POLAC INTERNATIONAL JOURNAL OF ECONS & MGT SCIENCE (PIJEMS)
DEPARTMENT OF ECONOMICS & MANAGEMENT SCIENCE
NIGERIA POLICE ACADEMY, WUDIL-KANO

AN ASSESSMENT OF THE EFFECT OF INFORMATION TECHNOLOGY-BASED REFORMS ON FINANCIAL ACCOUNTABILITY OF FEDERAL UNIVERSITIES IN NORTH-CENTRAL GEO-POLITICAL ZONE OF NIGERIA

Goje, Hadiza — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Muhammad, Akaro Mainoma — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Hassan, Ibrahim — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Aliyu, Usman Baba — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Abstract

University is vital for national development, driving skilled workforce production, research, and innovation. However, corruption, and inefficiencies in financial management have consistently plagued government institutions, including universities. This study examines the effect of Information Technology-based reforms on *financial accountability (Resource Allocation and Management) of federal universities in the North Central of Nigeria. A survey research design was used, with 278 participants selected from the bursary departments of the selected university. Ordered logistic regression, OLS regression with robust standard errors and partial least square based structural equation modelling (PLS-SEM) techniques were used to analyze the data. The findings revealed that Information technology reform, measured by IPPIS and GIFMIS, also significantly influenced performance. However the study concluded that public sector financial reforms, such as information technology-based reforms significantly influence the performance of government entities in Nigeria. The study recommends that the government should strengthen Information Technology-based through adequate funding, and capacity building,. This will enhance their effectiveness in combating corruption, fostering transparency, and ultimately leading to more efficient and effective governance in Nigeria.*

Keywords: Information Technology-based, Financial Accountability, Universities, Nigeria

1. Introduction

Financial accountability is prominent among the demands for better governance, which is expected to contribute to a broader political stewardship, transparency, legitimacy, and stability. Public financial accountability (PFA) in the face of mistrust and dishonesty in managing public funds has been a severe global issue that has afflicted the public sector. The central idea of public financial accountability is that an individual or institution must report on its activities to another individual or institution. This is to improve the volume and quality of services yielded by public resources, reduce waste, and curb corruption.

Corruption is a global issue that has captured the attention of governments, policymakers, international institutions, and scholars. Its impact on the world economy is a profound concern, with estimates suggesting it currently siphons off approximately 5% of the global Gross Domestic Product (IMF, 2020). Often, we are confronted with alarming reports of widespread corruption within the public sector (Atuilik & Hussein, 2019). This issue is particularly severe in the developing world, notably in Africa, where numerous cases of public fund misappropriation have surfaced in recent years

Governments of different economies have embraced public sector reforms as a potent tool for strengthening the effectiveness and efficiency of the sector (Ike et al., 2023). Public Sector reform has thus become a priority on the political agenda of developing nations, including Nigeria. The major driving force for these reforms in Nigeria is a growing shortage of public resources, the growing agitation from citizens and the perception of Nigeria by the global community as a corrupt nation **(**Emmanson & Ajayi, 2022). These reforms hold the promise of a brighter future, where financial accountability is not just a goal, but a reality. Despite the presence of relevant institutions and numerous reform efforts, successive federal, state, and local administrations have consistently failed to address these accountability issues (Afolabi et al., 2023).

One of the ways to combat corruption is the used of Information Technology (IT); The application of Information Technology (IT) to government and public administration springs to help attain internal efficiency, real-time transparency and accountability in service delivery and policy control and help catch up with the global technological world (Adesuyi & Gberevbie, 2022; Garuba & Aminu, 2020). Therefore, the application of IT in public administration is supposed to meet the citizens' demands and encourage sustainable accountability through timely reporting of public operations (Otiko & Inuwa, 2021; Yauri, 2021).

Study by Adetomiwa and Gberevbie (2022) state that IT deployment in the public sector has evolved to aid a developing country like Nigeria in combating corruption and improving transparency in public ministries, departments and agencies, a viewpoint shared by Basyal et al., (2018). Interestingly, the Nigerian government is harnessing IT to boost administrative capacity and improve accountability, having introduced programmes like Treasury Single Account (TSA), Government Integrated Financial Management and Information Systems (GIFMIS), Integrated Payroll and Personnel Information System (IPPIS), as well as other public reporting and monitoring mechanisms (Agha, 2017).

