

Management Information System and Organizational Success in a Competitive Environment: A Study of Small Scale Businesses in Port Harcourt

Nwachukwu Precious Ikechukwu¹, Ake Okechukwu², Benjamin Erastus³ and Sopirinye Ezekiel Epelle⁴

¹Lecturer, Department of Petroleum Marketing and Business Studies, Federal Polytechnic of Oil and Gas Bonny, Rivers State, NIGERIA

²Operation Manager, Elm Integrated Services Limited, Rivers State, NIGERIA

³Manager, Research and Development, Department, Benny Consult, Portharcourt, Rivers State, NIGERIA

⁴Student, Department of Management, Ignatius Ajuru University of Education, Rumuolumini, Port Harcourt Rivers State, NIGERIA

¹Corresponding Author: nwachukwupi27@gmail.Com

ABSTRACT

The purpose of this paper was to examine the effect of management information system as a process for improving organizational success: A case study of small scale businesses in port Harcourt. The research design was descriptive survey to study and observe the influence of management information system in organizational success in a competitive environment. It is very important for managers of small scale businesses within this expanse to effectively install a management information system that will constantly provide them with update on the currents in their environment, both internally and externally since this will help them to make strategic decisions that will have an impact on the success or failure of the organization. Findings from the research shows that when an organization is equipped with a sound management information system, it tends to enjoy improved customer services, increased adaptability, production improvement, improved management decision making process etc. Consequently, it is very important for managers to take the competitive environmental factors seriously since it can affect the operations and performance of the business both internally and externally. Some recommendations were put forward to resolve some of the issues of the research.

Keywords-- Management Information System, Organizational Performance, Decision

I. INTRODUCTION

Globalization has created a diverse and complex workforce, environment and competition that places a high level of demand on small scale organizations and corporate managers. In order to survive in this global economy and competitive environment, managers must foster creativity and competitive growth (Radovic Markovic, 2011). In this context, when a firm commits to implementing management information system, for example using, and supporting an information system, the organization often does so because some type of positive organisational impact is desired, such as improved

profitability or productivity (Petter, DeLone, McLean, 2013).

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 (Young et al, 2018)

Business managers today, are much more concerned about the effect of competition than they were even a few years ago. Due to these changes, managers are working in a more and more complicated environment (Chung et al. 2012). In this situation, organisations find themselves bound to redefine the essentials of their businesses, and consequently to search for solutions that will allow them to endure and grow (Urquidi and Ripoll, 2013). To manage successfully in this situation, managers require to implement a broad scope information system that supplies them with adequate and essential business information (Bouwens and Abernethy, 2000; Chung et al. 2012). Managers 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 (Munirat, Mohammed and Kazeem, 2014). Increased organizational dependence on information systems drives management attention towards improving information systems' quality. This is to accommodate both internal information and external information that is sourced from the competitive environment so as to be abreast with the trends in the global market. A recent survey shows that "Improve IT quality" is one of the top concerns facing IT executives in the organization (N.Gorla et al 2010)".

Presently, organizations are in the race for enhancing their capability in order to survive in the competitions of the new century global market. Therefore, organizations have seen the needs to advance

their alertness level by improving the decision making process to be more efficient and highly effective to meet the successive fluctuations of the competitive market. In an effort to achieve this, many modern organizations, both big and small, have concerned with a cycle of progressive investments in and adopted new management information systems components. According to Adebayo (2007) If the relevant information required in a decision-making process or an organization planning is not available at the appropriate time, then there is a good change to be a poor organization planning, inappropriate decision-making, poor priority of needs, and defective programming or scheduling of activities.

Ajayi and Omirin, (2007) have noted that Integrated management Information Systems (MIS) supports the process of providing information to handle managerial operations and decision-making process in an organization. MIS functions helps in the process of collecting, processing, storing and producing relevant information to support the managerial operations in any organizations (Laudon and Laudon, 2009). Thus, the process of decision-making extremely based on timeliness, relevant, accurate and accessible information. Researchers depicted the importance of MIS in decision-making as the concrete step for better decision-making (Ajayi and Omirin, 2007).

