

Surgical Experimentation and Adoption of Management Information Systems as a Tool for Enhancing Organizational Decision Making in Nigerian Economic Landscape: A Litmus Test for Anambra State

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Abstract

This paper examined how Management Information Systems (MIS) systems for organization decision making in Nigeria has been adopted, using Anambra State as a case study. The study was a descriptive research, which evaluated the use of MIS as a tool for enhancing decision making processes. The data was collected through a meticulously designed questionnaire, distributed to a targeted population of 840 managers and IT professionals involved in the use of MIS within the area of study.

Data were analyzed using descriptive and inferential statistics with the Statistical Package for Social Sciences (SPSS) version 25. The first steps of preparation involved coding of the responses, data entry, inspection for outliers or missing values, and consistency checks. Demographic information, the level and use of MIS, dimensions of MIS quality, decision-making effectiveness, and challenges faced were summarized using descriptive statistics including frequencies, percentages, means, and standard deviations. Inferential statistics were used to answer the research objectives and questions, and all tests were tested at a 0.05 significance level. Findings were displayed in graphs, tables and text, and connected back to the research questions and relevant literature.

The study concluded that when effectively implemented and utilized, MIS can be a valuable tool that can be used to enhance decision-making in Nigerian organizations. But its success is predicated on a continuance of investment in system quality, human capacity, and supportive organizational structures. Firms that make strategic expenditures in these domains should have greater success with decision quality, responsiveness, and competitive advantage.

Keywords: *Surgical Experimentation, Management Information Systems, Organizational Decision Making, Nigeria*

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1. Introduction

Management Information Systems (MIS) have become essential for businesses as a means of ensuring their survival as well as for competitive advantage in the modern business environment. According to Laudon & Laudon, (2020) information technology is rapidly changing the way organizations capture, manipulate, transmit, and use information for decision-making. As suggested by the study by Stair & Reynolds (2021), organizations in a time of information explosion and environmental complexity need solid systems that will turn the raw data into useful information for making strategic, tactical, and operational decisions. MIS can be understood as a combination of people, processes, and technology that supply relevant, timely, and accurate information to improve the effectiveness and efficiency of an organization. The role that MIS play in organizational or managerial decision is massive but critical in developing economies as resources are limited and decisions must be accurate Afolabi & Oyewole, (2019) . According to O'Brien & Marakas, (2020), by using appropriate Management Information Systems (MIS), organizations have better outcomes in resource deployment, strategy development and operational management than organizations that base their decisions on gut feeling or experience. MIS, according to Chaffey and White (2019), is the nervous system of business organizations, transmitting information through the various levels of organizational hierarchies and across functional areas. Such information flow allows managers to keep track of the performance of the organization, emerging trends, and to actively respond to changes in the environment.

The paper by Eze, Chinedu-Eze & Bello (2018) has shown the increasing prevalence and use of MIS in Nigeria by the banking, telecommunication, manufacturing, and public administration sectors. The introduction of MIS, and its use within organizations in Nigeria are further complicated by the contextual issues of inadequate infrastructure, erratic electricity supply, lack of technical know-how and attitudinal/cultural challenges to acceptance of technological change within Nigerian institutions (Adeyemo & Fagbohun, 2020). Notwithstanding all of these challenges, progressive institutions have further acknowledged that proper implementation of an MIS can yield competitive benefits in terms of decision-making, operational efficiencies, and service delivery to customers (Okunola & Rowley, 2021). The use of MIS for decision making is still a problem for most organizations in Nigeria, despite knowledge of the need for effective information management and increasing investment in information technology infrastructure (Onyeonu, Aliyu & Nwankwo, 2021). Leaders of organizations frequently rely on partial or obsolete data, gut feelings, or even hunches when making important choices rather than processing credible management information (Ogbonna & Harris, 2020). The challenges of this issue are both losing potential business opportunities, not being able to respond to changes in the marketplace, poorly allocated resources, and not being able to anticipate and mitigate organizational risks.

These pose serious threats to overall competitiveness, growth potential and sustainability of the organization. Organizations unable to adequately use Management Information Systems for decision making will find themselves at a competitive disadvantage, as well as being inefficient and unable to exploit business opportunities in rapidly changing business environments. It was therefore important to research the role of MIS as an aid to organizational decision making in a systematic way, to understand what has impacted on the success or failure of MIS and to be able to offer useful insights on improving decision making through MIS, particularly in Nigeria.

