

The Impact of Management Information System (Mis) on the Performance of Business Organization in Nigeria.

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Abstract: *The role of Management information system (MIS) in business environment has evolved over time to become an integral part of its business operations in Nigeria. The use of information systems (ISs) has increased in the last 10 years not only by firms, but also by individuals and even governments. The use of ISs was encouraged by the technological breakthroughs; the advancements in telecommunications such as the internet, the globalization that created a global unlimited marketplace, the strong growing for information economy, and the rise of competitive digital firms. All of these factors transformed the ISs from data processing systems to decision support systems and became the foundation of the new business environment. This study looks at various challenges and prospect of MIS in Nigeria. The study was conducted in Federal Capital Territory, Abuja, North-Central Nigeria with the use of questionnaire and interview to collect data that was statistically analyzed using the Z-test.*

The study also attempts to highlight the impact of management information system in Nigeria Business Organization. It intends to determine how the information system helps an organization to perform effectively. The study recommends that business organization should introduce flexibility in the nature or pattern and structure of MIS, attention should also be paid to communication through the media agencies as a way of promoting company's control of the market as well acquiring appropriate and suitable computer software and program to meet MIS ever growing growth and expansion in the global business market environment.

Keywords: *Information System (ITs), Management, business environment, computer, software, Technology, Program.*

1. INTRODUCTION

Business managers today, are much more concerned about the effect of competition than they were even a few years ago. They must react to the competitive threats not only from local source but also from regional, national and international source; likewise they must seek to explore all opportunities that are available in the immediate, national and Global environment. Deregulation has also increased competitive pressure for organizations to survive, grow and prosper. In such a competitive environment, managers must employ a lot of the resources at their disposal as efficiently as possible so as to accomplish the objectives and goals of the enterprise. Management Information System provides information in form of reports and displays to managers and many business professionals. For example sales managers may use their networked computer and web browser to get instantaneous display about the sales results of their daily sales analysis report to evaluate sales made by each sales personnel.

Management Information System also takes into account integrative nature of information flow as well as the structuring of the organization around decision centers. Standards of performance are

part of any good plans; hence, determination of standards like other aspects of the planning process depends on the availability of relevant management information system. Management information system aids the functioning and monitoring of an organization. It also describes the components and resources to ensure the proper functioning of an organization.

Management information system has changed the physical layout of offices to accommodate local networks and departmental integrated systems. It is also a formalized procedure to provide management at all levels and in all functions with appropriate information from all relevant source to enable them make timely and effective decisions for planning, directing, evaluating, and controlling the activities for which they are responsible. A major task also facing management in almost every field of Endeavour is to plan carefully so that the quantity and quality of information obtained will be adequate to meet its needs.

One potentially powerful resource available to managers is Information Technology (IT), though it could also serve as a threat/problem, but the Top management has to be creative and strategic enough through their conceptual and intellectual capacity to explore full opportunities in all strategic decisions of the enterprise which affect the long term objectives of the Organization. More reports has shown how Information Technology has successfully given some companies an advantage over their competitors both in the National and Global Markets.

A Management Information System (MIS) is a subset of the overall internal control of a business covering the application of people, documents, technologies, and procedures by management accountants to solve business problems such as costing a product, service or a business-wide strategy. Management Information Systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization.

Financial accounting system is an important functional element or part of the total management information system structure. However, they are more narrowly focused on the internal balancing books to generate ledger and other financial accounting system. For example, accrual adjustment reconciliation and correcting entries used to reconcile the financial system to the general ledger are not always immediately entered into other management information systems. Accordingly, although management information systems and accounting reconciliation totals for related listing and activities should be similar, they may not necessarily balance.

Institutional management information systems should be designed to achieve the following;

- Enhance communication among employees.
- Deliver complex materials throughout the institution.
- Provide an object system for recording and aggregate information.
- Reduce expenses to labour intensive manual activities.
- Support the organizations strategic goals and direction.

In spite of the fact that management information system supplies decision makers with facts, likewise, it supports and enhances the overall decision making process. MIS also enhance job performance throughout an institution. At the most senior level it provides the data and information to help the board and management to make strategic decisions(top management decisions or long lasting decisions) and at other levels of management MIS provides the means through which the enterprise activities are executed, monitored, controlled and information are distributed to management, supervisors, employees and customers.

