

Impact of Management Information System on Organizational Performance “A Field Study of Madonna University, Nigeria”

Ude Chika

Department of Accountancy,
Madonna University, Okija Campus,
Email: udechika50@gmail.com

Ubogu Festus. E PhD

Madonna University,
Okija Campus,
Phone: 08149030383. Email: drubogufestus@gmail.com

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Abstract

This study examined the effect of Management Information System (MIS) on Organisational Performance at Madonna University, Nigeria. Specifically, the study examined the effects of Information Quality, Information Technology, and Information Processing and Decision-Making on organisational performance. The study adopted a survey research design, with a population of 823 staff of Madonna University. Using the Taro Yamane formula at a 5% level of precision, a sample size of 269 respondents was determined. A structured questionnaire was used for data collection, out of which 256 questionnaires were returned, representing a response rate of approximately 95.2%. Descriptive statistics and multiple regression analysis were used to analyse the data. The regression analysis was conducted at a 5% significance level to determine the effect of the MIS dimensions on organisational performance. The findings provided evidence on the contribution of Information Quality, Information Technology, and Information Processing and Decision-Making to organisational performance. The study concludes that effective management and utilisation of MIS are important for improving organisational performance at Madonna University.

Keywords: Management Information System, Information Quality, Information Technology, Decision-Making, Organisational Performance, Madonna University.

Background to the Study

In the contemporary business and institutional environment, information has become one of the most important resources for effective management and organisational success. Organisations require accurate, timely, relevant and reliable information to plan activities, coordinate operations, allocate resources and make appropriate decisions. The increasing complexity of organisational activities has therefore made effective information management essential for achieving organisational objectives. Management Information System (MIS) refers to an organised combination of people, technology, procedures and data designed to collect, process, store and distribute information to support management activities and decision-making. Through

MIS, managers can obtain information required for planning, controlling, coordinating and monitoring organisational activities. The increasing use of computerised information systems has also enabled organisations to process large volumes of data more efficiently and make information available to decision-makers more rapidly than traditional manual systems. The relevance of MIS has become particularly important in higher education institutions because universities generate, process and utilise large volumes of information relating to students, academic programmes, staff, finance, examinations, admissions, procurement, library services and institutional administration. Efficient information systems can therefore support university administrators in coordinating activities and making timely decisions. Ogundipe et al. (2023), in their study of government-owned universities in Ogun State, emphasised the importance of MIS tools in university administration, particularly in managing data and information required for achieving institutional objectives. Similarly, Amaefule and Inyama (2024) found that university management information systems provide quality information that supports managerial decision-making and can contribute to improved productivity, control and achievement of institutional objectives. The relationship between MIS and organisational performance has also received attention in the Nigerian context. Organisational performance refers to the extent to which an organisation achieves its objectives through the efficient and effective utilisation of available resources. In a university environment, performance may be reflected in administrative efficiency, quality of service delivery, effective decision-making, staff productivity, coordination of activities and efficient utilisation of institutional resources. Lawal and Afolayan (2023), in a Nigerian service-industry study, reported a significant relationship between MIS and organisational performance, noting that MIS contributed to employee performance and analytical capabilities. Evidence from Nigerian universities further indicates that information systems can support administrative performance. A study of staff in Nigerian universities found that equipment and software information systems, network information systems, and information-system procedures were significantly associated with administrative performance and efficiency. The study also identified inadequate management skills and financial challenges as constraints to effective MIS development. More recently, Buhari et al. examined MIS and the administration of tertiary institutions in Niger State, focusing particularly on record keeping and decision-making, demonstrating the continuing importance of information systems in tertiary institutional administration. The effectiveness of MIS, however, does not depend only on the availability of computers and software. Factors such as information quality, technological infrastructure, system reliability, users' digital skills, training, management support and data security can determine whether an information system produces the expected organisational benefits. Recent research on academic information-system adoption in Nigerian universities identifies system quality, compatibility, top-management support, IT human resources, user training and digital literacy among the factors relevant to successful adoption and utilisation. Madonna University, Nigeria, like other higher educational institutions, undertakes a wide range of academic and administrative activities requiring effective information management. Its activities involve the management of student information, academic programmes, staff, finance, examinations, admissions and other institutional processes. The University's current institutional structure includes programmes and departments across management, computing, health, engineering and other academic areas, indicating the breadth of information that must be generated, processed and communicated in its operations. The adoption and effective utilisation of MIS can provide benefits such as faster access to information, improved communication, better coordination of activities, enhanced managerial decision-making, improved record keeping and more effective

monitoring and control. However, the extent to which these benefits are realised depends on the quality of the systems and the institutional conditions under which they are used. Consequently, there is a need to examine how MIS affects organisational performance within the specific context of Madonna University rather than relying solely on findings from other organisations or institutions. It is against this background that this seminar examines Management Information System and Organisational Performance: A Field Study of Madonna University, Nigeria. The study focuses on how information systems support organisational activities and whether their utilisation contributes to improved decision-making, communication, coordination, administrative efficiency and overall organisational performance within the university.