Management information system provides the organization faster access to the required information which helps the organization to make effective and timely decisions regarding every aspect such as investments, employments, products, etc depending upon the organization. Decision making basically refers to choosing a certain line of action from among several alternatives. It is integral management that occurs in every level of management and in every function. Therefore, this implies that effectiveness of the organization depends solely upon the quality of decisions that informs its operation. Decision making is a major metric to determine the organizations success or failure.

II. RESEARCH PROBLEM

Organizational performance and success depend on information systems like: "Management Information System (MIS), Decision Support System (DSS), and Transaction Processing System (TPS) in order to remain afloat in the global market". Information is the life-wire of any organization; any organization without quality information is bound to fail in the competitive market. "Thus, for any organization to perform very well in order to achieve its set objectives, the organization must have adequate information systems to know what your competitors are doing", this will enable the manager to plan ahead of them so as to outsmart them, to know your target market (customers) and how to satisfy them, all these are only achievable through the help of an information system, then the business organization can stand the test of time and performance will be achieved effectively and efficiently.

Despite the advantages that comes with MIS, most organization has failed to understand the essence of management information system in the business environment. The researchers felt that if nothing was done to correct and remedy this situation, there is every tendency of more developing business organization to fail in future.. This raised the researcher's interest and hence the need to ascertain the importance of management information system for organizational success in a competitive environment. This study therefore seeks to examine the relationship between management information system and organizational success in competitive environment. It also seeks to provide answers to the following research questions:

- i. What is the relationship between management information system and increased profitability in a competitive environment in the organization?
- ii. What is the relationship between management information system and organizational survival in the competitive environment?

III. OBJECTIVE OF STUDY

The objectives of this study were to:

- 1) Examine the impact of management information system on organizational success in competitive environment.
- 2) Investigate the effect of management information system on organizational performance in small scale businesses

Review of Related Literature

Increasing market competition creates turbulence, stress, risk and uncertainty for organizations. Active organizations scan the environment in terms of social, economic and technological changes to take benefit from them accordingly. Hence, while facing extensive competition, it is important for corporate managers to use the market information for decision making.

IV. CONCEPT OF MANAGEMENT INFORMATION SYSTEM

Kroenk (2012) views management information system as the development and use of information systems that help companies achieve their goals and objectives. According to Lucey(2005), management information system, is a system that convert data from internal and external sources into information and communicates that information in an appropriate form to managers at all levels in all functions to enable them make timely and effective decision for planning, directing and controlling the activities for which they are responsible. While Parson (2012) saw management information system, as an information system that uses data collected by transaction processing system and manipulates such data into reports for managers for making routine business decisions in response to

structured problems". That is, "MIS is characterized by the production of periodic reports that managers use for structured and routine tasks". "The most important goals of an management information system, is to increase the efficiency of managerial activity; different levels of management have different needs and MIS can produce scheduled reports or ad hoc reports".

Management information system according to Lucey (2005) has become synonymous with computer; yet, both concepts are not exactly the same because management information systems existed in the life of pre-modern organizations long before the advent of the computer technology. This argument is substantiated by the fact that computer was not in use when organizations kept records using traditional and manual mechanisms to manage information.

Furthermore, Samar and Rawan (2018) also noted that Management Information System (MIS) is an effective tool to achieve the objectives the business organizations covering the application of people, documents, technologies, and procedures by management accountants to solve business problems such as decision-making, costing a product, service or a business-wide strategy. They added that Information technology and information system are two joined concepts, but they are different. They maintained that Information technology (IT) refer to the hardware, products, methods, inventions, and protocols that are used for the purpose of producing and processing information. It is important here to identify that the computer has been accorded much credit for increased interest in management information systems because it eases and facilitates data processing as well as adds new vistas of interesting career options in MIS (Ottih, 2005).

In his study, Obi (2003) suggested that management information system is indispensable in the area of decision-making as it can monitor by itself the instability in a system, verify a course of action and take action to keep the system in control. This is true as posited by Liu and Young (2007) who observed and talked about key information models and their relationships in business decision support in three different scenarios. They proved that global businesses are in advance due to the Enterprise Applications System provided by modern IT tools such as Enterprise Resource Planning, Knowledge Management Systems and Customer Relations Management to enhance the efficiency and effectiveness of the Decision Making process. Thus, to improve and achieve success in the organization, organizational capability and enhance its level of competition in the global market, corporate managers and strategic decision makers should understand the dimensions of the Information Management, and clearly outline and develop the resources in example of human, technological, and internal operations, among others., and manage them well across the organizational frontiers.

