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INFORMATION SYSTEM DEVELOPMENT AND SUSTAINABLE COMPETITIVE ADVANTAGE OF COMMERCIAL BANK IN RIVERS STATE, NIGERIA.

Dr. Erien-naikachep Maurice Ikuru
Department of Office and Information Management
Faculty of Administration and Management, Ignatius Ajuru University of Education
Email: eriennaikacap.ikuru@iaue.edu.ng; 08064345396

Background to the study

The business environment is always changing from the old "standards" of information systems management, which involve replacing one information system with another partial or whole. Information system development is the preparation of a new system to replace the older system, both in whole or partially. An information system is an integrated system for data collection, storage and processing and also as a source for information, cards and electronic products. information systems are used by business firms and other organizations routinely involving in their activities and the management of their operations, in communicating with their customers/suppliers, and in competing in the marketplace. Information system is one of the dynamic fields or areas, which are tracking changes, maybe one of the most important driver induced by the development of computers. It's a system that does work and has to do with information. The principal roles of building an information system is to eliminate uncertainties and unknown situations, to provide a solid foundation for the qualitative decision making in management and leadership.

The purpose of developing IS is to manage information of an organization that can transform data into information, then communicate to managers at all levels of an organization in an appropriate form. The information can be used as input for making decisions or planning that will be implemented (Patterson, 2005). Also, it requires the steps of gathering, handling, storing, obtaining and sharing information that is relevant to an organization, so that they may operate and plan activities efficiently. So, the computer system processor is generally referred to as inputs/outputs or information. Information system is one or more connected elements having attributes that allow their electronic data processing. Computers are being used in all areas; it is especially expressed mostly in business. Those who learn to use this powerful tool gain a competitive advantage and provide the information needed for careers and successful business, regardless of the profit field they are oriented in—finance, marketing, management, or any other field of business—and those who are not confronted with this powerful tool will be away from the future.

When constructing an information system, we examine various aspects of the hardware, programming and software used to create an information system for the business professional. Unfortunately, this is the wrong mentality; many people think information systems software is mysterious, complicated and extremely difficult to understand. Management information system (MIS) is very interesting logics, essential, will be very important for successful functioning of businesses and have provided reasonable parameters for optimizing a business systemically through the use of these frameworks. Informational systems are closely connected with an essential operation of enterprises, institutes and to a large degree also in the operation of modern businesses. Using information system technology, businesses are able to compete against their rivals. In fact, many of simple business processes are going to gain by using of information systems that would implement the service delivery, improve the quality of task systems and make it more innovative. As an information system is developed properly, it will present information either in the form of reports, or displays that were already predetermined as information needed for business decisions (O'Brien & George, 2007). It is defined as an electronic system which converts data to information and then summarizes the information into meaningful and useful formats as management reports to use in managerial decision making; will help organizations to outperform their competitors. It is considered as a system of people, equipment and procedures for gathering, organizing, analysing, evaluating and communicating information timely to decision makers or as an organised

computerised system that can gather, feed, process and report dates from a range of sources to provide information for decision making in the management process.

An information system consists of entirely related elements among themselves which function together with the purpose of collecting, processing, and saving information distribution. It is also a structured computer system used to gather, store, process and report data related to different levels of source to provide information required to manage the implementation of decision making. When discussing computer operating systems, the following five tasks or activities are mentioned: data collection, data processing, data management, control and security of data and generation of information. In these activities, the data from different sources is processed into useful information for the user (data processing) through various activities. Information systems are made up of equipment, software, data, process and staff. Most of the literature on evaluation has formal-rationalist tones, and tends to view evaluation as primarily a quantitative activity of assigning a probable cost/benefit ratio against a set of established criteria (Walsham, 1993). These methods tend to be management based and include a variety of measures which may be of a more challenging economic nature. Sustainable competitive advantages are those attributes that enable an organization to surpass other organizations for an extended time.

Several recent studies suggested in empirical terms that there is a link between information technologies and institutional stability. Muhammad Ikuru, Abbey, Amos, and Nwikpo (2026) found out that adoption of the information management system directly improves structural data protection and integration of financial data, thus enabling a stabilisation of the operational environments in developing regions. Additionally, data governance and leadership behaviours are important enablers to the effective operation of transitioning from legacy infrastructures to new ones. The practice of strategic leadership heavily influences on all the effects of information system changes and technological structural transitions has been confirmed by Ikuru, Egeonu and Chuku (2026). These digital platforms, besides change management, depend on their security and reliability metrics to help fulfill baseline survival. Nwabali, Ikuru, and Gift (2026) found that data governance is directly linked to the success and effectiveness of Information Change Management in local corporate/organizational context.