Effective MIS should ensure the appropriate presentation, formats and time frames required by operations and senior management are met. MIS can be maintained, evaluated and developed by either manual or automated systems or a Combination of both. It should always be sufficient to meet an enterprise's unique business goals and objectives. Likewise it seeks to explore all available opportunities that can be explored by the organisation in the immediate, national and global economies. The effective delivery of an enterprise's products and services are supported by the MIS which has a great influence on the market share portion, revenue generation, sales volume achieved, recruitment of best qualified candidates, the goodwill of the enterprise and the customers' perception about the organization and its output. These systems should be

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comprehensive, accessible, flexible and useable at all appropriate levels of the organization's activities.

MIS is a critical component of the institution's overall risk management strategy; it supports management's ability to perform such reviews. MIS should be used to recognize, monitor, measure, limit, and manage risks. Risk Management involves four main elements, which include:

- Policies or practices.
- Operational processes.
- Staff and management.
- Feedback devices.

Frequently, operational processes and feedback devices are intertwined and cannot easily be viewed separately. The most efficient and useable MIS should be both operational and informational. As such, management can use MIS to measure performance, allocate, manage and control resources, and help an institution comply with regulatory requirements. One example of this would be the managing and reporting of loans to insiders. MIS can also be used by Management to provide feedback on the effectiveness of risk controls.

1.1 Statement of the Problem

According to Barry (1988) information is a generic term, because it has been described as the livewire of any enterprise (public, private, local firm, Multinational company, manufacturing, merchandise, and franchise business, retailing stores, multiple chain stores or service oriented organization). It provides the relevant concept and intelligence to enable the right thing to be done at the right time.

The problems to be studied are as follows:

- Is there any need for management information system in Nigeria business Organization.
- Does the status of a business determine the type of information system in it?
- Does MIS aid decision making in an organization?
- Could there be any room for development or improvement of MIS in Nigeria?

1.2 Objectives of the Study

The aims of this study are to critically examine the impact of Management Information System on corporate performance. The objective of the study includes:

- To determine if MIS policies or practices, processes, objectives and internal control are adequate.
- To evaluate whether MIS application provides users with timely, accurate, consistent, complete and relevant information.
- To determine whether MIS application and enhancement system exist to adequately supports corporate goals.
- To identify the determine factors influencing MIS process in Nigeria.

1.3 Hypotheses Tested

Two hypotheses are formulated and tested in this study:

H₀₁: Financial constraint is not a serious factor militating against effective management of MIS in Nigeria.

H₀₂: Lack of management skill does not hamper the efficient performance of management information system of business organization in Nigeria.

2. LITERATURE REVIEW

The system of Management Information System shows that communication is needed to carry out the managerial functions and for linking the organizations with its external environment. Management Information System provides communication link that makes the activities and responsibilities surrounding management or managers possible, Burns, J.M.(1998).The focus in Management Information System coupled with improved processing as led to the reduction in

bottlenecks attached to management process. Managers have re-organized for years so that traditional accounting information aimed at the calculation of profit have been of limited value for control. Yet in many companies, this has been virtually the only regular collected and analyzed type of data. Managers need all kinds of non accounting information about the external environment such as social, economic, political, and technical development. In addition, managers need non accounting information on internal operations. The information should be quantitative.

Weihrich and Koontz [2001] defined Management Information system as a functional system of gathering, comparing, analyzing, and dispersing internal and external information to the enterprise in a timely, effective, and efficient manner.

Management information system can be defined as a support to management to provide the competitive advantage which must support the goals of the organization, Kenneth and Jane Laudon (2003) Dos Santos (1991), Define Management information system as a planned system of collecting, processing, storing, disseminating data in the form of information needed to carry out the functions of management. It can also be a documented reports of the activities, planned and executed.

Management information system use formalized procedures to provide management at all levels in all functions with appropriate information based on the data from both internal and external sources to enable them to make timely and effective decision for planning, directing and controlling the activities for which they are responsible.

An effective management information system typically employs computer and other sophisticated technology to process information that reflects the day to day operations of the company. Based on the above, management information system is an integrated manual computer system that provides information to support the operations of managements and the decisions making functions of a company. Management information system is also a collection of people, procedures and devices organized to convert data from internal and external sources into information and communicate such information in an appropriate form to management at all levels.