However, with faster access to needed information through management information system,

managers are able to make effective and timely decisions regarding investments, employment, new products and many more as it concerns their organizations.

Lahar et al (2015) posited that management information systems is an organized, diverse and automated information system that is concerned with the process of gathering, storing and transferring relevant information to support the management operations in an organization. He added that this information data is distributed among the various departments in an organization. Given today's global marketplace and increasingly complex economy, management information system is critical to many organizations' survival, and business managers consistently rank it among the top IS management issues (Whittington, 2014). Brazilian managers assume that information technology/information systems (IT/IS) can strengthen corporate performance (Meirelles, 2016), and Brazilian firms spent 7.6 percent of their revenue on IT/IS solutions to address and adapt to economic turbulence. From the Analysis of research made by Awais et al. (2012) shows that over the past few decades, companies all over the world started to notice a great need for information systems in the business field. It was hardy possible to ignore the significance of benefits and a possibility to increase business performance through such an investment.

According to Predrag et al (2012) Information is a set of classified and interpreted data used in decision making and it has also been defined as "some tangible or intangible entity which serves to reduce uncertainty about future state or events". He added that Information is essential for the endurance of all organization in the global and competitive market to make strategic decision whether small, medium or big organizations and this, is only provided by a sound management information system whose information is of Quality, Flexible, timely, and accessible to the strategic decision makers of the information. To manage successfully in this competitive environment, managers require to implement a broad scope information system that supplies them with adequate and essential business information (Bouwens and Abernethy, 2000; Chung et al. 2012).

V. EMPIRICAL REVIEW

Relationship between Management Information System and Organizational Success

Al-Dhmour, Muayyad Ahmmad Yousef (2010) "Evaluation of the Role of Management Information System in Administrative Decision-Making at the University of Jordan Evaluation of the Role of Management Information System in Administrative Decision-Making at the University of Jordan". The study intended to explore the subject of management information system in general, and assess the role of the employed information systems in administrative decision making at the University of Jordan. Furthermore, the

study examined the connection between management information system and quality of information to administrative decision making. The study found that the relationship between MIS and quality of information contribute was positive. Which means that good quality management information system leads to good organizational decision .

Nokuthula (2015) conducted a study on the role of management information systems in measuring organisational performance in the KwaZulu-Natal Department of Arts & Culture. Government departments collect process and use information for planning and reporting to comply with diverse legislation at operational and strategic level. Information systems play an important role in the collection and processing of information, making it possible to process large quantities of information, and synchronise and share it. Management information systems are used to process information both at strategic and operational level to monitor activities, assess and plan new services, and monitor trends which enable senior managers to effectively manage the strategic direction of an organisation. Management information systems play an important role in measuring organisational performance. The purpose of the study was to describe the role of management information systems (MIS) in measuring organisational performance in the KwaZulu-Natal Department of Arts & Culture. A case study approach was used to investigate the research problem. Managers of the core programmes of the department were included in the study. Face-to-face interviews and self-administered questionnaires were used to collect data. The study concluded that the role of MIS in measuring organisational performance was limited in the department. The department did not have an integrated PMIS (performance management information system) or adequate capacity to develop and manage such a system. The study recommends that the department should formalise its performance measurement framework and build capacity to fully implement a PMIS. Further studies should include participants who are not in management and should examine the records management systems in greater detail.

Yusuf, Isyaka and Kazeem (2014) conducted a study on the impact of management information system (MIS) on the Performance of Business Organization in Nigeria. The role of Management information system (MIS) in business environment has advanced over time to become an integral part of its business operations in Nigeria. 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 analysed 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.

