International Journal of Business and Management Review
Vol.8, No.6, pp.43-60, December 2020
Published by ECRTD-UK
Print ISSN: 2052-6393(Print), Online ISSN: 2052-6407(Online)

MANAGEMENT INFORMATION SYSTEM AND QUALITY OF CORPORATE REPORTING IN NIGERIA

ALAWODE, Olufemi and ADEGBIE Folajimi Festus
Olufemi.alawocome@gmail.com. adegbief@babcock.edu.ng.
Department of Accounting, Babcock University, Ilishan-Remo, Nigeria

ABSTRACT: *With the whole world now a global village with all wired via computer systems the business system environment is then dominated by computerised technology. The purpose of this paper was to examine the effect of management information system as a process for improving the key variants of organisation functions as it affects revenue, cost, data security and consequentially the organizational achievement of contributing to the stakeholders welfare.There is hardly any distinction in the utilisation of management information system from small to large organisations, it's a function of birds nesting according to size and thus the review is taken from the statutory compliance, customer database management and the safety of the data involved including the hardware devices. Accounting information system and the operational information system combined with separate or integrated forecasting and reporting tool are essential components of information management and most critically the people that will operate the system. The research design was descriptive survey to study and observe the influence of management information system in organizational success in a competitive cyber-crime prone environment. The analysis revealed that all proxies of management information system such as general information system, production simulation system, reporting package, forecasting tool have a significant positive effect on the statutory reporting compliance (Adjusted R^2= 0.945, F-statistics = 351.505. : p= 0.000<0.05). All proxies of management information system have a significant positive effect on customer relationship management (Adjusted R^2= 0.847, F-statistics = 113.534.: p= 0.000<0.05). The result also shows all proxies of management information system have a positive effect on data storage and security (Adjusted R^2= 0.935, F-statistics = 291.517.: p= 0.000<0.05). Thus, the study concluded that the proxies of management information system considered have a significant positive influence on the quality of corporate reporting.*

KEYWORDS: customer relationship management, management information system, organizational performance

INTRODUCTION

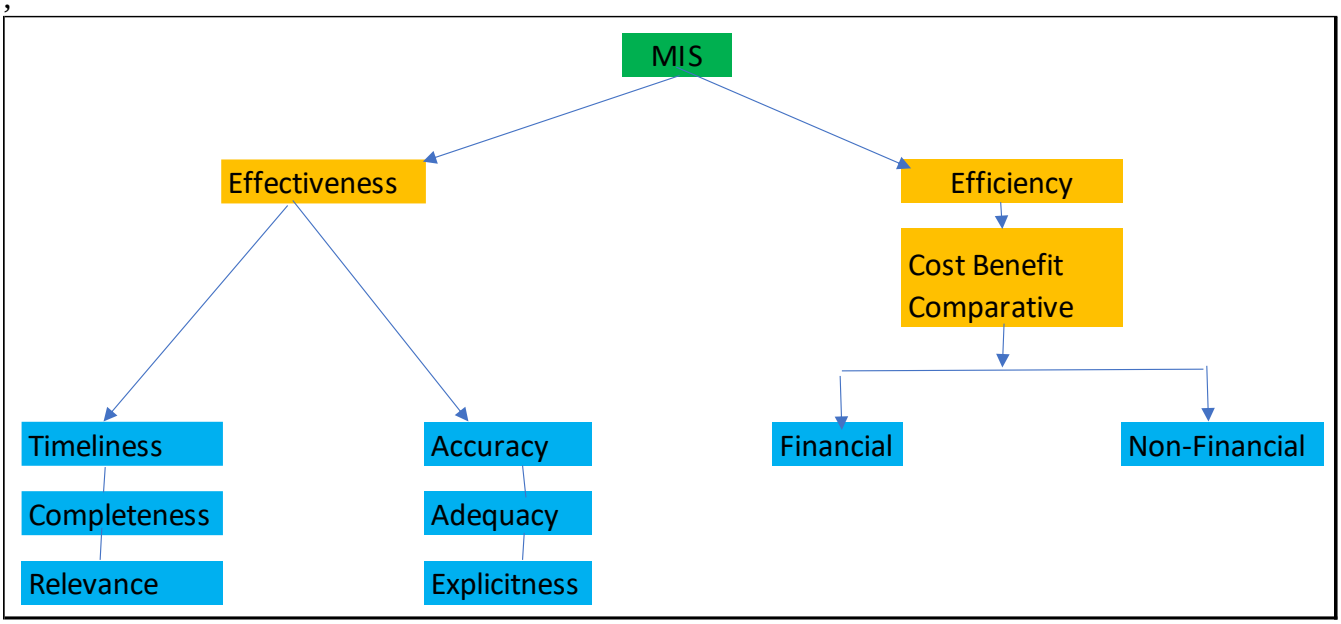
The concept of the MIS has evolved over a period of time comprising many different facets of the organisational functions. MIS is a necessity in all the organizations. Without labouring this study with the traditional history of the evolvement of computer system and also assuming that the era of personalized computers and consequently server-based utilisation of computer systems has developed and gained so much acceptance that normal operations in a business environment is the one that is computerized. The era of manual accounting ledgers amongst other documentation and records is gone to that extent that unavailability of the computer system can mean total shut-down

of operations in both accounting and by extension the technical operations of affected organisations.

According to an online help facility, Includehelp(2020), Management Information system can be evaluated from the angle of effectiveness and efficiency and this can simply be diagrammatically explained as contained in Table 1 of the paper.