2. Literature Review

2.1. Theoretical Review

The field of MIS has theoretical origins in computer science, management science, operations research, and organizational behavior (Galliers and Leidner, 2019). This interdisciplinarity reflects the complexity of the interrelationships among technology, information, people, and organizational processes that characterize contemporary information systems. Management Information Systems (MIS) include Decision Support Systems (DSS), Executive Information Systems (EIS) and Business Intelligence (BI) systems, which are all specialized types of MIS that aim to support decision-making at various levels of an organization (Power, 2019). These systems apply data analysis and mining as well as visualization technologies to organizational data in order to produce strategic information. This paper systematically reviewed the system theory which is suitable for this study. Systems theory was one theory used in understanding Management Information Systems (MIS) and its contribution to decision-making in the organization. Systems theory described organizations as complex, open systems consisting of interrelated components that interact with each other and with the environment (Von Bertalanffy, 2020). This perspective stated that MIS should not be understood as an isolated component but as part of a larger context that includes people, processes, technology, and organizational structures (Kast & Rosenzweig, 2019). Systems theory differentiated between closed systems that operate independently of their environment and open systems that constantly exchanged information, energy, and resources with the environment (Scott & Davis, 2018). Organizations represent open systems that need to adapt to change to survive and thrive, which requires MIS to monitor the environment, coordinate, and respond to changes (Luhmann, 2021).

The concept of subsystems in systems theory recognised that organizations consisted of several interrelated subsystems including technology, work processes, and social subsystems involving people and interactions, management and control subsystems, strategic subsystems responsible for environmental and strategic relations, and informational subsystems responsible for communication and knowledge flows (Katz & Kahn, 2018). MIS were informational subsystems that connected and coordinated other organization subsystems, allowing information flow across functional boundaries, levels of organization, and organizational/environment (Boulding 2020). The interconnectedness of systems theory highlighted implied that changes in MIS would affect other organizational subsystems and vice versa. This meant that a holistic approach to system design and implementation would need to consider technological, organizational, and human dimensions as well as the business entity (Checkand & Holwell, 2019). There are several concepts related to understanding the effects of MIS in supporting decision making. The principle of equifinality suggested that organizations may achieve desired outcomes through multiple means, not one best, and that effective MIS may take varying forms depending on the context, strategies, and capabilities of organizations (Katz & Kahn, 2018). This principle explained the number of MIS in an organization as well as the importance of MIS implementation that does not fit all (Katz & Kahn, 2018). The notion of feedback loops stressed the importance of information flows that enabled systems to monitor outputs, detect deviations from desired results,

and make changes as needed (Von Bertalanffy, 2020). MIS provided feedback mechanism that allowed organizations to monitor their performance against their objectives, identify issues that needed attention, and evaluate the effectiveness of managerial actions (Luhmann, 2021).

This distinction between negative feedback that retained stability by correcting deviations from established standards and positive feedback that enhanced the changes and influenced the development of the system, reveals the difference between the roles of MIS in control and innovation (Boulding, 2020). While negative feedback provided controls and tactical decisions, positive feedback provided information to enhance organizational learning and decision-making through warnings of deviations from plans and standards, while positive feedback provided opportunities and threats that required response (Checkland & Holwell, 2019). Entropy is the tendency of systems to become disorder and decline without continuous inputs of energy and information, and MIS provides information to help coordination, learning, and renewal (Katz & Kahn, 2018). Systems theory's emphasis on interaction with the environment identified MIS's effectiveness in providing information that allowed an organization to adapt to changing situations (Scott & Davis, 2018). Because of the influence of the environment, MIS must adapt to change (Von Bertalanffy, 2020). Systems theory supported the notion that MIS needed to be evaluated holistically as an agent for examining how information systems interact with organizational processes, cultures, and strategies so as they interact with other organizational structures, processes, and strategies within an organization to influence decision-making (Luhmann, 2021). The MIS was presented as a subsystem within its context, how each of these systems interacts with organizational and environment, and how MIS characteristics related to organizational factors to influence the decision-making process and organizational variables.