Statement of the Problem

The increasing volume and complexity of information generated by universities have made effective Management Information System (MIS) an important requirement for efficient institutional administration and organizational performance. Universities depend on timely, accurate and accessible information for student administration, staff management, financial activities, academic planning, examination administration, record keeping and managerial decision-making. Where such information is inadequate, delayed, inaccurate or difficult to access, the effectiveness of administrative processes and managerial decisions may be affected. Although Management Information Systems are increasingly being adopted by Nigerian universities, evidence indicates that their effective utilisation continues to face several challenges. Ogundipe, Anise, Adelana and Adeniji (2023) reported that universities in Ogun State use MIS tools in their administrative activities, but identified challenges including inadequate funding, lack of skilled manpower, delay in information retrieval, outdated systems, inadequate power supply, system crashes and insufficient training and retraining of staff. These challenges may limit the ability of universities to obtain the full administrative benefits expected from MIS. Similarly, Amaefule and Inyama (2024) established that Management Information Systems provide important information for managerial decision-making in universities and are associated with improvements in efficiency, productivity, control and the achievement of institutional objectives. However, their study also identified challenges relating to cost, technical barriers, professional requirements, data accuracy and information security. This suggests that the mere availability of an information system does not necessarily guarantee improved organisational performance; rather, its effectiveness may depend on the quality, reliability and accessibility of the information generated and the ability of users to utilise the system effectively. The problem is also reflected in broader Nigerian university administration. Recent research has identified inadequate technological integration, poor coordination, administrative bottlenecks and other institutional challenges as factors that can affect the efficiency and effectiveness of university administration. In addition, a recent study of tertiary institutions in Niger State found that MIS significantly enhanced record keeping and decision-making, further demonstrating the importance of effective information systems to institutional administration. Despite these findings, much of the existing Nigerian literature has concentrated on public universities, government-owned institutions or groups of tertiary institutions. For example, Ogundipe et al. (2023) focused on government-owned universities in Ogun State, while other studies have examined federal universities and tertiary institutions in specific geographical areas. There is therefore a need for institution-specific evidence on how MIS relates to organisational performance in a private university setting. This constitutes an important research gap in the context of Madonna University, Nigeria. As a private university, its administrative structure,

information requirements, technological environment and management processes may differ from those of public universities. Consequently, findings from public institutions cannot automatically be assumed to represent the situation at Madonna University. The central problem of this study is therefore the need to establish the extent to which Management Information System contributes to organisational performance at Madonna University, Nigeria. Specifically, the study seeks to examine whether the quality and availability of information, technological infrastructure, managerial decision-making, communication and coordination associated with MIS contribute to improved organisational performance. It also considers the challenges that may limit the effective utilisation of MIS within the institution. The study is consequently undertaken to provide empirical evidence on the relationship between Management Information System and organisational performance at Madonna University, Nigeria, thereby contributing to the understanding of how information systems can support effective university administration and achievement of institutional objectives.

Objectives of the Study

The main objective of this seminar is to examine the effect of Management Information System on organisational performance at Madonna University, Nigeria.

1. examine the effect of information quality on organisational performance at Madonna University, Nigeria;
2. determine the effect of information technology infrastructure on organisational performance at Madonna University, Nigeria; and
3. assess the effect of information processing and decision support on organisational performance at Madonna University, Nigeria.

Research Questions

1. To what extent does information quality affect organisational performance at Madonna University, Nigeria?
2. To what extent does information technology infrastructure affect organisational performance at Madonna University, Nigeria?
3. To what extent does information processing and decision support affect organisational performance at Madonna University, Nigeria?

Research Hypotheses

H₀₁: Information quality has no significant effect on organisational performance at Madonna University, Nigeria.

H₀₂: Information technology infrastructure has no significant effect on organisational performance at Madonna University, Nigeria.

H₀₃: Information processing and decision support has no significant effect on organisational performance at Madonna University, Nigeria.

Significance of the Study

The study will be significant to university management, academic and administrative staff, students, researchers and other stakeholders in higher education.

