

EURASIAN EXPERIMENT JOURNAL OF HUMANITIES AND SOCIAL SCIENCES (EEJHSS)	ISSN: 2992-4111
©EEJHSS Publications	Volume 5 Issue 1 2024

Influence of Integrated Personnel and Payroll Information System (IPPIS) on Personnel Cost Reduction in Federal Ministries in South-East Nigeria

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ABSTRACT

This research investigates the influence of the Integrated Personnel and Payroll Information System (IPPIS) on reducing personnel costs within Federal Ministries in South-East Nigeria. Specifically, it evaluates the influence of IPPIS personnel records, planning, and budgeting on cost reduction. Data was collected through questionnaires distributed among ministry employees, supplemented by secondary data from the Office of the Accountant General of the Federation covering 2012 to 2017. Utilizing Freund and William's statistic formula, a sample size of 697 was determined, with 508 accurately filled questionnaires returned. Data analysis employed mean score and standard deviation via Sprint Likert Scale, and hypotheses were tested using Z-test statistic. The findings indicate significant impacts of IPPIS personnel records and planning and budgeting records on personnel cost reduction. The study concludes that IPPIS records and planning mechanisms substantially contribute to improving performance in cost reduction within federal ministries. Recommendations emphasize the importance for the federal government to prioritize the maintenance and security of personnel and payroll records to prevent inaccuracies and fraudulent entries, thereby ensuring the sustained benefits of IPPIS in cost reduction efforts.

Keywords: Influence, IPPIS, personnel cost and Nigeria

INTRODUCTION

The civil service is generally regarded as an institution saddled with the responsibility of designing, formulating, and implementing public/government policies and discharging government functions and development programmes in an efficient and effective manner. In the opinion of [1], it is the pillar that sharpens the direction of national goals and aspiration. The civil service is bedrock for the development of an economy. According to, [2], it provides the machinery and acts as a springboard for the development, consolidation of programmes and policies of the government of the day. In Nigeria, the civil service is structured into three tiers in line with her federalism. Similarly, the civil service is further organized into Ministries, Departments and Agencies (MDAs). The ministry according to [3], is the highest and largest unit in the structure of the civil service. Meanwhile, the focus of this study is the federal ministries. In Nigeria, the federal ministries previously operated manual personnel and payroll accounting system, without the aid of computers. According to [4], accountants invested a lot of time and energy in keeping track of all employees' data files and information, calculating monthly salaries, hourly remunerations, bonuses, leaves, benefits, taxes and other deductions. According to [5], all these were done by keeping numerous files filled with track records for each and every employee. Nevertheless, the payroll and personnel were decentralized. Federal ministries drew their salaries from the Consolidated Revenue Fund. Manual computation of salary and documentation of personnel information has been compounding the problem of transparency and accountability. This also affects accuracy in computation of salary hence overpayment or underpayment of salaries, omission of staff name in payroll, wrong calculation of promotion and pension that is due to staff and Ex-staff as the case may be [6]. [2], observed that some unscrupulous civil servants take undue advantage of the inadequacies of the manual personnel payroll system, to put in names of non-existing workers (ghost-names) in the payroll of the federal ministries for pecuniary gains. This has over the years accounted for continued escalation in the cost of administering public sector in Nigeria (personnel cost), and has to larger extent put greater pressure on government recurrent expenditure at the expense of capital expenditure. Henceforth, the study was motivated by the need to know the extent Integrated Payroll and Personnel Information System has influenced the performance of the federal ministries in Nigerian using South East as our focal point.

Statement of the Problem

Successive governments had embarked on articulated pattern of reforms aimed at improving the efficiency and effectiveness of the federal ministries by monitoring and cutting down recurrent expenditure through appropriate policies to avoid over spending of government revenue on payment of salaries at the detriment of other challenging sectors. As a result, Integrated Payroll and Personnel Information System (IPPIS) was initiated as a reformative approach, with IT facilities to address personnel records and payroll administration problems of the federal ministries. Thus, after over a decade of successful implementation of the programme, the researcher deemed it appropriate to ascertain whether IPPIS has actually influenced the performance of the federal ministries with emphasis on personnel cost reduction in Federal Ministries in South-East Nigeria. Most previous researches centered on the effectiveness of IPPIS in addressing 'ghost workers' syndrome in the civil service, effect of IPPIS on federal government recurrent expenditure, Impact of IPPIS in addressing payroll fraud and so on. Based on this the need to study the influence of Integrated Personnel and Payroll Information System (IPPIS) on personnel cost reduction in Federal Ministries in South-East Nigeria.