Figure 1- MIS Evaluation

;



Source: Researchers Concept, 2020

Again, talking about the quality of corporate reporting is measuring how the various stakeholders are able to extract satisfaction at minimal cost and disruption. Accordingly, the study seeks to examine the impact of a good management information system on the quality of corporate reporting from the perspective of the beneficiaries of a good management information system.

Statement of the Problem

Many organisations would ordinarily not want to expend so much money on system implementation or adopt one based on the dynamism of this accounting system requiring frequent changes with attendant disruptions to operational functions. However, a company does not exist in isolation and since mostly, there is an Agency relationship which makes it imperative for stewardship reporting, it becomes essential that a good management information system is in place marrying operations and financial reporting to both internal and external stakeholders as an ethical requirement and much more so as a statutory requirement. Also, the quality of corporate reporting influences the flow of support in terms of all resources an organisation can attract and thus the need to invest in this area.

Many researches have discussed this impact of MIS focusing on the quality of information requirements. Trabulsi(2018) narrowed MIS to accounting information system which improves quality of information, leads to cost reduction and effective decision making and concluded that it is an enhancement tool.Ndidi(2016) also viewed management information system as one that enables proper auditing and financial reporting of organisations and enhances sound decision making and recommended that there should be flexibility in the nature, pattern and structure of MIS in organizations so as to allow uninterrupted information flow.This paper reviewed these positions to see the impact of a good management information system on the ability to effectively meet the statutory reporting requirement timely and with expected quality, it also examined the impact on the customer relationship management as the revenue earner and added the factor of data security in view of the global cyber-insecurity and various cloud-based cyber activities.

Objective

The objective of this study is to establish whether the utilisation of management information system has any significant effect on the quality of corporate reporting and specifically the objectives are broken down into

1. Evaluate the effect of completeness of management information system on the Statutory Reporting Compliance of the affected corporate entities
2. Evaluate the effect of consistency of management information system on the quality of Customer Relationship Management of the affected corporate entities
3. Evaluate the effect of management information system on the quality of Data Storage and Security of the affected corporate entities

Research Hypothesis

H_{01} : the completeness of management information system has no effect on the Statutory Reporting Compliance of the affected corporate entities

H_{02} : the consistency of management information system has no effect on the Customer Relationship Management of the affected corporate entities

H_{03} : the effective management information system has no effect on the Data Storage and Security of the affected corporate entities

LITERATURE REVIEW

Conceptual Review - Management Information System (MIS)

Management Information System, as a computer-based system really helps the organisation and particularly the managers, to organise and evaluate information and/or data, and provide information in a timely and efficient manner at the least or optimal cost.

The MIS is a system to support the decision making functions in the organisation and in today‘s globe MIS can be broken down to be a computerised, business processing system generating information for the people in the organisation to meet the information needs and assisting in taking decisions to achieve the corporate objectives of the organisation either private or public.(Adesola 2018)

According to Babaei and Beikzad (2013), management information system is an integrated, computerized and machine user system providing the required information to support the operation and decision making. The main elements of this system are: 1- An integrated system to give service to many users, 2-The computer system linking some of information software via a database.3- User-machine interface responding to the temporary and immediate searches. 4- Presenting the information to all management level, 5- Supporting the operation and decision making

Kenneth C. Laudon and Jane Laudon identify five eras of Management Information System evolution corresponding to the five phases in the development of computing technology:

The first era (mainframe and minicomputer) was ruled by IBM and their mainframe computers. These computers would often take up whole rooms and require teams to run them - IBM supplied the hardware and the software. As technology advanced, these computers were able to handle greater capacities and therefore reduce their cost.

The second era (personal computer) began in 1965 as microprocessors started to compete with mainframes and minicomputers and accelerated the process of decentralizing computing power from large data centres to smaller offices. In the late 1970s minicomputer technology gave way to personal computers and relatively low-cost computers were becoming mass market commodities, allowing businesses to provide their employees access to computing power that ten years before would have cost millions of naira.

As technological complexity increased and costs decreased, the need to share information within an enterprise also grew, giving rise to the third era (client/server), in which computers on a common network access shared information on a server. This lets thousands and even millions of people access data simultaneously.

The fourth era (enterprise) enabled by high speed networks, tied all aspects of the business enterprise together offering rich information access encompassing the complete management structure. Every computer is utilized.

The fifth era (cloud computing) is the latest; and employs networking technology to deliver applications as well as data storage independent of the configuration, location or nature of the hardware. This, along with high speed cell phone and Wi- Fi networks, led to new levels of mobility in which managers access the MIS remotely with laptop and tablet computers, plus smart phones.

THEORETICAL REVIEW

Theory of accounting measurement

Measurement theory is concerned with how things events and processes are numbered and how such numbers are assigned to objects and phenomena in such a way as to develop relationships between such occurrences and the identification of any probable error in the measurement process

The Measurement Process involves several elements which are knitted directly and indirectly, as and does not mean there is only one absolutely correct measure. A simple measure of this type, which can be for example inventory or even cash will depend on many factors including:

- The object itself
- The attribute being measured
- The measurer
- Counting or enumerating operations
- Instruments available for the measuring task
- Constraints affecting the measurer

Accounting measurement is the representation of data, which can be measured in a variety of consistent ways, in terms of a specific method, such as currency, hours, or units so as to enable comparative analysis over time, currency, sector or other required groupings. Generally accepted accounting principles (GAAP) does not specifically state accounting measurement standards, but it does specify the types of accounting methods that need to be used. All of these definition and explanation is summed up in the unit of measure concept of accounting.