Nader et al (2013) conducted a research on The Role of Management Information Systems (MIS) to Increase Productivity in the Workforce (Case Study of Iran). The purpose of this survey research was to study the role of Management Information System (MIS) in increasing human resource productivity. Statistical population included all 462 personnel in upper, middle and lower level of the organization under the study. Sample population by use of Morgan Table was 210, selected by random sampling. Instrument for data gathering was designed by researcher based on the six characteristics of information introduced. Data collected was analyzed by use of descriptive methods, central tendency measures, and T test. The study revealed that related information and cost-effectiveness of information were two most important factors associated with the productivity of human resources. The study has suggested the benefits of using on-the-job-trainings, management support of IMS distribution of information through networking.

Alaa (2015) conducted research on the Effect of Management Information System on Organizational Performance: Applied Study on Jordanian Telecommunication Companies. This study examine the concept of management information system and organizational performance, and examines the relationship between management information system and organizational performance in Jordan. The population of the study includes all telecommunication companies located in Amman city, a sample of (100) employees based on (10) branches of telecommunication companies was selected randomly for the purpose of this study. The study found that employees in Jordanian telecommunication companies have positive attitudes towards management information system (MIS). Also result of the study reveals that employees in Jordanian telecommunication companies have positive attitudes towards databases because Managerial system in Jordanian telecommunication companies has databases. The study result reject Hypotheses that states: There is no statistical significant relationship between management information system and organizational performance in telecommunication companies in Jordan. A good Managerial information system is carefully planned and designed, installed, managed and improved in order to meet changing demands.

Boonmak Study (2007) "The Influence of Management Information System and Information Technology on Management Performance and Satisfaction". The study aimed to examine the relationship between management information systems and the firm of performance and business strategy. A sample of (170) executive managers, who work in various

business firms, were examined. Questionnaire instrument was used to evaluate firm performance and business strategy. The analysis establish that Management information systems and IT enhance firm performance and business strategy. In addition, the study induced that the more volume of information (MIS) needed, the more advanced the MIS should be provided. In addition, business strategy will be more effective if organizations have enough and more reliable IT. The more employed of reliable IT and information (MIS) provided, the more successful firm performance is. IT can enhance and help increasing the efficiency and effectiveness of firm performance.

Furthermore, Al-Nakib et al (2015) researched on Using Management Information Systems to Boost Corporate Performance. The study emphasizes the importance of Management information systems (MIS) for corporate performance. Prior studies have been reviewed to substantiate theories that explain how Management information systems (MIS) affect corporate performance. Management information system (MIS) is providing information that relates to possible future events, efficiency and output rates. Furthermore, it was discovered that greater management information system capability leads to a higher degree of strategic performance. it was also noted that with the use of valid information systems, the company can exchange information more effectively and efficiently (Priem and Butler, 2001). In addition, a way to increase company operations and improve their overall effectiveness, companies adopt new management techniques with the goal of enhancing overall decision-making processes, improve results and finally reduce costs. Drawing from this empirical studies, management information system has a positive impact in organizational performance within the competitive environment.

Importance of MIS in Competitive Environment

In today's organizational operation, information systems directly affect how managers decide, plan, and manage their employees, and, increasingly, they shape what products are produced, and where, when, and how. Without an appropriate information, nothing but eventual failure and subsequently total corporate collapse can be achieved. The crux of information management in organizations is to help solve the problems of growth, development and productivity by making the best use of the 5ms of management resources in a volatile and dynamic environment growing steadily more complex. Specifically management information system plays the following tangible and intangible role in ensuring organizational success in a competitive environment:

- Improved management decision making process
- Production improvement
- Improve organizational performance
- Increased in adaptability of the organization
- Greater flexibility
- Continuous improvement
- Increases profit
- Improved customer services

- Reduced waste etc

According to Nowduri and Al-Dossary, (2012), management information system provide reports to various managers among the middle and low level managers of the organization. Especially, information on the organizational performance reports, which in turn aid in predicting the future performance of the organization.

Internally, also according to Nath and Badgujar (2013) management information system provides several aids to the business organization: to come out with appropriate responses to a business situation; the means of effective and efficient coordination between different departments at all the levels of the organization; access to relevant data and documents; use of less labour; improvement in organizational and departmental techniques; management of day-to day activities.

