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Effect of Integrated Payroll and Personal Information System On Wage Fraud Control in Nigeria's Federal Ministry of Education

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Abstract: *This study aimed to examine the effect of the Integrated Payroll and Personnel Information System on wage fraud control in Nigeria's Federal Ministry of Education. Specifically, it assessed the influence of biometric verification, payroll automation, real-time staff record updating, and compliance with audit protocols on reducing wage fraud. The research adopted a survey design, targeting administrative, finance, and human resource personnel from the Nigeria's Federal Ministry of Education. A stratified random sample of respondents was selected, and data were collected through a structured questionnaire. Descriptive statistics and multiple regression analysis were employed using SPSS. Findings revealed that biometric verification and payroll automation contributed significantly to wage fraud control. However, real-time staff record updating and compliance with audit protocols did not have statistically significant effects. The study concluded that while IPPIS has improved payroll integrity through biometric and automation mechanisms, its full potential is hindered by weak implementation of real-time updates and audit compliance. This study contributes to public administration literature by empirically validating key IPPIS mechanisms in a high-risk ministry. It is recommended that government agencies enhance biometric data updates, strengthen automation infrastructure, improve training for HR and payroll staff, and enforce strict audit compliance to maximize IPPIS effectiveness. These actions will deepen anti-fraud outcomes and support sustainable public sector financial management reforms.*

Keywords: IPPIS, wage fraud, biometric, compliance

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INTRODUCTION

Background to the study

Globally, wage fraud presents a persistent challenge to public sector efficiency and fiscal responsibility. In various countries, including the United States and the United Kingdom, mechanisms such as biometric verification and centralized payroll systems have been employed to mitigate fraudulent activities related to wage payments (Paul & Oluwaseun, 2023). These initiatives aim to enhance transparency and accountability in public service remuneration. Similarly, in Africa, nations like Kenya and Ghana have adopted integrated payroll systems to address wage fraud, reflecting a continental commitment to curbing financial malpractices in the public sector (Ahmed et al., 2023). In Nigeria, the introduction of the Integrated Payroll and Personnel Information System (IPPIS) in 2007 marked a significant step towards combating wage fraud, particularly within Nigeria's Federal Ministry of Education, which has historically been susceptible to such malpractices due to its extensive workforce.

Wage fraud in Nigeria's public sector has manifested in various forms, including the inclusion of ghost workers, manipulation of salary grades, and unauthorized allowances. These fraudulent activities have led to substantial financial losses, undermining the efficiency of public service delivery. The implementation of IPPIS was a strategic response to these challenges, aiming to centralize and automate the payroll system, thereby enhancing transparency and reducing opportunities for fraud (Kwede & Danbala, 2024). The system's effectiveness in identifying and eliminating ghost workers has been documented, with significant reductions in fraudulent salary payments reported across various ministries and agencies.

A critical component of IPPIS is the implementation of biometric verification, which serves as a robust mechanism for authenticating the identities of employees. By capturing unique physical characteristics, such as fingerprints, the system ensures that only legitimate employees receive salaries, thereby preventing the inclusion of ghost workers (Alokpa & Solomon, 2023). This measure has been instrumental to enhanced integrity of the payroll system, particularly within the Nigeria's Federal Ministry of Education, where the risk of wage fraud is heightened due to the large number of employees.

Payroll automation and centralization under IPPIS have significantly reduced human intervention in salary processing, minimizing errors and opportunities for manipulation. The system's ability to automatically compute salaries based on verified data ensures consistency and accuracy in wage payments (Okonkwo et al., 2023). This automation has streamlined payroll processes within the Nigeria's Federal Ministry of Education, leading to improved efficiency and reduced instances of wage fraud.

Real-time staff record updating is another vital feature of IPPIS that contributes to effective wage fraud control. The system allows for immediate reflection of changes in employment status, such as promotions, transfers, or terminations, ensuring that salary payments correspond accurately to current staff records (Ahmed et al., 2023). This capability is particularly beneficial in the education sector, where staff movements are frequent, and timely updates are essential to prevent fraudulent salary claims.