Specifically, the main goal of implementing GIFMIS is to computerize the financial management system for the Nigerian government in such a manner that depicts efficiency, effectiveness, and user-friendliness, while the Treasury Single Account (TSA) was implemented to eliminate treasury leakages (Abdulkareem & Ishola, 2021; Owuor et al., 2020). According to Okeke (2023), the TSA was implemented in Public Universities a part of Government Ministries, Departments, and Agencies (MDAs) in Nigeria, to primarily improve transparency and accountability by ensuring that all funds are paid into government accounts via the use of Remita and are transferred to the CBN at the end of each day. This means that TSA also aims to operate as a regulatory agent while ensuring that money is appropriated to various public universities by previously submitted budgets and needs assessments. Arguments against delaying the release of these funds to these institutions, however, run counter to the idea of accountability (Obi et al., 2021), likewise affect the function of internal administration of the universities at ensuring the implementation of policies and coordinating of both human and materials resources of the universities (Ogunode & Garba, 2023).

The IPPIS was also created as a dependable and complete database for all government personnel. Its procedures were designed to eradicate falsified documentation, payroll fraud and the incidence of ghost workers. Folorunso and Simeon (2021) said IPPIS saved ₦416 million in the first month of operation (in 2007) and ₦12 billion at the end of the three-year testing period. In 2019, the Nigerian government mandated that all federal universities join the IPPIS platform, a centralized payment system managed by the Federal Government, with salaries exclusively disbursed through this automated payroll to civil servants. However, most university-based unions (ASUU, SSANU, NAT, etc.) opposed this directive, leading to various instances of industrial action against implementing IPPIS in federal universities. This study therefore aims to examine the impacts of information technology-based reforms on the financial accountability (Resource Allocation and Management) of federal universities in North-central geo-political zone of Nigeria

2. Literature Review

2.1 Empirical Review

Mohunyo and Jagongo (2018) explored the impact of internal control on financial performance in higher learning institutions in Nairobi, Kenya. Drawing from Agency, Stewardship, and Positive Accounting theories, the study assessed the effects of risk assessment, control environment, information and communication, and monitoring. Utilizing questionnaire surveys and multiple linear regression analysis, the researchers found that all aspects of internal control significantly influenced the financial performance of the institutions.

In another study by Yeboah (2017) focusing on reforms in Ghana's Public Sector Financial Management, particularly on the Ghana Integrated Financial Management Information System (GIFMIS), the research explored the accountability framework. According to respondents, the GIFMIS system incorporates a budget module facilitating budget formulation and implementation. This module enables tracking and collection of actual expenditure data, which informs the formulation of subsequent budget periods. However, a limitation of the study is that it utilized a qualitative case study method, whereas this study employs a quantitative approach for generalizable findings.

Chebet (2017) conducted a study in Kenya, examining critical factors influencing the implementation of Integrated Financial Management Information Systems (IFMIS) in public agencies. Through a survey involving finance officers, information communication technology officers, and other key users, the study revealed that user involvement in the implementation process, clear recruitment guidelines, risk management, and effective communication are essential for successful IFMIS implementation. Additionally, proper resource management, top-level management support, robust cash management and budgeting systems, and effective communication among stakeholders were identified as crucial for successful IFMIS implementation. It's important to note that this study was not conducted in Nigeria, highlighting a geographical gap that the current research aims to address.

Enakirerhi and Temile (2017) looked into the Integrated Personnel and Payroll Information System (IPPIS) in Nigeria, exploring its challenges, benefits, and potential. Employing a theoretical approach, the study drew insights from various sources, including government announcements, stakeholder opinions, international presentations, and media publications. It identified significant advantages of IPPIS such as ensuring accurate personnel data, combating corruption, and enhancing budgeting accuracy. However, the study highlighted obstacles like skill transfer issues, inadequate infrastructure, and resistance from stakeholders that threaten the system's effectiveness. Notably, the study's reliance on theoretical analysis rather than empirical data poses a limitation, suggesting a need for further empirical research to validate its findings.