Resource-based view Theory

Propounded by Wernerfelt in 1984 as one of the strategic relevant contemporary management practical approach to resource handling. The main focus of this theory is sustainable competitive advantage over other firms operating in the same industry as a first concern and then to others.

Olokundun(2014) defined resources within the context of this theory as all assets, capabilities, organizational processes, firm attributes, information, knowledge, controlled by a firm that enable the firm to conceive of and implement strategies that bestows on the firm a competitive advantage. Barney(1991) in his article "Firm Resources and Sustained Competitive Advantage" listed two assumptions , the first assumption of the resource based theory suggests that all firms within an industry or a strategic group or cluster may be heterogeneous as regards the stock of resources available to them while the second assumption is that a firm's resources may reflect heterogeneity persistently over a period of time based on the fact that the stock of resources employed to gain strategic edge are not perfectly transferable or mobile across competing firms implying that a firm's resources cannot be traded in factor markets and are not easy to amass and replicate. Hence the uniqueness or distinctiveness of a firm's resources is regarded as a pre-condition for the stock of resources to effectively gain competitive advantage.

Resource-based theory suggests that resources that are valuable, rare, difficult to imitate, and no substitutable best position a firm for long-term success. These strategic resources can provide the foundation to develop firm capabilities that can lead to superior performance over time. Capabilities are needed to bundle, manage, and otherwise exploit resources in a manner that provides value added to customers and creates advantages over competitors.(Barney 1991).

Agency Theory

Agency theory was introduced by Stephen Ross and Barry Mitnick in 1973. Ross is responsible for the origin of the economic theory of agency, and Mitnick for the institutional theory of agency(Mitnick 2013). ,It was further developed by Jensen and Meckling (1976).An agency, in

broad terms, is any relationship between two parties in which one, the agent, represents the other, the principal, in day-to-day transactions. The principal or principals have hired the agent to perform a service on their behalf.

The principal-agency problem states that the interests of a principal and an agent may not always be in alignment due to differences of opinion, and probably differences in priorities and interests. Agency theory is a principle that is used to explain and resolve issues in the relationship between business principals and their agents. Most commonly, that relationship is the one between shareholders, as principals, and company executives, as agents. Agency theory is directed at the ubiquitous agency relationship, in which one party (the principal) delegates work to another (the agent), who performs that work. Agency theory is concerned with resolving two problems that can occur in agency relationships. The first is the agency problem that arises when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the problem of risk sharing that arises when the principal and agent have different attitudes towards risk. The problem here is that the principal and the agent may prefer different actions because of the different risk preferences.

Agency theory provides a possible explanation for information systems project success and failure. The theory suggests that a greater outcome-basis of the contract between project manager and systems developers reduces goal conflict. (Mahaney & Lederer, 2011).Information technology also can reduce internal management costs. According to agency theory, the firm is viewed as a "nexus of contracts" among self-interested individuals rather than as a unified, profit-maximizing entity (Jensen and Meckling, 1976). A principal (owner) employs "agent" (employees) to perform work on his or her behalf. However, agents need constant supervision and management; otherwise, they will tend to pursue their own interests rather than those of the owners. As firms grow in size and scope, agency costs or coordination costs rise because owners must expend more and more effort supervising and managing employees. Information technology, by reducing the costs of acquiring and analyzing information, permits organizations to reduce agency costs because it becomes easier for managers to oversee a greater number of employees.

EMPIRICAL LITERATURE

MIS and Statutory Reporting Compliance

There are two key stakeholders in the management information system of an entity, the internal stakeholders and the external stakeholders. Principally the Company and Allied Matters Act 2020 demanded for publishing of annual accounts and reports in addition to many other reporting requirements of various sectors as similarly covered by their sectoral supervisory bodies. These requirements are multi-dimensional and few of them highlighted below

The Financial Reporting Council of Nigeria (FRCN) issues corporate governance guidelines to assist in the implementation of various reporting requirements as may be required to respond to prudential considerations in different sectors of the economy, some of them as listed below:-

- The Nigerian code of Corporate Governance (NCCG) 2018.
- The Banks and Other Financial Institutions Act (BOFIA) 2007
- Central Bank of Nigeria (CBN) Act 2015
- Banks and other Financial Institutions Act (BOFIA). 2007
- The Insurance Act of 2015
- The Investment and Securities Act (ISA) 2007

Provisions by Financial Reporting Regulations as adapted can be summarised thus

S/No	Items	CAMA - 2020	BOFIA -2007	Insurance Act - 2015	Investment and Securities Act 2007
1	Sufficiency of accounting records	P	P	NP	P
2	Accuracy of accounting records	P	P	NP	P
3	Content of financial statements	P	NP	NP	P
4	Form of financial statements	P	NP	NP	NP
5	Requirement of Annual returns	P	P	NP	NP
6	Time of Annual Return	P	P	P	NP
7	Penalties for non-compliance	P	P	P	P
8	Monitory Unit monitoring	P	NP	NP	NP
9	True and Fair View of Balance sheet & Profit & Loss	P	P	NP	P
10	Reference to standards	P	P	NP	NP
11	Publication of Annual Accounts	P	P	P	NP
P = "Provided for" ; NP= "Not Provided for"					

Condition Precedent of a Good Reporting System

Precipitating a good financial reporting system is a combination of the Internal Control System, Business Intelligence, Accounting Information System, Accounting Standards and standard chart of accounts which is the foundation for any accounting system. It is a list of all accounts tracked by the system, including the health account. Each account in the chart is assigned a unique identifier, or an account number, involving a series of information tags that denote certain things about the data being entered into the system. The account number attaches to the data and serves accounting, management, and all other reporting purposes. It also forms part of the data validation process, providing information on details such as whether a vendor exists, whether there is an authorized budget, and whether funds have been committed. Without an appropriately designed chart of accounts, created with consensus of key stakeholders, information cannot be stored or accessed properly (USAID, 2008).

