



Management Information System (MIS) and Audit Practice in Delta State, South-South Zone of Nigeria

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Abstract

Managers and other stakeholders must take decisions, based on audited financial reports of organizations in such a way that wise choices are more likely to be taken. MIS and audit focuses on this need for sound information for decision-taking. This study aims at finding out the relationship between Management Information System (MIS) and audit practice in Delta State, South-South zone of Nigeria. MIS and audit processes are targeted at satisfying the informational needs of financial statements end-users in primarily used in assessing the liquidity, profitability, and performance of an entity for a particular period of time. A survey design was adopted in this study. Seventeen (17) small-sized audit service firms located within Warri and Asaba metropolis of the State were used as sample. The entire population of this study was 70 and since they were accessible, the population was adopted as sample. A twelve-item structured questionnaire was raised to test each research question. The questionnaire, which was personally administered, was based on the likert 5-point scale of Strongly Agreed (SA), Agreed (A), Undecided (U), Strongly Disagreed (SD), and Disagreed (D) to which the subjects (accounting/audit professionals) were expected to respond. Simple percentage method was used in the analysis of data in response to the research questions; while the hypotheses were tested using the Pearson Moment Correlation Coefficient at 0.05 level of significance. The study showed that significant relationship exists between MIS and audit practice, on one side, and financial reporting of organizations, on the other side, for the enhancement of business intercourse and provision of more accurate, reliable and timeous financial information to a wide variety of users. Conclusion was drawn and the researchers recommended that there should be flexibility in the nature, pattern and structure of MIS in organizations so as to allow uninterrupted information flow; amongst others.

Key Words: MIS, Audit, Financial Reports, Practice, Informational

Introduction

Management Information System (MIS) is a system that enables management and other stakeholders have access to dependable information for planning and decision-making. This information could be either quantitative or qualitative or both depending on the method employed in the process. Qualitative information deals with information that are not subjected to mathematical evaluations and thus borders on matters of opinion. It is strongly canvassed that such opinion must be well-informed based on experience and knowledge. Quantitative information, on the other hand, are those obtained through empirical studies and computation of facts and figures using statistical (or mathematical) models. MIS provides information that economic entities need to manage themselves efficiently and effectively (Mehrsa, Taheri, Farah, and Gharakhani, 2013).

Granted, the bulk of management information in modern businesses, tend to be computer-based. It is instructive to note that MIS is not absolutely about computer-aided processing of management information. In traditional MIS, data could be processed in a variety of ways. This was the case before the advent of computers and its related hi-tech. Therefore, it is safe to say that data could be processed using the traditional method through: *reasoning*; which involves the use of mental processes such as in 'working it out' or 'brain trust'; second, the *manual* approach; under which MIS uses human physical efforts in transmuted data into information, this could be paper-based, etc. However, in the manual approach there is an attempt towards automation by avoiding repetitive processes as in the use of carbon papers, etc. Again, *mechanical* approach was also used in this era in the management of management information. It involved the deployment of machines with mechanical parts and rotations in the processing of data to generate information. Examples of such machines include, but not limited to, adding machines and cash registers, etc.

Arising from the exciting challenges in fast-moving, technologically complex corporate activities and the attendant huge mass of data generated from these activities in recent decades, the need arose for speedy, accurate, reliable, efficient, and effectiveness in the provision of information to improve the quality of management of business organizations. Therefore, it became cumbersome to rely on the afore-mentioned traditional systems of managing information. This necessitated the deployment of electronic devices (computers and accessories) to handle the complex array of data required to generate management information. Consequently, a great deal of MIS in the modern era is computer-based.

The concern in MIS as it has been argued is that information so generated must be reliable, dependable, concise, precise, timeous, and cost effective if it is to be justified. Furthermore, the value of MIS is such that cannot be overemphasized as management literatures harp on the relevance of information in virtually all management systems. Information is perceived as the greatest asset of any economic entity. Sunday-Ekwu (2004) was very quick to argue that every organization irrespective of their nature, processes and summarizes accounting information to meaningful and useful formats for use in performing managerial duties such as planning, controlling, and decision-making. Therefore, how data is acquired, processed, and analyzed to achieve information (*usable knowledge*) is of immense concern to academics and practitioners alike.