Furthermore, Yaser et al (2014) mentioned that Management information systems can help all kinds of businesses improve the efficiency and effectiveness of their business processes, managerial decision making, and workgroup collaboration, which fortifies their competitive positions in rapidly changing marketplaces.

Al-Nakib (2015) stated that management information system increases the quality of plants by providing proper information for quality decision-making. Given the increase in the size and complexity of organizations, corporate managers have lost personal contact with the scene of operations. Management information system also changes the greater amount of data into compiled form and thereby avoids the possible uncertainty that may arise when managers are flooded with detailed facts. Management information system is used for measuring company performance and making a necessary change in the organizational plans and procedures (Pfeffer and Sutton, 2000). Management information system links all decision centers in the organization, by enabling the integration of specialized activities by retaining each department conscious of the requirements and issues of other departments. (Jorgenson, 1989). Management information system also assists as a link between managerial planning and control and assembles, processes, stores, retrieves, evaluates and disseminates the information. It improves the capability of management to analyse, assess and improve comprehensive company performance.

VI. SMALL SCALE BUSINESSES IN PORT HARCOURT

Port Harcourt being the capital of the state, with many opportunities are full of businesses and industries. The City due to industrialization, has witnessed the modernization in the way businesses are being conducted. thus, giving edge for entrepreneurs to explore the environment and venture into different business sectors. Among the businesses that are thriving in the area and are concern for the research are depicted in the figure 1

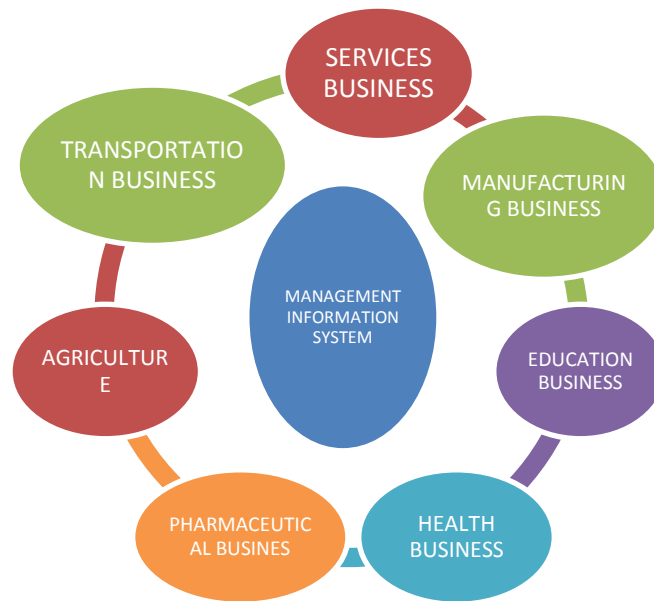


Figure 1 : Small scale businesses in Port Harcourt
 Source: Researcher, 2019

The diagram shows that all this business sector irrespective of its goal and objective, size and mode of operation in port Harcourt are surrounded by information need in other to be competitive and for survival in the competitive environment. And also as this businesses increases so are the need for the implementation of management information system.

Some Management Information System Implementation Process and its Challenging Key Problems in Small Scale Business

The Following Are Areas Where Small Business Scale In Port Harcourt might Encounter Challenges In

trying to Implement Management Information System In Other To Improve Their Organizational Performance

- leadership issues,
- organisation environment issues,
- management process issues,
- Personnel (Employees) issues,
- technical systems PROBLEM.

These are the main problems for management information system implementation realization which affects the management information system implementation process in the organization . They are diagrammatically shown in the figure 2.

