

INFORMATION ACCESSIBILITY AND UTILIZATION AS FACTORS INFLUENCING DECISION-MAKING OF MANAGERS IN COMMERCIAL BANKS IN NIGERIA

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ABSTRACT

This study investigated information accessibility and utilization as factors influencing decision-making of managers in commercial banks in Nigeria. Single stage random sampling with equal allocation method was used to select 550 managers from the 66 licensed commercial banks. The study revealed that there was a significant positive relationship between academic qualifications and information utilization in decision-making of the respondents ($r = 0.88$, $P < 0.05$). Information accessibility and utilization, when taken together significantly influenced decision-making of the respondents ($F = 48.67$, $df = 2: 507$, $P < 0.05$). Also, each of the two factors independently has a significant influence on decision-making of the respondents information accessibility ($\hat{\alpha} = 0.6214$; $df = 507$, $T = 10.71$, $P < 0.05$) and information utilization ($\hat{\alpha} = 0.8246$, $df = 507$, $T = 12.49$ $P < 0.05$). The study also found that information utilization has a greater relative influence than information accessibility on decision-making of the respondents. Information accessibility and utilization was found to have significant positive multiple relationship with decision-making of the respondents ($R = 0.8428$, $P < 0.05$). It is therefore recommended that the management should make relevant information accessible on time for the use of managers for improved decision-making in the Nigerian commercial banks.

KEYWORDS: INFORMATION ACCESSIBILITY, INFORMATION UTILISATION, COMMERCIAL BANKS, MANAGERS, NIGERIA.

Introduction

Before the introduction of the Structural Adjustment Programme (SAP) in 1986, Nigeria's financial sector was highly regulated by the government. Some of the regulations, though occasionally desirable, had no doubt led to strains in the financial sector. Banks were subjected to great restrictions or controls on their financial products, services and activities. These restrictions had, to some extent, limited some banks especially the commercial banks to adjust to rapid unstable market conditions under the new financial system in a deregulated economy.

Among these interventions and controls were ceilings on credit expansion and interest rates, restrictions on entry into the banking industry and the restriction often placed on bank's portfolio selection. Some banks were forced to perform developmental roles such as provision of subsidized credit to priority sectors (manufacturing, agriculture, transport and communication, tourism, energy) and public enterprises for which some of them lacked expertise, the consequence was insolvency which weakened their internal efficiency.

More so, the urgent need to sanitize the operations of banks in a deregulated environment prompted the adoption of some monetary policy measures which adversely affected some of them. Among such policy measures were the prudential guidelines, statement of accounting standards for banks and the use of stabilization securities by the Central Bank of Nigeria (CBN) to mop up excess liquidity in the system. The introduction of these measures, though sometimes very necessary, exposed many weak banks and threatened them with insolvency. Some banks which had earlier posted fat profits started to post heavy losses leading to insolvency. The use of stabilization securities to mop up surplus liquidity also forced some marginal banks to illiquidity. In most cases, banks' illiquidity caused panic among the customers, because of the low ability of some banks to meet depositors' demand. Consequently, the banks embarked upon distress borrowing in the inter-banks market at exorbitant or cut throat rates. More so, the problem of inadequate capital further worsened the poor performance of banks in the financial sector, and the huge amount of non-performing loans has eroded the capital base of many banks.

In addition, the poor management of banks in Nigeria often results in excessive risk-taking through high operating expenses, inadequate administration of loan portfolio, an overly aggressive growth policy to attract deposits, interest rate speculation coupled with other instances of poor judgment that result in stress in the banks. It must be noted that deregulation of the financial sector in any economy is information driven. The bank managers need accurate, reliable, complete, efficient and timely information to manage uncertainty associated with their business operations and to make rational decisions. The quality of decisions made by the managers in commercial banks especially on credit management, conflict resolution, financial products and services planning and development, interest rate speculation, human resources management, profit making, investment analysis, insurance policy, risk assessment, portfolio management, choice of suitable business plan, marketing strategy to adopt, the use of appropriate information and communication technologies, etc. depends on accessibility of pertinent information and how well they use available information.

Furthermore, information is an indispensable corporate asset or resource, necessary and important for the survival of commercial banks in a deregulated

economy like Nigeria. Since the financial sector in Nigeria has been subjected to market forces, banks especially commercial banks and more so their managers need adequate information about their business environment for good decision-making. This perhaps explains why Elliot and Starking (1998) see information as the life blood of business organizations. The risks associated with business operations of banks generally in Nigeria are enormous. Macroeconomic variables that fuel economic problems such as inflation rate, exchange rate, unemployment rate, debt stock, debt service rate, gross domestic product (GDP), purchasing power parity, manufacturing capacity utilization rate, taxation, human development index, population growth rate, balance of payments, export and import growth rates coupled with political instability and poor banking culture adversely affect quality of decision-making of commercial bank managers and ultimately the bank's business performance in Nigeria. The risk assessment by managers in banks especially commercial banks calls for regular collection of information from the business environment as well as its intensive use to manage those risks.