Compliance with IPPIS audit protocols is essential for maintaining the system's integrity and effectiveness in controlling wage fraud. Regular audits and adherence to established procedures ensure that discrepancies are promptly identified and addressed, thereby reinforcing accountability within the payroll system (Paul & Oluwaseun, 2023). In the Nigeria's Federal Ministry of Education, strict compliance with these protocols has been associated with a notable decline in wage fraud incidents, reflecting the importance of continuous monitoring and evaluation.

The interrelationship between IPPIS and wage fraud control is evident in the system's multifaceted approach to enhancing payroll integrity. By integrating biometric verification, automating salary computations, enabling real-time record updates, and enforcing audit compliance, IPPIS addresses the root causes of wage fraud in a comprehensive manner. The Nigeria's Federal Ministry of Education experience with IPPIS underscores the system's potential to transform payroll management and mitigate financial malpractices in the public sector. Continued investment in technology, staff training, and policy enforcement is necessary to sustain these gains and further strengthen wage fraud control in Nigeria's Federal Ministry of Education. Additionally, this study is an attempt to bridge the gap between IPPIS and the particularized anti-corruption information and payment system called University Transparency and Accountability Solution (UTAS).in taming wage fraud in the Federal Ministry of Education

Wage fraud remains a significant challenge within Nigeria's public sector, particularly in the Nigeria's Federal Ministry of Education, where the prevalence of ghost workers and unauthorized salary payments has led to substantial financial losses. Despite the implementation of the Integrated Payroll and Personnel Information System (IPPIS) aimed at curbing such malpractices, issues persist due to systemic inefficiencies and resistance to change. One major problem is the manipulation of staff records, where individuals falsify personal information to remain on the payroll beyond retirement or to receive multiple salaries. For instance, an audit revealed that over 1,000 names were duplicated in the payroll system, with some employees' records appearing multiple times, leading to unwarranted salary disbursements (Sahara Reporters, 2022). The implementation of biometric verification within IPPIS is designed to address this issue by ensuring that each employee's identity is uniquely tied to their biometric data, thereby preventing duplication and unauthorized payments.

Another pressing issue is the lack of real-time staff record updates, which hampers the accuracy of payroll information and allows for continued payment to individuals who are no longer in service. The absence of timely updates means that changes such as retirements, resignations, or

transfers are not promptly reflected in the payroll system, leading to financial leakages. Ahmed et al. (2023) highlighted that the failure to update staff records in real-time contributes significantly to payroll fraud, as it creates opportunities for ghost workers to persist within the system. By incorporating real-time staff record updating, IPPIS can ensure that any changes in employment status are immediately captured, thereby enhancing the integrity of the payroll system and reducing the incidence of wage fraud.

A key methodological gap in the literature is evident in the predominant reliance on qualitative methods and simple descriptive statistics in assessing the effect of the Integrated Payroll and Personnel Information System (IPPIS). For instance, Paul and Oluwaseun (2020) utilized qualitative methods and bibliographic analysis, while Okonkwo et al. (2023) and Ahmed et al. (2023) employed descriptive survey designs and basic inferential tools such as percentages and chi-square, which may lack the robustness needed to draw generalizable and causally strong inferences. Similarly, Kwede and Danbala (2024) and Alokpa and Solomon (2023) primarily relied on frequency counts and percentages, limiting the depth of empirical insights. The current study addresses this methodological gap by applying more advanced statistical techniques and a mixed-method approach to ensure deeper analytical insights and robust conclusions that extend beyond surface-level observations.