University Management: The study will provide useful information on the extent to which Management Information System (MIS) supports organisational performance at Madonna University. The findings may assist management in identifying areas where information systems

can be strengthened to improve administrative efficiency, decision-making, communication and coordination.

Academic and Administrative Staff: The study will help academic and administrative staff understand the importance of reliable and timely information in carrying out their responsibilities. An effective MIS can facilitate access to information, reduce delays in administrative processes and improve coordination among departments and units.

Students: Students may benefit indirectly from improved information systems through more efficient admission processes, student records management, communication, examination administration and access to relevant university services. **University Administrators and Policy Makers:** The findings may provide useful evidence for administrators and policy makers when making decisions concerning investment in information technology infrastructure, staff training, information security and the development of effective information management practices in universities.

Researchers and Students: The study will contribute to the existing body of literature on Management Information Systems and organisational performance. It may also serve as reference material for researchers undertaking further studies on MIS, university administration and organisational performance, particularly in Nigerian private universities.

Scope of the Study

The study examined the impact of Management Information System on organisational performance at Madonna University, Nigeria. The content scope of the study covered four major dimensions: information quality, information technology infrastructure, managerial decision-making, and communication and coordination. Organisational performance was examined in terms of administrative efficiency, effectiveness of decision-making, staff productivity, quality of service delivery and achievement of organisational objectives. The geographical scope was limited to Madonna University, Nigeria. The study focused on selected academic and administrative staff who interact with or utilise information systems in the performance of their duties. The study was limited to Management Information System and organisational performance and did not cover all forms of information technology or every factor that may affect organisational performance. Factors such as organisational culture, leadership style, employee motivation and financial performance were outside the principal scope of the study except where they were relevant to the discussion.

Operational Definition of Terms

Management Information System (MIS): An organised system involving people, hardware, software, data and procedures for collecting, processing, storing and distributing information to support management activities and decision-making.

Information Quality: The degree to which information generated by an information system is accurate, relevant, timely, complete and reliable for its intended use.

Information Technology Infrastructure: The technological facilities, including computer hardware, software, databases, networks, internet facilities and related equipment, used to support information processing and communication.

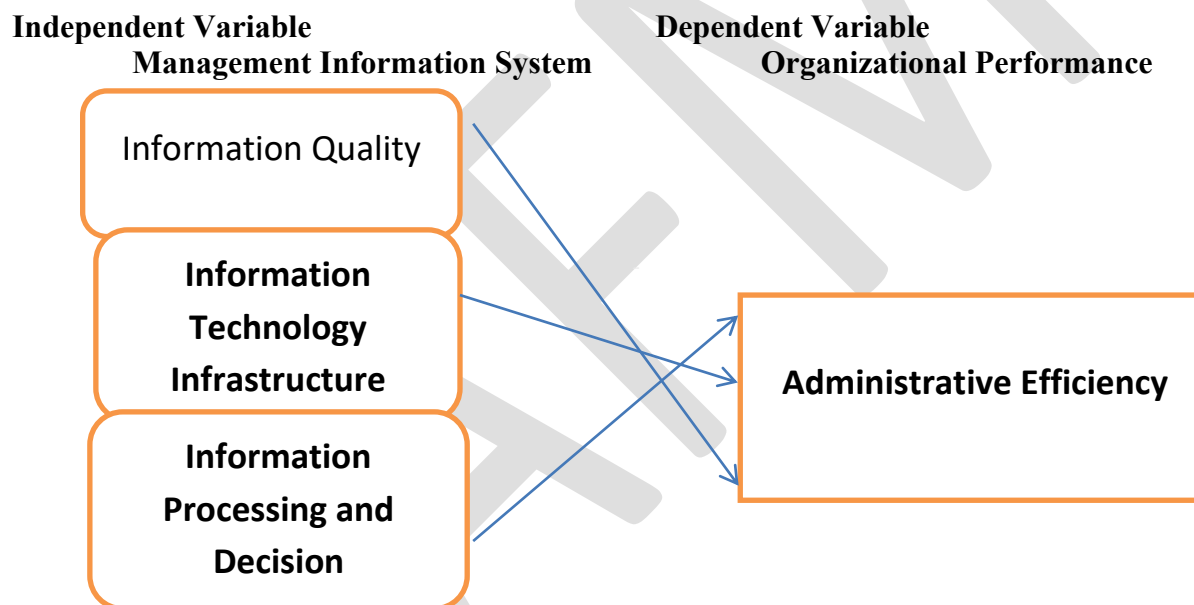
Organisational Performance: The extent to which an organisation achieves its predetermined objectives effectively and efficiently through the utilisation of its available human, financial, technological and other resources.