Objectives of the Study

The broad objective of the study was to examine the influence of Integrated Personnel and Payroll Information System (IPPIS) on personnel cost reduction in Federal Ministries in South-East Nigeria. The specific objectives were:

To assess the influence of IPPIS personnel records on personnel cost reduction in Federal Ministries in South-East Nigeria.

To examine influence of IPPIS planning and budgeting records on personnel cost reduction in Federal Ministries in South-East Nigeria.

Research Questions

The following research questions were formulated to guide the study:

To what extent does IPPIS personnel records influenced personnel cost reduction in Federal Ministries in South-East Nigerian?

To what degree do IPPIS planning and budgeting records personnel cost reduction in performance of Federal Ministries in South-East Nigerian?

Statement of Hypotheses

Hypothesis One

HO₁: IPPIS personnel records have no significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Hypothesis Two

HO₂: IPPIS planning and budgeting records have no significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Significance of the Study

The study has both empirical and theoretical significance. Empirically, the study will be of immense benefit to government at all level as it will expose the relevance of IPPIS in addressing the problem of ghost workers in the civil service. Furthermore, the outcome of this research will be of utmost importance to policy formulators, government and private employers, (multinational coop rations) especially as it relates to addressing payroll fraud and corruption, and other related problems.

Scope of the Study

The scope of the study will be restricted to examination of the Influence of IPPIS on personnel cost reduction in six (6) Federal ministries used for the first pilot implementation of IPPIS. Therefore the study was concentrated on examining the extent the IPPIS reform initiative has influenced reduction in the personnel cost. Geographically, this study will cover federal ministries in South East, Nigeria.

REVIEW OF RELATED LITERATURE

Concept of Integrated Personnel and Payroll Information System (IPPIS)

The manual, file-based personnel system operated by the federal public service meant that government did not have accurate and reliable information about the size and nature of its workforce. The incidence of 'ghost workers' was prevalent, with fraudulent public servants claiming and collecting the salaries of non-existent workers. Other fraudulent activities included some public servants collecting salaries from multiple establishments, some officers conniving with others to get paid higher salaries than were due to them, and records of loans obtained from government routinely disappearing from files. Personnel records contained in files, such as birth certificates, declarations of age and even certificates of indigene-ship, were often substituted to obtain undue advantage. This stimulated the Federal of Nigerian to introduced the Integrated Personnel and Payroll Information System (IPPIS) (Bureau of Public Service Reform (BPSR 2007)

IPPIS Systems

IPPIS system is made up of five records operating sub systems or units namely;

- a) Personnel Records Unit.
- b) Personnel Planning and Budget Records Unit.
- c) Payroll and Remuneration Records Unit,
- d) Retirement Records Unit.

e) Payroll Audit Records Unit.

Personnel Records

IPPIS personnel records provides accurate staff strength, records of expunged ghost workers, actual records of all the detected ghost workers, proper record of personnel promotions, proper record of employee turnover and actual records of diseased employees. These are predictors for measuring personnel records.

Personnel Planning and Budget Records

Personnel planning and budgeting is the process of accomplishing organizational objectives by acquiring, retaining, terminating, developing and properly using the employees in an organization. It is the process by which an organization ensures that it has the right number of people and the right kind of people at the right place and the right time, doing things for which they are economically most useful.

Personnel Cost Reduction

According to [7], performance is a multi-dimensional construct, the measurement of which varies depending on a variety of factors. [8], judged performance of the Nigerian Federal Civil Service in terms of infrastructural development put in place such as agricultural development, transportation, development in the educational sector, and electricity supply undertaken by the NFCS in the years under review. However, there are several measures of performance in the public sector like accountability, efficiency, effectiveness, economy, transparency.

Relationship between IPPIS and personnel cost reduction in Federal Ministries

Personnel Records and Personnel Cost Reduction

When a new employee is hired in an organization, a personnel record is established for that employee. This will contain status in the organization, birth date, next of kin, work experience, educational experience, nationality, state and local government of origin, residential address, health status etc. As time goes in, additional information will be added to the personnel records; this will include positions held with the organization, salary, retirement date, leaves of absence, performance evaluations (appraisal), accidents, and insurance plans. The personnel record will also contain authorization from the employee, directing the organization to withhold certain amounts from his/her paycheck for various deductions such as medical insurance, union dues, and savings bonds. The attendance register, together with information from the personnel records, provide the basis for the accounting department payroll division to update the employee's earnings record. This record, together with the records of all other employees, is used to prepare the payroll register, paychecks, and also the many reports required by governmental bodies.