There is also a notable population gap in the reviewed empirical studies. Many of the existing works focused on narrow or localized samples. For instance, Ahmed et al. (2023) confined their study to five selected MDAs in Gombe State, while Okonkwo et al. (2023) limited their population to university staff without extending their findings to other government sectors. Similarly, Paul and Oluwaseun (2020) did not involve any primary population, relying solely on documentary sources. Such limited population scopes hinder the generalizability of findings across the broader Nigerian public service. The current study seeks to bridge this gap by focusing on Nigeria's Federal Ministry of Education.

A theoretical conflict gap is also noticeable in the reviewed literature. While Kwede and Danbala (2024) employed the New Public Management (NPM) theory, and others like Paul and Oluwaseun (2020) made no explicit theoretical grounding, the inconsistencies in the choice of theoretical frameworks reveal a lack of consensus in explaining the operational dynamics and effectiveness of IPPIS. Furthermore, Enakirerhi and Temile (2017) employed a theoretical discourse without aligning with a specific, testable theory, which weakens the theoretical coherence of the body of research. The current study addresses this theoretical conflict by anchoring its analysis on Control Theory (Internal Control Framework), which offers a robust foundation for examining how systemic mechanisms like IPPIS deter fraud and promote accountability within the public service. A conceptual gap emerges from the limited integration of multifaceted variables that influence the effectiveness of IPPIS beyond ghost workers and payroll irregularities. While most studies focused narrowly on fraud elimination (Kwede & Danbala, 2024; Alokpa & Solomon, 2023), staff welfare (Okonkwo et al., 2023), or information integrity (Ahmed et al., 2023), there is a lack of comprehensive frameworks that examine IPPIS as a holistic tool of governance reform, covering

variables such as employee motivation, transparency, internal control compliance, and accountability. The current study intends to close this conceptual gap by adopting a broader perspective that evaluates IPPIS not only as a fraud detection tool but as a mechanism for enhancing overall public sector governance through internal control systems and accountability metrics.

Research Questions

The study was guided by the following research questions.

i. what is the effect of biometric verification on wage fraud control in Nigeria's Federal Ministry of Education?

ii. To what extent does the payroll automation affect wage fraud control in Nigeria's Federal Ministry of Education?

iii. What is the effect of staff record update on wage fraud control in Nigeria's Federal Ministry of Education?

iv. To what extent does the IPPIS audit protocols compliance affect wage fraud control in Nigeria's Federal Ministry of Education?

Objectives of the study

The main objective of this study is to determine the effect of Integrated Payroll and Personnel Information System (IPPIS) on wage fraud control in Nigeria's Federal Ministry of Education. The specific objectives are to:

i. Evaluate the effect of biometric verification on wage fraud control in Nigeria's Federal Ministry of Education

ii. Assess the effect of payroll automation on wage fraud control in Nigeria's Federal ministry of Education.

iii. Ascertain the effect of staff record update on wage fraud control in Nigeria's Federal Ministry of Education

iv. Analyze the effect of IPPIS audit protocols compliance on wage fraud control in Nigeria's Federal Ministry of Education

Statement of Hypotheses

Based on the specific objectives, the following null hypotheses were formulated and tested for the study.

HO_1: Biometric verification has no significant effect on wage fraud control in Nigeria's Federal Ministry of Education

HO_2: Payroll automation has no significant effect on wage fraud control in Nigeria's Federal Ministry of Education

HO_3: Staff record update has no significant effect on wage fraud control in Nigeria's Federal Ministry of Education

HO_4: IPPIS audit protocols compliance has no significant effect on wage fraud control in Nigeria's Federal Ministry of Education

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LITERATURE REVIEW

Conceptual Review

Wage fraud control encompasses strategies designed to prevent, detect, and address fraudulent practices related to employee compensation, especially in Nigeria's public sector. Common issues include ghost workers, salary manipulation, and unauthorized allowances, which have led to significant financial losses. Key measures for addressing these include real-time updates of staff records, biometric verification systems to eliminate ghost workers, strict audit compliance, and the automation of payroll systems to reduce human errors and enhance transparency (Ahmed et al., 2023; Kwede & Danbala, 2024; Ogiriki & Atagboro, 2023).