Administration Efficiency: The process of planning, organising, coordinating, directing and controlling the academic and non-academic activities of a university towards the achievement of its institutional objectives.

Conceptual Review

This section reviews the major concepts relating to the study. It explains the meaning and key components of Management Information System (MIS) and organisational performance, and discusses how MIS supports information processing, managerial decision-making, planning, coordination and control within an organisation. The review provides the conceptual foundation for examining the effect of MIS on organisational performance at Madonna University.

Fig.2.1 Operational Conceptual Framework



Operational Conceptual Framework

Independent Variable

Information quality
Information technology infrastructure
Information processing and decision

Dependent Variable

Organisational performance

Concept of Management Information System

Management Information System (MIS) is an organised arrangement of people, procedures, technology, databases and other resources designed to collect, process, store and distribute information required for effective organisational management. MIS transforms raw data into meaningful information that managers can use for planning, decision-making, coordination and

control. The concept of MIS combines management, information and technology. The management component relates to the planning, organising, directing and controlling of organisational activities. The information component concerns the collection, processing and distribution of meaningful data, while the technology component provides the hardware, software, communication networks and databases required to process and communicate information. In modern organisations, MIS has moved beyond the traditional preparation of periodic management reports. It increasingly supports real-time information processing, electronic records management, communication, monitoring and decision-making. In universities, MIS can be used to manage student records, staff information, examination results, financial transactions, course registration, admissions, human resources and institutional reporting. Ochai and Onoja (2025) observed that MIS supports effective university administration in Nigeria through university planning and administration, decision-making, student administration, staff administration and data management. Their review also identified inadequate ICT expertise, high maintenance costs, inadequate funding and insufficient training as challenges to effective MIS utilisation. Ogundipe, Anise, Adelana and Adeniji (2023) similarly examined MIS and university administration in government-owned universities in Ogun State, Nigeria. Their study focused on the use of MIS tools in university administration and emphasised the importance of effective information management for university operations. MIS is therefore not simply the possession of computers or software. Its effectiveness depends on the ability of the system to provide useful information to the right users at the right time and in an appropriate form. An organisation may possess sophisticated technological facilities but still obtain limited benefits if information is inaccurate, systems are unreliable or employees lack the skills required to use them effectively.

Components of Management Information System

A Management Information System consists of several interconnected components. The major components include hardware, software, data, procedures, people and communication networks.

Hardware: Hardware comprises the physical devices used to collect, process, store and communicate information. Examples include computers, servers, printers, scanners, storage devices and other peripheral equipment. In a university, hardware supports activities such as student registration, examination processing, financial management and records administration.

Software: Software consists of programmes and applications that enable computers to process data and perform specific functions. University management systems may contain applications for student registration, payroll, accounting, human resources, examination management and electronic communication.

Data: Data constitute the basic raw materials processed by an information system. University data may include student identification details, academic records, staff records, financial information, examination results and institutional statistics. The quality of information produced by MIS depends substantially on the quality of the underlying data.

People: People are essential to the operation and utilisation of MIS. They include managers, administrators, academic staff, technical personnel and other employees who input, process, retrieve or use information.

Procedures: Procedures are the rules and processes governing how data are collected, processed, stored, accessed and communicated. Clearly defined procedures help to ensure consistency, security and reliability of information.

Communication Networks: Networks facilitate the movement of data and information between computers, departments and users. Internet and institutional networks enable university personnel to share information and access systems across different locations. These components are interdependent. A weakness in one component can affect the performance of the entire information system.

Functions of Management Information System

MIS performs several functions that support organisational administration and performance.

First, MIS facilitates data collection and processing. Data from different organisational activities can be collected, processed and transformed into useful information.

Second, MIS supports planning. Managers require information about resources, activities, previous performance and expected outcomes when preparing plans and budgets.

Third, MIS facilitates decision-making by providing relevant information that enables managers to identify problems, assess alternatives and make appropriate decisions.

Fourth, MIS supports coordination and communication. Information can be shared across departments, reducing communication delays and facilitating coordination of activities.

Fifth, MIS supports monitoring and control. Managers can compare actual activities with plans, identify deviations and take corrective measures.

Finally, MIS supports record keeping and information retrieval. Electronic databases can make it easier to store, retrieve and update large volumes of organisational information.

Recent Nigerian evidence supports these functions. A study of tertiary institutions in Niger State found that MIS significantly improved record keeping and decision-making, indicating the practical relevance of information systems to institutional administration.