In most organizations, the management information system involves at least three systems which are likely to be the following:

- [1] Personal system: It traces flow of employees in the firm that is, those entering and leaving the firm, their pay, and even seniority location.
- [2] Commercial system: This traces the flow of material, sub-material e.t.c. into and out of the firms.
- [3] Financial system: This traces flow of money or fund into, through or out of the firm.

In some organizations, the Management Information System is manual with units submitting reports to upper-level manager on a regular basis. In large organization many of the MIS is computerized

A Management Information System [MIS] is a set of computer hardware and software, gathered, organized, summarized, and reported information for use by managers, customers and other users. The broad definition of MIS which includes use of information system to provide value to external customers is consistent with essence of management that is, decision making.

Management Information System is a system approach to management that aims to continuously increase value of customers by designing and continuously improving organization process and system. Thus the design and operation of MIS as key system that can provide value to customers should be integrated to Total Quality Management [TQM] in the organization.

Management Information System consists more than just the latest computer hardware and software specification. Recently information technology as become combined with the knowledge of telecommunication, videotext, video conference, cellular conference and PABX [Private Automated Branch Exchange] are just a few examples of the application of the new technology. Still picture phone have already been introduced different parts of the world.

Historically, managerial uses of management information system were focused in making internal operations faster, more accurate and more efficient. Today, the more exciting users of

management information system are those that provide additional values for external customers. Those managers who find ways to bring additional values to their external customers with the firm management information system will gain additional market shares.

2.1 Objectives of Management Information System

Professor Robert J. Of Carew school of business, Arizona state university (2000). explain the objectives of management information systems as the provision of information to all levels management at the most appropriate time at an acceptable level of accuracy and at an economical cost, such information is used in the decision making process for modifying the state of system by taking appropriate action. An essential requirement of MIS is feedback which is the process of communicating a system measured output to control system which generates effective control system, normally a manager in respect of business system. It is these factors which allow the state of a system to be modified.

2.2 Elements of Management Information System

The elements of Management Information System are the inputs/outputs control, storage and process.

- Input: This includes the keyboard, the data users, punch cards, computer operation and programmes.
- Processing: Processing refers to the task performed before the input is generated into output.
- Output: This is the result generated after processing the input [data].
- Storage: Storage refers to the main and auxiliary memory. The storing of data is the basis of the information system.
- Control: This refers to the various measures taken to ensure timeliness, accuracy, and cost effectiveness

2.3 Classification of a Good Information

According to Bardhan I. and Whitaker (2006). Information has many characteristics and can be classified in many ways. The following gives some examples of such classifications.

- By sources: This relates to where the origination of such information emanates. It may be internal, external, primary, secondary or government reports and so on.
- By nature: Here, information classification is viewed in the way in which its form is being seen. It can be quantitative, qualitative, formal, or informal.
- By time: This type of classification focuses attention on the question e.g. when was the information produced? Or the period it is needed. It can be historical, present, or future.
- By use: This classification refers to the use the information can be put especially in management process, which can be planning, or control of decision making.
- By form: This classification explains the explicit pattern under which information is being gotten and made to flow [transfer from one location or one person to another] such information could be written, oral, visual, sensory e.t.c.

2.4 Characteristics of a Good Information System

According to Kenneth hamlet (2002) Effective management information system posses numerous qualities among which are the following:

- Relevance: This type of information characteristics is of the truth. The overriding quality information must be relevant to the problem being considered; though information may take different forms. Examples are: reports, messages, tabulation e.t.c. The positive effect it has on the problem or needs at hand will mainly be the functions of its relevance otherwise. The absence of this quality relevant will make understanding of the message more difficult and may eventually cause frustration to the user.
- Accuracy: Information should be sufficiently accurate for it to be relied upon by those in the management team and for the purpose for which it is intended. Even though absolute accuracy may not be obtainable, yet the level of accuracy must be related to the decision

level involved. Also, accuracy should not be confused with precision. Information may be inaccurate but precise or vice-versa.

- Time: Good information is that which is communicated in time to be used. The time of regular produced information is essentially important in this regards. In fact, information should be produced at a frequency which is related to the type of decision or actually involved.
- Details: Information should contain the least amount of details consistent with effective decision making. The level of details usually varies with the level in the organization.