The Integrated Payroll and Personnel Information System (IPPIS) is a centralized platform launched by the Nigerian government to manage public sector payroll and personnel data. IPPIS incorporates biometric verification, payroll automation, and real-time record management to combat wage fraud by eliminating duplicate and unauthorized salary payments. Despite challenges such as infrastructure limitations and agency resistance, the system has significantly improved payroll accuracy and saved public funds. With continued investment and capacity building, IPPIS remains a pivotal tool in promoting accountability and curbing wage fraud in Nigeria (Office of the Accountant General of the Federation, 2025; Ahmed et al., 2023).

Empirical Review

Paul & Oluwaseun (2020) explored the extent to which IPPIS as an e-governance tool reduces corruption in the Nigerian public service. This investigation was motivated basically because IPPIS was introduced to guard against fraudulent practices and entrench accountability as well as transparency in the Nigerian Public Service. However, there are mixed reactions regarding its effectiveness in the Nigerian public service. Utilizing the qualitative method, this paper infers from analysis of existing bibliographic documentation that the use of IPPIS based on the evidence cited across Africa and Nigeria in particular is instrumental in deterring and detecting fraud. Hence, the paper supports the application of IPPIS in all MDAs. The paper, however, strongly concludes that the extension to MDAs at various levels of government can easily be facilitated and made more effective when proper records of employees are fed into the IPPIS and the operators are constantly trained and motivated to encourage them to be upright while discharging their duties. Furthermore, a comprehensive payroll and personnel system modules should be built into the IPPIS to enhance its effectiveness. Consequent upon the foregoing, the paper recommends inter alia that there is a need for the government to extend its implementation to all Ministries, Departments and Agencies (MDAs) at Federal, State and Local Government levels.

Okonkwo et. al., (2023) examined the effect of implementation of IPPIS on the payment of staff of Nigeria Universities. The specific objectives were to examine the influence of IPPIS implementation on the gains of staff of Nigerian Universities and assess the influence of IPPIS

implementation on the pains of staff of Nigerian Universities. The study adopted survey research design because it had to sort the opinions of respondents as regard to the issue of IPPIS implementation in Nigeria. The study population was two hundred and seventy-eight (278) respondents. The entire population was adopted as the sample size. Data were collected through a structured questionnaire, presented in tables and analyzed using simple percentages. Formulated null hypotheses were tested using one sample t-test statistical tool at 0.05 level of significance through Statistical Package for Social Sciences (SPSS, version 23). The study found that IPPIS implementation had both significant influence of on the gains of staff of Nigerian Universities [p-value=0.004, at 0.05 level of significance] and on the pains of staff of Nigerian Universities [p-value=0.000, at 0.05 level of significance]. The study concluded that there is influence of IPPIS implementation on the gains and pains of staff of Nigerian Universities. Recommendations were made among other things that the implementation of IPPIS should be fully emphasized to consolidate on its gains and that more attention been given to IPPIS implementation in tackling the aforementioned challenges (pains of staff of Nigerian universities).