Information Quality

Information quality refers to the extent to which information generated by an information system is accurate, relevant, timely, complete and reliable. High-quality information is important because managers depend on information when making decisions and controlling organisational activities. Accuracy means that information correctly represents the underlying data or event. Incorrect information can result in inappropriate decisions. Timeliness refers to the availability of information when it is required. Information that arrives after a decision has already been made may have limited managerial value. Relevance means that information should address the particular needs of the user or decision being considered. Completeness means that sufficient information is available to support an appropriate understanding of an issue. Reliability refers to the degree to which users can depend on the information for decision-making. Information quality is a central element of information systems success. DeLone and McLean's updated model identifies information quality, system quality and service quality as important dimensions of information-system success and links these dimensions to system use, user satisfaction and net benefits. Within a university environment, information quality is particularly important because administrative decisions may depend on student records, staff information, financial reports, examination data and institutional statistics. Errors or delays in such information may affect the efficiency of university administration.

Information Technology Infrastructure

Information technology infrastructure refers to the technological foundation that supports the collection, processing, storage and communication of information. It includes computer hardware, software, databases, servers, communication networks, internet connectivity and related technological facilities. Adequate infrastructure is important for the effective operation of MIS. A university may have an appropriate information management policy, but poor network connectivity, insufficient computers, outdated software or inadequate server capacity may restrict the practical benefits of the system. Technology infrastructure can also affect the speed and accessibility of information. Reliable networks enable users to access institutional systems, communicate with other departments and process transactions efficiently. Ochai and Onoja (2025) identified inadequate ICT expertise, high maintenance costs and insufficient funding among the challenges affecting MIS development and effective university administration in Nigeria. Technology infrastructure should therefore be considered not only in terms of the availability of equipment but also its reliability, compatibility, maintenance and capacity to support the information needs of users.

Concept of Organisational Performance

Organisational performance refers to the extent to which an organisation achieves its predetermined objectives through the effective and efficient utilisation of available resources. It is a multidimensional concept that may be assessed using financial and non-financial measures. In a university environment, performance extends beyond financial outcomes to include the efficiency and effectiveness of academic and administrative activities.

For the purpose of this study, organisational performance is measured using administrative efficiency as the proxy. Administrative efficiency refers to the extent to which the university performs its administrative activities accurately, promptly and with minimum waste of resources. It includes the reduction of unnecessary delays, improved processing of information, efficient coordination of activities and timely completion of administrative tasks. This proxy is considered appropriate because an effective Management Information System provides timely and accurate information that can support administrative processes and improve organisational efficiency.

Management Information System and Organisational Performance

The relationship between MIS and organizational performance can be explained through the ability of information systems to improve the availability, quality and use of information. An effective MIS may reduce information-processing time, improve communication, support decision-making and facilitate monitoring and control. These benefits can contribute to improved organisational performance. DeLone and McLean's Information Systems Success Model provides a useful explanation of this relationship. The model proposes that system quality, information quality and service quality affect system use and user satisfaction, which in turn contribute to net benefits. The model therefore provides a theoretical basis for examining whether the quality and utilisation of information systems translate into organisational benefits. Empirical evidence from Nigerian institutions also provides support for examining this relationship. Research involving administrative staff at Michael Okpara University of Agriculture, Umudike and Federal University of Technology, Owerri reported that electronic and print MIS were positively associated with administrative staff performance, while poor database management, inadequate training and insufficient senior-management support were identified as constraints. The implication is that MIS may contribute to organisational performance, but the

extent of the contribution depends on how effectively the system is designed, implemented and used.

Theoretical Review

DeLone and McLean Information Systems Success Model

The DeLone and McLean Information Systems Success Model was originally developed by DeLone and McLean (1992) and subsequently updated in 2003. The model was developed to provide a framework for understanding and measuring information systems success.

The original model identified six major dimensions: system quality, information quality, use, user satisfaction, individual impact and organisational impact.

The updated 2003 model consolidated the impact dimensions into net benefits and incorporated service quality alongside system quality and information quality. The model therefore consists of six related dimensions:

System Quality; Information Quality; Service Quality; Use/Intention to Use; User Satisfaction; and Net Benefits.

The model proposes that system quality, information quality and service quality influence use and user satisfaction, while use and satisfaction contribute to net benefits. The model is relevant to the present study because information quality is one of the study's independent variables, while organisational performance represents the organisational benefits associated with MIS. The model also provides a basis for understanding why the availability of information technology alone may not guarantee organisational benefits.

Application of the Model to the Present Study

The DeLone and McLean model provides the theoretical foundation for linking MIS characteristics with organisational performance at Madonna University.