The study carried out by Al-Nakib et al. (2011), Using Management Information Systems (MIS) to Boost Corporate Performance highlights the role of Management Information Systems (MIS) towards corporate performance. Existing research literature has been examined to validate the theories related to the link between MIS and Corporate Performance. A management information system (MIS) can give information related to potential future events, possibilities to be efficient, and output rates. Moreover, the higher the capability of management information systems, the higher the strategic performance. According to the reasons given above, these and many more are suggested as being crucial features of MIS which directly affects the financial and strategic performance of any company. Likewise, the study of Anja et al. (2000) on information development in a developing country gave a theoretical study of the special issues in Nigeria and Africa as well as the special structural prerequisites to the development of an information system in the African continent.

Importantly, today's approaches tie information architectures tightly to market dominance. In their study, Information system reliability, digital storage capacity and retrieval efficiency as enablers of sustainable competitive advantage (2026), Ikuru, Dick and Return concentrated on information system reliability, digital storage capacity, and retrieval efficiency as the key elements of sustainable competitive advantage, specifically the way that information system reliability relates to service quality superiority, organizational resilience, and financial performance. The foregoing studies however, has shown a direct relationship between the infrastructure reliability and the operational resilience but no of these specific studies has tried to model the interaction of the holism of the development of information system with the sustainable competitive advantage of commercial banks operating in Rivers State. This is exactly the missing information needed that this study aims to address. This gives impetus to this study.

Statement of Problem

Information system development relies on structuring development, functionality development and interaction features development. Also (systems) are distributed. Thus, co-design and co-evolution becomes one of the main characteristics of systems. Information Systems is a system which transforms data into information that is conveyed to the right people at the right levels in an organization in proper format. The information may help in making good decisions or plan for action to be implemented (Patterson, 2005). Information system development are sequence survey of structure that is design to replace former methodology with the view of achieving efficiency, basically involves the process of collecting, processing, storing, retrieving and communicating the relevant information for the purpose of efficient management operations and for business planning in any organizations. Thus, the functions as the constituents of the administrative process and the available information plays a significant role in the success of an effective decision making process, which is the core of administrative process, (Nath & Badgujar, 2013). IS Present information in certain predetermined formats and displays to assist decision making within business (O'Brien & George, 2007). ISD is define as type of information systems that transform data to information and summarized the information to meaningful and useful forms as management reports to use it in managerial decision making.

The Technology Acceptance Model, created by Davis, is a highly impactful research framework in examining the factors influencing information systems development and the acceptance of information technology to forecast individuals' intentions to utilise and embrace these systems. The Technology Acceptance Model is influenced by two factors: perceived ease of use and perceived usefulness (Chen, Li, & Li, 2011). Perceived usefulness (PU) - Fred Davis (1989) defined this as "the person's belief that the use of a specific system will improve his or her job performance.

However, negligence in the development of an adequate information system in an organization entails that such organization will go entropy, which will emanate from loss of organizational vital information as an unauthorize individual or group will start having access to information of the organization. Information system and the need to constantly develop it periodically in conformity to the features that will help organization to outperform her contemporary is liken to the life blood of every organizations. Most of the firms make decisions that impact their competitive position and profitability via strategic management and strategic planning (expected to help the firm secure a competitive edge over its competitors in achieving their competitive advantage). There are numerous linkage and interdependencies between activities in the value chain of firms and therefore interdependencies are essential to gaining competitive advantage. This is done to enable the company build a competitive advantage in the search for sustainable competitive advantage. There are two components to the firm's profitability: Organization attractiveness (structure) and The relative standing of the firm in the industry. Strong comparative view suggests that the company gains something in the competitive world which can be invincible.

Administering and perceiving systems often changes dramatically in response to infrastructural deployments and system visibility. In accordance with Omoku et al. (2022), a direct relationship between digital information and communication technology architectures and the business processes of an organization and systemic workflows was established. Likewise, the perceptions of users within the professional domain also contribute to the individual acceptance metrics: Omoku et al (2026b) showed that the perceived capability and (expected) result of the frameworks in office and information management also play a significant role in determining individual acceptance. The human and structural dimensions coexist with administrative settings that misjudged design decisions can affect performance. For example, Omoku et al. (2026a) found that the baseline indicators of job productivity for the managers in complex localized metropolises can be directly affected by environmental stressors and behavioral pressures.