In actual sense, one of the critical functions of managers in corporate banking beside business planning and controlling is decision-making. Opeke (1984) rightly observes that without information, management in their decision-making ability is stifled and without information management, there will be no systematic approach to information harnessing, dissemination and use. Babalola and Alabi (2002) submit that there is a tendency that managers in Nigerian banks do not always know how to access and utilize the information necessary for decision-making. Poor information literacy, lack of functional information systems and inappropriate information use may incapacitate bank managers from accessing and using available information appropriately for decision-making. It must be pointed out at this juncture that commercial bank managers in Nigeria live in an information rich business environment. How well they source their information requirements from the wide-spectrum of information sources available and use them in their decision-making process have direct effect on their business performance. Information is the basic raw material required as input in the decision-making process of managers in commercial banks for the formulation of strategic business plans to gain a competitive edge in their sector.

Thus, the increasing awareness about information as a corporate asset and its positive role in business performance has forced some bank chief executives in Nigeria to establish corporate information centres to make information available and readily accessible for use of their workers, especially managers for better decision-making. It would be of interest to note that managers monitor and evaluate trends in their business environment through internal and external channels of information available and accessible to them. By virtue of their position, managers receive more information from different sources than almost any one else in an organization (O'Brien, 1996). Apparently, bank business process

reengineering can only succeed when the managers access and use information from authoritative and relevant sources when performing their functions.

The underlying factor of business process reengineering in the corporate world is total quality management. This implies that bank managers must continuously improve the quality of their financial products and services. This can only be achieved when managers in corporate banks make use of information in their decision analysis. Menke (1979) sees decision analysis as a methodology for calculating the trade-off between making a decision with partial information versus expending resources to obtain more information and thereby making a decision based on more complete information.

Koenig (2000) opines that organizations that more rapidly perceive that the wholeness of information driven management will have an advantage in creating a faster learning organization that will give them continuing competitive advantages. Arguably, if banks, especially commercial banks allow their management to be information driven, their managers would access and use information better in the decision-making process. When better decisions are made with the use of current, accurate and efficient information acquired from external and internal business environments by the bank managers; their financial services and products quality will be rapidly improved.

Instant access to information from a multiplicity of sources facilitates information utilization for improved productivity and decision analysis of the bank managers in a deregulated financial sector which currently prevails in Nigeria. Tamuno (1992) comments that it is one thing to generate as much information as possible, it is quite another thing however to make such information accessible to others when needed. On daily basis, bank managers have to take job-related decisions in order to provide value-added services to their clientele. The quality of decisions made by them is based on the quantum of information accessible to them and used in their decision-making process.

It is pertinent to note that researchers in the fields of library and information science have failed to conduct empirical study on how information accessibility and utilization affect the decision-making of bank managers. What we have in the literature are just mere opinions expressed by some scholars on how information availability, accessibility and utilization affect the decision-making process of any group of users. It is against this backdrop that this study addresses information accessibility and utilization as factors influencing decision-making of managers in commercial banks in Nigeria.

Objectives of the Study

The following are the specific objectives of the study:

1. To find out the most prevailing specific information requirements in decision-making of the respondents;
2. To ascertain the very easily accessible sources of information to the respondents in their decision-making;
3. To determine the major sources of information utilized in decision-making of the respondents;
4. To find out if there is any significant gender difference in information sources utilization in decision-making of managers in the commercial banks in Nigeria;
5. To determine if there is any significant difference in information sources utilization of managers in decision-making based on their management cadre in the commercial banks in Nigeria;
6. To find out if there is any significant relationship between academic qualification and information utilization of managers in decision-making in the commercial banks in Nigeria;
7. To ascertain if information accessibility and utilization will significantly influence decision-making of managers in the commercial banks in Nigeria; and
8. To determine if there is any significant relationship between information accessibility, information utilization and decision-making of managers in the commercial banks in Nigeria.