Effiong et al., (2017) investigated the impacts of the Treasury Single Account (TSA), Integrated Payroll and Personnel Information System (IPPIS), and Integrated Financial Management Information System (IFMIS) on fraud management within Nigeria's public sector. Employing a descriptive research design, the study distributed questionnaires randomly among respondents from selected Ministries. Through the utilization of a linear regression model, the study established a positive and significant relationship between TSA, IPPIS, and IFMIS and fraud management, suggesting their collective influence on the performance of Public Interest Entities. However, the study's limitation lies in its reliance solely on descriptive statistics to address its research objectives.

Leyira and Temple (2018) explored the impact of the Integrated Personnel and Payroll Management System (IPPIS) on the prevalence of ghost workers in Nigeria's public sector. Employing a historical research method, the study found that the implementation of IPPIS has substantially reduced opportunities for fraudulent activities related to payroll. Despite this, the study's overreliance on historical research methods represents a limitation.

Agboola (2018) conducted survey research to assess the effectiveness of the Integrated Personnel and Payroll Information System (IPPIS) in addressing the ghost worker syndrome in the Nigerian public sector. The study gathered data from both primary and secondary sources, focusing on the perspectives of public servants within the Federal Inland Revenue Service (FIRS). It identified ongoing challenges in the IPPIS system, particularly related to the uploading of monthly employee salaries. Despite these challenges, the study concluded that the proper implementation and management of IPPIS could significantly mitigate the issue of ghost workers in the Nigerian public service. However, it was limited to exploring the impact of IPPIS on combating the ghost worker syndrome.

Mela (2019) looked into the implementation of the Integrated Personnel and Payroll Information System (IPPIS) policy in Nigerian universities by the federal government. Employing a qualitative research approach, the study revealed that while the university system did not outright reject IPPIS, concerns were raised regarding its failure to adequately accommodate the flexibility and unique characteristics of universities. The study focused solely on exploring the benefits and challenges associated with adopting the IPPIS policy in Nigerian universities and remained conceptual in nature.

Davis (2020) investigated the role of the Integrated Payroll and Personnel Information System (IPPIS) in ensuring the sustainability of university education in Nigeria post-COVID- 19 pandemic. The reliability of the research instrument was assessed through a pilot test, yielding a Cronbach Alpha reliability coefficient ranging from .74 to .79 for the sub-scales. The study recommended the computerization of university budget estimation to enhance accuracy and ensure the sustainability of education post-pandemic. Additionally, the automation of university staff payroll was suggested as a measure to curb payroll fraud and promote sustainability. Similar to Mela (2019), this study focused solely on the role of IPPIS in public universities in Nigeria, neglecting other sectors. The study's limitation lies in its exclusion of federal universities in Nigeria.

Ezegwu and Obichilo (2022) examined the portrayal of the Federal Government's implementation of the Integrated Payroll and Personnel Information System (IPPIS) policy in Nigerian newspapers. Their objectives were to scrutinize the direction, story types, and dominant themes in newspaper coverage of the issue. Employing content analysis, the study revealed that 53.4% of the items analyzed exhibited a negative tone. Moreover, the predominant themes revolved around worker retrenchment and government cost-saving measures. The study advocated for media agenda-setting on governmental policies, particularly when novel, and emphasized the need for Nigerian newspapers to provide comprehensive coverage through features, investigative reports, editorials, and opinion pieces. However, the study's reliance on content analysis was acknowledged as a limitation, given its susceptibility to data misinterpretation due to the processing of large volumes of data, potentially yielding spurious results.

Similarly, existing literature focused on use of I.T Based Reforms on accountability of government entities of both developed and developing countries. However, the major limitation is that the countries do not consider the effect of financial control reforms on financial accountability of federal Universities in Nigeria. Although a few studies conducted in Nigeria, including those by Avery and Obah 2018, evaluate the impact of financial control on accountability in the Nigeria; Olaoye and Orimogunje 2022 examined public Financial Management (PFM) and Economic Development in Nigeria. However, Ezegwu and Obichilo (2022) examined newspaper coverage of the implementation of Federal Government Integrated Payroll and personnel Information System (IPPIS) policy in Nigeria. However, none of the study conducted within Nigeria to the best knowledge of the researcher have explored the effect of financial control reforms on financial accountability of federal Universities. Hence, this study intend to fill this important gap.