Previously investigation revealed that most customers were having poor service delivery, lack of quality service system and absence of innovativeness from organization, 'this could be traceable to

lack of effort from organization to develop and update her information system model. Another issue that necessitated this study is the shortfall of documented empirical studies on how information system development dimensions such as, information technology, people, and process evaluation relate to sustainable competitive advantage of Commercial bank in Rivers State. Therefore, it is pertinent to close this knowledge gap.

Conceptual Framework

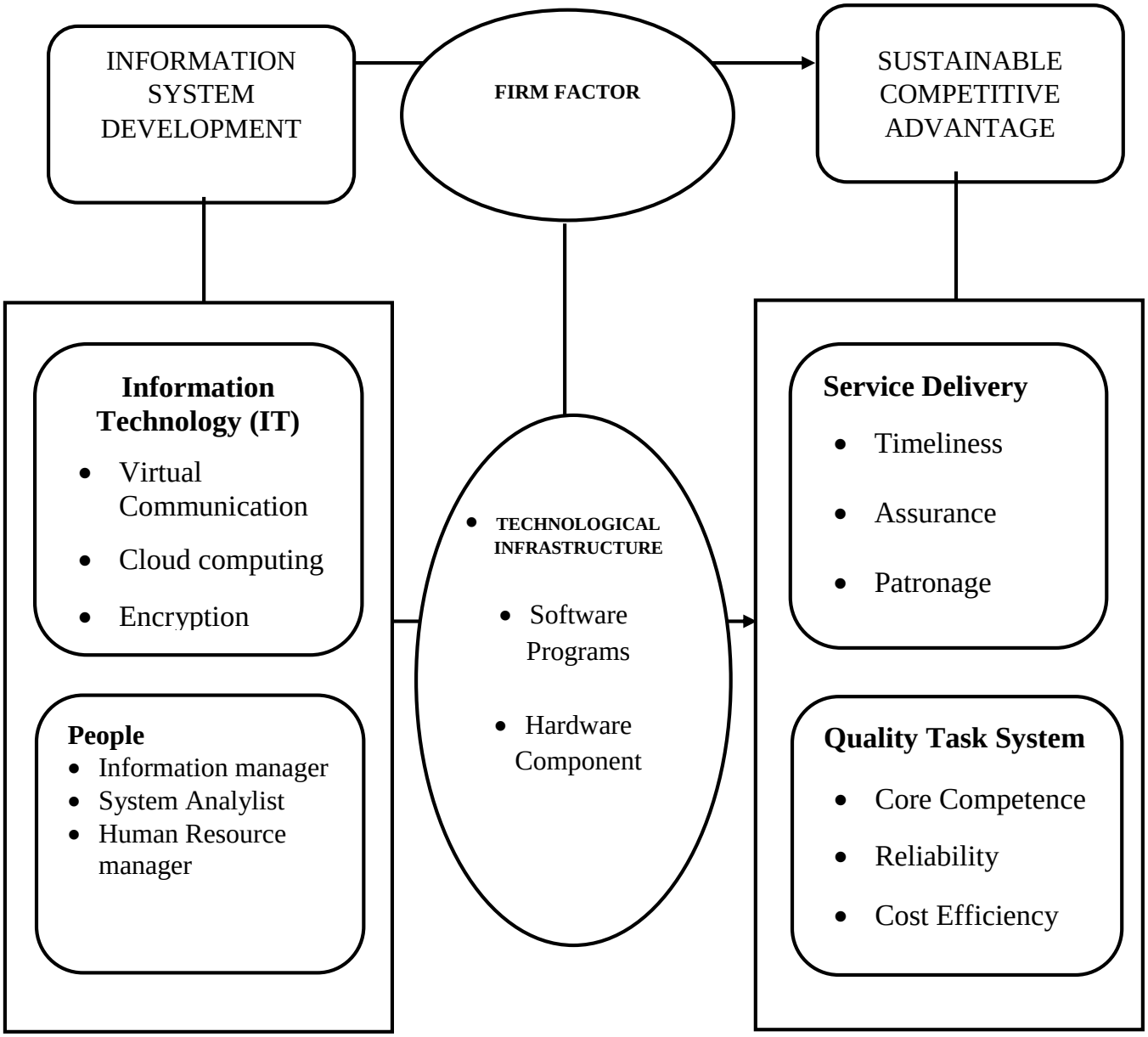


Figure 1.1 Conceptual Framework showing the relationship between Information System Development (Independent Variable) and Sustainable Competitive Advantage of Commercial Bank in Rivers State, Nigeria (Dependent Variable)

Source *Research*er (2022) based on the dimensions of information system development adopted from the work of Philip et al (2010) and the measures of sustainable competitive advantage sourced from Victoria (2009). The measures of technological infrastructure were adopted from Jeromy (2015).