Research Hypotheses

The following hypotheses were formulated and tested at a = 0.05 level of significance to serve as a guide in the conduct of this study:

1. There is no significant difference between male and female managers' use of information sources in decision-making in the commercial banks in Nigeria;
2. There is no significant difference in information sources' utilization of managers in decision-making in the commercial banks in Nigeria based on their management cadre;
3. There is no significant relationship between academic qualifications and information utilization of managers in decision-making in the commercial banks in Nigeria;
4. Information accessibility and utilization do not significantly influence decision-making of managers in the commercial banks in Nigeria; and
5. There is no significant relationship between information accessibility, information utilization and decision-making of managers in the commercial banks in Nigeria

Literature Review

Information has been viewed from different perspectives by many people based on the disposition of the proponent. Losse (1997) defines information as one or more statements or facts that are received by a person and that have some form of worth to the recipient. It could be seen as a knowledge communicated or received concerning a particular fact or situation; news or messages which may or may not be recorded in tangible format (text, film and electronic forms) but are capable of changing the knowledge state of the recipient. Further, Harrold (1990) defines information as an assemblage of data in a comprehensive form, capable of communication. According to Camble (1992), it is that which adds to our awareness or understanding of some topics, problems or events. It is variously perceived as facts, data, intelligence, news and knowledge.

Information can be delivered orally or it can come in visual form as data; texts or graphics. Aiyepoku (1992) sees information as that which reduces the user's level of uncertainty in a particular decision-making situation. It must be noted that the user's level of uncertainty cannot be reduced from the use of information because uncertainty of occurrence of an event exists when perfect information is not available, and accessible for use to predict the occurrence of that event. What information utilization is capable of doing in decision-making analysis of the users is to assist them in managing uncertainty in order to make rational decisions.

In the view of Scarrot (1994), information is essentially the human understanding that guides human actions and it is a central feature of the human ecological niche, which can most concisely be described as the compulsive organizer. Wersig and Neveiling (1976) consider information as structures, processes, messages, knowledge, meaning and effects. This is compatible with the cognitive view on information interaction where potential information gained by a recipient from information systems may transform his/her knowledge structures (Ingwersen, 1992).

Information accessibility and decision-making

In an organizational setting, managers are saddled with the responsibility of efficient allocation of resources for optimal profit or improved productivity. The greatest challenges that managers often face in accomplishing this goal is how to access information for optimal factors combination. Decision-making comes in when managers are confronted with the choice of factors of production that could best be combined and suitable methods of production of goods or services that will produce the desired results. In the banking industry, managers are faced with complex tasks such as loan portfolio management, profit maximization, cash management, market analysis, investment analysis, manpower development and planning. All these activities call for access to, and use of information to support decision-making.

Literature suggests the existence of a number of complex tasks that exhibit characteristics that require pertinent information accessibility and availability to guide decision-making. These are: repetitively, analyzability, a priori determinability, the number of alternative paths of task performance, outcome novelty, number of goals and conflicting dependencies among them, uncertainties between performance and goals, number of inputs, cognitive and skill requirements, as well as the time-varying conditions of task performance (Campbell, 1988; Daft, Sormuen and Parks, 1988; Fischer, 1979; Fiske and Maddi, 1961; Hart and Rice, 1991; Jarvelin, 1986; March and Simon, 1967; Macmullin and Talylor, 1984; Tiarniyu, 1992; Tushman, 1978; Van de Ven and Ferry, 1980; Wood 1986; and Zeffane and Gul, 1993). In as much as complex tasks are to be performed by managers in an organization like commercial banks, decisions must be made on how best to perform such tasks in the light of available resources and access to needed information.

In the world of work, acquisition, accessibility, utilization and dissemination of information lie at the heart of management. Mintzberg (1973) supports this view by dividing the work of managers into three overlapping roles, namely; interpersonal, informational and decisional. Due to the formal authority vested in them, they perform three interpersonal roles as figurehead, leader, and liaison. These roles give managers access to numerous internal and external sources of information and so enable them to perform these three informational roles. As monitor and evaluator, the manager continually seeks or searches and receives information from a broad spectrum of sources in order to have thorough knowledge of the organization and its environment. As disseminator, the manager disseminates the organization's information into the environment to create a primary demand for their products or services so as to make profit. The unique ease of access to information from a variety of sources coupled with power and legitimate authority tend to empower managers in the industry to perform four decisional roles. As managers in commercial banks they initiate programmes and projects, formulate business strategic plans, deal with business uncertainty, analyze risks, enter into business agreements with customers and other organizations, and resolve conflicts that may create industrial disharmony. These are purely decisional roles that access to, and uses of information are critical factor inputs.

However, O'Reilly (1982) investigates the impact of sources accessibility and quality on the use of information sources by decision makers in four branch locations of a country welfare agency and finds that superiors and peers have high sources of information accessible to them.

It must be borne in mind that when bank managers perceive ease of accessibility to a particular information source, there is a likelihood of using it in their decision-making process. Rosenberg (1967) concludes that research and non-research personnel preferred to access information sources that were easy to use rather

than because of the amount of information which they provided. Gerstberger and Allen (1968) investigate the criteria employed by research development engineers in the selection of an information source and report that various oral and written technical information sources are selected for use. Accessibility not only determined the overall frequency of a source's use, but also the choice of first source. In many instances, subjects preferred using oral sources due to their relative accessibility and ease of use.