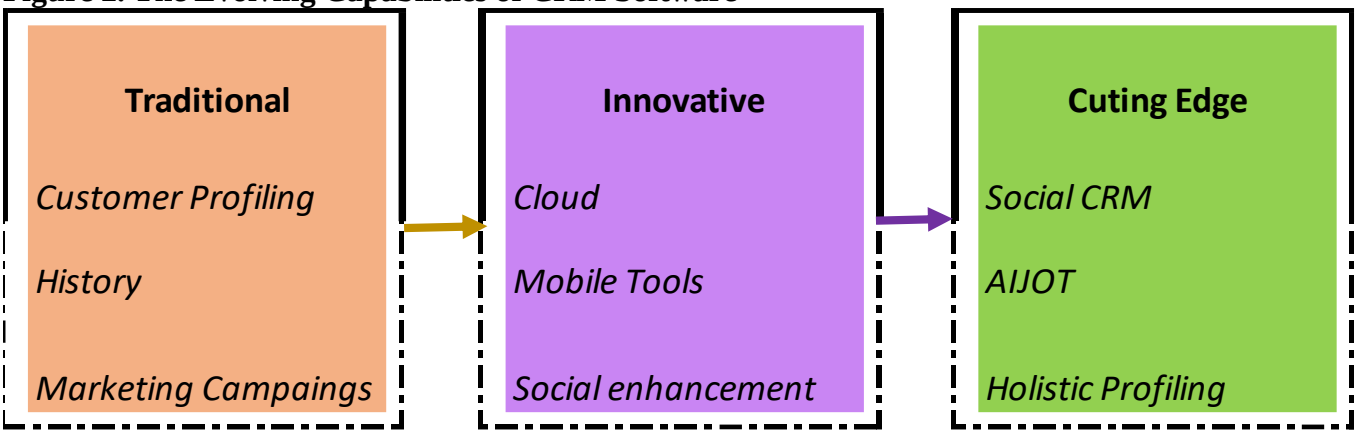
MIS and Customer Relationship Management

CRM is often synonymous with software because the acronym was born of and proliferated parallel to the 1990s advances in business technology. Database software was the earliest revolution of managing customer contacts, spurred by the customer-centric banking and telecommunications industries. Customer relationship management (CRM) software as a critical component of an organisation true story is as good as how the customer relationship team makes it to be. And with a standard business process template so that the organisation can achieve its goals. It's a combination of methodologies and software systems that help companies build relationships with customers through organization, automation, synchronicity, and—most recently—collaboration. As a process that ties together the customer lifecycle and distributes it across the integrated teams and functions of a business, CRM helps organisations be more effective and efficient in their day-to-day tasks and assists them in reaching long-term business objectives and goals. However, good process is nearly invisible. CRM must fit the organization's processes, which are in turn driven by the customer lifecycle.

CRM as an indispensable tool of growth and development of an organisation need to exhibit the following characteristics, Easy integration and compatibility ; Ease of use by the employees and customers ; Adaptability to future needs and grow with the organisation ; Positive impact on customer satisfaction ;Easy reporting & overviews enabling tracking features. According to Olupot, Kituyi & Noguera (2014).electronic Customer Relationship Management was very beneficial in promoting SME new products, marketing existing products, keeping their customers updated and sharing information with some limitations arising from poor info-tech infrastructure and top management commitments.

Customer Relationship Management (CRM) is a business strategy for improving profitability by focusing on customer needs and creating an attentive relationship with the customer. It involves a personalized and interactive approach for the entire customer lifecycle" (Fletcher & Alan, 2001)
CRM as a digitalized customer knowledgebase enables the understanding of maximization of customer needs by the salesforce with the most return to the sales organisation as a win-win situation and obvious benefits include increase in customer loyalty, superior service, superior information gathering and knowledge sharing and organisational learning .(Tinnsten, 2013).
Customer Relationship Management is becoming a method to maintain existing structure and development of high quality customer base. It involves development of marketing strategy through a better understanding of the entire customer base, understanding needs and attitudes of customers, as well as more efficient consideration of profitability and added value that each customer have for the organisation. (Laketa , Sanader, Laketa & Misic, 2015).

Figure 2. The Evolving Capabilities of CRM Software



Source: Adapted from Engagebay.com.