Aim and Objectives of the Study

Immediately after stating our research problem, the focus of this study was how to investigate the relationship that exists between information system development and sustainable competitive advantage of selected banks in Rivers State. This study attempts to help overcome the gaps mentioned above and has the following objectives, specifically:

1. To investigate relationship between Information Technology and Commercial Banks Service Delivery in Rivers State
2. To establish the correlation between people and quality task system in commercial Bank in Rivers State.
3. To examine the moderating effect of hardware component on information system development of commercial banks in Rivers State.

Research Questions

Given the aim of this study the following research questions were formulated for the research study:

1. What is the role of information technology to commercial bank's service delivery in Rivers State?
2. What is the relationship between people and quality task system of commercial bank in Rivers State?
3. What is the role of the moderating role of the objective variable (hardware component) in the relationship between information system development and the sustainable competitive advantage of commercial bank in Rivers State?

Hypotheses

In order to be properly guided in the study, the following null hypotheses were tested at 0.05 level of significance

Ho_1 Information technology does not relate to service delivery of commercial banks in Rivers State.

Ho_2 People does not relate to quality task system of commercial banks in Rivers State.

Ho_3 Hardware component does not moderate the relationship between information system development and sustainable competitive advantage of commercial banks in Rivers State.

Conceptual Review

The concept of information system development, the predictor variable adopted for this study is discussed below.

Concept of Information System Development (ISD)

Issues of information system development in recent time have been a fundamental focal target in the management of organization, this is because most stakeholders involve in the usability of Information Systems (IS) are particular about quality in terms of user interface, functionality, ease of use and satisfaction. "For a robust interactive society, information systems development (ISD) should provide all the quality-relevant information during the whole life cycle of a product to all stakeholders.

Information system development (ISD) is an integral component of diffusion and implementation of information technology (IT). Here it is very generally defined as any collective work activity that is processed using new information-technological tools creatively by means of analysis, design, implementation, introduction and continuous support. Also software process improvement, quality assurance, and project management activities. ISD is an intentional change process, driven by certain more or less clear objectives. The changes are primarily in terms of different object systems or views of computer-based information systems centred around the information content and the organizational perspective centred around the use of the information system. These include the technical perspective dealing with the technical platform, the symbolic perspective, corporate

activities and information use in decision-making are strongly grounded in developed or produced by individual and specific IT systems. These systems gather, harvest, organize and produce an output which would foster timely and well-informed corporate choices. They use new management techniques and create new information systems with a goal of improving decision making processes, improving benefits and reducing costs of production. Hence it's a method to boost company operating efficiency. If firms stick to certain priorities in the field of management; there are various management techniques and management accounting practices that enhance financial performance. It is also suggested by studies that companies using accounting techniques based on traditional management prove to be more profitable than those using NMTs.

Dimensions of Information System Development

Firstly, summative discussion about dimensions of information system development used on the study is discussed in the previous section.

Information Technology (IT)

In response to this conscious effort of many organizations to outperform their rivals, strategic management of the organization has begun to change, as was highlighted by the recent comments of the U.S. Federal Reserve Chairman, Alan Greenspan, who said, Information technology is starting to change, fundamentally, the way in which we do business and how we create economic value . . . . Melloan (1999, p. A27) attributed this to their contribution to the greatest prosperity the world has ever known. How these technologies emerged is also notable, as is what occurred prior to them actually appearing: "These technologies weren't just plucked from the ether; they were incubated," he said, and "how they got incubated is something to learn from organizations.

A sustainable competitive advantage information system uses information technology (IT) for the strategic needs of the organization is intended to achieve the competitive advantage. This information will help an organisation provide products and/or services that are valuable, uncommon, hard to copy easily, and have no true alternative. It is hard to imagine anyone saying the information systems (IS) of today are not amazingly powerful enough to help one acquire a sustainable competitive advantage. Organizations can now collect data from the system and, alter the data and use it in ways that may make it the foundation for sound decisions. To do this, however, requires the information to be transformed from data and then evaluated according to a decision maker's judgment. IS can do this to take data, the raw materials of doing business, and synthesize it in a way that would create useful knowledge. Then this useful knowledge can then be applied in decision making.