Notably, managers in some organizations like commercial banks gather much information and in most cases do not use it in their decision-making process. Probably due to their limited information utilization capacity, some managers may even have unrestricted access to available information sources but do not have time to acquire information for use when taking a decision. March (1982) supports this assertion when he reiterates that managers in organizations seem to gather a great deal of information that has little or no relevance to decision-making. Some managers in the financial industry in developing countries like Nigeria would make decisions first and look for the relevant information to justify their actions. Broad studies of managerial behaviour also suggest that the managers in organizations appear to be far less rational than generally believed. In a study of successful senior managers in the public and private sectors, Isenberg (1984) finds that managers' decision-making do not seem to follow any standard model (although their decisions could later be justified by data and logic).

The reason for this could be that the managers under study may not have had easy access to relevant information for their decision-making. Allen (1977) and Culman (1983) define information accessibility as the amount of effort needed to locate an information source and then get the needed information from that source. This definition is germane and adopted in this study.

Information utilization and decision-making

Knott and Wildavsky (1980) posit that information means data arranged to make a difference as to whether a decision is made and the shape it takes. Alemna (1995) submits that information can be used for three major processes; for creating awareness, for acquiring knowledge and for decision-making. He further stresses that for information to fulfill its purpose of creating awareness, providing knowledge and aiding decision-making, it must be relevant to the needs of the users. Neelameghan (1981) asserts that the utilization of information is also dependent upon the appropriateness of information accessed. It must be noted at this juncture that information accessibility of the managers in any organization like the banks does not mean utilization, but it stimulates or facilitates the use of information in their decision-making processes.

However, Janis and Mann (1977) aver that the decision-makers can and will engage in a thorough search for all relevant information to aid their decision

analysis. Huber (1980) identifies seven types of information that must be searched for: possible alternatives, criteria to evaluate the alternatives, the relative importance of these criteria, possible future conditions, the probability that those future conditions will hold, the possible payoffs, and the constraints involved. Simon (1976) suggests that people do not optimize their decisions but search for alternatives until they find the first one that meets their minimum requirements; then they feel "satisfied".

Be that as it may, one cannot neglect the fact that information utilization is an essential ingredient of rational decision-making. Maxwell (2001) observes that most business managers in developing countries failed to make use of the available electronic information services for better decision-making. Oketunji (2000) investigates the information needs and the behaviour of Accountants and Bankers in Nigeria, and reports that references in books, journals, abstracts and indexes, book reviews and seminar/conference papers are the most useful sources of information to them. This means that they make use of authoritative sources of information probably in their decision-making or job performance. Lester and Waters (1989) remark that environmental scanning is needed to provide the information for top management to make decisions that create strategic advantage for the organization to succeed in a changing environment. Wheelen and Hunger (1998) view environmental scanning as the monitoring, evaluation and dissemination of information from the external and internal environments to key people within an organization for the purpose of identifying strategic factors – those external and internal elements that will determine the future of the corporation.

Auster and Choo (1994) find that the most frequently used personal sources of information are subordinate managers, subordinate staff, customers, and business associates. They also find that the CEOs in the study use environmental information mainly to make entrepreneurial decisions concerning organizational improvements and business strategies.

Saunders and Jones (1990) develop a general model relating information acquisition to complex organizational decision-making processes. The model is based on contextual information acquisition and decisional components, and suggests that the selection of an information source and medium at a particular point in time is affected by the various phases and associated routines comprising decision processes as well as many contextual factors. Okwilagwe (1995) reports a positive correlation between information inputs of directors and senior managers in decision-making and organizational effectiveness of the publishing industry in Nigeria. Kotter (1982) finds that managers in U.S.A rely more on information from discussions with individuals than on books, magazines, or reports. Jones and Mcleod (1986) explore the use of information sources by senior managers in the four decisional roles and report that information from

subordinates was frequently obtained and valued highly and that in the resource allocation role, they preferred internal information but did not care if it was verbal or written. Sam (1998) finds that irrespective of educational level, policy makers and managers in agricultural establishments in Ghana attach importance to ideas formations in decision tasks. Aiyepoku (1978) states that the decision makers' personality variables; the time the decision is being made; and the environment in which the decision has to be made will affect the decision makers' use of information. Appleby (1994) defines decision-making as the point at which plans, policies and objectives are translated into concrete actions. The availability and quick accessibility to accurate information for use by the managers in the commercial banks is a key component of decision-making.