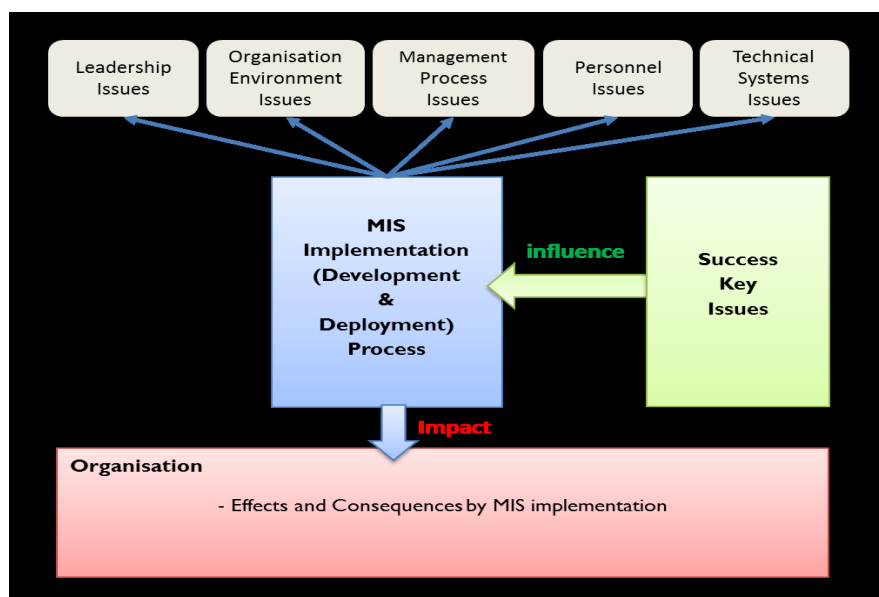


Figure 2 : management information system implementation
 Source: Researcher, 2019

Types of Management Information System used in Competitive Decision-Support Environment

The information systems (literature has long emphasized the positive impact of information provided by business intelligence systems on decision making, particularly when organizations operate in highly competitive environments (Popovič et al., 2012).

Business Intelligence System

According to Turban, et al.(2010) in a decision-support environment, business intelligence systems (BIS) has been developed as a technological solution tool used for data integration and analytical capabilities to provide stakeholders at various organizational levels with valuable information for their decision-making. It is expected that a successful organization should be able to make selection among all alternatives and implement the right ones. In a nutshell, an information system is a group of constituents which can increase competitiveness and gain better information for decision making. Thus, the organizations decide to implement information system in order to improve the effectiveness and efficiency of the organizations in a competitive environment. Business Intelligence solutions developed out of a combination of increased globalization, competition, and pervasiveness of information systems. Business intelligence as a discipline is made up of several related activities, including data mining, online analytical processing, querying and reporting (SQL Power, 2014). In an enterprise where end-to-end operational business processes are not fully understood and managed, data integration is much more difficult if not impossible, and understanding of information needs for business intelligence system is impeded. Understanding of business processes is required in order to find out the relevant indicators (Popovič et al, 2012).

The Management Information Decision Making System (Management Information Decision Support)

The management information decision making system, is a new and more sophisticated class of management information system that eventually converts the WIMIS information into recommended decision. Basically, we are referring to a generalized management information system component that would incorporate decision-making capabilities into the framework of the WIMIS. The decision-making component of a management information decision support may take a variety of forms. A management information decision support decision model component based on a linear programming representation of the production system could provide the manager with information such as inventory levels, machine utilization, and most essentially, a recommendation for a minimum cost production schedule (Radovic Markovic, Omolaja, 2009).an understanding of the business processes is essential in order to find out the relevant indicators (Popovič et al, 2012).

Decision Support Systems

Decision Support Systems are Information system that helps managers to perform decision-making

activities. It is a software-based system intended to help decision makers with providing easy data flow and useful information from raw data, documents, personal knowledge, and/or business models to recognize and solve problems and make decisions. The association between information system and decision-making is a major subject in the employment of information system. The essence of information systems is to assist decision makers by providing accurate and timely information helping them in making the right decisions in turbulent, dynamic, competitive and complex environment.

VII. SUMMARY OF LITERATURE REVIEWED AND GAP

The objective of nearly every business organization is to be profitable, to grow and survive. To achieve this involves making effective decisions – decisions that will bring breakthrough and anticipate problems (and opportunities). Thus, in making the decisions, it is necessary to monitor them and control their implementation. Finally, the business must also operate routinely on a day-to-day basis. These tasks - decision-making, control and operation- are only made possible through a proper information management. The reviewed literatures brought to bear the various concepts of management information system. This is because management information system is one of the greatest challenges most managements face due to the competition in the global market. Some organizational managements have recognized the importance of management information system based on their contributions towards achieving organizational goals and objectives.