Additionally, a significant gap exists in exist in the dependent variable. Studies conducted by Olanrewaju et al. (2020) shows that communication with stakeholder; accountability and internal control are positively and significantly associated with public sector performance. Also, Omankhanlen, (2012) shows that the financial sector developments experienced in Nigeria`s economy at one point or the other had effect on the activities of the economy. However, no known author has, to the best of the researcher's knowledge and based on the parameters of financial accountability used in this study, as none has taken into account the transparency and financial reporting, regulatory compliance and oversight function, stakeholder engagement, internal control and audit function, as well as resource allocation and management aspect of financial accountability in Federal Universities in Nigeria. Therefore, there is the need to fill this gap.

Moreover, Ezegwu and Obichilo, (2022) examined the implementation of Federal Government Integrated Payroll and personnel Information System (IPPIS) policy, Davis (2020) studied Integrated Payroll and Personnel Information System (IPPIS) for Sustainability of University Education in Nigeria after COVID-19 Pandemic, Mela, (2019) analysis on the Implementation of IPPIS Policy in the Nigerian Universities by Federal Government, and Leyira and Temple (2018) on IPPIS and the Ghost Workers Syndrome in Nigeria's Public Sector.

Also, past studies by Enakirerhi and Temile (2017); Effiong et al., (2017); Leyira and Temple (2018); Agboola (2018); and Mela (2019) on information technology-based reforms on accountability in Nigeria. However, none of these studies take into consideration the effect of information technology-based reforms on financial accountability of federal universities in Nigeria which exists a notable gap. This concludes the gap that the current study fills.

3. Methodology

This study adopts a survey research design and focuses on the North Central region of Nigeria, comprising eight federal universities: Federal University of Agriculture Makurdi, Federal University of Health Sciences Oturkpo, Federal University Lokoja, University of Ilorin, Federal University Lafia, Federal University of Technology Minna, University of Jos, and University of Abuja (Ogunmodede et al., 2021). The target population includes staff members from the bursary departments of these universities. A two-stage sampling procedure is employ. In the first stage, stratified sampling is use to divide bursary departments across the selected universities into strata to ensure administrative efficiency. In the second stage, random sampling is conduct to select staff members, particularly those in financial and audit roles, using probability proportional to the number of units within each bursary department. The Taro Yamane model was use to calculate a final sample size of 278 for the study.

$$n= N/(1+912(e)^2 \qquad (1)$$

n= sample size N= Population

e= the degree of accuracy expressed as a proportion (0.05)

$$n = 912/(1+912(0.05))^2$$

n= 278

Proportionate stratified random sampling was select to ensure that all identified strata the bursary departments of each university are represent in the sample, enhancing the accuracy of population representation. The sample size allocation for each university was determined by applying the proportion of its bursary staff to the total bursary population, ensuring that larger departments receive proportionately greater representation in the sample size. The breakdown is show in Table 1.

Table 1: Sample Size Apportionment of Bursary Department and Selection Approach

Bursary Departments	Population	Proportionate Stratified Random Sampling	Sample Size
1. Federal University of Agriculture Makurdi	119	119/912*278	36
2. Federal University of Health Sciences Oturkpo	107	107/912*278	33
3. Federal University Lokoja	131	131/912*278	40
4. University of Ilorin	125	125/912*278	38
5. Federal University Lafia	94	94/912*278	29
6. Federal University of Technology Minna	113	113/912*278	34
7. University of Jos	87	87/912*278	27
8. University of Abuja	136	136/912*278	41
Total	**912**		**278**

Source: Author's Computation, 2023

3.1 Model Specification

To examine the effects of Public Sector Financial Reforms on Resource Allocation and Management of Federal universities in Nigeria, the model is specified as follows