In the present study:

Information Quality represents the accuracy, timeliness, relevance, completeness and reliability of information generated by MIS.

Information Technology Infrastructure represents the technological facilities supporting the information system.

Managerial Decision-Making represents an important managerial outcome supported by MIS.

Communication and Coordination represent organisational processes facilitated by information sharing.

Organizational Performance represents the broader organizational benefits associated with effective utilization of MIS. Although the study does not reproduce every construct of the original DeLone and McLean model, the model provides a theoretical basis for examining how the quality and utilization of information systems can generate organizational benefits.

Empirical Review

Ogundipe et al. (2023) investigated Management Information System and university administration in government-owned universities in Ogun State, Nigeria. The study focused on the role of MIS tools in university administration and information management. The authors emphasised the importance of MIS to efficient university administration and identified challenges affecting its effective use. The study is relevant to the present research because it demonstrates the importance of MIS in the Nigerian university environment. However, its focus

on government-owned universities creates a contextual difference from the present study, which focuses on a private university.

Amaefule and Inyama (2024) examined the impact of MIS on managerial decision-making in universities. Their findings indicated that MIS provides quality information that supports managerial decision-making and contributes to productivity, control and the achievement of institutional objectives. The study supports the third objective of the present study, which examines the effect of MIS on managerial decision-making. However, the present study extends the investigation to the specific institutional context of Madonna University.

Buhari et al. (2026) examined the impact of MIS on administration in tertiary institutions in Niger State, Nigeria. The study used a descriptive survey design and collected data from management, academic and non-academic staff. The findings indicated that MIS significantly enhanced institutional record keeping and significantly affected decision-making. The study provides recent evidence that MIS can support important administrative functions within Nigerian tertiary institutions. Its focus on tertiary institutions in Niger State, however, differs from the private-university context of the present study.

Ochai and Onoja (2025) reviewed the role of MIS in effective university administration in Nigeria. The study identified university planning and administration, decision-making, student administration, staff administration and data management as important functions supported by MIS. The authors also identified poor funding, high costs, inadequate ICT expertise, high maintenance costs and inadequate training as challenges to effective MIS utilisation. The study provides useful contextual evidence for the present research. However, because it was based on secondary sources, the present field study will provide primary evidence from respondents within Madonna University.

Andrew (2022) examined the effect of Management Information System (MIS) on the performance of administrative staff in Michael Okpara University of Agriculture, Umudike and the Federal University of Technology, Owerri, covering the period 2011–2016. The study employed regression analysis to examine the effect of MIS on administrative staff performance. The findings revealed that electronic and print-based MIS were positively related to staff performance and significantly improved the performance of administrative staff in the selected universities. The study further identified poor database management, inadequate training and lack of senior management support as major constraints to effective MIS development. The study recommended continuous updating of information systems and training of employees to enhance effective utilisation of MIS.

Gap in Literature

The reviewed literature demonstrates that MIS is important to information management, university administration, decision-making, record keeping and organisational performance. Existing studies have provided evidence from Nigerian universities and tertiary institutions, including government-owned universities in Ogun State and tertiary institutions in Niger State. However, three gaps can be identified.

First, contextual gap exists because a substantial part of the reviewed Nigerian literature focuses on public or government-owned institutions. The present study focuses specifically on Madonna University, a private university.

Second, variable gap exists because previous studies have often examined MIS broadly or focused on specific outcomes such as record keeping and decision-making. The present study combines information quality, information technology infrastructure, managerial decision-making, and communication and coordination within one framework for examining organisational performance. Third, methodological gap exists because some recent studies have relied on secondary literature, while others have examined specific administrative functions. The present field study seeks to obtain primary data from relevant respondents within Madonna University. **Consequently, the present study seeks to provide institution-specific evidence on the effect of Management Information System on organisational performance at Madonna University, Nigeria**

Research Design

The study adopted a survey research design. This design was considered appropriate because data were collected from respondents through a structured questionnaire to examine the effect of Management Information System on organisational performance at Madonna University, Nigeria.

Population of the Study

The population of the study comprised 823 staff of Madonna University, Nigeria.

Sample Size Determination

The sample size was determined using the Taro Yamane formula at a 5% level of precision:

$$N / 1 + N(e)^2$$

Where:

n = sample size

N= population size = 823

e= level of precision = 0.05

$$n = 823 / 1 + 823 (0.05)^2$$

$$n = 269.06$$

Therefore, the sample size of the study was 269 respondents.

Sampling Technique

The study adopted a simple random sampling technique to give members of the population equal opportunity of being selected.