Personnel Planning and Budgeting Records and Personnel Cost Reduction.

Planning involves selecting missions, objectives and the chains of actions to achieve them. According to [9], planning is carried out to select in advance, for an organization and its, functional area, future possible courses of action form among alternative. It is made to decide what is to be done and to what end, who will do that at a certain time and how it will be accomplished. Thus [10] defined planning as deciding in advance what to do, how to do it, when to do it, where to do it, who is to do it and even why it should be done. Planning bridges the gap from where we are to where we want to go. It makes it possible for things to occur which would not otherwise happen. . Planning ensures efficiency and effectiveness in the use of organizational resources especially in the developing countries where resources are scarce.

Theoretical Review

The Equity Theory guided the study

The Equity Theory

The Equity Theory as pioneered by John Stacy Adams in 1963 deals with the perceptions employees (people) have about how they are being treated as compared with others. In other wards it is based on the assumption that people in organizations want to be treated fairly, According to the theory equity is the belief that we are treated fairly in relation to other s and inequity as the belief that we are being treated unfairly in relation to others [11]. Thus, to be dealt with equitably is to be treated fairly in comparison with another group of people (a reference group) or other people. Adams is of the view that workers\ employees are motivated to seek equity in the rewards they receive in the workplace based on their performance. Put differently, an employee compares the ratio of his inputs into the organization vis-à-vis the outcomes he gets there from with the perceived inputs/outcomes of another colleague of his. If his perception is that he has not been fairly compensated in comparison with this colleague he gets demotivated and he will do whatever is in his powers to "balance the equation". As such it is work performance that will be negatively affected by way of indolence, absenteeism and even outright resignation. On the other hand if the employee's feeling is that he receives just reward for his efforts compared to his other co-worker, he is motivated to do more.

Empirical Studies

Empirical studies in prose form according to the objectives of the study.

Influence of IPPIS Personnel Records on Personnel Cost

[12], carried a study on Integrated Personnel Payroll and Information System (IPPIS): Panacea for Ghost Workers Syndrome in Nigerian Public Service. Their study examined the effects of ghost workers syndrome and how the instrumentality of integrated personnel payroll and information system (IPPIS) could address the menace in the public service. The researchers collected data from both primary and secondary sources and

analyzed same using the simple percentage, frequency tables, mean score and spearman rank order correlation technique. The findings of the research showed that ghost workers syndrome is highly imminent in the public service. [13], carried out a study on “the effect of Integrated Personnel and Payroll Information System (IPPIS) on Federal Government Recurrent Expenditure in Nigeria”. Specific objectives of the study were to determine if there is any significance difference on federal government’s recurrent expenditure following the introduction of IPPIS; to determine if there is any significant difference on the actual personnel cost of federal government’s ministries, departments and agencies following the introduction of IPPIS and to determine the extent which the elimination of non-existent workers has resulted in fund savings for the federal government. Secondary data obtained from budget office of the federation, Annual Report from the Office of the Accountant General of the Federation, and audited Financial Statement and the Central bank of Nigeria (CBN) statistical bulletin was used for data collection. Findings of the study revealed that there was a significance difference on federal government’s recurrent expenditure following the introduction of IPPIS in 2007. Moreover, their study equally revealed that there is a significant difference on the actual personnel cost of federal government’s ministries, departments and agencies following the introduction of IPPIS. They further revealed that the implementation of IPPIS have resulted in funds savings to the tune of 38.4 billion naira from the budgeted expenditure of seven (7) MDAs taken as a pilot MDA in the scheme in 2007 to 2012. [14], carried out a study on “Effect of Integrated Personal Payroll Information System on Employee Welfare: Evidence from Federal Ministries in Nigeria”. The study examines the effect of the implementation of Integrated Personnel Payroll Information System (IPPIS) on employee welfare using fifty Ministerial, Department and Agency's in Nigeria. The study was based on survey and descriptive research design and the data were collected using questionnaire structured in open-closed format. ANOVA in Minitab 21 statistical software was used for the analysis and test the hypothesis. The result showed that the implementation of IPPIS has weak positive relationship with employee welfare but it is statistically significantly. The findings of the study showed that the identification and removal of ghost workers from the payroll will save the government huge amount which can be used to ensure regular salary and full implementation of Shonekan committee recommendation on employee welfare. Based on the findings, the study recommended that staff audit should be carried out and IPPIS programme should be implemented in all the three tiers of government in Nigeria. [15], carried out a study on “the effectiveness of Integrated Personnel and Payroll Information System in addressing ghost workers syndrome in Nigerian public sector.” The main objective of this study was to examine the strategies adopted by IPPIS in checking ghost workers in the Federal Revenue Service (FIRS). The specific objectives were to assess the effect of ghost workers in public service salary administration in FIRS in Nigeria and analyse the challenges facing IPPIS in implementation of the IPPIS in the FIRS in Nigeria. [14], used data from the Federal Inland Revenue Services; a parastatal in the Federal Ministry of Finance, where three senatorial districts of Lagos State were purposely selected for the study. He conducted a cross-sectional study using survey instrument containing both open-ended and closed ended questions administered on 450 staff of FIRS in the three selected senatorial districts of Lagos State. [14], employed simple percentages and content analysis in his analysis. The findings of his study revealed that the quality of government payroll administration has vastly improved and Federal Ministries, Departments and Agencies are moving away from manual payroll administration and salaries are now paid promptly. He also found that IPPIS has certainly reduced corruption particularly it has successfully weeded out over 86,000 ghost employees in federal civil service.