$RAAM = \beta 0 + \beta_8 IPPIS + \beta_9 GIFMIS + \beta_{10} TSA + \beta_{11} IPSAS + \mathcal{E}$……………………………….(2)

Where:

RAAM = Resource Allocation and Management
β0 = Constant
IPPIS = Integrated Payroll and Personnel Information System
GIFMIS = Government Integrated Financial Management Information System.
IPSAS = IPSAS's compliance
TSA = Treasury Single Account
β1- β4 = The coefficient of the independent variables
Ɛ = error term

4. Results and Discussion

4.1 Descriptive Results

Figure 1 presents the descriptive analysis of socio-demographic indicators, illustrating the distribution of university staff who participated in the study.

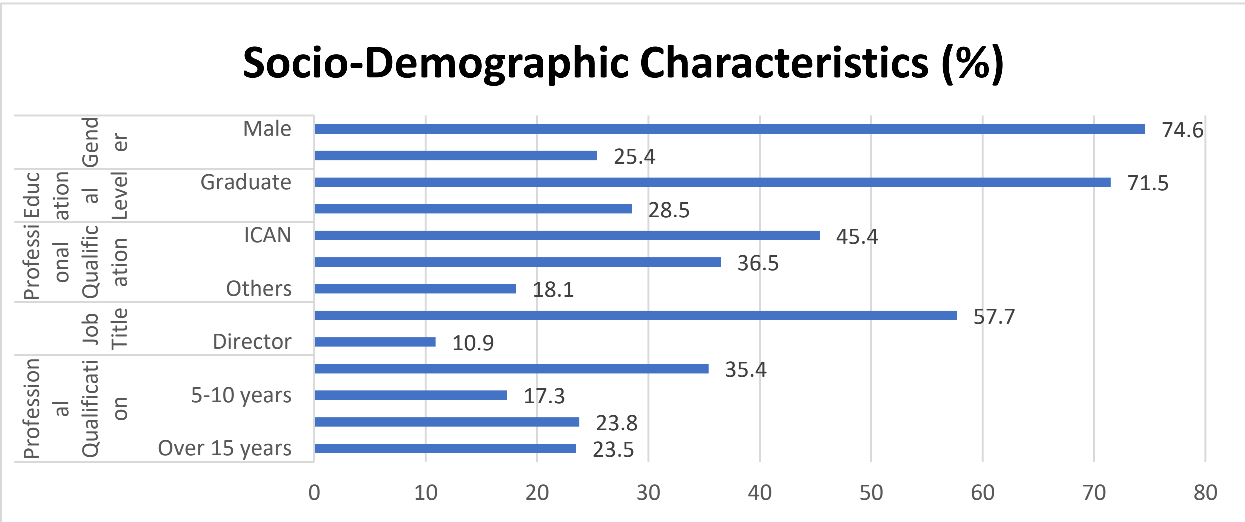

Figure 1: Socio-Demographic Characteristics of the Respondents (%)

Figure 1 presents an overview of the qualifications and experience of Bursary department staff. A majority (71.5%) hold graduate degrees, while 28.5% have postgraduate qualifications. Professionally, 45.4% are affiliated with ICAN, and 36.5% with ANAN, with most respondents (87.3%) occupying senior or middle management roles. Experience is varied, with 35.4% having less than 5 years and 23.5% exceeding 15 years of service, indicating a balanced tenure within the department.

Table 2: Ordered Logistic Regression Result for Resource Allocation and Management

Variables	Coefficient	Std. Err.	T	p-value
Information Technology-Based Reforms				
IPPIS	0.542	0.29	1.87	0.062
GIFMIS	0.763	0.356	2.14	0.032
TSA	0.297	0.255	1.16	0.245

LR chi2(5) = 262.68
Prob > chi2 = 0.0000
Pseudo R2 = 0.2107

Source: Author's Analysis, (2024). *IPPIS is integrated payroll and personnel information system, GIFMIS is government integrated financial management information system, TSA is treasury single account.*

With regards to the coefficients of the variables as presented in Table 2,-integrated payroll and personnel information system (IPPIS), government integrated financial management information system (GIFMIS), and treasury single account (TSA), have positive effects on resource allocation and management in federal universities in North-Central Nigeria.

