor

S/N	Firm Factor	N	Minimum	Maximum	Mean	Std. Deviation
1.	We are willing to try new ways of doing things and seek unusual methods.	131	1.00	4.00	3.9821	1.0721
2.	In our organization, we encourage individuals who think and behave in original and new ways.	131	1.00	4.00	3.1026	1.24563
3.	Our organization changes/improves processes at a great speed in comparison with our competitors.	131	1.00	4.00	3.8215	.85831
4.	The technology of our main processes and equipment in use is very up-to-date	131	1.00	4.00	3.7631	1.30254
Valid N (listwise)		131				

Source: SPSS Output, (2023)

Table 5 above reveals mean scores of 2.5 and above. This cut across all items implying that respondents are agreement that most firms are committed to automating its processes. Furthermore, respondents agree that there is a total overhaul of services due to strong leadership

tilted toward change. More so, respondents agreed that organizations are willing to learn new things in order to enhance performance. Finally, respondents agreed that managers support employees to think rationally towards firm automation.

Bivariate Data Analysis
Test of Hypotheses
Robotic/Artificial Intelligence and Organization Performance
Table 6 Robotic/Artificial Intelligence and Organization Performance

			Robotic/Artificial Intelligence	Process Performance	Customer Service	Innovativeness
Spearman's rho	Robotic/Artificial Intelligence	Correlation Coefficient	1.000	.677**	.669*	.635**
		Sig. (2-tailed)	.	.000	.0.02	.000
		N	131	131	131	131
	Process Performance	Correlation Coefficient	.677**	1.000	.768**	.870**
		Sig. (2-tailed)	.000	.	.000	.000
		N	131	131	131	131
	Customer Service	Correlation Coefficient	.669*	.668*	1.000	.436**
		Sig. (2-tailed)	.0.02	.001	.	
		N	131	131	131	131
	Innovativeness	Correlation Coefficient	.635**	.870**	.436**	1.000
		Sig. (2-tailed)	.000	.000	.009	.
		N	131	131	131	131

****. Correlation is significant at the 0.01 level (2-tailed).**
Source: SPSS Data Output, 2023

Table 6 on robotic/artificial intelligence automation and process performance showed that the probability value (pv) = 0.000 is less than 0.05, hence from the decision rule, null hypotheses is rejected indicating that there is a significant relationship between robotic/artificial intelligence automation and process performance. This shows that robotic and artificial intelligence automation, if applied in commercial banks will have a significant positive influence on process performance. It also showed that the probability value pv = 0.000 < 0.05. Hence from the decision rule, null hypothesis is rejected indicating that there is a significant relationship between robotic/artificial intelligence automation and customer service. This shows that the robotic/artificial intelligence automation has a significant positive influence on customer service.
Since the probability value pv = 0.000 < 0.05, null hypothesis is rejected indicating that there is a significant relationship between robotic/artificial intelligence automation and innovativeness. This shows that robotic/artificial intelligence automation has a significant positive influence on the innovativeness of commercial banks in Port Harcourt, Rivers State.

Table 7 Business Documentation Automation and Organization Performance

			Business Documentation Automation	Process Performance	Customer Service	**Innovativeness**
Spearman's rho	Business Documentation Automation	Correlation Coefficient	1.000	.547**	.656**	.398**
		Sig. (2-tailed)	.	.000	.000	.000
		N	131	131	131	131

Process Performance	Correlation Coefficient	.547**	1.000	.768**	.870**
	Sig. (2-tailed)	.000	.	.000	.000
	N	131	131	131	131
Customer Service	Correlation Coefficient	.656**	.768**	1.000	.636**
	Sig. (2-tailed)	.000	.000	.	.009
	N	131	131	131	131
Innovativeness	Correlation Coefficient	.398**	.870**	.636**	1.000
	Sig. (2-tailed)	.000	.000	.009	.
	N	131	131	131	131

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

Source: SPSS Data Output, 2023

Table 7 on business documentation automation and process performance showed that the probability value (pv) = 0.000 which is less than 0.05. Thus, from the decision rule, null hypotheses is rejected indicating that there is a significant relationship between business documentation automation and process performance. This shows that business documentation automation, if applied on commercial banks will a significant positive influence on their process performance. Since the probability value pv = 0.000 < 0.05, we abide by the decision rule. Therefore, null hypothesis is rejected indicating that there is a significant relationship between business documentation automation and customer service. This shows that business documentation automation has a significant positive influence on the customer service.