2.2. Empirical Review

Empirically, Nwosu and Ike-Elechi (2023) explored reasons why management information systems have been successful in some public sector organizations in Nigeria and not in others and tried to understand the factors that have facilitated successful adoption and use of management information systems in government departments. The study utilized ex post facto research design based on completed MIS implementations projects. The population consisted of 180 public sector organizations that had implemented an MIS in the past five years. Of these 95 organizations, purposive sampling based on project documentation availability was undertaken. Data collection methods included document analysis, structured questions to project managers and system administrators, and review of implementation documents. The variables studied were top management support, user involvement, project management practices, vendor support, and technical infrastructure adequacy. Data analysis employed logistic regression to examine the predictors of implementation success based on system functioning, user adoption, and project success. The result showed that the most important predictor of implementation success was top management support ($\beta=0.72$, $p<0.001$), followed by user involvement ($\beta=0.58$, $p<0.01$), and project management quality ($\beta=0.51$, $p<0.01$). The quality of vendor support and the adequacy of technical infrastructure were also significant predictors of success but with smaller effect sizes.

Organizations with top management support, engaged users and a defined methodology were 78% successful while organizations without any of these factors were 34% successful. To improve the success of MIS projects, the study recommended active leadership involvement in the public sector; defined formal governance roles in MIS projects; the engagement of end-users throughout all implementation project phases; and targeted development of project management capabilities.

In another existing study, Aniche (2022) explored the impact of Management Information Systems on decision making effectiveness in Nigerian manufacturing firms by examining the link between different dimensions of MIS quality and managerial decision making outcomes. It sampled 450 managers in manufacturing companies in Lagos State and employed a descriptive survey research design. A total of 210 respondents were systematically sampled using proportionate stratified random sampling from all levels of management. Data were collected through structured questionnaires that measured the MIS quality characteristics of information quality, system quality, and service quality, and decision making effectiveness. Descriptive statistics as well as correlation and multiple regression analyses were employed to explore as statistically between variables. The results showed a strong positive correlation between information quality and decision effectiveness ($r=0.68$, $p<0.01$), between system quality and decision effectiveness ($r=0.61$, $p<0.01$), and between service quality and decision outcomes ($r=0.58$, $p<0.01$). Multiple regression analyses showed that all dimensions of MIS quality accounted for 52% of the variance in decision-making effectiveness. The research promoted the need for information quality improvement initiatives, user-friendly system interfaces, and responsive IT support services in organizations to improve decision making through greater quality of the MIS. Similarly, Okonkwo and Eze 2021 also identified some of the challenges that obstruct the effective use of management information systems in making decisions within organizations in Nigeria but they focus on technical, organizational and human barriers to management information systems effectiveness rather than looking at what others have documented on the issue of management information systems in Nigeria. The research was mixed method using quantitative surveys and qualitative interviews. The population consisted of 320 managers and IT experts from service industries in South eastern Nigeria. The sample size of 180 respondents was calculated using Taro Yamane formula and respondents were chosen by stratified random sampling. The data was collected using structured questionnaires and semi structured interviews with 15 senior managers. Descriptive statistics and factor analysis were run on the quantitative data and qualitative data was examined using thematic analysis. Among the findings, the respondents identified lack of IT infrastructure (76%), lack of user training (68%), poor data quality (64%), user resistance (59%) and lack of top management support (52%) as major challenges. Factor analysis indicated three main challenge dimensions: technical challenges related to infrastructure and system design; organizational challenges of policies and support; and human challenges around skills and attitudes. The study recommended training, infrastructure, data governance, and change management to combat the barriers to MIS being utilized effectively.

Similarly, Udeh (2020) investigated the link between the varying degrees of MIS in use and organizational performance among SMEs in Nigeria to determine if the implementation of MIS made any impact on businesses. The study employed a correlational research design and study population of 280 SMEs from different sectors from Enugu State. A simple random sampling was used to select a total of 165 SMEs. The first source of primary data consisted of structural questionnaires to owner-managers and senior executives, asking about the level of adoption of Management Information Systems, how the systems were/are used, and general performance measures such as profitability, market share, and efficiency. Pearson correlations, chi squares and ANOVAs were conducted where appropriate to explore relationships between variables and differences between groups. The results indicate that the degree of use of MIS is positively correlated to profitability ($r=0.54$, $p<0.05$), growth in market share ($r=0.48$, $p<0.05$) and operational efficiency ($r=0.61$, $p<0.05$). MIS performing SMEs have shown a better performance in all aspects measure compared to MIS none or with low levels on MIS. The ANOVA

demonstrated significant differences in performance metrics by three different categories of MIS usage; non-adopters, partial adopters, and full adopters ($F=18.42$, $p<0.001$). The study recommended that government policies support the technology adoption of SMEs by means of financing schemes and supportive capacity building programs; and that SMEs despite the limited resources, invest on MIS.