Theoretical Review

The theoretical framework underpinning this study is drawn from three key theories—Fraud Hexagon Theory, Unified Theory of Acceptance and Usage of Technology (UTAUT), and Control Theory—each offering critical insights into wage fraud control within Nigeria's Nigeria's Federal Ministry of Education, particularly through the lens of the Integrated Payroll and Personnel Information System (IPPIS) (Office of the Accountant General of the Federation, 2025; Ahmed et al., 2023). The Fraud Hexagon Theory, propounded by Georgios L. Vousinas (2019) identifies pressure, opportunity, rationalization, capacity, collusion, and ego as necessary conditions for occupational fraud, with IPPIS addressing the "opportunity, capacity and collusion" components via biometric verification and centralized payroll to curb wage fraud. The theory remains relevant for evaluating fraud risk and fraud risk mitigation. TAM, developed by Davis (1986), posits that perceived usefulness and perceived ease of use influence user adoption of new technologies. In the Ministry, employees' perceptions of IPPIS's utility and usability are crucial for successful implementation and fraud reduction. Although TAM has limitations, integrating it with broader models like Unified Theory of Acceptance and Usage of Technology (UTAUT), developed by Venkatesh, et al (2003); enriches the understanding of adoption dynamics in bureaucratic environments. Control Theory, rooted in the work of Power (1973) and Deming (1982), emphasizes feedback mechanisms and continuous monitoring to ensure alignment with organizational standards. IPPIS operationalizes Control Theory by incorporating features like real-time record updates, payroll audits, and automation to enhance accountability. While critics warn against excessive rigidity, the theory validates the role of internal control systems in detecting and preventing wage fraud. Together, these theories provide a comprehensive foundation for assessing how IPPIS enhances payroll integrity and mitigates fraudulent practices in the Nigerian public sector.

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METHODOLOGY

Research Design

This study adopts a quantitative survey research design. The design is appropriate because it allows for systematic collection of data from a sample, based on realist ontology and positivity epistemology, using a structured questionnaire to access the effectiveness of the Integrated Payroll and Personnel Information System (IPPIS) in addressing payroll fraud and enhancing transparency in Nigeria's Federal Ministry of Education. The survey design also facilitates the statistical testing of hypothetical effect of the explanatory variable on the explained variable.

Population of the study

The target population of the study comprise of employees from Nigeria's Federal Ministry of Education that are currently enrolled on the IPPIS platform. This includes administrative, finance, and human resource personnel who are directly involved in payroll and personnel management activities. The estimated total population of the staff is 600 staff members determined through consultation with staff at HR department.

Sample size and its determination Technique

The sample size was determined using Taro Yamane's (1967) formula for a finite population:

$$n = \frac{N}{(1 + N(e)^2)}$$

Where:

n = sample size

N = population size = 600

e = level of precision (sampling error) = 0.05

$n = 600 / (1 + 600(0.05)^2)$

$n = 600 / (1 + 600(0.0025))$

$n = 600 / (1 + 1.5) = 600 / 2.5$

$n = 240$

Therefore, the sample size for the study is 240 respondents. The study adopted a stratified random sampling technique. The population was stratified based on departments (administration, finance, HR), and proportionate random sampling was used to select respondents from each stratum to ensure fair representation of all relevant units.

Method of Data Collection

The method of data collection for this study is a structured questionnaire administered to a random sample of 240 respondents drawn from a population of 600 staff, which includes administrative, finance, and human resource personnel who are directly involved with payroll and personnel management under the IPPIS platform. The questionnaire was designed to measure perceptions of biometric verification, payroll automation, real-time staff record updating, and compliance with audit protocols as they relate to wage fraud control

Technique of Data Analysis

Data collected were coded and analyzed using Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics (frequency, mean, standard deviation) were used to summarize respondent characteristics and item responses. Inferential statistics such as multiple regression analysis were used to test the stated hypotheses and measure the influence of IPPIS on payroll fraud reduction and personnel integrity.

Model Specification

The analytical model for this study is based on the assumption that the effectiveness of IPPIS (dependent variable) is influenced by factors such as reduction in payroll fraud, personnel information integrity, and planning/budgeting efficiency. The regression model is specified as follows:

$WFC = \beta_0 + \beta_1 BV + \beta_2 PA + \beta_3 RSR + \beta_4 AP + \varepsilon$

Where:

WFC= Wage Fraud Control (Dependent Variable)
BV = Biometric Verification (Independent Variable)
PA = Payroll Automation (Independent Variable)
RSR = Real-time Staff Record (Independent Variable)
AP= Audit Protocols (Independent Variable)
$\beta 0$ = Intercept (Constant Term)
$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients of the independent variables
ε = Error term representing unobserved factor