Lastly, on table 7 also, on the above hypothesis showed that the probability value pv = 0.000 < 0.05, hence from the decision rule, null hypothesis is rejected indicating that there is a significant relationship between business documentation automation and innovativeness. This shows that the business documentation automation has a significant positive influence on the innovativeness.

Table 8 Big Data Analytics and Organization Performance

			Big Data Analytics Capability	Process Performance	Customer Service	Innovativeness
Spearman's rho	Big Data Analytics Capability	Correlation Coefficient	1.000	.777**	.689**	.774**
		Sig. (2-tailed)	.	.000	.000	.000
		N	131	131	131	131
	Process Performance	Correlation Coefficient	.777**	1.000	.668**	.870**
		Sig. (2-tailed)	.000	.	.001	.000
		N	131	131	131	131
	Customer Service	Correlation Coefficient	.689**	.668**	1.000	.636**
		Sig. (2-tailed)	.000	.001	.	.009
		N	131	131	131	131
	Innovativeness	Correlation Coefficient	.774**	.870**	.636**	1.000
		Sig. (2-tailed)	.000	.000	.009	.
		N	131	131	131	131

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

Source: SPSS Data Output, 2023

Table 8 on big data analytics capability and process performance showed that the probability value (pv) = 0.000 is less than 0.05, Therefore, null hypotheses is rejected indicating that there is a significant relationship between big data analytics capability and process performance. This shows that data analytics capability, if applied on motivating commercial banks will a significant positive influence on their process performance. The table also, showed that the probability value pv = 0.000 < 0.05, hence from the decision rule, null hypothesis is rejected indicating that there is a significant relationship between big data analytics capability and customer service. This shows that the big data analytics has a significant positive influence on customer service.
Lastly, on table 8 also, on the above hypothesis showed that the probability value pv = 0.000 < 0.05, hence from the decision rule, null hypothesis is rejected indicating that there is a significant relationship between big data analytics capability and innovativeness. This shows that the big data analytics capability has a significant positive influence on innovativeness.

Multivariate Data Analysis
Firm Factor, Office Automation and Organizational Performance
Table 9 Correlations on Firm Factor and Office Automation and Organizational Performance

Control Variable			Firm Factor	Office Automation	Organizational Performance
-none-[a]	Office Automation	Correlation	1.000	**0.417**	**0.341**
		Significance (2-tailed)	.000	.000	.000
		Df	0	131	131
	Organizational Performance	Correlation	**0.417****	1.000	0.188
		Significance (2-tailed)	.000	.000	.000
		Df	131	0	131
	Firm Factor	Correlation	**0.328****	0.188	1.000
		Significance (2-tailed)	.000	.000	.000
		Df	131	131	0
Firm Factor	Office Automation	Correlation	1.000	0.809	
		Significance (2-tailed)	.000	.000	
		Df	0	131	
	Organizational Performance	Correlation	**0. 341****	1.000	
		Significance (2-tailed)	.000	.	
		Df	131	0	

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

Sources: SPSS Output, 2023

Table 9 above reveals r value of 0.417 at a significant level of 0.00 signifying a correlation between office automation and organizational performance; this shows a significant positive relationship. The partial relationship controlling for firm factor is a strong positive association given the r-value 0.328 which is high. Furthermore, the significance value of 0.00 which is less than the alpha level of 0.05 implies that the relationship between office automation and organizational performance is moderated by the influence of the firm factor of the organization. This implies that the extent to which firm factor elements such as managerial support is adopted by the organization, the more office automation adopted will in turn enhance organizational performance of commercial banks in Port Harcourt Rivers State

DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

From the analysis above, the study found that there is a strong positive relationship between robotic/artificial intelligence automation and process performance of commercial banks in Rivers state. There is also, a strong positive relationship between robotic/artificial intelligence automation and customer service of commercial banks in Port Harcourt, Rivers state. There is a strong positive relationship between robotic/artificial intelligence automation and innovativeness of commercial banks in Port Harcourt, Rivers state. These findings are in line with the information technology policy, it can be seen that the use of robots and artificial intelligence in organizations has made information dissemination to customers faster and easier for the Information Manager. The findings also conform to the opinion of Akpomi and Ordu (2009) that these new technologies enables both Managers and employees progress in their employment on a useful and productive basis, especially now that modern offices lay emphasis on robots/artificial as a way of facilitating the processing of correspondence, handling and operation.

On business documentation automation and organizational performance, the study found that there is a strong positive relationship between business documentation automation and customer service of commercial banks in Port Harcourt, Rivers state. This finding aligns with Young, Milner, Edmunds, Pentsil and Broman (2014) who found a significant positive relationship document automation and organizational commitment whereas increased automation in documentation results in increased organizational commitment. Similarly, it has also been conceptualized that document automation results in increased effectiveness. Indeed, Mohanty (2009) found that a positive attitude, which may arise from increased effectiveness among employee, is due to document automation which makes their job easy.

The study also found that there is a strong positive relationship between big data analytics capability and process performance of commercial banks in Port Harcourt. There is also, a strong positive relationship between big data analytics capability and innovativeness of commercial banks in Port Harcourt, Rivers state. In this case, the study conforms to the findings of Mills (2019) who suggested that investing more in BDAC is a good thing because big data provide firms with useful economic benefits. This study is also in consistent with Ciampi et al.'s (2021) suggestion that organizations can facilitate development of innovative business models by investing in personnel expertise in big data analytics. It is also in line with previous research that suggests that organizational culture that prioritizes data driven and evidence-based decision making can facilitate development of innovative business models (Mikalef et al., 2019).

On firm factor as a moderating factor, the study revealed that there is a moderating role of firm factors in the relationship between office automation and organizational performance of commercial banks in Port Harcourt, Rivers state. This study provides useful insights into the processes managers can use to generate greater returns from investments in automation irrespective of the factors besetting the organization. While prior research conducted by Gunasekaran et al., (2017) highlights the vital roles of organizational leaders and managers in building automations in organizations. Beyond the widely accepted direct benefits captured in extant literatures of Akter et al., (2016) Yasmin et al, (2020), managers can harness automation processes to develop organizational performance through managerial support. To contribute to this scholarly discourse, we draw on contingency theory to argue that the economic benefits of investing in automation might not be realized in an environment characterized by low technical and psychological support from managers.

Based on the results of the analysis, we conclude that office automation to a large extent, relate with organizational performance of commercial banks in Port Harcourt, Rivers State. From the study, it was revealed that organizations that implements office automation are bound to outperform their competitors. The study points out that component of office automation are necessary for the effective implementation of decision in the organization. Hitherto, the we recommend that: More policies be adopted for wide application of modern information technologies to simplify and increase the productivity of employees. There is need for employees of commercial banks to match the new

challenges by acquiring new skills and competencies in the operation of these new technologies. Secondly, on-the-job and off-the-job training of Secretaries and Information Managers on business documentation automation be established as this will enable effective and efficient customer service in an organization. Thirdly, the office environment should be redefined to accommodate big data analytics capable of ensuring innovativeness and management of commercial banks should create the enabling environment to improve their efficiency and productivity and firms that offer office technology and Management should lay more emphasis on the use of automated devices.

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