By the same token, it has been popularly canvassed that there is a close relationship between MIS and audit so much so that the divide is only a question of semantics. To this end, the thinking has been that both processes (MIS and

Audit) aims at generating information to enhance the quality of business intercourse and assist in the processing of information to end-users and permit informed judgments.

In most financial literatures, audit has been referred to as the examination of accounting or financial records to determine whether an entity is meeting certain rules or standards. The auditor is an independent and duly qualified accountant who by a search for evidence establishes an opinion concerning the truth and fairness of the accounts and records being examined, thus, lending greater veracity to the contents of the financials which are to be used as *road-map* predominantly by persons external to the concerned entity. Most commentaries offered on definitions of 'truth and fair-view' have been made to reflect that: 'True' implies that information is factual and confirms with reality, not in falsehood and also conforms with prescribed standards and laws. 'Fair', on the other hand, connotes that information is free from discrimination and in compliance with expected standards and rules. In addition, the accounts should show the commercial substance of the entity's underlying transactions.

Although the above description may appear to be sufficient, it is a matter of sound judgment to observe that an audit could be internal or external. While an internal auditor works for a company ensuring that established accounting procedures and management instructions are being complied with throughout the organization; an external auditor verifies accounting and financial records to external users of financial statements such as: stockholders, fund providers (short and long-terms), government, suppliers, consuming public, etc.

Audits are conducted to provide assurances that financial statements accurately reflect the financial position of an organization in addition to complying with current accounting standards and laws. Eilifsen, Knechel and Wallage, (2001) uphold that the business environment has evolved more rapidly than the audit profession. The audited accounting information is now in a substantially disadvantaged state relative to other forms of timely information. For example, company news is readily available in financial press and investors can differentiate between competitors by reading about product quality and other industry information posted by consumer product groups. Most important, much of this information is generated very soon after occurrence of events and readily available for on-line consumption and processing.

Notwithstanding, the computer-based MIS has exponentially changed the nature of the work of auditors (Mahzan and Veerankutty, 2011). Thus, the audit profession is rapidly changing in response to changes in modern corporate environment. Lucey (2005) perceives that auditors are struggling to maintain their identity and purpose as the organization they audit continually changes. Moon (2002) and Hazman and Manian (2004) asserts that information technology is an increasingly powerful tool for improving the quality of audit services for businesses and clients. In line with this, Lombardi, Bloch and Vasarhelyi (2014) opined that for auditors to remain relevant, auditing must take advantage of technological advances and provide assurances that are meaningful to real-time financial statement users.

The problem, however, is that academics and practitioners have not given desired attention to the relationship between MIS and audit practice due to insufficient information on the relationship or deliberate (outright) refusal to accept that such a relationship exist. The thrust of this study is to inquire into the relationship between MIS and audit practice. The study shall, in the same vein, determine the cost- effectiveness of MIS and audit practice in Delta State.

Research Questions

In order to guide this study, the following research questions were raised:

- i. What is the relationship between MIS and audit practice in accountancy profession in Delta State?
- ii. What is the effect of MIS on financial reporting of organizations in Delta State?
- iii. What is the effect of MIS and audit reports on managerial decision-making process?

Research Hypotheses

To be able to establish a relationship between MIS, audit practice, and financial reporting of organizations in Delta State, the following null hypotheses are formulated to be tested at 0.05 level of significance:

H₀1: There is no significant relationship between MIS and audit practice in Delta State.

H₀2: There is no significant relationship between MIS and financial reporting of organizations in Delta State.

At the end of the study, academics and practitioners could be better informed of the relationship which exists between MIS and the treasured accounting processes of auditing and financial reporting of organizations in Delta State. Hopefully, the researchers expect a beneficial synergy between organizations' information managers, auditors, and decision-makers to bring about a new generation of sound, efficient, and viable business organizations that will remain competitive in the emerging global markets especially in the developing nations of the world.

Related Literature Review

Conceptual Framework (Audit, Auditing, and MIS Defined)

Simply put, an audit is used to refer to a systematic and independent examination of books of accounts, records and documents of an organization for transactions of a specific period of time to assess whether or not the financial statements prepared presents a true and fair view of the entity. Gray and Manson (2005) defines an audit as an investigation or a search for evidence to enable an opinion to be formed on the truth and fairness of financial and other information by a person or persons independent of the preparer and persons likely to gain directly from the use of the information and the issue of a report with the intention of increasing its credibility and therefore, its usefulness. To this end, audits provide third party assurances to interested users of audited financial statements that the subject matter is devoid of material misstatement. Auditing on the other hand, can be rightly captured as a specialized area of accounting that develops standards for audits and provides the people to perform the audit.