RESULTS AND DISCUSSION

Descriptive Statistics

Table 4.1: Descriptive Statistics of Variables

Variable	Min	Max	Mean	Std. Deviation	Variance	Skewness	Std. Error (Skewness)	Kurtosis
Biometric_Score	2.80	5.00	3.9060	0.47332	0.224	-0.176	0.160	-0.399
Automation_Score	2.40	5.00	3.9138	0.50193	0.252	-0.282	0.160	-0.308
Realtime_Score	2.20	5.00	3.9509	0.48510	0.235	-0.510	0.160	0.298
Compliance_Score	2.60	5.00	3.9716	0.48211	0.232	-0.451	0.160	-0.246
WageFraudControl	2.60	5.00	3.9353	0.49635	0.246	-0.338	0.160	-0.363
Valid (listwise)	232							

Source: SPSS Output

The descriptive statistics in Table 4.1 reveal that all key variables (Biometric_Score, Automation_Score, Realtime_Score, Compliance_Score, and WageFraudControl) have relatively high mean values ranging from 3.9060 to 3.9716 on a 5-point scale, indicating a general agreement

among respondents on the effectiveness of these mechanisms in controlling wage fraud. The standard deviations (approximately 0.47–0.50) and low variances indicate moderate dispersion, suggesting a consistent perception across respondents. The skewness values are negative but close to zero (ranging from -0.176 to -0.510), showing a slight leftward skew, which implies that responses are slightly concentrated toward higher ratings. Kurtosis values (ranging from -0.399 to 0.298) are near zero, reflecting a distribution that is close to normal, supporting the appropriateness of parametric analyses like regression. These results justify that biometric Verification, payroll automation, real-time updates, and audit compliance are perceived as effective tools in wage fraud control within the Nigeria's Federal Ministry of Education. The implication is that policy strategies enhancing these mechanisms under the Integrated Personnel and Payroll Information System (IPPIS) are likely to be well-received and impactful in combating payroll-related fraud.

4.2 Test of Hypotheses

Table 4.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.699	0.489	0.48	0.35788

Table 4.3: Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-0.094	0.369	—	-0.253	0.800
Biometric_Score	0.463	0.05	0.441	9.248	0.000
Automation_Score	0.555	0.047	0.561	11.781	0.000
Realtime_Scor	0.004	0.049	0.004	0.088	0.930
Compliance_Score	0.008	0.049	0.007	0.156	0.876

Table 4.2 shows that the regression model has an R value of 0.699, indicating a strong positive correlation between the independent variables (Biometric_Score, Automation_Score, Realtime_Score, and Compliance_Score) and the dependent variable (WageFraudControl). The R Square value of 0.489 implies that approximately 48.9% of the variance in wage fraud control can be explained by the model, demonstrating a moderately high explanatory power. The Adjusted R Square of 0.480 confirms the model's reliability even after adjusting for the number of predictors. The standard error of the estimate (0.35788) reflects the average distance between the observed and predicted values, indicating a good model fit.

Table 4.3 provides insight into the individual contribution of each predictor. The coefficients for Biometric Score ($\beta = 0.441$, $p < 0.001$) and Automation_Score ($\beta = 0.561$, $p < 0.001$) are both positive and statistically significant, confirming their strong influence on wage fraud control. Therefore, H_1 and H_2 are rejected, because biometric verification and payroll automation significantly enhance fraud mitigation. In contrast, Realtime_Score ($\beta = 0.004$, $p = 0.930$) and Compliance_Score ($\beta = 0.007$, $p = 0.876$) show non-significant relationships, indicating they do

not have a statistically meaningful impact on the dependent variable. Thus, H_3 and H_4 are accepted, suggesting that, within this dataset, real-time updates and audit compliance practices may not significantly affect wage fraud control in Nigeria's Federal Ministry of Education.