Influence of IPPIS Planning and Budgeting Records on Personnel Costs

[15], carried out a study on the Adoption and Implementation of Integrated Personnel and Payroll Database in Kenya Government Ministries. The purpose of this study is to establish drivers for adoption and factors affecting implementation of Integrated Payroll and Payroll Database (IPPD) in Kenya Government Ministries. This was necessitated by the fact that use of IPPD in the public service is undergoing challenges especially providing accurate data for human resource and payroll management. The Government is currently grappling with issues of huge public sector wage bill, ghost workers and public officers who are appointed but to not report to their work stations. IPPD is seen as the system to provide reliable information on public service numbers, wages and allowances, capacity gaps and guide in development of a comprehensive pay reform strategy for the public service. The study was based on the several theories including Technology Acceptance Theory and descriptive survey research design was employed. The study focused on 19 central Government Ministries. Questionnaires and interview schedules were used to collect primary data. The respondents were Directors of Human Resource Management who supervise implementation of IPPD. Data was analyzed using descriptive statistics, regression and correlation. The study findings established that the key drivers contributing to IPPD implementation are elimination of manual operations, availability of accurate and reliable data, information demanded from the system by other Government departments and supportive top management. The findings also revealed that the implementation of IPPD is not affected by drivers identified in Kenya ICT master plan whose foundation is infrastructure, human capital development and infrastructure for information sharing. However, there is need to support implementation of the IPPD through provision of necessary infrastructure to ensure the system is decentralized and available to Human Resource Officers in the Ministries. [7], studied on Payroll Fraud: Effects of Ghost Names on the

Government Wage Bill in Ghana. The purpose of this quasi-experimental study was to extend Cressy's conceptualization of the fraud triangle theory to test the applicability of Reinikka and Svennson's graft estimation model by using nonprobability quota sampling to select 85 heads of public agencies for participation in a cross-sectional survey. The research questions focused on the relationship between size of government agency, the estimated number of opportunities for ghost workers, and the dependent variable of occurrence of ghost workers in the public sector in Ghana. Correlational and multiple regression analysis was used to discern the relationship between the independent variables of agency size and opportunities for ghost workers and the dependent variable of number of ghost workers. Results revealed a statistically significant, positive relationship between the number of opportunities for ghost workers and the number of ghost workers. However, there was a negative relationship between the size of government agencies and both the number of opportunities for ghost workers and the number of ghost workers. The implications for social change include recommendations to revise the Financial Administration Act of Ghana by introducing new controls in the payroll administration at the Controller and Accountant General's Department to eliminate ghost workers from the payroll so that public funds can be saved to provide more public services for Ghanaians.