With regards to the significance of the variables, government integrated financial management information system (GIFMIS) have significant effects on resource allocation and management

Furthermore, GIFMIS, with a coefficient of 0.763 and a p-value of 0.032, implies that for every increase in GIFMIS, we expect a 0.763 percent increase in the log odds of improving resource allocation and management in federal universities, given all other variables in the model are held constant.

The LR chi-squared statistic of 262.68 with an associated p-value of 0.0000 implies that all variables (IPPIS, GIFMIS, TSA,) are jointly significant in predicting resource allocation and management within federal universities in North-Central Nigeria.

Table 3: OLS Regression Result with Robust Standard Error for Financial Accountability

Variables	Coefficient	Std. Err.	T	p-value
IPPIS	0.035	0.063	0.55	0.581
GIFMIS	0.166	0.061	2.73	0.007
TSA	0.013	0.047	0.28	0.781
Constants	0.238	0.134	1.78	0.077

$F(12, 246) = 84.44$
Prob > F = 0.0000
$R^2 = 0.7515$

Source: Author's Analysis, (2024). *IPPIS is integrated payroll and personnel information system, GIFMIS is government integrated financial management information system, and TSA is treasury single account*

The results presented in Table 3 show that R-squared has a value of 0.7515, indicating that 75.15 percent of the variation in financial accountability in federal universities in North-Central Nigeria is explained by integrated payroll and personnel information system (IPPIS), government integrated financial management information system (GIFMIS), and treasury single account (TSA). The F-statistics result shows a value of 84.44 with an associated p-value of 0.0000, which implies that it is statistically significant. Based on this result, it can be concluded that all variables are jointly significant in predicting financial accountability in federal universities in North-Central Nigeria.

As regards the variables coefficient as employed in the model, the result revealed that government integrated financial management information system (GIFMIS) have significant coefficients. This assertion was based on their respective p-values, which is less than 5% significance level chosen for the study.

Furthermore, GIFMIS, with a coefficient of 0.166 and a p-value of 0.007, shows a significant positive influence, suggesting that an increase in GIFMIS enhances financial accountability by 0.166 percent points. Other variables such as integrated payroll and personnel information system (IPPIS), and treasury single account (TSA) show no significant effect on financial accountability as their p-values exceed 0.05.

4.2 Discussion of Findings

The study's findings revealed that information technology-based reforms have a significant positive impact on financial accountability in federal universities in north-central Nigeria. These reforms, which modernize and automate financial processes, have transformed the way financial transactions are handled, recorded, and reported within these institutions. By introducing advanced technology systems, universities can now achieve greater transparency and accuracy in their financial operations, reducing the risks of human error and fraud. The automation of financial management processes through these reforms allows for real-time monitoring and tracking of financial activities, ensuring that resources are used efficiently and that any discrepancies are promptly identified and addressed. Furthermore, the use of standardized financial systems aligns universities with global best practices, enhancing their credibility and trustworthiness. Government integrated financial management information system (GIFMIS), a key component of information technology-based reforms, significantly improves financial accountability in federal universities in North-Central Nigeria. GIFMIS is designed to enhance the transparency, efficiency, and accuracy of financial management by automating and integrating financial transactions across various departments within the universities. GIFMIS helps streamline the budgeting, spending, and procurement processes, ensuring that funds are allocated and used efficiently in accordance with institutional goals. Its ability to generate accurate and timely financial reports strengthens the accountability mechanisms within universities. This can be linked to Legitimacy Theory, with universities are demonstrating a commitment to transparency, accountability, and efficient management of public resources values that are widely expected by stakeholders, including the government, donors, and the public. GIFMIS enables universities to provide real-time, accurate financial data, ensuring that their financial operations are transparent and aligned with regulatory standards. This transparency enhances the universities' legitimacy by showcasing their efforts to responsibly manage public funds and comply with legal requirements. Additionally, the use of GIFMIS helps these institutions meet the expectations of their stakeholders, who demand accountability and trustworthiness in the management of public resources. These findings is similar to the empirical evidence reported by Banerjee (2020), Olaoye and Orimogunje (2022), Oluwadayisi and Mimiko (2020), Omankhanlen (2012), Enakirerhi and Temile (2017), and Leyira and Temple (2018).

