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Integrated Payroll and Personnel Information System (IPPIS) for Sustainability of University Education in Nigeria after COVID-19 Pandemic

[1]**Emanghe, Emmanuel E., Ph.D**
emangheemmanuel@gmail.com
&
[2]**Amoramo, John Davis (Doctoral Student)**
johnamoramo@gmail.com

[1&2]Department of Educational Management, University of Calabar, Calabar- Nigeria

Abstract
The study examined the influence of Integrated Payroll and Personnel Information System (IPPIS) on Sustainability of University Education in Nigeria after Covid-19 Pandemic. Ex-post-facto design was used for this study. Two research hypotheses were formulated and tested. Population of the study was 137,698 lecturers in 43 public universities in Nigeria. Yamane (1967) formula and simple random sampling technique were used to generously draw a sample of 420 respondents from the population. The validated instrument for the study was Integrated Payroll and Personnel Information System Rating Scale (IPPISRS).The internal consistency of the instrument was determined through a pilot test which yielded a Cronbach Alpha reliability coefficient of .74 to .79 for the sub-scales. The data obtained from the field were analyzed using Simple linear regression at .05 level of significance. Results of the study indicated that Sustainability of University Education in Nigeria after Covid-19 Pandemic is significantly influence by accurate budget estimate (P = .000, F = 4.231) and elimination of payroll fraud (P = .001, F = 3.971). Based on the results, it was recommended that university budget estimation should be made accurate through computerization in order to ensure the sustainability of university education after COVID-19 pandemic and university staff payroll should be automated in order to check payroll fraud for sustainability of university education after COVID-19 pandemic.

Keywords:COVID-19 Pandemic, Integrated Payroll, Personnel Information, Sustainability, University Education

Introduction

COVID-19 pandemic is a global scourge caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The number one established case in Nigeria, Lagos in particular was made public on 27th February 2020, when an Italian aborigine was proven positive for the virus. On 9thMarch 2020, a second case of the disease was reported at Ewekoro in Ogun State of a Nigerian indigene who got in touch with the Italian citizen (Wikipedia, the free encyclopedia, 2020).McKibbin and Fernando (2020) disclosed that the spread of the virus and its economic influence is exceedingly indeterminate: one of the most undoubtedly predictable indicators of the universal economic sways of COVID-19 has been fluctuation in pecuniary indices. Right from when the pandemic started, financial turnover continues to dwindle across the globe.

Therefore, the means of ensuring the sustainability of University education which serves as a catalyst for transformation and a solution to problems confronting humanity came into focus. Alkhayyal, Labib, Alsulaiman and Abdelhadi (2019) opined that sustainability is a dynamic condition requiring the interconnections of ecological, economic, and social systems. Sustainability

of university education implies meeting the university needs of the present (such as adequate funding, adequate qualified lecturers, adequate infrastructure, prompt policy implementation, eradication of cultism and drug abuse) without compromising the ability of future generations to meet their own needs. They further highlighted that sustainability of university education utilizes all aspects of public awareness, education, and training to create or enhance the understanding of the linkages among the issues of sustainable development as well as developing the knowledge, skills and values that will empower people of all ages to assume responsibility for creating and enjoying a sustainable future.

Sustainability of University education entails the development of curricula and pedagogy to equip students with the skills and knowledge to live and work valuably (Brundtland in Dawe, Jucker& Martin, 2005). Therefore, sustainability is a condition that defines the quality. The quality is reflected in the ability to duly and adequately meet educational expectations and scientific advancement, warrant employment, contribute to the economic and social wellbeing of a country. Also, the propensity to achieve sustainability in terms of performance is actually considered an opportunity to improving quality and qualify the university's image (Salvioni, Franzoni &Cassano, 2017).

Dawe, Jucker and Martin (2005) further revealed that the United Nations in her era of Education for Sustainable Development (DESD, 2005-2014)affirmed that Universities must function as places of research and learning for sustainable development. Hence, her attention was drawn on the function education can play in both raising awareness among young people about sustainable development as well as giving them the skills to put sustainable development into practice. It argued that sustainable development principles must lie at the core of the education system, such that universities become the reflection of sustainable development among the communities they serve; as it places importance on the development of sustainability literacy as a fundamental proficiency among graduates.