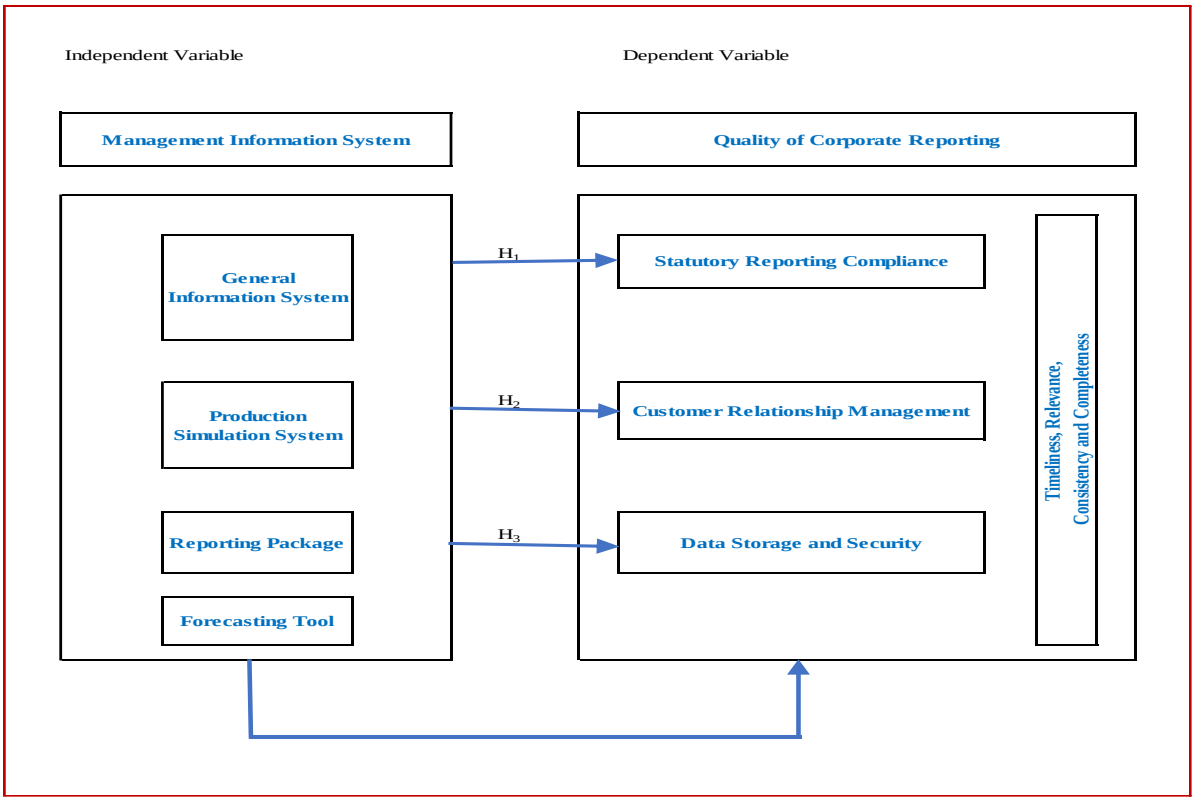
MIS AND DATA SECURITY

An information security management system (ISMS) refers to that part of the overall management system, based on a business risk approach, to establish, implement, operate, monitor, review, maintain and improve information security. The management system includes organizational structure, policies, planning activities, responsibilities, practices, procedures, processes and resources (ISO/IEC 27001:2005)

According to Safianu(2016), while Researches in information security have all this while been concerned only with technical problems, attempts to curb security problems are either software-centered or hardware-oriented while the greatest loophole in information security are people who use the computers with minima attempts undertaken at addressing this people aspect of data and systems security. Some of the most common data security threat factors are accessing a link from unknown sender, responding to requests to install programs form unverified person, sharing keys to wireless network to visitors, sharing username and password with colleagues and using weak or strong password.

In Gupta(2005) work, he opined that though global proliferation of the internet, falling computer prices and a growing menu of applications are compelling businesses of every size to rely on computers to store, manage and transmit vital information, the value of the generated information has not escaped the attention of hackers, cyber criminals and insiders who seek to steal from or damage an organization with either a disgruntled employee, an overzealous competitor, a probing hacker or a cyber thief being sources of an attack against an organization's stores of computerized information. While their motives may vary, individuals planning an attack have a wide array of attack options. Erasing a customer data base, planting a virulent virus, rifling through correspondence files, sending a Trojan Horse, copying personnel records and searching for active credit card numbers are just a few of the attacks that may be directed at the victim's information technology (IT) system.

Figure 3: Conceptual Review



Source: Authors Conceptual Model (2020).

The independent and dependent variable for this research is Management Information System (X) and Quality of Corporate Reporting (Y) respectively. The independent variable of Management Information System (X) is measured considering the Production system, the Enterprise Resource Planning/Package, the Reporting tool and forecasting tool while the dependent variable is measured using statutory reporting compliance, customer relationship management and data security as a combination of the whole variables.

METHODOLOGY

This study adopted survey research design in obtaining relevant data. Survey method was adopted to collect primary data from the respondents . A combination of both the quantitative and qualitative methods of data analysis will be used to analyse the data collected and specifically, the qualitative research method will involve establishing the links or connection between the aims and objectives of the paper and the results from the data collected and analysed. The sources for the primary data includes methods such as interviews, from questionnaires administration Furthermore, findings from other similar research studies will be used to back up the secondary sources of information.