5. Conclusions and Recommendations

The study also concludes that information technology-based reforms contribute significantly to the enhancement of financial accountability of federal universities. This conclusion was reached considering that increase in GIFMIS will bring about higher financial accountability. The coefficient of GIFMIS is positive and statistically significant, leading to the conclusion that GIFMIS has significant effect on financial accountability in federal universities in North-Central Nigeria, which aligns with the study's expectation.

Based on the findings of this study, as well as the conclusions that emerged from these findings, the following recommendations are made in order to improve financial accountability in federal universities in Nigeria.

Given the positive significant effect of information technology-based reforms, universities should prioritize the full integration of financial management systems like GIFMIS across all financial departments. This integration would streamline financial processes, reduce redundancy, and enable real-time financial reporting.
Additionally, universities should invest in regular staff training on the use of these technologies to ensure proper utilization and maintenance of system integrity. Implementing cyber security measures to protect financial data from breaches or misuse is also crucial.

References

Abdulkareem, A., & Ishola, R. A. (2021). Impact of fiscal policy on economic growth in Nigeria. *Journal of Economics and Sustainable Development*, 12(8), 45–56.

Adesuyi, P. A., & Gberevbie, D. E. (2022). E-governance and public sector service delivery in Nigeria: The Lagos State experience. *African Journal of Public Affairs*, 12(1), 45–60.

Adetomiwa, B. A., & Gberevbie, D. E. (2022). Human resource management practices and employee retention in selected SMEs in Lagos State, Nigeria. *Journal of Human Resource Management*, 10(1), 15–25.

Afolabi, H., Ram, R., Hussainey, K., Nandy, M., & Lodh, S. (2023). Exploration of small and medium entities' actions on sustainability practices and their implications for a greener economy. *Journal of Applied Accounting Research*, 24(4), 655–681.

Agboola, M. G. (2018). *Impact of strategic management on competitive advantage and organizational performance: Evidence from Nigerian bottling company*. *Journal of Business and Management*, 20(3), 40–45.

Agha, N. (2017). The economic impact of mega sporting events: A review of the literature. *International Journal of Sport Management*, 18(1), 1–20.

Atuilik, S. M., & Hussein, H. (2019). Corruption in the public sector: A case study of West Africa. *Journal of Public Sector Governance*, *9*(4), 75–91.

Atuilik, W. A., & Hussein, M. A. (2019). The impact of international financial reporting standards (IFRS) adoption on the accounting quality of listed companies in Ghana. *International Journal of Accounting and Financial Reporting*, 9(2), 1–19.

Avery, G. C., & Obah, B. (2018). *Leadership practices in Nigeria: Managerial perspectives and research implications*. *African Journal of Business Management*, 12(14), 451–460.

Banerjee, A., Duflo, E., Imbert, C., Mathew, S., & Pande, R. (2020). E-governance, accountability, and leakage in public programs: Experimental evidence from a financial management reform in India. *American Economic Journal: Applied Economics*, 12(4), 39-72.

Basyal, S., Poudel, P. C., & Adhikari, D. B. (2018). Impact of remittance on economic growth in Nepal. *NRB Economic Review*, 30(1), 1–20.

Chebet, R. (2017). The impact of e-government on public service delivery in Kenya: A case study of the Ministry of Interior and Coordination of National Government. *International Journal of Scientific and Research Publications*, 7(5), 1–10.

Davis, A. J. (2020). Integrated payroll and personnel information system (IPPIS) for sustainability of university education in Nigeria after COVID-19 pandemic. *International Journal of Capacity Building in Education and Management (IJCBEM)*, *4*(1), 35–48.

Effiong, E., & Obun, E. (2020). Anti-graft reforms and their impact on public accountability in Nigeria: A case of the higher education sector. *International Journal of Management Sciences*, *8*(1), 45–59

Emmanson, E. O., & Ajayi, M. A. (2022). Effect of tax incentives on foreign direct investment in Nigeria. *Journal of Economics and International Finance*, 14(2), 30–40.