In almost all countries of the world, audit of corporate organizations is made compulsory by statutes. Under the Nigerian setting, Companies and Allied Matters Act of 1990, (*as amended till date*) is the enacted legislation that provides for the conduct of audits of corporate form of business organizations, amongst others. The final outcome of an audit is the issuance of the auditors' report, which may be qualified or unqualified. The auditor is expected to give an

opinion whether the audited financial statements examined are prepared in all material respects in compliance with an identified financial reporting standards and existing legislations. The two phrases which are used interchangeably to express an auditors' opinion are 'give a true and fair view' or 'present fairly, in all material respects'. Modern auditors are, however, expected to be quite vast in computer applications and operations and not being mere computer-literate. For a good joke, they are labeled as *digital accountants*.

Ekanem (2007) perceives MIS as an information system that provides managers with responsive information and knowledge at the right time, in the right location, and in the right form. Fundamentally, MIS is a broad and complex subject that is identified as an integrated user-machine system for providing information to support operations, management and decision-making functions in an organization. The system utilizes computer hardware and software, manual procedures, and models for analysis.

Information must be processed, stored, manipulated, analyzed, and distributed. An entity with a well defined information system will normally have a competitive advantage over the one with ill-conceived MIS and worse off with one without any. Information would be used to increase efficiency and productivity in order to achieve organizational goals.

It is reasonably argued that most modern businesses are harnessing the fortunes of using MIS as a result of tense competitions from rivals and financial quagmires to reasonably mitigate the ever-rising operating costs. The development of IT has significantly enhanced the capabilities of both MIS and audit processes in this direction. In spite of this, the fundamental principles of accounting and auditing have remained unaffected

MIS Concept

Moorthy, Seetharaman, Mohamed, Gopatan, and San (2011) noted that the concept of MIS has evolved over a period of time comprising many different facets of the organizational functions. The initial concept of MIS was to process data from the organization and presents it in the form of reports at regular intervals. The system was largely capable of handling the data from collection to processing. It was more impersonal, requiring each individual to pick and choose the processed data and use it for his requirements. This concept was further modified when a distinction was made between data and information. The information is a product of an analyzed data. What are needed are information and not a mass of data. However, the data can be analyzed in a number of ways, producing different shades and specifications of information as a product. This concept was further modified, that the system should present information in such a form and format that it creates an impact on its user, provoking a decision or an investigation.

The concept of MIS in today's world is a system which handles the organization's databases. Databases, provides computing facilities to the end-user and gives a variety of competitive decision-making tools to the user of the system. Lombardi et al (2014) stated that the foundation of MIS is the principles of management and its practice. The information should be generated in this setting and must be useful in managing the business. This is possible only when it is conceptualized as a system with an appropriate design, MIS, therefore, relies heavily on systems theory as it offers solutions to handle the complex situations of the input and output flows. It uses theories of communication which helps to evolve a system design capable of handling data inputs, process, and outputs with the least possible noise or distortion in transmitting the information from a source to a destination. Also, it uses the principles of system design, viz., an ability of continuous adjustment or correction in the system in line with the environmental change in which the MIS operates. Such a design helps to keep the MIS tuned with the business management's needs of the organization. The concept, therefore, is a blend of principles, theories and practice of management, information, and system giving rise to single product labeled as Management Information System (MIS).

The multitudinous definitions ascribed to MIS, notwithstanding, the fact remains that in today's world, the MIS is a computerized business processing system generating information to meet the diverse informational needs for decision-making to achieve the overall corporate objectives of any particular organization.

Benefits from MIS

MIS plays the role of information generation, communication, problem identification and helps in the process of decision making. The MIS, therefore, plays a vital role in the management, administration and operations of an organization. The benefits accruable from an effective MIS are summarized thus:

- The system is expected to fulfill the informational needs of an individual, a group of individuals, the management functionaries (managers and the top management).
- MIS satisfies the diverse needs through a variety of systems such as Query Systems, Analysis Systems, Modeling Systems, and Decision Support Systems. The MIS helps in strategic planning, management control, operational control and transaction processing.
- MIS helps the clerical personnel in transaction processing and address their queries on data pertaining to the transaction, the status of a particular record and references on a variety of documents.
- The MIS helps the junior management personnel by providing them with the operational data for planning, scheduling and control, and helps them further in decision making at the operations level to correct an off-control situation.
- The MIS helps the middle management in short-term planning, target setting and controlling the business operations. It is supported by the use of the management tools of planning and control.
- The MIS assist the top management in goal setting, strategic planning, and evolving the business plans and their implementations.