3. Methodology

This study utilized a descriptive survey research design with a view of examining Management Information Systems as means of improving organizational decision-making in Nigeria. The descriptive survey design was suitable for the study as it allowed for collection of data from a relatively large sample of respondents to describe features, views, attitudes and behaviors related to, among others, MIS adoption, quality, use and effectiveness of decisions making (Creswell & Creswell, 2018). The study was carried out in Anambra State in southeastern Nigeria with its capital city the city of Awka. The selection of Anambra State as the study setting was closely tied to the fact that it is one of the biggest commercial/industrial centers in Southeast Nigeria, hosting a range of organizations in various sectors such as manufacturing, trading, services, and technology (Anambra State Government, 2020). The computer infrastructure, the focus on entrepreneurship within the state, the high density of small, medium and large enterprises, and the embrace of technology by businesses, made it a suitable study-setting for understanding the use of MIS and decision-making effectiveness. (Onitsha Chamber of Commerce, 2021).

The major commercial centers Onitsha, Nnewi and Awka, also offered access to organizations at different stages of MIS use; from early adopters with developed systems, to organizations initiating technologies for the first time.

Given this, the study targeted a population of 840 IT personnel and Managers of institutions that had adopted Management Information Systems in Anambra State. The participant population consisted of top managers, middle managers, operations managers who rely upon the outputs from MIS to make decisions as well as IT managers and system administrators who implement and maintain MIS. The selected organizations were operating in manufacturing, banking and financial services, telecommunications, retail and trading, hospitality and professional services and had utilized MIS for a minimum time period of two years ensuring that they had adequate experience with the use of the system.

In addition, 168 respondents were sampled based on the Taro Yamane formula for sample size determination:

$$N = n / 1 + N(e^2),$$

where?

n was the sample size, and N is the population size (840),... e is the margin of error (0.05).

Using this formula:

$$n = 840.1 + 840(0.05^2) = 840.1 + 840(0.0025) = 840.1 + 2.1 = 842.1 = 271.$$

The technique of stratified random sampling was also applied to represent all strata of the organization in terms of types of organizational sectors, organizational size, and managerial level (Taherdoost, 2020). Obtaining the sample proceeded by first stratifying the population into categories by sector (manufacturing, services, financial services, trading) and size (large, medium, small), and then using proportional allocation for the number of respondents taken from each stratum. The specific unit of respondents that were selected from each stratum was determined through simple random sampling, whereby all units in the population had an equal probability of being included in the sample. The data collection instrument was a structured questionnaire known as the "Management Information Systems and Organizational Decision-Making Questionnaire" or MISODQ. The survey was designed in five sections in line with the objectives of the study. Section A gathered demographic data including age, gender, education level, position, work experience, and organizational demographics. Items relating to system availability, accessibility, frequency of use, and features used constituted measures of MIS usage in Section B. Section C comprised 5-point Likert ratings on dimensions of MIS quality, these included; dimensions related to information quality (accuracy, completeness, relevance, timeliness), system quality (reliability, ease of use, response time, flexibility), and service quality (responsiveness, competence, empathy). Decision making effectiveness was assessed in Section D with items on quality, timing, confidence and outcomes of decisions. Section E explored challenges and improvement strategies through closed and opened ended items. The questionnaire asked mostly closed-ended questions, using 5-point Likert scales of 1 (Strongly Disagree) to 5 (Strongly Agree) for items of attitudes and perceptions, and 1 (Very Low) to 5 (Very High) for items regarding extent and frequency, with some limited open-ended questions to elicit some qualitative data.

The questionnaire went through face and content validity processes, but, to ensure it was measuring what it purported to measure. The researcher initially prepared the instrument through an extensive review of literature and guidance from the research supervisor. The draft questionnaire was then taken for review to two experts in Management Information Systems from the Department of Business Administration. These validators reviewed the questionnaire for

clarity of language, appropriateness of items for measuring variables of interest, items comprehensiveness, and logical organization. In addition to the items, based on feedback received from the validators, several dimensions of MIS quality that were missing were added, some difficult items were reworded, and some sections were rearranged into a more logical order. The revised instrument was submitted to the research supervisor for alignment with the research objectives and questions, who provided final recommendations for improvement and approval for pilot testing and deployment in the main study.

4. Results

Descriptive analyses regarding the demographics and professional characteristics of the respondents were introduced before the analyses corresponding to the research questions. Table 1 shows gender, age, level of education, position, and years of experience of the respondents.