Research methodology

Research design: - The research design adopted in this study is Ex-post-facto because the researcher cannot manipulate the independent variables – information accessibility and utilization and establishes the control that is needed in true experiments. We only attempt to link some already existing effects or observations to some variables, that is, the aforementioned independent variables as causative agents of decision-making of managers in some commercial banks in Nigeria.

Sampling procedure and sample size

The study population consisted of managers in 66 licensed commercial banks in Nigeria. Single stage random sampling with equal allocation method was used to select 55 banks from the available 66 licensed commercial banks. Thereafter, ten managers were chosen from each of the 55 selected banks. The total sample size of 550 managers was drawn from the corporate headquarters of these banks, which are located in Lagos.

Research instrument

The research instrument for this study involved the use of a structured questionnaire called Managers Information Accessibility, Utilization and Decision-making (MIAUD) scale. It is divided into three main sections. Section one elicits information on background information of managers such as sex, age, marital status, institution, job status, religion, job tenure and highest educational qualifications. Section two deals with information requirements, accessibility of information sources, utilization of information sources, and information in decision-making. This subscale has a coefficient reliability of 0.82 using cronbach-alpha method. Section C deals with decision-making of the managers. A decision-making behaviour inventory developed by Hammed (2002) having 26-items was used. It was revalidated and a reliability coefficient of 0.78 was obtained using cronbach-alpha method. It is a five point scale with responses ranging from "very much unlike me" = 1 to "very much like me" = 5.

Methods of data collection and analysis

Ten research assistants personally administered the questionnaire to the 550 sampled managers from the 55 chosen commercial banks with corporate headquarters in Lagos. Out of this number, 510 responded and their questionnaire were found valid for analysis. The data collection lasted for two months, October – November, 2002. The response rate achieved was 92.7 per cent. The data analysis was done with the aid of computer, using the Statistical Package for the Social Sciences (SPSS). Z-score, F-ratio, multiple regression and correlation analyses were used to test the formulated hypotheses.

Findings

Of the 510 respondents, 345 (67.6%) were male with the remaining 165 (32.4%) being female. This means that the smallest proportion of women are represented at the management level in Nigeria's commercial banks. The reasons for this state of affairs could be that the women generally do not want to take banking as a career, inadequate child-care facilities at work, career interruptions, male work cultures and discriminatory attitudes in the workplace. The prejudice of their male colleagues may also be the only psychological constraint to career progression women may encounter in the banking industry. Concerning the marital status of the respondents, 120 (23.5%) are single, while the rest 390 (76.5%) are married.

Their age ranges from 30 to 53 years with a mean age ($\bar{x} = 41.5$, $SD = 3.8$) years. The majority of them had put in between 16 and 28 years of active service in their banks. Their mean length of service is $\bar{x} = 18.2$, $SD = 4.5$ years and this means that they still have more active years to spend in their banks, because the maximum length of service of a worker in the Nigerian banking industry is 35 years. Also, their academic qualifications show that 180 (35.3%) of them are holders of bachelor degree certificates and/or its equivalents, 125 (24.5%) are holders of postgraduate diploma certificates, 190 (37.3%) are holders of masters degree certificates and 15 (2.9%) are holders of doctorate degree certificates particularly in business related disciplines.

To determine the most prevailing information requirements in decision-making of the respondents, they were asked to score each of the nine provided list of specific information that bank managers may require in decision-making on a 4-point scale, that is, "very highly required" =4, "highly required" =3, "occasionally required" =2, and "never required" =1. Thereafter, mean ($\bar{x}$), standard deviation (SD) and variance (S^2) scores of the specific information requirements in decision-making of the respondents are obtained (Table 1).

TABLE 1: MEAN SCORES OF SPECIFIC INFORMATION REQUIREMENTS IN DECISION MAKING OF THE RESPONDENTS

Variables	x	SD	variance
Government monetary/fiscal policies	3.98	0.52	0.270
Household income/budget	3.96	0.55	0.303
Banking laws	3.95	0.50	0.314
Price data	3.94	0.54	0.292
Labour matters	3.93	0.50	0.250
Social crimes	2.96	0.18	0.032
Technological Changes	2.94	0.21	0.045
Political stability	2.90	0.28	0.078
Population matters	2.88	0.24	0.058

As shown in Table 1, the most prevailing specific information requirements in decision-making of the respondents are government monetary and fiscal policies, household's income and budget, banking laws, price data and labour matters.

Concerning the information accessibility of the respondents for decision-making, they were asked to rate sixteen sources commonly used in accessing information by any group of corporate managers as mentioned in the work of Auster and Choo (1994). Each source type rating was scored as follows: very easily accessible (4), easily accessible (3), occasionally accessible (2) and not accessible (1). Thereafter, the mean (x), standard deviation (SD) and variance (S^2) scores of each source type were computed as reflected in Table 2.