Model Specification

The variables for this study operationalized thus:

$Y = f(X)$

Where Y = Quality of Corporate Reporting (QCR), and;

y_1 = Statutory Reporting Compliance (SRC)

y_2 = Customer Relationship Management (CRM)

y_3 = Data Storage and Security (DSS)

X = Management Information System (MIS)

$X = (x_1, x_2, x_3, x_4)$

x_1 = Production Simulation System (PSS)

x_2 = Reporting Packages (RPS)

x_3 = Forecasting Tool (FTS)

x_4 = General Information System(GIS)

Hypothesis One

$Y = f(x_1)$

$y_1 = \beta_0 + \beta_1 x_1 + \varepsilon_i$

$SRC = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$----------Equation 1

Hypothesis Two

$Y = f(x_2)$

$y_2 = \beta_0 + \beta_2 x_2 + \varepsilon_i$

$CRM = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$ ----------Equation 2

Hypothesis Three

$Y = f(x_3)$

$y_3 = \beta_0 + \beta_3 x_3 + \varepsilon_i$

$DSS = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$ ---------- Equation 3

$QCR = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$ ---------- Main Model

Where β_0 = the constant of the equation

β_1- β_5 = the coefficient of variables in the equations;

ε_i = the stochastic function that accounts for the errors that may arise in the equation.

FINDINGS AND ANALYSIS

Descriptive Statistics

Table 1: Descriptive statistics

	SRC	CRM	DSS	PSS	RPS	FTS	GIS
Mean	9.04	7.73	16.05	16.65	10.60	8.11	10.01
Skewness	.194	-.130	-.085	-.362	-.768	-.458	.267
Maximum	14	10	10	24	14	10	14
Minimum	5	4	10	9	4	6	7
Std. Dev.	2.724	1.334	2.419	3.643	2.581	1.089	1.978
Observations	82	82	82	82	82	82	82

Source: Researcher's Study, 2020

Table 1 shows the summary statistics of all the variables obtained from the sampled listed companies for the period under study. The maximum values of quality of corporate reporting measures of Statutory Reporting Compliance (SRC), Customer Relationship Management (CSM) and Data Security System (DSS) are 14,10 and 10 respectively which are all positive while the data are not too dispersed at 2.7, 1.3 and 2.4 respectively, meaning that the ranges are close and the volatility is not high . However, the direction and extent of relationship among these variables cannot be determined from the numerical representation. As such, the regression analysis in the next section shows the extent and direction of this relationship in line with the stipulated objectives of the study.

Test of Hypothesis

Hypothesis One

Research Hypothesis 1 (Ho1): The completeness of management information system has no significant effect on the Statutory Reporting Compliance of the affected corporate entities..

Table 2 - Model 1

Variable	**Model 1**			
	Coefficient	**Std. Error**	***t*- stat**	**Prob.**
Constant	-5.123	.739	-6.931	.000
PSS	.479	.045	10.764	.000
RPS	.075	.077	.972	.334
FTS	.755	.099	7.661	.000
GIS	.014	.182	.078	.938
R^2	.948			
Adjusted R^2 : Overall	.945			
***F*-Stat (*p*)**	351.505(.000)			

Dependent Variable: SRC ***significance at 5%**

Model 1

$SRC = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$

$SRC = -5.123 + .479PSS + -075RPS + .755FTS + .014GIS$

Table 2 shows that the completeness of management information system explains (95%) of the variance of decision -making process effectiveness as characterized by (Adjusted R^2). This implies that there are other elements contribute (5%) in meeting statutory reporting compliance. At (5%) level of significance, the calculated F is (351.5; $p<0.05$), which explains that the overall model is

very significant. Consequently, the null hypothesis is rejected and the alternative is accepted, that completeness of management information system has significant effect on the Statutory Reporting Compliance of the affected corporate entities.

4.2.2 Hypothesis Two

Research Hypothesis II (Ho2): The consistency of management information system has no effect on the Customer Relationship Management of the affected corporate entities..

Table 3 - Model 2

Variable	**Model 2**			
	Coefficient	**Std. Error**	***t*- stat**	**Prob.**
Constant	2.498	.605	4.130	.000
PSS	.065	.036	1.772	.080
RPS	.122	.063	1.931	.057
FTS	.349	.081	4.332	.000
GIS	-.141	.149	-.943	.349
R^2	.855			
Adjusted R^2 : Overall	.847			
***F*-Stat (*p*)**	113.534.(000)			

Dependent Variable: CRM ***significance at 5%**

Model 2

$CRM = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$

$CRM = 2.498 + .065PSS + .122RPS + .349FTS - .141GIS$

Table 3 shows that the completeness of management information system explains (84.7%) of the variance of management information system as characterized by (Adjusted R^2). This implies that there are other elements contribute (15.3%) in meeting an effective customer relationship management. At (5%) level of significance, the overall F-Statistics is 113.5, while the P-value of the F-Statistics is 0.000 which is less than 0.05 adopted for this work, which explains that the overall model is also very significant. Consequently, the null hypothesis is rejected and the alternative is accepted, that consistency of management information system has significant effect on the Customer Relationship Management of the affected corporate entities.

Hypothesis Three

Research Hypothesis III (Ho3): The effective management information system has no effect on the Data Storage and Security of the affected corporate entities..