Although, this literatures provided an in depth knowledge on the subject under study, however, most of the studies focused on the importance information technological tools to the top management with less attention to the employees. There is therefore need to carry out further research due to the importance of employees in organizational performance in a competitive and complex organizational environment.

VIII. CONCLUSION

Based on the reviewed literatures relating to the influence of management information systems on organizational success and performance especially in a competitive environment, the following conclusions could be made: – The increasing need for information in today's world requires the development of information systems. It is important that enterprises monitor the news on the latest information technology solutions for business management that appear on the market and offer to improve business management methods and operational productivity, thus increasing competitive advantage. One of information technology solutions that improve the efficiency of a company is information

systems. Information system collects data, organizes people, market, competitors, environment, procedures, databases and devices to provide routine information that will assist corporate managers in making effective and efficient decisions that will improve both employees and organizational performances and result to organizational success. It helps in ensuring that actual organizational performance conforms to the expected performance objective of the organization through the provision of correct, accurate, timely and necessary information needed for effective decision making that will enable to the achievement of organizational goal. Management information system is a key to organizational survival in the competitive environment. Thus, every corporate manager should install a management information system since this has a positive influence in organizational performance in the competitive environment. At this point it is worth concluding that management information system plays a significant role in the process of achieving organizational success by increasing its information bank, profitability, effective decision making and survival in a competitive environment.

RECOMMENDATION

Base on the above conclusion, the researchers thus, recommend the following:

- 1) Organization should suitably align their strategies with adopted management information. This will enable management to track the changes in the competitive environment.
- 2) An empirical research should be conducted on integrated MIS systems for enhancing both strategic and tactical decisions and organizational productivity.
- 3) It is essential for small scale business entrepreneurs to keep in line with developments in technology, information, and communications in order to improve their management information system and consequently the decision-making process.
- 4) Corporate managers should also ensure that other organizational success factors are evaluated to compliment the contributions of the management information system to the success of their organization.

REFERENCES

- [1] Adebayo F.A. (2007). *Management information system for managers*. Ado-Ekiti: Green Line Publishers.
- [2] Alaa, K. (2015). The effect of management information system on organizational performance: Applied study on Jordanian telecommunication companies. *Information and Knowledge Management*, 5(6), 45-50.
- [3] Barzegar N., Araghieh A., & Asgarani M. (2012). The role of management information systems (MIS) to increase productivity in the workforce (Case study of Iran). *Journal of Educational and Management Studies*, 3(3), 191-194.
- [4] Samer, A. & Rawan, M. (2018). Evaluating the role of management information system characteristics in managerial decision-making: A study of Mutah University. *International Journal of Academic Research in Business and Social Sciences*, 8(5), 187-198.
- [5] Al-Nakib Noofal, Ahmed Mohsen Mohammed, & Wang Hu. (2015). Using management information systems (MIS) to boost corporate performance. *International Journal of Management Science and Business Administration*, 1(11), 55-61.
- [6] Ajayi, I. A. & Omirin, Fadekemi F. (2007). The use of management information systems (MIS) in decision making in the south-west Nigerian universities. *Educational Research and Review*, 2(5), 109-116.
- [7] Awais, M., Irfan, M., Bidal, M., & Samin, T. (2012). Helpful business value of advance bal information system. *IJCSI International Journal of Computer Science Issues*, 9(2), 415-422.
- [8] Bouwens, J. & Abernethy, M.A. (2000). The consequences of customization on management accounting system design. *Accounting, Organizations and Society*, 25(1), 221-241.
- [9] Chung, S.-H., Su, Y.-F. andand, & Yu-Ju, S. (2012). Broad scope management accounting system and managerial performance: The impact of role ambiguity and functional difference. *African Journal of Business Management*, 6(30), 8873-8878.
- [10] Jorgensen, D. L. (1989). *Participant observation*. John Wiley & Sons, Inc.
- [11] Lahar, M., Ratna, K., & Janhavi, B. (2015). Review on management information systems (MIS) and its role in decision making. *International Journal of Scientific and Research Publications*, 5(10), 1-5.
- [12] Laudon, Kenneth C. & Laudon, Jane P. (2009). *Management information systems: Managing the digital firm*. (11th ed.). Prentice Hall/Course Smart.
- [13] Liu, S & Young, R.I.M. (2007). An exploration of key information models and their relationships in global manufacturing decision support. *Journal of Engineering Manufacture*, 21(1), 711-724.
- [14] Lucey, T. (2005). *Management information systems*. (9th ed.). London: Thomson Learning.
- [15] Munirat, Y., Sanni, I., & Kazeem, A. (2014). The impact of management information system (MIS) on the performance of business organization in Nigeria. *International Journal of Humanities Social Sciences and Education*, 1(2), 102-122.
- [16] N. Gorla, et al. (2010). Organizational impact of system quality, information quality, and service quality. *Journal of Strategic Information Systems*, 19(2010), 207-228.
- [17] Nath, R.P. & Badgujar, M. (2013) Use of management information system in an organization for decision making. *ASM's International E-Journal of Ongoing Research in Management And IT*. Available at: <http://www.sciepub.com/reference/68130>.
- [18] Nokuthula P. N. (2015). *The role of management information systems in measuring organisational*