TABLE 2: MEAN SCORES OF INFORMATION ACCESSIBILITY IN DECISION-MAKING OF THE RESPONDENTS

Variables	x	SD	Variance
Customers	3.98	0.52	0.270
Newspapers/periodicals	3.96	0.48	0.230
Company library	3.95	0.42	0.176
Broadcast media	3.93	0.40	0.160
Subordinate managers	3.91	0.38	0.144
Subordinate staff/colleagues	3.90	0.36	0.130

Government publications	3.90	0.34	0.116
Internal memo/circulars	2.97	0.28	0.078
Internal reports/studies	2.94	0.32	0.102
Superior/board members	2.92	0.22	0.048
Business/professional associates	2.90	0.24	0.058
Trade associations	2.88	0.42	0.176
Competitors	2.80	0.44	0.194
Conference/strips	2.52	0.36	0.130
Electronic information services	1.36	0.08	0.006
Government officials	1.28	0.04	0.002

The very easily accessible sources of information to the respondents in their decision-making are customers, newspapers/periodicals, company library, broadcast media, subordinate managers, subordinate staff/colleagues, and government publications. Electronic information services and government officials are occasionally accessible to them when taking decisions on their job related matters.

Similarly, respondents were provided with a list of sixteen sources of information. They were asked to rate their utilization of each source type in their decision-making on a 4-point scale: very heavily used =4, heavily used =3, occasionally used =2 and never used =1. Thereafter, mean ($\bar{x}$), standard deviation (SD) and variance (S^2) scores were computed for each source type to determine the most prevailing sources of information used in decision-making by the respondents.

TABLE 3: MEAN SCORES OF INFORMATION SOURCES UTILISATION IN DECISION MAKING OF THE RESPONDENTS

Variables	$\bar{x}$	SD	Variance
Customers	3.97	0.22	0.048
Subordinate staff/colleagues	3.96	0.20	0.040
Newspapers/periodicals	3.96	0.21	0.044
Internal reports/studies	3.94	0.28	0.078
Internal memo/circulars	3.93	0.26	0.068
Government publications	3.91	0.24	0.058
Electronic information services	3.90	0.32	0.102
Subordinate managers	2.99	0.41	0.168

Broadcast media	2.98	0.38	0.144
Competitors	2.96	0.26	0.068
Business/professional associates	2.92	0.20	0.040
Trade associations	1.96	0.18	0.032
Conferences/strips	1.93	0.32	0.102
Company library	1.90	0.22	0.048
Superior/broad members	0.98	0.18	0.032
Government officials	0.44	0.08	0.006

Table 3 depicts the mean scores of information sources utilization in decision-making of the respondents. Among the sources of information used in decision-making of the respondents, customers, subordinate staff/colleagues, newspapers/periodicals, internal reports/studies, internal memo/circulars, government publications and electronic information services have highest mean scores. This means that these are the major sources of information utilization in decision-making of the respondents.

However, the mean score of information sources utilization in decision-making of the male managers is $x = 28.7$, $SD = 4.81$ while that of the female managers is $x = 27.9$, $SD = 4.72$. Despite the fact that there is a slight increase of 0.8 in the mean score of information sources' utilization in decision-making of male managers over that of their female counterparts, the test of hypothesis one reveals that there is no significant difference between male and female managers' use of information sources in decision-making in the commercial banks in Nigeria ($x=1.78$, $P > 0.05$).

TABLE 4: Z-SCORE TEST SHOWING SIGNIFICANT DIFFERENCE IN INFORMATION SOURCES UTILISATION IN DECISION-MAKING OF MANAGEMENT IN THE COMMERCIAL BANKS IN NIGERIA BY SEX.

Variables	n	x	SD	Z	P
Male	34.5	28.7	4.81	1.78	0.081
Female	165	27.9	4.72		

Out of the 510 respondents, 280 (54.9%) are managers, 165(32.4%) are senior managers and 55(12.75%) executive managers. Table 5 shows the summary of one-way analysis of variance which reveals that there is no significant difference in information sources utilization in decision-making of the respondents by management cadre. The Table reveals that there is no significant difference in

information sources utilization of managers in decision-making in the commercial banks in Nigeria based on their management cadre ($F = 1,538$, $df = 2; 507$, $P > 0.05$).