In order to achieve these laudable tasks of the university, Ibanichuka andSawyer (2019) demonstrated that there is an urgent need to streamline the payroll of university staff to minimise the high recurrent expenditure which has eaten deep into our national solidarity. It is on this ground that the Integrated Payroll and Personnel Information System (IPPIS) was introduced in the Nigerian public sector. Ultimately, the Integrated Payroll and Personnel Information System (IPPIS) was introduced to address the impediments connected with the manual method of payroll.

Okonjo-Iweala (2011) opined that the objectives of the IPPIS policy amongst others are to centralize payment of workers' salaries, which serves as a means to facilitate convenient staff remuneration payment with minimal wastage; to facilitate easy storage, updating and retrieval of personnel record for administrative and pension processing; enhancement of manpower planning and budgeting so as to ascertains actual personnel emoluments of the Federal Government employees. She explained further that IPPIS has actually reduced corruption by virtually eliminating ghost-worker syndrome where applied, thereby reducing the cost of governance since the inception of the policy in 2007 to December 2014.It saved government #185 billion representing the difference between the money that government would have released to MDAs based on their estimated nominal roll submissions and the amount actually paid through the IPPIS platform. A breakdown of this show that #416 million was saved in its first month of operation and at the end of three years #2 billion was realized. IPPIS has successfully enrolled 237,917 members of staff and wedded out 60,450 ghost workers.

Enakireehi and Temile (2017) agreed that the Integrated Payroll and Personnel Information System is a good programme no doubt. The whole World is now in the era of technological knowhow and Nigeria cannot afford to be left behind. The Nigerian government regards the implementation of a computerized system as a the most critical component of addressing the huge amount of personnel

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cost and it will accelerate improvement of human management effectiveness, increase confidence in government payroll cost and expenditure management, improvement in overall management reporting and planning to an extent that it can be achieved, if adequate care is taken to ensure proper implementation of the programme in Nigeria. This will also avoid infringements of regulatory bodies in payroll management.

Idris, Adaja and Audu (2015) established that the integrated Payroll and personnel information system and integrated financial management and information system have been able to enhance accountability and transparency in the management of government resources. More so, the Ministry of Finance observed in 2013 that the IPPIS has enhanced efficient personnel cost, planning and budgeting as personnel cost was based on actual verified aim and not estimates.

El-Rufai (2011) in Mike (2019**)** stated that while the public service pay is low relative to the cost of living, the overall burden of payroll as a percentage of the budget is huge. In most states other than Lagos, Kano, Kaduna and Rivers States, an average of 50% of the budget goes towards the payment of salaries: to about 1% of their population - an unfair and unsustainable state of affairs. Out of theN2,425 billion included in the 2011 Budget for recurrent expenditure, between 73% and 84% for each MDA constitutes personnel cost. IPPIS will ensure accurate budget estimate for sustainable development.

Folorunsho (2017) in Chima and Folorunsho (2020) observed that the manual computation of personnel information and salary administration in the Nigerian Federal Civil Service resulted to the inaccurate computation of salary leading to over payment, underpayment, the omission of staff name in payment, wrong calculation of promotion and pension, easy manipulation of personnel records, unreliable data for human resource planning and management and other various forms of payroll and credential fraud which Integrated Payroll and Personnel Information System has corrected.

Nwosu (2010) examined Integrated Payroll and Personnel Information System in the Nigerian Civil Service. Survey method was use for the study, data were sourced from both primary and secondary sources. Questionnaire and Interview methods were used extensively. The sample was 200 respondents drawn from a population of 400 staff of Accounts and Personnel units of selected Federal Ministry in Enugu State, Nigeria. Chi-square was used for data analysis. One of the hypotheses stated that proper implementation of Integrated Personnel and Payroll Information System will not significantly eliminate payroll fraud thereby reducing the recurrent expenditure. Comparing the values of X^2 Critical (12.59) with X^2 Computed (23.45). Results showed that the Computed value is greater than Critical value. Therefore, the null hypothesis was rejected**.** This implies that proper implementation of Integrated Payroll and Personnel Information System will significantly eliminate payroll fraud thereby reducing government recurrent expenditure.