Table 4- Model 3

Variable	Model 3			
	Coefficient	**Std. Error**	***t*- stat**	**Prob.**
Constant	4.066	.717	5.671	.000
PSS	.245	.043	5.667	.000
RPS	.242	.075	3.242	.002
FTS	.472	.096	4.944	.000
GIS	.061	.177	.342	.733
R^2	.938			
Adjusted R^2 : Overall	.935			
***F*-Stat (*p*)**	291.517(.000)			

Dependent Variable: DSS ***significance at 5%**

Model 3

$DSS = \beta_0 + \beta_1 PSS + \beta_2 RPS + \beta_3 FTS + \beta_4 GIS + \varepsilon_i$

$DSS = 4.066 + .245PSS + .242RPS + .272FTS - .061GIS$

Table 4 shows that the completeness of management information system explains (93.5%) of the variance of management information system as characterized by (Adjusted R^2). This implies that there are other elements contribute (6.5%) in meeting an effective Data Storage and Security system. At (5%) level of significance, the overall F-Statistics is 291.5, while the P-value of the F-Statistics is 0.000 which is less than 0.05 adopted for this work, which explains that the overall model is equally very significant. Consequently, the null hypothesis is rejected and the alternative is accepted, that effective management information system has very significant effect on the Data Storage and Security of the affected corporate entities.

DATA ANALYSIS/SUMMARY/CONCLUSION/IMPLICATIONS

From analysis, there is a very positive significant relationship between an effective, complete and accurate management information system meeting expectations in terms of statutory reporting compliance, an effective customer relationship management and the security of information for ease of retrieval and a fall back during disasters.

This conclusion tallies with the work of Coltman, Devinney, & Midgley(2011) that examined the impact of customer relationship management as one designed to harness and orchestrate lower order capabilities that comprise physical assets, such as IT infrastructure, and organizational

capabilities, such as human analytics and business architecture leading a greater performance. Secondly, Information systems are exposed to different types of security risks of which the consequences of breaches varies like a complete damage to the data base integrity or to the physical destruction of the entire information system facilities with attendant securities and these can risk can be addressed with a system architecture on multi-site and multi-levels. (Jouini,,Ben & Aissa, 2014).

RECOMMENDATIONS

Human capital development is essential as this is at the centre of all management information system, thus efforts should not be spared at continuous human capital development. All corporate organisations should keep in line with developments in science and technology, information, and communications in order to improve their management information system and consequently the decision-making process.

Secondly, the customer base affects directly the Revenue and profit line of the business and thus a dynamic customer database resulting from utilisation of a cost-effective module will always require updates.

Lastly, the threat posed by cyber-crimes in Nigeria is obvious and damaging and the environment should be thoroughly scanned for all threats, minor and major, for early detection and solution while the existing data management outfits can be enhanced to also have a Service Level Agreement that performance will be almost 100% in data recovery on-site and off-site.

REFERENCES.

Awan, A.G. & Azhar, M.S.(2014). Customer Relationship Management System: A Case Study Of Floor Mills In Bahawalpur District. British Journal of Marketing Studies, 2(7). 1-13.

Akinola, G.O. & Odesola, O.T. (2018). Information and Communications Technology and Inventory Management amongst Breweries in Nigeria. Journal of Information Systems Engineering and Business Intelligence,4(1). 39-45.

Atnafu, D & Balda, A.(2018). The impact of inventory management practice on firms' competitiveness and organizational performance: Empirical evidence from micro and small enterprises in Ethiopia. Cogent Business & Management, 5. 1-16.

Babaei,M. & Beikzad, J. (2013). Management information system, challenges and solutions. European Online Journal of Natural and Social Sciences, 2(3). 374-381.

Barney, J.B. (2001). "Is the Resource-Based "View" a Useful Perspective for Strategic Management Research?". Academy of Management Review. 26 (1): 101. doi:10.5465/AMR.2001.4011938

Barney, J. B. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17, 99–120.

Bull, Christopher & Adam, Alison. (2010). Customer relationship management information systems (CRM-IS) and the realisation of moral agency. Journal of Information, Communication and Ethics in Society. 8. 10.1108/14779961011040578.

Bunardi, J.& Salma, L. (2012). Customer Relationship Management Information System St Borromeus Hospital. Matics. 10.18860/mat.v0i0.2008.

Chen, P. (2007). Complexity of Transaction Costs and Evolution of Corporate Governance. The Kyoto Economic Review, 76(2 (161)), 139-153. Retrieved October 14, 2020, from http://www.jstor.org/stable/43213351

Chittaie, R.(2012). Customer Relationship Management And Business Strategies. International Journal Of Organizational Leadership, 1(1). 13-22.

Dener, C., & Young Min, S. (2013). Financial management information systems and open budget data: Do governments report on where the money goes? A World Bank study. Washington, DC: The International Bank for Reconstruction and Development/The World Bank.

Dessalegn A. & Roy, R.N. (2002). Computer assisted inventory control system. Journal of EEA, 19(1). 65-77.

Ikechukwu, N.P., Okechukwu,A., Erastus,B. & Sopirinye, E.(2019). Management Information System and Organizational Success in a Competitive Environment: A Study of Small Scale Businesses in Port Harcourt. International Journal of Engineering and Management Research, 9(4). 93-101.

Imeokparia, L. (2013). Inventory Management System and Performance of Food and Beverages Companies in Nigeria. IOSR Journal of Mathematics, 6(1). 24-30.

Ganyam, A.I. & Ivungu, J.A.(2019). Effect of Accounting Information System on Financial Performance of Firms: A Review of Literature. Journal of Business and Management (IOSR-JBM), 21(5). 39-49.

Gupta,A. & Hammond,R. (2005).Information systems security issues and decisions for small businesses: An empirical examination, Information Management & Computer Security,13(4). 297-310.

Hla, D. & Teru, S.P. (2015). Efficiency of Accounting Information System and Performance Measures – Literature Review. International Journal of Multidisciplinary and Current Research, 3(1). 976-984.