Enakirerhi, L. I., & Temile, S. O. (2017). *The effect of tax incentives on investment in Nigeria*. *International Journal of Development and Economic Sustainability*, 5(6), 14–27Folorunso, O. O., & Simeon, A. O. (2021). The gains and pains of Integrated Payroll and Personnel Information Systems (IPPIS) policy implementation in Nigeria. *Journal of Human Resource and Sustainability Studies*, *9*(4), 551–569.

Ezegwu, E. C., & Obichilo, I. C. (2022). *The role of financial literacy in promoting financial inclusion among the youth in Nigeria*. *International Journal of Economics and Finance*, 14(3), 45–58.

Garuba, R. O., & Aminu, D. B. (2020). E-governance and digital economy policy performance in Nigeria. *Icheke Journal of the Faculty of Humanities*, *18*(2), 1–20.

Ike, I. A., Okafor, F. O., & Nwankwo, C. O. (2023). E-Government adoption and public service delivery in Nigeria: A study of the Federal Ministry of Education. *International Journal of Public Administration*, 46(1), 1–12.

International Monetary Fund. (2020). *World Economic Outlook: A Long and Difficult Ascent*. Washington, DC: International Monetary Fund. Available at https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020

Leyira, D. I., & Temple, J. (2018). E-Government and public service delivery in Nigeria: A study of the Federal Ministry of Finance. *International Journal of Public Administration,* 41(8), 635–646.

Mela, C. F. (2019). *Marketing research: An applied orientation*. *Journal of Marketing Research*, 56(4), 567–569.

Mohunyo, J. N., & Jagongo, A. (2018). *Effect of internal control systems on financial performance of public institutions of higher learning in Nairobi City County, Kenya*. *International Academic Journal of Human Resource and Business Administration*, 3(2), 273–287.

Obi, C. J., Adegbite, O., & Yusuf, F. (2021). *Evaluation of the Treasury Single Account (TSA) and its impact on public sector financial accountability*.

Ogunmodede, O. F., Babatunde, O. S., & Adegoke, A. (2021). The evolution and structure of Nigerian universities: A regional perspective. *Nigerian Journal of Higher Education Studies*.

Ogunode, N. J., Obioma, M. A., & Belloh, A. M. (2023). Accountability in university system in Nigeria: Challenges and way forward. *European Journal of Artificial Intelligence and Digital Economy, 1*(2), 7-18.

Okeke, C. (2023). The role of digital technology in enhancing educational outcomes in Nigeria. *International Journal of Educational Development*, 50, 102–110.

Olanrewaju, A. L., Tan, S. Y., & Kwan, L. F. (2020). *Construction project delay in Nigeria: A perception of indigenous and multinational construction firms*. *Journal of Project Management*, 5(1), 1–12.

Olaoye, F. O., & Orimogunje, T. O. (2022). *Impact of climate change on agricultural productivity in Nigeria*. *Environmental Science and Pollution Research*, 29(5), 7078–7089.

Oluwadayisi, A. O., & Mimiko, M. O. (2020). Effects of money laundering on the economy of Nigeria. *Beijing Law Review, 7,* 158-169.

Omankhanlen, A. E. (2012). The financial sector reforms and their effect on the Nigerian economy. *Journal of Finance, 15*(2).

Otiko, W. A., & Inuwa, I. M. (2021). The effect of corporate social responsibility on financial performance of listed consumer goods companies in Nigeria. *Journal of Finance and Accounting*, 9(2), 45–53.

Owuor, G., Ngigi, M., & Ouma, S. (2020). Determinants of agricultural commercialization among smallholder farmers in Kenya. *African Journal of Agricultural Research*, 15(2), 123–134.

Yauri, M. (2021). *IT reforms in public administration and their challenges in Nigeria*.

Yeboah, M. (2017). *Determinants of loan repayment performance among microfinance institutions in Ghana*. *International Journal of Social Economics*, 44(12), 1657–1671.