TABLE 5: ONE-WAY ANALYSIS OF VARIANCE (ANOVA) SHOWING TEST OF SIGNIFICANT DIFFERENCE IN INFORMATION SOURCES UTILISATION OF MANAGERS IN DECISION-MAKING BY MANAGEMENT CADRE

Sources of Variation	DF	SS	MS	F
Management cadre	2	315.620	157.810	1.538
Residual	507	52018.284	102.600	
Total	509	52,333.904		

The academic qualifications of the respondents are measured on a 4-point scale, that is, Bachelor Degree =1, Post-graduate Diploma =2, Master's Degree =3 and Doctorate Degree =4. The mean score of academic qualifications of the respondents is $x = 2.65$, $SD = 0.24$ while the mean score of their information utilization in decision-making is $x = 28.3$, $SD = 4.78$. The test of hypothesis three shows that there is a significant relationship between academic qualifications and information utilization of managers in decision-making in the commercial banks in Nigeria. ($r = 0.88$, $P < 0.05$). This is shown in Table 6.

TABLE 6. SUMMARY OF TEST OF SIGNIFICANT RELATIONSHIP BETWEEN ACADEMIC QUALIFICATION AND INFORMATION UTILIZATION OF MANAGERS IN DECISION-MAKING IN THE COMMERCIAL BANKS IN NIGERIA.

Variable	n	x	SD	r	p
Academic Qualification	510	2.65	0.24		
Information utilization	510	28.3	4.78	0.88	0.016

Nonetheless, the mean scores of decision-making, information accessibility and utilization of each of the respondents were computed. The multiple regression analysis was used to determine the influence of independent variables – information accessibility and utilization on dependent variable decision-making of the managers in the commercial banks in Nigeria.

From Table 7, it is obviously seen that information accessibility and utilization jointly have significant influence on decision-making of managers in the commercial banks in Nigeria ($F = 48.67$, $DF = 2$; 507 , $P < 0.05$).

TABLE 7: SUMMARY OF REGRESSION ANALYSIS ON DECISION-MAKING OF THE RESPONDENTS.

Source of variation	DF	SS	MS	F-ratio
Due to regression	2	9582.46	4791.23	48.67*
Due to residual	507	49914.85	98.45	
Total	509	59497.31		

Multiple R (adjusted) = 0.8428

Multiple R^2 (adjusted) = 0.7103

Standard error of estimate (SEE) = 9.9222

* $F = 48.67$, $df = 2$; 507 $P < 0.05$

Table 8 presents for each independent variable, the standardized regression weight (b), the standard error of estimated "b" SE (b), the degree of freedom (df) and the t-values. As shown in Table 8, the t-values associated with the two independent variables – information accessibility and utilization are significant at a =0.05 level. This implies that each of the independent variables on its own significantly influenced decision-making of the respondents.

TABLE 8: RELATIVE INFLUENCE OF THE INDEPENDENT VARIABLES ON DECISION-MAKING OF RESPONDENTS.

Variable	Std. Reg. wt (B)	SE(B)	DF	T-value
Information accessibility	0.6214	0.058	507	10.71*
Information utilization	0.8246	0.066	507	12.49*

Significant at $\alpha = 0.05$ level

The test of hypothesis five reveals that there is a significant positive multiple relationship between information accessibility, information utilization and decision-making of managers in the commercial banks in Nigeria ($R=0.8428$, $P<0.05$).

Discussion

To improve the quality of the decision and policy-making process within the banking industry, the managers in the commercial banks in Nigeria need a wide range of information on their job related matters. One of our findings in this study is that the most prevailing specific information requirement in decision-making of the managers in commercial banks in Nigeria are government monetary and fiscal policies, households' income and budget, banking laws, price data and labour matters. Also, they need a host of general economic information such as exchange rates, share prices, interest rates, insurance, tax laws, monetary supply and demand, national income and the general state of the economy, in their decision-making process. This may be partly due to the unstable nature of the Nigerian economy and rapid changes in government economic policies.

However, high risks associated with business operations in the Nigeria banking industry have forced managers in commercial banks to seek information from the available sources to make rational and appropriate decisions in managing business risks. It must be noted that not all available information sources to any group of users like commercial bank managers are easily accessible. In actual fact, most users of information would prefer sources of information that are perceived to be easily accessible than giving much consideration to quality of those sources. This present study finds that customers, newspapers/periodicals, company library, broadcast media, subordinate managers, subordinate staff/colleagues and government publications are very easily accessible sources of information to the respondents in their decision-making. This finding is in line with an earlier work of Auster and Choo (1994) who report that the most perceived information source accessible to the chief executive officers in the Canadian publishing and telecommunications industries when scanning the environment for strategic advantage are newspapers/periodicals, subordinate managers, subordinate staff, broadcast media, internal memo/circulars and customers.