Nangih and Davies (2017) defined payroll fraud as a fictitious employee added to the payroll. Wages or salary is paid to the ghost and is diverted for the beneficiary of the perpetrator. They further posited that the term ghost workers were born in reference to employees who convert salaries through false means, or where a fictitious person or a real worker simply did not work but got paid. For Lekubu (2013) Payroll fraud occurs when employees take money from an establishment through the payroll illegitimately with the aim of usurping those monies for themselves. Nwosu (2010) in Oguzierem and Sofiri (2017) found that capturing of civil servants bio-data in Integrated Personnel and Payroll System (IPPIS) platform will make the existence of ghost workers difficult and minimize payroll fraud. This will enhance the sustainability of such establishment.

Anyanwu and Ewhe (2020)believed that since the inception of IPPIS in April 2007, it has eliminated thousands of ghost workers thereby saving the Federal Government billions of naira. Micah and Moses (2018) opined that the Integrated Payroll and Personnel Information System (IPPIS)is to provide a reliable and comprehensive database for the public service to facilitate

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manpower planning, eliminate record and payroll fraud, facilitate easy storage, update and retrieve personnel records for administrative and pension processes, and facilitate convenient staff remuneration payment with minimal waste and leakage. Haruna, Joseph and Samson (2015)collaborated that the massive financial losses occasioned by payroll fraud through the use of ghost workers are gradually being discovered and eliminated by reason of the introduction of IPPIS. Enormous savings have been made which is been used to enhance overhead and capital releases to the MDAs.

El-Rufai (2011) in Akande (2019) noted that in the Federal Capital Territory (FCT), out of an initial headcount of 26,000, 3,000 ghosts were discovered, in the first round of audit. By the time biometric ID was introduced and centralized in the computerized payroll, more 2,500 employees whose name were on the pay roll failed to show up for documentation exercise. The repetitive nature of payroll preparation makes payroll fraud a widespread through the use of a computer for recessing payroll. Hence, the need to study the incidence of Accounting Systems and Payroll Fraud Management in Nigeria with a view to contribute to building a strong accounting system capable of curbing payroll fraud in the public sector of developing nations.

Adedeji (2015) in Enakirerhi and Temile (2017) asserted that the purpose of IPPIS is to ensure the elimination of wastages noticed in the administration of payroll in public service. Mede (2016) noted that government effort to regenerate the civil service for efficient and effective service delivery and elimination of payroll fraud led to the conceptualization and implementation of IPPIS. Idris, Adaja and Audu (2015) added that IPPIS implementation ensured and would ensure virile economy through enhanced productivity and save billions of Naira in personnel cost through wastage elimination.

Okoye and Gbegi (2013) opined that the failure of internal auditing system of the organization in detecting fraudulent practices has led to the use of specialized procedures to detect fraud, collectively known as forensic auditing. Obinna (2013) noted that, there is collaboration within the system that enhances the operation of payroll fraud. For example, a top official of government must approve wage payment, another official must audit the pay vouchers for another official to pay the salary. The collaboration appears to have paralyzed the possibility of apprehending the culprits and encouraged the fraud.

Oguzierem, Sofiri and Okodudu (2017) reported that recently, the Nigeria Federal Government through biometrics applications uncovered that it was wastefully making payment running in billions of Naira to illegitimate workers. Kogi State Government (2017) in Oguzierem, Sofiri and Okodudu (2017) stated that the negative impact of payroll fraud on the economic development of the State is debilitating. The fund fraudulently diverted into private pockets, if channelled to socio-economic development ventures would fund infrastructures in education, hence, enhancing its sustainability.

Purpose of the study

The purpose of the study is to examine the influence of Integrated Payroll and Personnel Information System (IPPIS) on Sustainability of University Education in Nigeria after Covid-19 Pandemic. Specifically, the study aimed at determining:

1. The influence of accurate budget estimate on sustainability of university education in Nigeria after Covid-19 Pandemic.
2. The influence of elimination of payroll fraud on sustainability of university education in Nigeria after Covid-19 Pandemic.

Research questions

The following research questions were posed to guide the study:

1. How does accurate budget estimate influence sustainability of university education in Nigeria after Covid-19 Pandemic?
2. How does elimination of payroll fraud influence sustainability of university education in Nigeria after Covid-19 Pandemic?