People

The whole process of replacing old way of organization information system so as to outperform competitors are driven by employee, the users of the system, survey the system, identify and conduct analysis of the need for system change, which might come inform of upgrade or total change of the existing model, the design of the system to provide a framework and complete blueprint as a guide for Information system, the implementation stages or aspect of the information system development are also carried by organizational staff(people), the testing of the information system model that is been developed must be done also by the concealed personnel. This is carried out in order to determine the efficiency of the information system model more importantly, a periodic change and maintenance of the model is conducted by the organizational personnel. Information has always had an important role in the human society but during the development of that society and the resulting innovation in science and technology, its role in all areas of human endeavours has become more significant and information management more complex.

The 21st century has been characterized by change in all aspects of life. The changes in how we individuals do our work, our homes and in how organizations are managed. The progress in

information technology (Enukoha & Angioha, 2019; Attaran, Attaran & Kirkland, 2019) has been blamed for these changes. Information is nowadays universally recognized as strategic and tactical resource not only in organization but also as a very important resource of added value. Quality of staff has always been considered as a competitive advantage in the business environment. But important thing is if an organization which can use this important resource by application of new technology, the actual changes would be there if and when it increases the potential value of its employee. The storage, processing, marketing and transfer of a great quantity of data with the aid of IT can help managers enhance organization sustainable competitive advantage in particular for the banking sector. The importance of productivity and the need for it to be assessed, all because of a high level of competition, the high complexity on technology, tastes diversity, absence on resources and fast exchange of information, etc. Some suggestions with an approach emerged as Employee Resource Management (ERM) have been made, at least for a while, for managing human resources. Actually, ERM originated because of a general application of Crew Resource Management (CRM), a technique which tries to convey the structure of communication found in IT conversation, with client and workers concerns. In general, ERM is an effective system, approach, and technology across the management arena that refers to how companies are approaching with their new and old staff. Along with other new managerial concept, ERM is considered as an effective tool which delivers respective benefits and values for employers and employees. Among the major values offered to employees is the highest satisfaction with their personal needs will the most promised values for employers are employees' willingness, survival, motivation, and their increased performance. The consultant and software suppliers have tried to promote the ERP system as ERM. Moreover, it appears that there are some organisations that have adopted, more recently, some attributes of ERM. Although ERM is a new and growing concept, there are some knowledge and consensus available about it.

The Concept of Sustainable Competitive Advantage

For the companies the constant need of the maximization of resource application leads to market imperfections (imbalances of firms and markets) and these market imperfections make up the competitive advantage of firms. The notion of advantage requires the development (renovation, investment and leverage) of new resources and capabilities or the combination of skills (capabilities/competencies) or even of unique resources (dynamic or essential) that build, maintain and highlight the distinct and hard to imitate advantages (Prahalad and Hamel, 1990; Collis and Montgomery, 1995; Teece, Pisano and Shuen, 1997).

Competitiveness derives of the creation of differential capabilities needed to sustain the growth in a competitive selection environment. An organization has competitive advantage if it is capable to create more economic value than its competitor. The contribution or the level of benefit that a company makes towards the value of the goods and services provided to its users is the difference between advantages they take from purchasing the product by its cost to the company. The generation of a superior performance will depend on the obtained income from strategies and from the costs of execution of these strategies.

Different performances amongst companies are the result of different basis of their knowledge and different capacities on the development and unfolding knowledge. Unless some writers claim that there is a hierarchy of abilities, with the dynamic capacity being the highest, one has no understanding of the concept. It is observed that the company dynamics is the main driver to all other competencies and capabilities. Collis (1994) specifies that dynamic competences are "the ability of the firm to innovate faster or more effectively than its rivals. According to Wang, et al. (2007), dynamic is a component of the organizational behavior that is focused on integrating, reconfigure, renew, recreate its resources and capabilities in order to reach, sustain and improve/rebuild its key capabilities to communicate with environment mutations so as to achieve

competitive advantage. The dynamic capabilities are not only processes for them, they also are 'with-in the processes.

Measures of Sustainable Competitive Advantage
The measures of sustainable competitive advantage adopted for this study are discussed in the preceding section.