It has been observed that corporate establishments like commercial banks need relevant and timely information for effective strategic decisions to be taken within the industry. Such decisions taken within the banking industry help greatly in establishing a competitive advantage over other banks operating within the same industry. Therefore sourcing, accessing, utilizing and dissemination of information is taking a new dimension wherein an average manager or corporate bank in the banking industry is actively involved in the setting up of models of sourcing and analyzing relevant information for good decision-making. Hence, business organizations like commercial banks today are consciously or unconsciously involved in the art of acquiring and utilizing information that are relevant to their business operations through formal and informal sources for better decision-making.

This study also finds that the major sources of information utilization in decision-making of the respondents are customers, subordinate staff/colleagues,

newspapers/periodicals, internal reports/studies, internal memo/circulars, government publications and electronic information services. This finding agrees with the opinion expressed by Miller (2001) that business information could better be sourced from direct contact with customers, printed information documents, and electronic information services. However, our present finding is at variance with that of Maxwell (2001) who submits that most business managers in the developing world failed to make use of the available electronic information services for better decision-making.

The study shows that there is no significant difference in information sources utilization in decision-making of the respondents based on their sex. This may be due to the same information sources that are available to them and also to the fact that they are exposed to information literacy programmes.

Similarly, in this study, it is established that there is no significant difference in information sources utilization in decision-making of the respondents based on their management cadre. This finding is surprising in the sense that one would have expected that the executive managers at strategic level of management would make more use of information in decision-making than managers and senior managers at the tactical level of management. The reason being that the executive managers need more information to formulate long range business plans, and to take far-reaching decisions that affect overall business performance in the banking industry. The pressures of competition and the need to improve financial products and services as well as making good decisions have generated a need for better information to manage business operations, so they have also increased the need for managers operating at tactical and strategic levels in the commercial banks in Nigeria to acquire information and make more effective use of it.

The result of this study reveals that there is a significant positive relationship between academic qualifications and information utilization of the respondents. This implies that the higher the academic qualifications of the managers in the Nigeria commercial banks, the more they make use of information in decision-making. This finding is consistent with Burkett's (1972) and Ehikhamenor's (1990) observations that users' educational levels influence access to, and use of information.

The study also found out that information accessibility and utilization when taken together significantly influence decision-making of managers in the commercial banks in Nigeria ($F=48.67$, $df=2$; 507, $P<.05$). This could not have happened by chance because information accessibility stimulates the use of information regardless of a user's group. It may thus be said that about 71.03 percent of the total variance in the decision-making of managers in the commercial banks in Nigeria is accounted for by a linear combination of their information accessibility and utilization.

Further analysis reveals that information accessibility and utilization independently has a significant influence on decision-making of the respondents. It is equally important to stress that information utilization ($B=0.8246$, $df=2$; 507 , $t=12.49$) has greater relative influence than information accessibility ($B=0.6214$, $df=2$; 507 , $t=10.71$) on decision-making of the respondents. Moreover, the study shows that there is a significant positive multiple relationship between information accessibility, information utilization and decision-making of managers in the commercial banks in Nigeria ($R\text{-adjusted}=0.8424$, $P<.05$). This means that the more information is made accessible to the managers in the Nigerian commercial banks and used by them, the likelihood that they make better decisions depending on the quality of information that is made accessible and used by them in their decision-making process.

Conclusion and Recommendations

Information is the key resource of management, not just in the banking industry but in all types of business enterprise. Organizations like commercial banks are now making more intensive use of information than before particularly in Nigeria. Information availability, accessibility and utilization permit the banking system world wide to create and manage financial resources and to mediate between surplus and deficit economic units. The timely supply of reliable and efficient information to managers in the banking system assists them in policy and decision-making in their job performance. No commercial bank can survive in a deregulated economy like Nigeria where keen market competition permeates the banking industry without embarking on systematic approach to acquire and use information for good decision-making.

The study finds that there is no significant difference between male and female managers' use of information sources in decision-making; no significant difference exists in information sources utilization of managers in decision-making by their management cadre, however there exists a significant positive relationship between the academic qualifications and information utilization of managers in decision-making; information accessibility and utilization when taken together significantly influence decision-making of managers and that information accessibility and utilization independently has a significant influence on decision-making of the managers; information utilization has greater relative influence than information accessibility on decision-making of managers; and there exists a significant multiple relationship between information accessibility, information utilization and decision-making of managers in the commercial banks in Nigeria. Based on these findings, it is recommended that the management of commercial banks in Nigeria must endeavor to provide information on government monetary/fiscal policies, households' income/budget, banking laws, price data, labor matters, social crimes, technological changes, political stability and population matters to managers in their decision-making process. They should make relevant information accessible on time for the use of managers in

their decision-making. The managers should make more intensive use of electronic information services and their company library information resources when taking decisions.

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