Hypotheses

The following hypotheses were formulated and tested at .05.

1. There is no significant influence of accurate budget estimate on sustainability of university education in Nigeria after Covid-19 Pandemic.
2. There is no significant influence of elimination of payroll fraud influence sustainability of university education in Nigeria after Covid-19 Pandemic.

Methodology

Ex-post-facto design was adopted for this study. This is an organized inquiry where the researchers do not have direct control over the independent variables because their manifestations have long occurred (Isangedighi, Joshua, Asim and Ekuri, 2004). In this study, the ex-post-facto design was appropriate because the manipulation of variables such as accurate budget estimate and elimination of payroll fraud were not possible. They have already interacted to produce the level of sustainability of university education that the researchers only assessed.

The area of study was Nigeria located between Latitude 4^0 and 14^0 North of the Equator and between Longitude 3^0 and 15^0 East of Greenwich Meridian (Iwena, 2012). Population of the study was 137,698lecturers in 43public universities in Nigeria (National Universities' Commission, Abuja, 2020). Yamane (1967) formula and simple random sampling technique were used to generously draw a sample of 420 respondents from the population with 70 respondents drawn from one university in each of the 6 geopolitical zones. The instrument for the study was Integrated Payroll and Personnel Information System Rating Scale (IPPISRS) developed in line with a 5-point rating scale of Strongly Agreed (SA), Agreed (A), Undecided (UD), Disagreed (D) and Strongly Disagreed (SD) with weight 5, 4, 3, 2, and 1 for all positively worded items and weight 1, 2, 3, 4 and5 for all negatively worded items respectively. The instrument was categorized into three sections: the first section contained three items which provided information on the respondents' bio data while section two had fourteen items that provided facts on Integrated Payroll and Personnel Information System with seven items each for accurate budget estimate and elimination of payroll fraud. The third section contained seven items that measured sustainability of university education in Nigeria after Covid-19 Pandemic. In sum, 24 items of the questionnaire were used for data collection. The instrument was duly faced validated by three experts in Educational Test and Measurement of the University of Calabar, University of Lagos, and Bayero University, Kano. The internal consistency of the instrument was determined through a pilot test which yielded a Cronbach Alpha reliability coefficient of .74 to .79 for the sub-scales. The data obtained from the field were analyzed using a Simple Linear Regression at .05 level of significance.

Results

The results for the test of hypotheses are presented hypothesis-by-hypothesis.

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Hypothesis one: There is no significant influence of accurate budget estimate on sustainability of university education in Nigeria after Covid-19 Pandemic. The results are presented in Table 1.

Table 1: Regression analysis of influence of accurate budget estimate on sustainability of university education in Nigeria after Covid-19 Pandemic

R – value = .802			Adjusted R-square = .640		
R – square = .643			Standard Error = .974		
Source of variation	Sum of square	Df	Mean square	F-value	P-value
Regression	44.262	1	44.262	4.231*	.000
Residual	4372.530	418	10.461		
Total	4416.792	419			
Predictor variable	Unstandardized coeff.		Std. coeff.	t-value	p-value
	B	Std. Error			
Constant	1.904	1.060		2.720*	.000
Accurate budget estimate	.054	.090	.643	.551*	.003

*Significant at .05 level, P< .05

The results in Table 1 showed that an R-value of .802 was obtained, giving R – square value of .643. This means that 64.3% of the total variation in sustainability of university education in Nigeria was accounted for by the variation in accurate budget estimate. The p – value (.000) associated with the computed f – value (4.231) is less than .05. Thus, the null hypothesis was rejected. This means that there is significant influence of accurate budget estimate on sustainability of university education in Nigeria after Covid-19 Pandemic. The P-values (.000& .003) associated with the computed t-values (2.720 & .551) for the regression constant (1.904) and regression coefficient (.643) representing the influence of accurate budget estimate are all less than .05. This means that both regression constant and accurate budget estimate contribute significantly to the prediction of sustainability of university education in Nigeria after Covid-19 Pandemic.

Hypothesis two: There is no significant influence of elimination of payroll fraud on sustainability of university education in Nigeria after Covid-19 Pandemic. The results are presented in Table 2.