Service Delivery
Service delivery pertains to the tangible provision of services and products to customers or clients. It so pertains to the location, timing, and manner in which a service product is provided to the consumer and whether this is equitable or inequitable. The service concept delineates the methodology and substance of service design, facilitating the alignment between client requirements and an organization's strategic objectives. As stated by Chen, Tsou, and Huang (2009), innovation in service delivery orientation pertains to an organization's receptiveness to novel concepts and willingness to evolve by integrating new technology, resources, competencies, and management frameworks. Service delivery innovation is characterised as a comprehensive procedure for creating novel service offerings within the organization. The catalysts for innovation are comparable in both product and service domains, primarily varying in their significance across the two settings. In the public sector, service elements are frequently intangible, consisting of a blend of processes, human competencies, and resources that need to be effectively coordinated to achieve the intended or structured service. Goldstein et al. (2002) contended that service innovation has been characterised in several manners, ranging from a limited perspective focused on the ideation phase of new service delivery to encompassing the entire service development process. It is essential to explicitly articulate the service concept before to and throughout the innovation, design, and development phases of services.

Quality Task System
According to Lewis and Booms (1983), giving quality service implies meeting the requirements to customer expectations regularly. Service quality is as the degree and direction of discrepancy between consumer’s perceptions and expectations in terms of different but relatively important dimensions of the service quality, which can affect their future purchasing behavior. From the perspective of the customer, quality signifies suitability for purpose and fulfilment of customer contentment. The calibre of service is a crucial element that influences a business's competitiveness. Financial institutions must perpetually enhance service quality, as there is no guarantee that the existing exemplary service will remain appropriate in the future. Quality evaluations derive from the service process as well as the service outcome. As stated by (In general sense, a product is a solid substance which is manufactured for sale. Marketing defines product as a thing that is offered to a market leading to satisfy a need and wants of a consumer. In retailing, products are termed as merchandise. A good or service that most closely meets the requirements of a particular market and yields enough profit to justify its continued existence (Mushtaq & Pratibha, 2013). Kotler and Armstrong (2012) described a product as anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a want or need. According to American Society for Quality (2017) there are so many ways to define what quality in business is. From qualitative to quantitative perspectives, people view it differently. But from a technical point of view, quality can be defined in so many ways.

Theoretical Review
Social-Technical Theory by Bostron & Heinen (1977)
Facilitating this investigation was the socio-technical theory. The theory endeavours to elucidate the interdependences between information technology and humanity, as well as the correlation between

the adoption and usage of information technology and the job characteristics and productivity of employees. Two systems, namely the technological and social systems, comprise business organisations, according to the primary theory. The sophisticated. The significance issues discussed are the impact of IT on organisational performance. However, the present investigation endeavours to demonstrate the impact of information system advancements in the financial sector on the establishment of a sustainable competitive advantage. The features that scholars hypothesized for the two sub-systems were

- The technical sub-system is much more than the sum of the equipment in the organization; it can be identified with the process responsible for the conversion of system inputs into system outputs. The conversion process must be continuously controlled to be sure that system goals can be achieved;
- The social sub-system, on another hand, is much more than the set of technical control tasks to be performed by people. Technical tasks are combined with individual jobs and with responsibilities assigned to groups. Any analysis and redesign of the social sub-system implies a revision of the jobs and of the corresponding social roles, for the implications they have on the technical sub-system and for the extent to which they enhance or reduce the quality of working life for the individuals and the groups involved in production. The cornerstone of the socio-technical approach is that the fit is achieved by a design process aiming at the joint optimization of the subsystems; any organizational system maximizes performance only if the interdependency of the subsystems is explicitly recognized. Hence, any design or redesign must seek out the impact each subsystem has on the other, and planning must aim at the achievement of superior results by ensuring that all the subsystems are working in harmony.