Sources and Method of Data Collection

The study used both primary sources of data. Primary data was collected from selected staff of Madonna University through a structured questionnaire based on the study objectives. The questionnaire covered information quality, information technology infrastructure, information processing and decision support, and organisational performance.

A five-point Likert scale ranging from 5 = Strongly Agree to 1 = Strongly Disagree were used. The questionnaires were administered personally by the researcher and collected after completion.

Instrument for Data Collection

Data were collected using a structured questionnaire designed in line with the objectives of the study. The questionnaire covered information quality, system quality, information use, and organizational performance.

Method of Data Analysis

Data collected were analysed using descriptive statistics and multiple regression analysis. Descriptive statistics were used to summarize the responses, while multiple regression was used to determine the effect of the independent variables on organisational performance.

Model Specification

The full multiple regression model for your study can be stated as:

$$OP = \beta_0 + \beta_1 IQ + \beta_2 IT + \beta_3 IPD + \varepsilon$$

Where:

OP = Organisational Performance (dependent variable)

IQ = Information Quality

IT = Information Technology

IPD = Information Processing and Decision-Making

β_0 = Constant/intercept

$\beta_1, \beta_2, \beta_3$ = Regression coefficients of the independent variables

ε = Error

Data Presentation

This chapter presents and analyses the data collected from the respondents of Madonna University, Nigeria. The data were obtained through a structured questionnaire and analysed using descriptive statistics and multiple regression analysis. The presentation focuses on the three dimensions of Management Information System, Information Quality (IQ), Information Technology (IT), and Information Processing and Decision-Making (IPD), and their effect on Administrative Efficiency (AE) as the proxy of Organisational Performance (OP).

Questionnaire Distribution and Response Rate

A total of 269 questionnaires were administered to the selected staff of Madonna University, Nigeria. Of these, questionnaires were properly completed and returned, representing a response rate of 95%. The returned questionnaires were considered adequate for the analysis and were subsequently used for the study.

Table 4.1: Summary of Questionnaires Administered and Returned

Category	Frequency	Percentage (%)
Questionnaires administered	269	100
Questionnaires returned	256	95.2
Questionnaires not returned	13	4.8
Total	269	100

Source: Field Survey, 2026.

Descriptive Analysis

The descriptive analysis was based on the 256 questionnaires returned, representing a response rate of approximately 95.2%. The analysis summarised the respondents' views on the three dimensions of Management Information System (MIS), namely Information Quality (IQ), Information Technology (IT), and Information Processing and Decision-Making (IPD), as well as Administrative Efficiency (AE), which was used as the proxy for Organisational Performance (OP). The data were described using frequency, percentage and mean to show the pattern of responses to the questionnaire items. The analysis provided a summary of respondents' perceptions regarding the quality and usefulness of information provided by the university, the availability and use of information technology, the extent to which information supports processing and decision-making, and the level of administrative efficiency within the university. The descriptive results therefore provided an initial understanding of the respondents' assessment of MIS and organisational performance at Madonna University, Nigeria. Higher mean scores indicated stronger agreement with the statements, while lower mean scores indicated weaker agreement.

Regression Analysis

Multiple regression analysis was used to determine the effect of Information Quality (IQ), Information Technology (IT), and Information Processing and Decision-Making (IPD) on Organisational Performance (OP). The analysis was evaluated using R^2 , adjusted R^2 , F-statistic, regression coefficients, t-values and p-values. A 5% significance level was adopted, with a p-value below 0.05 indicating a statistically significant effect.

Test of Hypotheses

The three hypotheses were tested using multiple regression analysis at a 5% significance level. The regression coefficients and p-values were used for decision-making. Where $p < 0.05$, the null hypothesis was rejected; where $p > 0.05$, it was not rejected.

The regression model was specified as:

$$OP = \beta_0 + \beta_1 IQ + \beta_2 IT + \beta_3 IPD + \varepsilon$$

Where OP = Organisational Performance, IQ = Information Quality, IT = Information Technology, and IPD = Information Processing and Decision-Making.

The regression results were used to determine the individual effects of IQ, IT and IPD on organisational performance and consequently make decisions on H_{01} , H_{02} and H_{03} .

Discussion of Findings

The findings showed the extent to which Information Quality, Information Technology, and Information Processing and Decision-Making affected organisational performance at Madonna University. The results were compared with previous empirical studies reviewed in Chapter Two, highlighting areas of agreement and disagreement. The multiple regression results provided the basis for explaining the effects of the MIS dimensions on organisational performance and informed the conclusions and recommendations presented in Chapter Five.