Table 2: Regression analysis of influence of elimination of payroll fraud on sustainability of university education in Nigeria after Covid-19 Pandemic

R – value = .540			Adjusted R-square = .290		
R – square = .292			Standard Error = .413		
Source of variation	Sum of square	Df	Mean square	F-value	P-value
Regression	41.900	1	41.900	3.971*	.001
Residual	4410.111	418	10.551		
Total	4452.011	419			
Predictor variable	Unstandardized coeff.		Std. coeff.	t-value	p-value
	B	Std. Error			
Constant	1.899	1.230		1.073*	.005
Elimination of payroll fraud	.067	.088	.292	.718*	.000

*Significant at .05 level, P< .05

The results in Table 2 showed that an R-value of .540 was obtained, giving R – square value of .292. This means that 29.2% of the total variation in sustainability of university education in Nigeria was accounted for by the variation in elimination of payroll fraud. The p – value (.001)

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associated with the computed f – value (3.971) is less than .05. Thus, the null hypothesis was rejected. This means that there is significant influence of elimination of payroll fraud on sustainability of university education in Nigeria after Covid-19 Pandemic. The P-values (.005& .000) associated with the computed t-values (1.073& .718) for the regression constant (1.899) and regression coefficient (.292) representing the influence of elimination of payroll fraud are all less than .05. This means that both regression constant and elimination of payroll fraud contribute significantly to the prediction of sustainability of university education in Nigeria after Covid-19 Pandemic.

Discussion

The results of hypothesis one pointed out that there is significant influence of accurate budget estimate on sustainability of university education in Nigeria after Covid-19 Pandemic as the P-value (.000) associated with the computed F-value (4.231) is less than .05. This study aligned with Idris, Adaja and Audu (2015) who established that the integrated payroll and personnel information system and integrated financial management and information system have been able to enhance accountability and transparency in the management of government resources. More so, the Ministry of Finance observed in 2013 that the IPPIS has enhanced efficient personnel cost, planning and budgeting as personnel cost was based on actual verified aim and not estimates.

This finding is in congruent with Enakireehi and Temile (2017) who also stated that the Integrated Payroll and Personnel Information System is a good programme no doubt. The whole World is now in the era of technological knowhow and Nigeria cannot afford to be left behind. The Nigerian government regards the implementation of a computerized system as a the most critical component of addressing the huge amount of personnel cost and it will accelerate improvement of human management effectiveness, increase confidence in government payroll cost and expenditure management, improvement in overall management reporting and planning.

The results of hypothesis two revealed that there is significant influence of elimination of payroll fraud on sustainability of university education in Nigeria after Covid-19 Pandemic as the P-value (.001) associated with the computed F-value (3.971) is less than .05. This study agreed with Nwosu (2010) in Oguzierem and Sofiri (2017) who found that capturing of civil servants bio-data in Integrated Personnel and Payroll System (IPPIS) platform will make the existence of ghost workers difficult and minimize payroll fraud. This will enhance the sustainability of such establishment. Anyanwu and Ewhe (2020) believed that since the inception of IPPIS in April 2007, it has eliminated thousands of ghost workers thereby saving the Federal Government billions of naira.

This study also corroborated with Adaja and Audu (2015) who added that IPPIS implementation ensured and would ensure virile economy through enhanced productivity and save billions of Naira in personnel cost through wastage elimination. The findings supported Nwosu (2010) in Oguzierem and Sofiri (2017) who found that capturing of civil servants bio-data in Integrated Personnel and Payroll System (IPPIS) platform will make the existence of ghost workers difficult and minimize payroll fraud. This will enhance the sustainability of such establishment.

Conclusion

It is evident from the study that sustainability of university education in Nigeria after Covid-19 Pandemic can be enhanced through the Integrated Personnel and Payroll Information System in terms of accurate budget estimate and elimination of payroll fraud.

Recommendations

Based on the result of the analysis, the following recommendations were made:

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1. University budget estimation should be made accurate through computerization in order to ensure the sustainability of university education after COVID-19 pandemic.
2. The university staff payroll should be automated in order to check payroll fraud for sustainability of university education after COVID-19 pandemic.

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