Iriana, R., & Buttle, F. (2006). Customer relationship management systems implementations: An analysis of organisational culture. International Journal of Knowledge, Culture and Change Management, 6(2), 138–147.

Ismail, N.A., Abdullah, S.N., & Tayib, M. (2003). Computer-Based Accounting Systems: The Case of Manufacturing-Based Small and Medium Enterprises in the Northern Region of Peninsular Malaysia. Jurnal Teknologi, 39(E). 19-36.

Kalemci, R.A.(2013). Discussing the Role of Trust in Behavioral Assumptions of Transaction Cost Theory. Turkish Journal of Business Ethics, 6(2). 72-83.

Kariuki, M.M., & Nzuki, D.M. (2019). Management information systems capabilities and organizational performance of supermarkets in Nairobi City County, Kenya. International Journal of Education and Research , 7(6).77-88.

Kartikasari, D. & Merianti, M. (2016). The Effect of Leverage and Firm Size to Profitability of Public Manufacturing Companies in Indonesia. International Journal of Economics and Financial Issues, 6(2). 409-413.

Khresat, A. (2015). The Effect of Management Information System on Organizational Performance: Applied Study on Jordanian Telecommunication Companies. *Information and Knowledge Management, 5*, 45-50.

Kouser, R., Awan, A., Arabia, Y., & Shahzad, F.A. (2011). Firm Size, Leverage And Profitability: Overriding Impact Of Accounting Information System.

Ku, E. (2010). The impact of customer relationship management through implementation of information systems. Total Quality Management. 21. 1085-1102.

Mahaney, R. & Lederer, A.(2003).An Agency Theory Analysis of Information Technology Project Success. AMCIS 2003 Proceedings. Paper 167. 1337-1349. http://aisel.aisnet.org/amcis2003/167.

Marko, L. Dusica, S. Luka, L. & Zvonimir, M.(2015).Customer relationship management: Concept and importance for banking sector, UTMS Journal of Economics, 6(2). 241-254.

Mohd S., M. F., Hoshino, Y. & Tahir, M.N. H.(2012). The Adoption of Computerized Accounting System in Small Medium Enterprises in Melaka, Malaysia. International Journal of Business and Management 7(18). 12- 25.

Munirat, Y., Sanni, I.M., & Kazeem, A.O. (2016). The Impact of Management Information System (MIS) on the Performance of Business Organization in Nigeria. International Journal of Humanities Social Sciences and Education (IJHSSE), 1(2). 76-86.

Ndidi, S.E.(2016). Management Information System (MIS) and Audit Practice in Delta State, South-South Zone of Nigeria. G.J.I.S.S.,Vol.5(2). 43-49

Oladejo, K.(2013). Management Information System Impact on Profitability and Decision-Making in Selected Manufacturing Firms in Nigeria. Greener Journal of Economics and Accountancy, 2(1). 30-43.

Olokundun, M., Amaihian,A. & Inelo,F.(2014), The link between the resource based theory and corporate politics, Munich, GRIN Verlag, https://www.grin.com/document/286623

Gupta,A. & Hammond,R. (2005).Information systems security issues and decisions for small businesses: An empirical examination, Information Management & Computer Security,13(4). 297-310.

Olupot, C. , Kituyi, N.G. & Noguera, J. (2014). Factors Affecting the Adoption of Electronic Customer Relationship Management Information Systems in SMEs. The Arab journal of the social sciences, 7(2). 25-45.

Rawan, T. A. & Abdullah, A.A.(2018). The Impact of Supply Chain Management and Manufacturing Flow Management Practices on Competitive Advantage of Jordanian Industry. European Journal of Scientific Research, 148(3). 394-407.

Rindfleisch, A. (2019). Transaction cost theory: past, present and future. Academy of Marketing Science 2019. https://doi.org/10.1007/s13162-019-00151-x

Saira, K., Zariyawati, M.A., & Annuar, N. (2010). Information System and Firms' Performance: The Case of Malaysian Small Medium Enterprises. *International Business Research, 3(4). 28-35.*

Samer, A., & Rawan, M. (2018). Evaluating the Role of Management Information System Characteristics in Managerial Decision-Making: A Study of Mutah University. *The International Journal of Academic Research in Business and Social Sciences, 8(5).* 187-198.

Sekyere, A.M. , Amoateng, A.K. & Frimpong, K. (2017). The Determinants of Computerized Accounting System on Accurate Financial Report in Listed Banks on the Ghana Stock Exchange. International Journal of Finance and Accounting, 6(4). 104-110

Sohail, N.(2018). A Study of Inventory Management System Case Study. Journal of Dynamical and Control Systems, 10(10).1176-1190.

Trabulsi, R. (2018). The Impact of Accounting Information Systems on Organizational Performance: The Context of Saudi's SMEs. International Review of Management and Marketing, 2018, 8(2). 69-73.

U.S. Agency for International Development. (USAID). (2008). Integrated financial management information systems: A practical guide. Washington, DC: USAID. Retrieved from http://pdf.usaid.gov/pdf_docs/Pnadk595.pdf

Young-Harry, D. , Oparanma, A. O. & Ejo-Orusa, H. A.(2018). Management Information System and Organizational Performance of Seven-Up Bottling Company in Aba and Port Harcourt. IIARD International Journal of Economics and Business Management, 4(4). 53-61.