2.5 Problem of Implementing a Computer Based Management Information System

Dickson [1970] identified some major factors that determine whether the implementation of a new MIS will be resisted and to what extent they are:

- Disrupting of established departmental boundaries: The establishment of a new MIS often results in change in several organizations units.
- Participation: In designing and implementing MIS features users should be made members of the MIS team operating managers, in particular they should have a particular say in the item to be included. The disposition of the entire information and possible job modification, if the entire design and implementation process is taken over by technology.
- Communication: The aim and characteristics of the system should be communicated to all members of the MIS team as well as the users.
- Redefinition of performance measurement: A new MIS may modify a manager's job to the point where old methods of performance evaluation no longer apply or is no longer applicable. For this reason MIS calls for proper evaluation.

Therefore, a new MIS may liberate middle managers from many boring and routine task and may also give them the opportunity to use the information provided by the system in more creative and productive ways.

2.6 Benefits of Management Information System

Linda banks (2003) propose that Successful implementation of MIS would possibly bring the following:

1. Possible clerical cost reduction
2. Improved processing demonstrated by more accurate results.
3. Intangible benefits such as customer relationship.
4. Improved work environment and job satisfaction.

2.7 Problems of Management Information System in Nigeria

The users of MIS results into a situation where a relatively little success in providing management with information is achieved and the following reasons are responsible:

1. Lack of management involvement in the design of MIS.
2. Narrow and/or inappropriate emphasis of the computer system.
3. Undue concentration on low level data processing application.
4. Lack of management knowledge of computer.
5. Poor appreciation by information specialist of management information requirement and organizational problems.
6. Lack of top management support.

2.8 Limitation of Management Information System in Nigeria

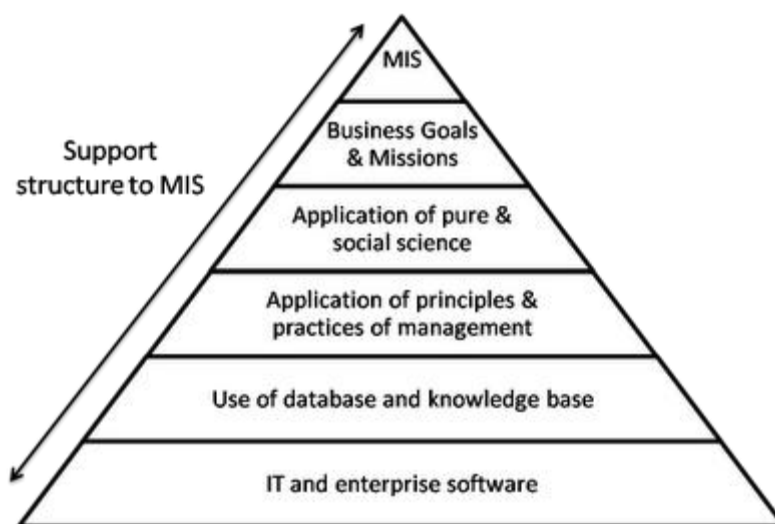
Although information system plays a vital role in modern organizations, they are not without their limitations. In particular, information systems have some basic limitations. Kenneth and Jane Laudon(2001).

1. Information systems are expensive and difficult to develop and implement.
2. Information systems are not suitable for all tasks or problems.
3. Information provided to managers may not be as accurate, timely, complete or relevant as it appears.
4. Managers may have unrealistic expectations of what information systems can do.

5. The information system may be subject to sabotage, computer viruses or down time.

2.9 Conceptual Framework of Management Information System (Mis)

The concept is a blend of principles, theories and practices of management, information and system giving rise to a single product called Management Information System. The concept of management gives high regard to the individual and his ability to use the information. MIS gives information through data analysis. While analyzing the information, it relies on many academic disciplines like management science, OR, organization behavior, psychology, etc. The foundation of MIS is the principles of management and its practices. MIS uses the concept of management control in its design and relies heavily on the fact that the decision maker is a human being and is a human processor of information. A MIS can be evolved for a specific objective it is evolved after systematic planning and design. It calls for an analysis of business, management views and policies, organization culture and the management style. The MIS, therefore relies heavily on systems theory. The systems theory offers solutions to handle complex situations of the input and output flows. it uses theory of communication which helps to evolve a system design capable of handling data inputs, process, the outputs with the least possible noise or distortion in transmitting the information from a source to destination.