Approaches to Audit Information Systems

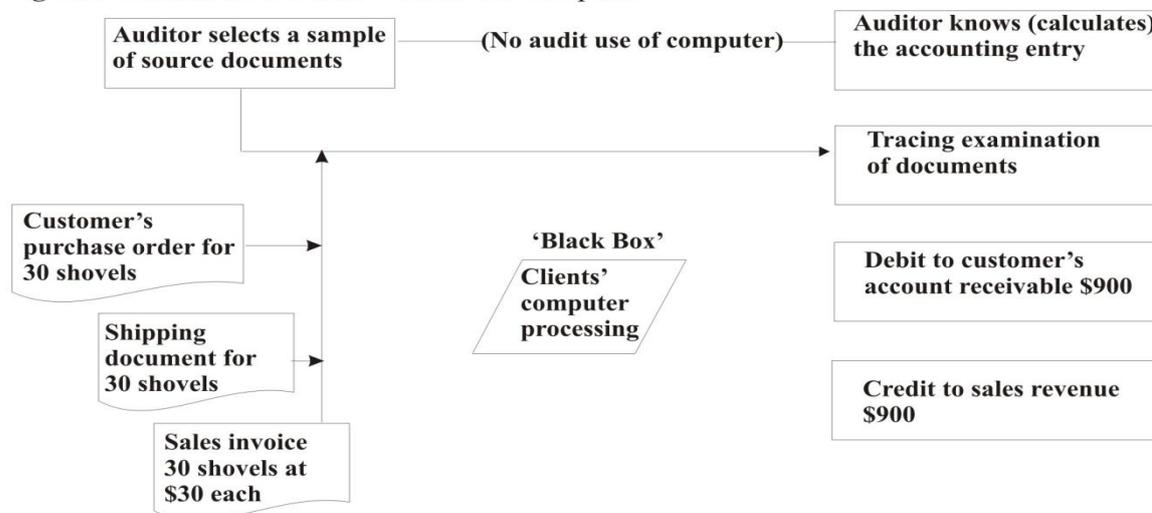
There are different approaches to audit information systems, such as: audit around the computer, audit through the computer with Computer Assisted Audit Techniques (CAATs), and audit with the computer using Generalized Audit

Software (GAS) (Hazman and Manian, 2004). When businesses started using computers, two phrases, often confused with each other were used to describe the nature of audit work on computer systems. The first phrase, "audit around the computer", more often known as *black-box audit approach*, refers to the auditors' attempts to treat the clients' computer system as a separate item and would not check for existence and/or operating effectiveness of controls in processing data. Thus, the auditor looks at the inputs and outputs and ignores the processing aspect of the data. Consequently, the auditor finds audit assurances by vouching data from outputs to source documents and by tracing from source documents to outputs and uses any one or combination of the following methods:

- Output oriented method. Under this arrangement, auditors select a sample of information generated by the computer system (output) and compares with auditors' ideal system or information gathered from other sources of evidence collected by them by the application of other audit procedures. For instance, comparing receivable balances with the statement of accounts received from customers or comparing inventory records with reports of inventory counts.
- Input oriented method. In adopting this approach, auditors select a sample of source documents (inputs) that are fed in to the computer system for processing and auditor independently processes the inputs using his own computer system or software and then compare the outputs generated by auditor's computer system with the outputs generated by the client's computer system to confirm accuracy, completeness, reliability, and other assertions. For instance, client's system reports that cashbook balance reconciles with bank balance as in bank statements; auditor may conduct his own reconciliation to confirm whether it is true or not.