Table 1: Background Characteristics of Respondents (N = 148)

Variable	Category	Frequency	Percentage (%)
Gender	Male	91	61.5
	Female	57	38.5
Age (Years)	21–30	38	25.7
	31–40	64	43.2
	41–50	34	23.0
	51 and above	12	8.1
Educational Qualification	OND/NCE	22	14.9
	B.Sc./HND	78	52.7
	M.Sc./MBA	42	28.4
	Ph.D.	6	4.1
Job Position	Top Management	31	20.9
	Middle Management	69	46.6
	Operational Management	30	20.3
	IT Professional	18	12.2

Years of Experience	1–5	35	23.6
	6–10	56	37.8
	11–15	38	25.7
	Above 15	19	12.8
Total		148	100.0

Source: Author’s Computation, 2026.

Most of the respondents were male (61.5%), as presented in Table 1, and females 38.5%. The age distribution shows that the most frequented is 31-40 years with 43.2% and then 21-30 years with 25.7% suggesting a young and middle-aged workforce. In terms of education level, majority of them were had B.Sc. or HND degree (52.7%) while 28.4% were postgraduates. In regard to job position, the largest percentage belonged to middle management staff at 46.6%, with top management at 20.9% given that the target in the study was decision makers. The majority of answers came from participants with 6-10 years of experience at 37.8%, which indicates that many had the knowledge of organizational experience and experience with the MIS to answer adequately.

4.1: Research Question 1: To what extent are Management Information Systems adopted and utilized in organizational decision-making processes?

In response to this research question, participants were asked to rate how much they adopted and made use of MIS within their organizations on a 5-point Likert scale (1 = Very Low, 5 = Very High).

Decision criterion: Mean scores of 3.50 and above indicated high level of adoption/utilization, scores between 2.50 and 3.49 moderate, and scores below 2.50 low. Results are presented in Table 2.

Table 2: MIS Adoption and Utilization in Organizational Decision-Making

Items	N	Mean	Std Dev	Remark
MIS is available and accessible to all relevant staff	148	4.12	0.68	High
MIS is routinely used for daily operational decisions	148	3.94	0.74	High
Management uses MIS reports for strategic planning	148	3.78	0.81	High
Staff are trained to utilize MIS features effectively	148	3.42	0.93	Moderate

MIS is integrated across key departments	148	3.65	0.87	High
Our organization uses advanced MIS analytical features	148	3.29	0.98	Moderate
MIS reports are frequently consulted before key decisions	148	3.88	0.76	High
The organization continuously updates its MIS	148	3.56	0.89	High
Overall Mean	148	3.71	0.83	High

Source: Author's Computation, 2026.

Table 2 suggests that MIS adoption and use in decision-making among sampled organizations from Anambra State was high (mean = 3.71; SD = 0.83). There were respondents who reported that MIS was accessible to the relevant staff (Mean = 4.12), MIS reports are often consulted before major decisions (Mean = 3.88), and management also noted the use of MIS for strategic planning (Mean = 3.78). But, items on the use of advanced analytical features (Mean = 3.29) and staff training (Mean = 3.42) were moderately answered, suggesting that although adoption was high, widespread, the use of advanced analytical features is not yet well.

4.2: Testing of Hypotheses

The null hypothesis was created and tested. All hypotheses were tested at a 0.05 level of significance. Table 3 displays the results of hypothesis testing.

Table 3: Summary of Hypothesis Testing Results

Hypothesis	Statistical Test	Result	Decision
Ho1: MIS adoption level is not significant in organizational decision-making	One-sample t-test, $t(147)=8.94$	$p = .000$	Reject Ho1

Source: Author's Computation, 2026.

Hypothesis 1 (Ho1): MIS are not widely used in decision-making processes of the organizations in Anambra State.

This was confirmed by the results of the one-sample t-test that the mean adoption score was significantly higher than the neutral midpoint of the scale (3.0). Taking the mean adoption score above the neutral midpoint of the scale (3.71), Ho1 was rejected. The results indicated that Management Information Systems are widely used in decision-making in the sampled

organizations. This was supported by the overall mean adoption score of 3.71 among the organisations in Anambra State. As predicted, the adoption scores were generally high in Anambra State organizations on MIS and use in daily operational and strategic decisions were the three best measured variables of adoption. The more advanced analytical tools and training of staff were moderately high in this study (overall mean of 3.71). MIS adoption and use in the sampled companies in Anambra State, compared to other states of African manufacturing firms were positively adopted in MIS, and Udeh (2020) reported that small and medium-sized enterprises in Enugu State with high MIS adoption scored higher on most measures across the selected indicators. It seems MIS has become an integral tool in the modern Nigerian business as Adeyemo and Fagbohun (2020).