The rejection of H_1 and H_2 suggests that policy efforts should prioritize strengthening biometric verification and automation processes within IPPIS as they significantly contribute to wage fraud detection and prevention. On the other hand, the acceptance of H_3 and H_4 indicates a potential gap in the effectiveness or implementation quality of real-time data updates and audit compliance protocols. It could imply these mechanisms are either underutilized or inconsistently applied, necessitating deeper administrative reforms or training to enhance their impact. For stakeholders and policymakers in Nigeria's education sector, the findings underscore the need for targeted investment and stricter implementation in areas proven to yield the greatest anti-fraud outcomes.

Discussion of Findings

The findings of the current study strongly agree with previous empirical studies that have emphasized the effectiveness of biometric verification and payroll automation in enhancing wage fraud control. For instance, Kwede & Danbala (2024) and Alokpa & Solomon (2023) highlighted the role of biometric technologies and IPPIS implementation in eliminating ghost workers, which aligns with the statistically significant impact of Biometric_Score and Automation_Score in the present study. Similarly, Ahmed et al. (2023) confirmed that IPPIS improves data integrity and reduces payroll fraud, resonating with the current model's explanatory power ($R^2 = 0.489$) and strong predictive fit ($F = 54.332$, $p < 0.001$). These agreements reinforce the robustness of IPPIS as an e-governance tool and substantiate the empirical reliability of its core components in fighting wage-related corruption. Moreover, the recommendation in Paul & Oluwaseun (2020) that biometric and centralized payroll processes must be adopted across all MDAs is validated by the significant positive coefficients for biometric and automation scores found in this study.

However, the current study's rejection of H_3 and H_4, indicating the insignificance of Realtime_Score and Compliance_Score, contrasts with aspects of prior literature. For instance, Ahmed et al. (2023) and Enakirerhi & Temile (2017) reported that compliance with IPPIS protocols and timely record updates are integral to transparency and planning, yet the current regression results ($\beta = 0.004$ and 0.007, respectively; $p > 0.05$) found no significant effect. This discrepancy may be due to implementation quality, data reporting practices, or limited capacity building among IPPIS operators—issues echoed by Paul & Oluwaseun (2020) and Enakirerhi & Temile (2017), who noted systemic challenges such as poor infrastructure, lack of skilled personnel, and stakeholder resistance. Therefore, while the study confirms the utility of key IPPIS modules, it also highlights that their effectiveness may vary based on execution fidelity and contextual constraints, necessitating further research and capacity enhancement interventions in underperforming areas of the system.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study investigated the effect of the Integrated Payroll and Personnel Information System (IPPIS) on wage fraud control in Nigeria's Federal Ministry of Education. Findings from the regression analysis showed that biometric verification and payroll automation significantly contribute to wage fraud mitigation. These components were effective in identifying and eliminating ghost workers and in reducing errors associated with manual salary processing. However, real-time staff record updating and compliance with audit protocols did not show statistically significant effects on wage fraud control. This suggests potential implementation challenges or gaps in enforcement within these components. Overall, the study demonstrates that while IPPIS has had a positive impact in curbing wage fraud, especially through biometric and automation mechanisms, its full potential is yet to be realized due to operational inefficiencies in record management and audit compliance.

Recommendations

In light of the findings, the study recommends that the Nigeria's Federal Ministry of Education and other public sector agencies enhance biometric verification by ensuring comprehensive and routine updates of all staff biometric data. Payroll automation infrastructure should be continuously upgraded to maintain accuracy, transparency, and reliability in salary computation and disbursement. Although real-time staff record updating did not show significant impact, it remains critical for preventing overpayments and must be strengthened through capacity building for HR and payroll officers. Additionally, strict compliance with audit protocols must be enforced, with regular checks and penalties for non-adherence to strengthen accountability. Lastly, the government should prioritize training and retraining of IPPIS users to improve technical competencies, reduce operational lapses, and foster optimal utilization of the system's anti-fraud capabilities.

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