METHODOLOGY

This study utilised a quantitative correlational research approach to explore the association between information system development and sustainable competitive advantage in commercial banks in Rivers State, Nigeria. The design was chosen acceptable since it allowed the research to evaluate the magnitude and direction of association among the variables without changing them. Primary data were acquired using a structured questionnaire, while secondary sources were employed to support the conceptual and empirical underpinning of the research.
The population of the research comprised of 150 managers recruited from the sixteen (16) commercial banks permitted to operate and having regional or head-office presence in Port Harcourt, Rivers State. The respondents comprised Regional Managers, Branch Managers, Human Resource Managers, Information Technology (IT) Managers, and Operations Managers whose functional responsibilities exposed them to information system development practices and issues of sustainable competitive advantage within their organisations. A census technique was selected since the accessible population was well defined, relatively small, and comprised of managers with enough knowledge of the research variables; hence, all 150 managers were included in the study. Data were obtained using a structured questionnaire based on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). Information system development was monitored by information technology, people, and process assessment, while sustainable competitive advantage was measured through service delivery, quality task system, and innovativeness. The moderating factors (software programs and physical components) were also assessed. The instrument was validated by expert review and assessed for reliability using Cronbach's Alpha, with 0.70 and above considered as satisfactory. A total of 150 copies of the questionnaire were issued, out of which [insert retrieved number] were correctly completed and returned. Data gathered were examined using descriptive statistics, Spearman's rank-order correlation, and partial correlation with the assistance of SPSS. All hypotheses were evaluated at the 0.05 level of significance.

Table 3.1: Population Distribution of Respondents in Commercial Banks in Rivers State

S/N	Selected Commercial Bank	Regional Manager	Branch Manager	Human Resource Manager	IT Manager	Operations Manager	Total Respondents
1	Access Bank PLC	1	1	1	4	3	10
2	Fidelity Bank PLC	1	1	1	4	3	10
3	First City Monument Bank PLC	1	1	1	5	4	12
4	First Bank of Nigeria PLC	1	1	1	4	3	10
5	Guaranty Trust Bank PLC	1	1	1	6	6	15
6	Keystone Bank Limited	1	1	1	4	3	10
7	United Bank for Africa PLC	1	1	1	4	3	10
8	Heritage Bank PLC	1	1	1	5	4	12
9	Zenith Bank PLC	1	1	1	3	3	9
10	Ecobank Nigeria PLC	1	1	1	3	2	8
11	Polaris Bank PLC	1	1	1	3	3	9
12	Stanbic IBTC Bank PLC	1	1	1	2	1	6
13	Unity Bank PLC	1	1	1	2	2	7
14	Sterling Bank PLC	1	1	1	2	2	7
15	Union Bank of Nigeria PLC	1	1	1	3	2	8
16	Wema Bank PLC	1	1	1	2	2	7
	Total	**16**	**16**	**16**	**56**	**46**	**150**

Source: Field Survey / NDIC (www.ndic.gov.ng)

Results/Findings

H_{o1} Information technology does not significantly relate with service delivery of commercial banks in Rivers State.

The findings in the aforementioned table demonstrate that the correlation coefficient (rho) signifies a relationship between information technology and service delivery. A correlation coefficient of 0.484 validates the degree and robustness of this relationship, reflecting a moderate positive correlation between the variables. The correlation demonstrates significance with a p-value of less than 0.0005. Thus, owing to this result, the earlier proposed null hypothesis is dismissed, while the alternative is supported. Thus, there is a statistically significant relationship between information technology and service delivery in commercial banks in Rivers State.

The Relationship between Information Technology and Sustainable competitive Advantage Measures

Table 4.20 Correlations for Information Technology and Sustainable Competitive Advantage Measures

			Information Technology	Service Delivery	Quality Task System	Innovativeness
Spearman's rho	Information Technology	Correlation Coefficient	1.000	.484**	.661**	.749**
		Sig. (2-tailed)	.	.000	.005	.006
		N	123	123	123	123
	Service Delivery	Correlation Coefficient	.484**	1.000	.446**	.741**
		Sig. (2-tailed)	.000	.	.000	.007
		N	123	123	123	123
	Quality Task System	Correlation Coefficient	.661**	.446**	1.000	.723*
		Sig. (2-tailed)	.005	.000	.	.013
		N	123	123	123	123
	Innovativeness	Correlation Coefficient	.749**	.741**	.723*	1.000
		Sig. (2-tailed)	.006	.007	.013	.
		N	123	123	123	123

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source SPSS Output

Multivariate Analysis of the Contextual Variable- Hardware Component

Partial correlation analysis of hardware component as a contextual variable on the relationship between information system development and sustainable competitive advantage of commercial banks is shown in Table 4.25.