Audit around the computer is satisfactory if the controls and information system provides enough visible evidence, such as the input source data, machine-produced error listings, visible control points (for example, use of batch totals), and detailed printed output. An illustration of audit around the computer is depicted in Fig. 1.1. For this, auditors select a sample of source documents and test the controls over recording transactions, such as sales, in a tracing procedure. The client's computer system processes the transactions but the auditor treats it like a "black box", interested only in how the input (customers' order, quantity shipped, and amount invoiced) corresponds to the output (debit to accounts receivable, credits to sales revenue). If sufficient evidence is obtained from the comparison, as in this case, it is not necessary to test the actual processing done by the client's computer.

Fig 1.1: Illustration of Audit Around the Computer



Source: (Hazman and Manian, 2004)

The second phrase 'audit through the computer' suggests that the test applied will necessitate the use of client's computer as well as the programs and master files under scrutiny. It is concerned with the actual evaluation of the client's computer hardware and software to determine the reliability of operations that cannot be viewed by the human eye. Audit through the computer has become more common because IT-based information systems often have significant in-built control procedures, and ignoring these would tantamount to ignoring important features of internal controls.

In audit through the computer, auditor starts by providing the accuracy of input data and then thoroughly examines the processing procedures with a view to confirm among others that:

- All input is actually introduced into the computer.
- Neither the computer nor the operators can cause undetected irregularities in the final reports.
- Unusual condition in the input does not cause misprocessing.
- The programs appear (on the evidence of rejection/exception reporting) to be functioning effectively.

Computer Assisted Audit Techniques (CAATs)

These are applications of auditing procedures using the computer as an audit tool. The overall objective and scope of an audit do not change when an audit is conducted in a computerized environment. However, the application of auditing procedures may require auditors to consider techniques that use the computer as an audit tool. These uses of the computer for audit work are known as Computer-Assisted Audit Techniques (CAATs). The two most commonly used CAATs for audit purposes are audit software and test data.

Audit Software and Test Data

Audit software consists of computer programs used by the auditors as part of their auditing procedures, to process data of audit significance from the entity's accounting system. It may consist of Generalized Audit Software (GAS) or custom audit software. Audit software is used for substantive procedures.

Test data, on the other hand, are techniques used in conducting audit procedures by entering data into an organization's computer system and comparing the results obtained with predetermined results. The objective of test data is to ensure that the controls within the system are operating effectively. Test data is, therefore, used for test of controls and should contain data of both a valid and an invalid nature.

Method

The target population of this study is made up of all auditors in professional accounting/audit service firms in Nigeria. The audit professionals in the selected seventeen (17) small-sized firms are clustered within the Asaba and Warri metropolis of Delta State numbered seventy (70). This was taken as a sample since the total population is small (or accessible) and can be studied at a go. Thus, the total population represents the sample size of this study.

The researchers designed a twelve-item questionnaire, personally administered, to obtain data from respondents of the study, all of whom are qualified practicing accountants and auditors in audit service firms. Besides, some quality time was expended on face-to-face chat with 16 respondents. Secondary data were collected from journals, monographs, and textbooks on the subject matter. The data obtained from respondents were analyzed by simple percentages; while the statistical tool employed in testing the hypotheses formulated is the Pearson Product Moment Correlation Co-efficient at 0.05 level of significance so as to determine whether to accept or reject the null hypotheses. The likert-type scale which has five levels was used in the analysis to measure the dependent and independent variables: Strongly Agree (SA); Agree (A); Undecided (U); Disagree (D); and Strongly Disagree (SD). Each level is assigned a point ranging from five (5) (SA) to one (1) (SD).

Data Presentation and Analysis

The Tables below contain the analytical details relating to findings from the respondents:

Table 1: Responses from Professionals

S/N	Audit Service Firm	No. of Audit Professionals	Percentage (%)
1	Adesiji Odupitan & Co.	4	5.7
2	Amaechi Ihekwereme & Co.	5	7.1
3	Bini & Co.	4	5.7
4	Efetur & Co.	4	5.7
5	Ejoh, Moju & Co.	4	5.7
6	Esiri Consults	3	4.3
7	F. Opone & Co.	7	10
8	Grace Laya & Co.	3	4.3
9	Isaiah & Isaiah (Chartered Accountants)	3	4.3
10	Jonathan Atano & Co.	3	4.3
11	Mabamidge & Co.	4	5.7
12	Matrillion Corporate Co.	2	2.9
13	Ojakovo & Co.	4	5.7
14	Onyeka Ebenuwa & Partners	6	8.6
15	Ogbodu & Co.	3	4.3
16	Peter Edojarioga & Co.	4	5.7
17	Sunday Ogwu Ojwu & Co.	7	10
Total		70	100

Source: Authors' Field Trip (2015)

Testing of Hypotheses

Hypothesis I: There is no significant relationship between MIS and audit practice in Delta State.