The Danish information and media scholar Niels Ole Finnemann (2001) proposed a five stage model for the development of media in human cultures, which may be seen as a kind of systems model in which media must be understood in relation to each other. Finnemann does not speak of an “information society” because information and information processing is important in any society. A society cannot exist in which the production and exchange of information are of only minor significance. His model looks like this:

- 1) Oral cultures based mainly on speech.
- 2) Literate cultures: speech + writing (primarily alphabets and number systems).
- 3) Print cultures: speech + written texts + print.
- 4) Mass media cultures: speech + written texts + print + analogue electric media.
- 5) Second-order alphabetic cultures: speech + written texts + print + analogue electric media + digital media.

What is the relevance of this for the concept of information? Quite simply, 'information' is a concept that takes different forms at different integrative levels. When the computer scientist manipulates information, he or she manipulates units of complexity such as bits and bytes (with the byte having a different level of complexity than the bit). The information retrieval specialist, on the other hand, conceives of information in terms of strings of symbols, matching query strings against indexed strings. The librarian sees information in terms of the macro containers; books, reports, journals and, now, electronic documents of various kinds, and, indeed of a higher level of organization, the library itself. In other words, information itself is not a unitary concept, but has different levels of organization, around which different theories are built and practices evolved. Consequently, there cannot be a unitary information science, but only different approaches to information from the perspective of the integrative level involved. “ (Wilson, 2002)

3. RESEARCH METHODOLOGY

3.1 Research Design and Sample Size

The study used a survey to evaluate the impact of management information system on the performance of business organization in Nigeria. The design was adopted because of its appropriateness in describing the current situation of phenomenon (Kothari, 1990) The population of the study are the operators of businesses organization operating in Nigeria. Nwankwo (1999) stated that the population of any research work is the universe of such group; of people or object which a researcher is interested. In obtaining the sample size of the population, SMEs owners from selected local government in Abuja, North-Central Nigeria were selected through random sampling. 5 local government areas were selected for the study. We had in these local government areas obtain a sample elements of 100 respondents which also means 20 respondents from each selected local government area through a probabilistic sampling techniques. The primary sources of data collection were through the use of questionnaire, personal observation and interview.

3.2 Research Instrument and Technique

The primary instrument used for the collection of data for this study is the questionnaire. The questionnaire was designed in open and closed ended patterns. Further, in order to reduce the possibility of questionnaire missing or getting lost in transit, the questionnaire were retrieved the same manner in which they were administered. The data collected were presented in tables and analyzed using non-parametric simple percentages and Z – test statistical technique was used in order to confirm the stated hypothesis.

3.3 Research and Reliability of Research Instrument

The validity of an instrument refers to the extent to which it measures what was intended to measure. The validity of the scales utilized in this study was assessed for content and construct validity. After the survey had been completed the reliability of the scales was further examined by computing their coefficient alpha (Crombach Alpha). All scales were found to exceed a minimum threshold of 0.7 suggested by Nunnally (1978).

3.4 Research Findings and Analysis

Research Findings and Analysis

In the course of this study 120 questionnaire were distributed to business organizations in order to critically evaluate the impact of MIS in Nigeria vis-à-vis the efforts of the government on the development of the system. The contribution was gathered from business organizations within the federal capital territory Abuja, North-Central Nigeria. A total 110 questionnaire were returned out of which 100 was found to be valid and useful for our study. This represents 83% which is good enough, as it is reliable and generalizable.

3.5 Research Hypotheses Testing

The hypothesized statements were tested using the Z – test statistical tool as earlier stated. The tests conducted at 95% confidence interval and 0.005 level of significant. The decision rule was that if the calculated Z is less than the critical value (1.96), we accept, if not we reject.

The following were the result of the tested hypothesis:

H₀₁: Financial constraint is not a serious factor militating against effective management of MIS in Nigeria.

As shown in Table 4.1 (appendix 1), the calculated Z= 3.2 is greater than the critical Z= 1.96. i.e. the null hypothesis will be rejected, in order words: there are other major barriers other than financing that hinders the effective development and growth of management information system in Nigeria.

H₀₂: Lack of management skill on ITs does not hamper the efficient performance of management information system of business organization in Nigeria.

In testing this hypothesis, Table 4.2 (appendix 1) has proved our stated hypothesis wrong by revealing that, the calculated Z=4 is greater than the critical Z= 1.96. In view of this result, we

hereby reject the stated hypothesis which means that the lack of management skill on ITs affect the performance of management information system in Nigeria.