Table 4.25 Correlations for the moderating effect of hardware component

Control Variables			Information System Development	Sustainable Competitive Advantage	Hardware Component
-none-[a]	Information System Development	Correlation	1.000	.728	.655
		Significance (2-tailed)	.	.000	.000
		Df	0	121	121
	Sustainable Competitive Advantage	Correlation	.228	1.000	.148
		Significance (2-tailed)	.000	.	.102
		Df	121	0	121
	Hardware Component	Correlation	.655	.148	1.000
		Significance (2-tailed)	.000	.000	.
		Df	121	121	0
		Correlation	1.000	.278	

Hardware Component	Information System Development	Significance (2-tailed)		.	.000
		Df		0	120
	Sustainable Competitive Advantage	Correlation		.678	1.000
		Significance (2-tailed)	.000		.
		Df		120	0

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

Source SPSS Output

In table 4.25, the zero-order correlation between the development of information systems and the sustainable competitive advantage of commercial banks in Rivers State indicates a correlation coefficient of 0.728, which is high and statistically significant with a p-value of 0.000, less than 0.01. The partial correlation, when adjusting for the hardware component, is 0.678 and is statistically significant (p-value (=0.000) < (0.01)). The identified favourable correlation between information system development and durable competitive advantage arises from the intrinsic connections among the variables and the hardware component. An examination of the zero correlation indicates that both information system development and sustained competitive advantage exhibit a positive correlation with the hardware component, the control variable. Eliminating the influence of this control variable diminishes the correlation between the remaining two variables to 0.678, which is significant at α = 0.01; thus, we reject the null hypothesis and assert that the hardware component significantly moderates the relationship between information system development and sustainable competitive advantage in commercial banks in Rivers State.

Summary of Findings

From the data analyzed, the summary of statistical values and their interpretations respectively were recorded and the summary of the findings are presented as follows

i. There is a significant relationship between service delivery of commercial banks in Rivers State.
ii. There is a significant relationship between quality task system of commercial banks in Rivers State.
iii. Hardware component significantly moderates the information system development and sustainable competitive advantage in commercial banks in Rivers State.

Discussion of Findings

The findings revealed a positive and significant relationship between information system Advancement and enduring competitive edge within the banking sector in Rivers State. System adaptability, system dependability, and simplicity of acquisition, alongside system attributes of intuitiveness, complexity, versatility, and responsiveness (Petter et al., 2008). The calibre of the management information system influences both the information and the organization overall, therefore enhancing the company's value. In a similar vein, the development of information systems focuses on introducing innovative methods for managing a crucial organisational asset; furthermore, the backing of information systems by top management pertains to their comprehension of the IS function's significance and their level of engagement in IS endeavours (Ragu-Nathan, Apigian, Ragu-Nathan, & Tu, 2004). Executive endorsement include managerial authorisation and ongoing assistance not alone during the development of the information system project but also throughout the system's operating phase (Al-Adaileh, 2009). It is logical that when managers allocate substantial resources to bolster information technology, they are likely to promote increased utilisation of information systems inside the firm. If top management endorses the use of an information system, they could include incentive mechanisms to motivate employees to engage with the system. In this context, employees exhibit more willingness and satisfaction while interacting

with an information system. As the performance of individual employees improves, the overall efficacy of the organization will rise (Cho, 2007). The subsequent conclusions derived from the research are as follows.

CONCLUSION

The result of the study emphasizes the significance of the relationship between information system development and sustainable competitive advantage of commercial bank in Rivers State. From the findings obtained from empirical literature and results from our tested hypotheses, we conclude that information system development significantly influences sustainable competitive advantage of commercial banks in Rivers State. Furthermore, the study also affirmed that software program and hardware component positively moderated the relationship between information system development and sustainable competitive advantage of commercial banks in River State.
Similarly, based on the specific objective, the following conclusions have been made

RECOMMENDATIONS

Based on the findings, the conclusions and implications of the study, the following recommendations have been made

i. Information technology is key for sustainable competitive advantage therefore, there is a need for an improvement in the technological system between employees and the employer, the areas where employees feel dissatisfied should be addressed especially on bringing modern system.
ii. To help enhance the effectiveness people as a performance strategy, the study recommends that team building should, training of staff and proper incentive be designed as a regular program and implemented by experienced external professionals. The topics and activities of such programs should be properly aligned with specific needs of different cadres of employees in the banking sector. They should also focus on the explicit goals such employees are expected to meet within a given timeframe, cost and logistics. That way, employees and facilitators alike will be able to focus their interest, energy and resources on what would add value to the overall competitive advantage and better performance of the team.
iii. With regards to process evaluation, managers and leaders should create a favorable organizational climate that provides employees with the needed emotional, psychological, and moral support that will help them adhere to the mode of operation that is strategically outline.

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