Summary of the Study

This study examined the effect of Management Information System (MIS) on organisational performance at Madonna University, Nigeria. The study specifically examined the effects of Information Quality, Information Technology, and Information Processing and Decision-Making

on organisational performance. A survey research design was adopted. The population comprised 823 staff, from which a sample size of 269 respondents was determined using the Taro Yamane formula at a 5% level of precision. Data were collected through a structured questionnaire and analysed using descriptive statistics and multiple regression analysis.

Conclusion

Based on the findings, the study concludes that Management Information System is relevant to organisational performance at Madonna University. The availability of quality information, appropriate information technology, and effective information processing and decision-making provides useful support for managerial activities, planning, coordination and control.

Recommendations

Based on the findings, the study recommends that:

Management should improve information quality by ensuring that information provided to staff and management is accurate, timely, relevant and reliable.

The University should strengthen its information technology infrastructure through regular upgrading of hardware, software, internet facilities and related ICT resources.

Management should improve information processing and decision-making systems to ensure that relevant information is available promptly for effective managerial decisions.

Regular training should be provided for staff to improve their ability to effectively use MIS facilities and applications.

Contribution of the Study

The study provides empirical evidence on the role of Management Information System in organisational performance within the university environment. It also provides useful information for university management on areas of MIS that require improvement.

References

- Amaefule, C. S., & Inyama, H. C. (2024). The impact of management information system on universities' managerial decision-making. *Journal of the Management Sciences*, 61(7), 350–367.
- Andrew, E. (2022). Effect of management information system on the performance of administrative staff: A study of Michael Okpara University of Agriculture, Umudike and Federal University of Technology Owerri (2011–2016). Michael Okpara University of Agriculture, Umudike.
- Buhari, M., Ogwu, J., Samaila, M., & Levi, D. H. (2026). Impact of management information system on the administration of tertiary institutions in Niger State, Nigeria. *Kwasu International Journal of Educational Management and Leadership*.
- DeLone, W. H., & McLean, E. R. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research*, 3(1), 60–95. <https://doi.org/10.1287/isre.3.1.60>
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, 19(4), 9–30. <https://doi.org/10.1080/07421222.2003.11045748>
- Lawal, O. R., & Afolayan, M. A. (2023). Management information system and organisational performance of service industry in Nigeria. *Acta Universitatis Danubius. Economica*, 19(2), 315–332.
- Ochai, D. P., & Onoja, J. A. (2025). Management information system (MIS) for effective universities administration in Nigeria. *American Journal of Corporate Management*, 2(3).
- Ogundipe, M. A., Anise, K. K., Adelana, O. P., & Adeniji, A. M. (2023). Management information system and university administration: The case of government-owned universities in Ogun State, Nigeria. *Management Research Journal*, 12(1). <https://doi.org/10.37134/mrj.vol12.1.2.2023>
- Petter, S., DeLone, W., & McLean, E. R. (2008). Measuring information systems success: Models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236–263.
- Seddon, P. B. (1997). A respecification and extension of the DeLone and McLean model of IS success. *Information Systems Research*, 8(3), 240–253.
- Wixom, B. H., & Watson, H. J. (2001). An empirical investigation of the factors affecting data warehousing success. *MIS Quarterly*, 25(1), 17–41.
- Al-Mamary, Y. H., Shamsuddin, A., & Aziati, N. (2014). The role of different types of information systems in business organisations: A review. *International Journal of Research*, 1(7), 128–136.
- Laudon, K. C., & Laudon, J. P. (2022). *Management information systems: Managing the digital firm* (17th ed.). Pearson.
- Stair, R., & Reynolds, G. (2020). *Principles of information systems* (13th ed.). Cengage Learning.
- Baltzan, P. (2022). *Business driven information systems* (8th ed.). McGraw-Hill.
- O'Brien, J. A., & Marakas, G. M. (2011). *Management information systems* (10th ed.). McGraw-Hill/Irwin.
- Rainer, R. K., Prince, B., Sanchez-Rodriguez, C., Splettstoesser-Hogeterp, I., & Ebrahimi, S. (2020). *Introduction to information systems* (8th ed.). Wiley.

- Urbach, N., & Müller, B. (2012). The updated DeLone and McLean model of information systems success. In Y. K. Dwivedi, M. R. Wade, & S. L. Schneberger (Eds.), *Information systems theory: Explaining and predicting our digital society* (Vol. 1, pp. 1–18). Springer.
- Petter, S., DeLone, W., & McLean, E. R. (2013). Information systems success: The quest for the independent variables. *Journal of Management Information Systems*, 29(4), 7–62.

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