Table 4: Calculate Pearson Product Moment Correlation Coefficient Statistic.

Options	X (Points)	Y (Responses)	XY	X ²	Y ²
SA	5	35	175	25	1,225
A	4	23	92	16	529
U	3	8	24	9	64
SD	2	3	6	4	9
D	1	1	1	1	1
Total	15	70	298	55	1,828

Source: Responses from questionnaire administered, 2015

The formula for the Pearson Product Moment Correlation Coefficient is given as follows:

$$\text{Where, } N=5, \sum XY = 294, \sum X = 15, \sum Y = 70, \sum X^2 = 55, \sum Y^2 = 1,828, \text{ and}$$

$$r = 0.9565$$

To justify the result obtained, a Tcal value was also computed and compared against Ttab value by using the test of significance at 0.05. Under the T-test 3 α 0.05 is 2.35. The formula for Tcal is written as:

$$\frac{r}{\sqrt{\frac{1-r^2}{N-2}}}$$

Table 5: Summary of Analysis

Formulated Hypothesis Test	r	Ttab	Tcal	Decision Rule
There is no significant relationship between MIS and audit practice in Delta State	0.9565	2.35	5.680	Null hypothesis is rejected

Hypothesis II: There is no significant relationship between MIS and financial reporting of organizations in Delta State

Table 6: Calculate Pearson Product Moment Correlation Coefficient Statistic

Options	X(Points)	Y(Response)	XY	X ²	Y ²
SA	5	34	170	25	1,156
A	4	25	100	16	625
N	3	5	15	9	25
SD	2	3	6	4	9
D	1	3	3	1	9
Total	15	70	294	55	1,824

Source: Responses from questionnaire administered (2015)

Where, $N=5$, $\sum XY = 294$, $\sum X = 15$, $\sum Y = 70$, $\sum X^2 = 55$, $\sum Y^2 = 1,824$, and

$$r = 0.9143$$

As with H₀₁, the r-value obtained (0.9143) has been subjected to a further test to justify the result, and in so doing, the test of significance has been used to derive the Tcal value. The summary of the analysis is shown hereunder:

Table 7: Summary of Analysis

Formulated Hypothesis Test	r	Ttab	Tcal	Decision Rule
There is no significant relationship between MIS and financial reporting of organizations	0.9143	2.35	3.9089	Null hypothesis is rejected

Discussion of Results

In relation to H₀₁, the r-value indicates that respondents affirmed that there is a positive and significant relationship between MIS and audit practice in Delta State. A further test showed that $Tcal > Ttab$ and consequently, we shall reject the null hypothesis and accept the alternative hypothesis that there is a significant relationship between MIS and audit practice in Delta State. The proposition has been affirmed by the trio of Moon (2002) and Hazman and Manian (2004).

Similarly, the results of analysis for H₀₂ also suggest that we shall reject the null hypothesis and accept alternative hypothesis that there is significant relationship between MIS and financial reporting of organizations as $Tcal > Ttab$. This view is collaborated by Lombardi et al. (2014) who believed that for auditors to remain relevant, auditing must take advantage of technological breakthroughs and provide assurances that are meaningful to real-time financial reports users.

Conclusion

In the foregoing discussion, attempts have been made to establish that significant relationship subsists between MIS and audit practice and more so, in the financial reports of organizations for use by interested persons for variety of purposes. For obvious reasons, the tasks of accountants and auditors have become more interesting and challenging with the advent of computer-based MIS. To this end, MIS has displayed a great and positive impact with today's accounting/audit professionals. It is pertinent to notice here that MIS has significant effect on the practices of accounting and audit profession in Delta State.

Recommendations

Arising from the above, the following recommendations are proffered:

- MIS should form important unit in organizations; since the survival of accountants and auditors in this technological era depends on it.
- The audit firms should develop, acquire appropriate and suitable computer software and program to meet with the attendant growth and expansion.
- There should be flexibility in the nature, pattern and structure of MIS in organizations so as to permit informed and easy information flow and accessibility to all information end-users.

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