But, the moderate scores of the use of advanced analytical features (Mean = 3.29) and training of staff (Mean = 3.42) indicates that while first order adoption, in terms of access and basic use, is prominent, second order adoption, in terms of leveraging advanced analytical capabilities, is still limited. This corroborates Okunola and Rowley (2021) who note that existing features of the system are actually underutilized in many Nigerian organizations, a situation that is caused by lack of training as well as poorly designed interfaces. It also is in favor of Simon's (2019) bounded rationality theory, which argues that organizational decision-makers need to have information systems as well as cognitive capabilities and training in order to use them to develop limitations to intuition and decision-making rationality. Under a systems theory view, given the high level of acceptance, it can be inferred that MIS have found place within the informational subsystem of these organizations, playing an active role in facilitating internal coordination and decision making. Yet, moderate use of some of the more advanced features indicates that the potential of MIS as a feedback mechanism and an environmental scanning tool, as highlighted by the systems theory, has not been fully tapped into yet. While valuable, this gap between adoption and deep usage is an organizational opportunity.

5. Conclusion

The study explored the use of Management Information Systems to improve decision making in organizations in Anambra State, Nigeria. This formed the basis of the research questions that informed the study on the level of adoption of MIS in Nigeria using Anambra State as a test case. This paper finds that MIS are being widely adopted in organizations in Anambra State with MIS frequently used for both operational and strategic decision making. But, the depth of use especially of advanced analytical features is moderate, and there is a need for targeted intervention gap in adoption. The research also identified a situation whereby the use of MIS presence in Anambra State institutions faces a web of technical, organizational and human issues some of which are unreliable power supply, poor data, lack of training, poor IT infrastructure and resistance from employees. These are not issues specific to Anambra State but are systemic barriers impacting organizations globally working under the conditions of a developing economy. Approaches identified and supported by respondents including investment in infrastructure, commitment from leadership, thorough training, data governance, user participation and change management serve as practical solutions for organizations to address these challenges and realize the potential in MIS as decision-support tools.

The study thus concludes that Management Information Systems are effective decision support systems for organizations in Nigeria if properly adopted and effectively deployed. However, their effectiveness is contingent on continuous investments in quality of system, quality of human

capacity and other organizational enablers to create the conditions necessary for MIS to deliver its intended decision support value. Those organizations who purposely invest in these enablers are well positioned to benefit from enhanced decision quality, organizational agility, and competitive success.

6. Policy Recommendations

From the above findings and conclusions of this paper, the following recommendations are proffered:

Improving Infrastructure: First, Organizations in Anambra State should focus on upgrading IT infrastructure such as servers, networking equipment, and backup power systems as a first step in trying to improve MIS effectiveness. It is particularly recommended to invest in alternative power sources such as solar systems and uninterruptible power supplies (UPS) to mitigate the impact of unreliable public electricity supply on MIS performance. Secondly, in order to minimize resistance from employees and to help an environment conducive to willing acceptance of the system, employees should be incorporated into every stage of the design, tailoring and implementation of Management Information Systems. One aspect in particular is the sense of ownership and involvement created by user participation forums, feedback mechanisms, and user advisory committees which greatly lowers adoption barriers and improves system-user fit. Thirdly, they should implement structured change management programs when introducing or upgrading MIS, dealing with resistance by means of clear communication strategies, demonstration of early successes, formation of MIS champions within all levels of the organization, and integration of MIS use in performance evaluation frameworks to signal organizational commitment to decision-making based on data. Fourthly, resource constrained organizations in particular small and medium enterprises should turn toward cloud based MIS alternatives which offer lower entry cost and scalable infrastructure and less maintenance challenges compared to traditional on-premise systems. Careful vendor evaluation for security, reliability and local customer support capability should accompany cloud adoption. Finally, the Anambra State Government as well as other regulatory agencies should formulate policies around MIS which serves as incentive to businesses, especially SMEs to adopt MIS either through grants for technology, tax incentives for investment in ICT, digital literacy programs for the populace as well as public-private initiatives to strengthen the technological infrastructure in the commercial centers of the state.

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