performance in the KwaZulu-Natal department of arts & culture. Available at:

<https://pdfs.semanticscholar.org/0b8d/58a7dabfb81b55f1ecd2f2e15f13bbe173c6.pdf>.

[19] Nowduri1, S. & Al-Dossary, S. (2012). Management information systems and its support to sustainable small and medium enterprises. *International Journal of Business and Management*, 7(19), 125-131.

[20] Young,H., Dabotubo, L., Oparanma, A. O., & Ejo-Orusa, H. A. (2018). Management information system and organizational performance of seven-up bottling company in Aba and port harcourt. *International Journal of Economics and Business Management*, 4(4), 53-61.

[21] Obi, Emenike. (2003). *Educational management: Theory and practice*. Enugu: JAMOE Nigeria Enterprises.

[22] Ottih, L.O. (2005). *Management information systems: An integrated Approach*. Owerri: New African Publishing Co. Ltd.

[23] Parson, J.C. (2012). *Strategic information system*. McGraw-Hill Publishers.

[24] Petter, W. et al. (2013). Information systems success: The quest for the independent variables. *Journal of Management Information Systems*, 29(4), 7–61.

[25] Priem, R. L. & Butler, J. E. (2001). Is the resource-based “view” a useful perspective for strategic management research?. *Academy of management review*, 26(1), 22-40.

[26] Popovič, A. et al. (2012). Towards business intelligence systems success: Effects of maturity and culture on analytical decision making. *Decision Support Systems*, 54(1), 729–739.

[27] Radovic- Markovic, M. & Omolaja, M.A. (2009). *Information management*. Mangalore: India: Himalaya Publishing, pp. 572.

[28] Samer, A., & Rawan, M. (2018). Evaluating the role of management information system characteristics in managerial decision-making: A study of Mutah university. *International Journal of Academic Research in Business and Social Sciences*, 8(5), 187–198.

[29] SQL Power. (2014). *What is business intelligence?*, Available at:

<http://www.sqlpower.ca/xbrlpower/page/biprimer>

[30] Turban, R., Sharda, D., & Delen. (2010). *Decision support and business intelligence systems*. (9th ed.). Upper Saddle River, NJ: Prentice Hall Press.

[31] Urquidi, A. C. & Ripoll, V. M. (2013). The choice of management accounting techniques in the hotel sector: The role of contextual factors. *Journal of Management Research*, 5(2), 65-82.

[32] Whittington, R. (2014). Information systems strategy and strategy-as-practice. *Journal of Strategic Information Systems*, 23(1), 87-91.

[33] Yaser, H. A., Alina, S., & Nor, A. (2014). The meaning of management information systems and its role in telecommunication companies in Yemen, Malaysia. *American Journal of Software Engineering*, 2(2), 22-25.

[34] Yusuf, Isyaka, S. & Aina, O. K. (2014). The impact of management information system (MIS) on the performance of business organization in Nigeria. *International Journal of Humanities Social Sciences and Education*, 1(2), 76-86.