4. DISCUSSION AND CONCLUSIONS

The result of this research work revealed that there has been a lot of barriers other than financing militating against the growth and development of MIS in Nigeria for the past years. Table 4.1 shows that 58% agree that Poor Technological equipment and advancement is one of the major barriers hampering the growth of MIS in Nigeria other than financing and 11% attributed to poor government policies on ITs as another barriers, while 8% says lack of MIS software and program by various business organization also hinder MIS development in Nigeria and 20% ascribe it lack of innovation and invention in Nigeria which prevent most business organization to compete favorably and develop a formidable MIS system in Nigeria MIS determine firms ability to perform and compete in the Global market, But the performance and effectiveness of MIS process in Nigeria has been drastically low despite various government and organization institutional policies on MIS on how to develop the process in enhancing the capacity of business organization in Nigeria.

Table 4.2 reveals that 60% agree that lack of adequate knowledge and skill on information technology and the ability to manage the MIS process by various organizations is one of the major factor that affect the efficient performance of management information system in Nigeria, while 19% ascribe it to the poor data base management in most organization as another factor militating against the efficient performance of MIS in Nigeria, other factors like Rigidity in MIS process, pattern and structure which prevent easy information flow and accessibility to all information end user and the inability of most business in Nigeria to develop suitable computer software and program to meet it ever growing growth and expansion.

Conclusively, lack of management skills on MIS process by most business organization in Nigeria does not only affect the effective performance of MIS but also reduce their ability to compete favorably in the market with their large scale industrialist counterpart which has been a major stumbling block for the development and growth of business organizations in Nigeria.

5. RECOMMENDATIONS

To achieve its corporate goals and objectives, a company needs to serve a larger market for its products. For the realization of this, business organization should pay more attention to the development of a good and formidable management information system. Based on the findings of this study, we recommend that; Because of the great potential of MIS to generate employment for the masses, government should directly get involved in the financing of MIS in most business organization to promote economic growth and development. There should be the introduction and operation of central-data-base management system through which information can be produced and communicated to various users at any point in time within the firm.

There should also be flexibility in the nature/pattern and structure of management system in organizations so as to permit informed and easy information flow and accessibility to all information end-users, Seminars and training for the staff in the organizations to improve the strength in the organization. Organizations should also pay more attention to communication through the media agencies. This goes a long way to promoting the company's control of the market.

Business organization in Nigeria should develop, acquire appropriate and suitable computer software and program to meet it ever growing growth and expansion. In the same vein, skilful and experienced IT workers should be employed to manage the IT department of the company. This is because without competent staffs no appropriate impact can be effected in the company. Finally enough time should be allotted for the transmission of information so as to guide against error and there should be effective communication at all levels of the so as to aid management control and create good image. Effective communication is also essential for forecasting mutual understanding and minimizing conflicts between management and employees.

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APPENDIX 1

Analysis of Hypothesis One

Table 4.1: Barriers other than financing that hinders the development of MIS in Nigeria.

	Factors	Frequency	Percentage
a.	Lack of MIS software and Program	8	0%
b.	Lack of Innovation and Invention	20	20%
c.	Poor Government policies	11	11%
d.	Poor Technological Equipment and Advancement	58	58%
	Others (specify)	3	3%
	Total	100	100%

Source: field survey 2013

From the Table 4.2, we have

$$P=58 \quad 58\%= 0.58$$

$$P_1=0.5$$

$$N=100 \quad Z = \frac{0.58-0.5}{\frac{0.5(1-0.5)}{\sqrt{100}}} \quad Z = \frac{0.08}{\frac{0.25}{\sqrt{100}}} \quad Z=3.2$$

Analysis of hypothesis Two

Table 4.2: Problems of Managing Management Information System in Nigeria

	Problems	Frequency	Percentage
a.	Lack of Managerial Skill on ITs	60	60%
b.	Poor knowledge of Information Technology	10	10%
c.	Rigidity in MIS Process	5	5%
d.	Poor Data Base Management	19	5%
e.	Others(specify)	6	6%
	Total	100	100%

Source: field survey 2013

From table 4.3, we have

$$P=60 \quad 60\%=0.6$$

$$P_0=0.5 \quad N=100$$

$$Z = \frac{0.60-0.5}{\frac{0.5(1-0.5)}{\sqrt{100}}} \quad Z = \frac{0.1}{\frac{0.25}{\sqrt{100}}} \quad Z=4$$

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