[16], carried out a research on Integrated Payroll System and Government Recurrent Expenditure in Nigeria. The main aim of the study was to investigate empirically the relationship between integrated payroll system and government recurrent expenditure in Nigeria. Data were collected through primary and secondary sources. The secondary were collected from annual reports of Bayelsa State Government, Nigeria and survey data were obtained from 30 respondents using researcher-designed questionnaire validated by experts and shown to have a reliability coefficient of 0.90. Descriptive and ordinary least square regression statistical techniques were used in analyzing the data with the aid of Statistical package for Social Sciences (SPSS) version 21. The study findings revealed that there exists a positive and strong relationship between integrated payroll system and personnel cost and overhead cost. We conclude that there exists a significant relationship between integrated payroll system and government recurrent expenditure, and recommends that all staff civil servants should be paid through bank and not by cash to prevent double hiring. Payroll presentation for all state civil servants should be centralized in the state treasury. Individual staff records should be centrally and safely kept with relevant accounting packages. The treasury single account policy should be duly implemented even in the local government system. Accounting staff should be trained on e-commerce and accounting system for intelligent and efficient use of accounting software in the ministries. All overhead cost incurred or to be incurred should pass through serious internal control mechanism in the state ministries.

Summary of Review and Gap in Literature

From the literature reviewed, it is pertinent to note that most researches centered on the effectiveness of IPPIS in addressing ghost workers' syndrome, emphasis was laid on the use of IPPIS to reduce and checkmate payroll fraud, wage administration and administration and civil service productivity, effect of IPPIS on Federal government recurrent expenditure, effect on manpower planning, on development, of civil service, in Lagos state, corruption in civil service; a study of payroll fraud, labour turnover and productivity and employees in federal agencies in Southwest, Nigeria; Use of TSA, IPPIS, and IFMS application and implementation; its effect on fraud management; impact of wages and salaries on civil service productivity; effectiveness of IPPIS in addressing ghost worker's syndrome in Nigerian Public sector.

METHODOLOGY

The research design used in the study is the cross-sectional survey approach. The study was conducted in the selected federal Ministries in South- East Nigeria and IPPIS office Abuja. The areas of study in the federal ministries include: Education, Information and national orientation, Finance; Works, power & Housing; Agriculture, Justice with a total population of Eight hundred and thirty six (836). The primary data in the study was gathered from questionnaire issued to the employees of the selected ministries in South-East Nigeria. The secondary data was performance of the Federal ministries (personnel cost reduction) which was generated from the office of the Accountant General of the Federation, covering the period 2012 to 2017. To determine the sample size of 697, the researcher used Freund and William's statistic formula. Five hundred and eight (508) staff returned the questionnaire and accurately filled. That gave 73 percent response rate. The validity of the instrument was tested using content analysis and the result was good. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.760 which was also good. Data was presented and analyzed by mean score (3.0 and above agreed while below 3.0 disagreed) and standard deviation using Sprint Likert Scale. The hypotheses were analyzed using Z – test statistic tool.

PRESENTATION, ANALYSES AND INTERPRETATION OF DATA

The chapter presents and analyzes the data collected for the study. The presentation and interpretation of data were based on the questionnaire administrated to the staff of the selected in public sectors of Southeast, Nigeria. A total of six hundred and ninety seven (697) copies of the questionnaire were distributed to the respondents from which five hundred and eight (508) copies were returned while one hundred and eighty nine copies (189) were not | returned.

Data Presentation

Table 1 Distribution and Return of the Questionnaire

Public sectors	No. Distributed	No. Returned	Percent	No. not Returned	percent
Education	85	62	9	23	3
Information	145	100	14	45	6
Finance	103	76	11	27	4
Works	134	92	13	42	5
Agriculture	126	101	15	25	4
Justice	71	52	8	19	3
IPPIS Staff	33	25	4	8	1
Total	697	508	74	189	26

Source: Field Survey, 2019

Table 1 shows that six hundred and ninety seven (697), seventy four were distributed. Five hundred and eight (508) representing seventy four percent (74%) of the distributed copies of the questionnaire were returned and used while one hundred and eighty nine (189), twenty six percent (26%) were not returned and were not used.

Data Analysis

Table 2: Influence of IPPIS personnel records on performance (personnel cost reduction) of Federal Ministries in South East, Nigeria

	5 SA	4 A	3 N	2 DA	1 SD	$\sum fX$	\bar{X}	Std.D	Decision
1. IPPIS personnel and payroll records provide accurate staff strength of your ministry..	100 20 4	1116 279 55	228 76 15	184 92 18	41 41 8	1669 508 100%	3.29	1.064	Agree
2. IPPIS personnel and payroll records have expungedghost workers in your ministry.	700 140 28	816 204 40	183 61 12	140 70 14	33 33 6	1872 508 100%	3.69	1.198	Agree
3. IPPIS detection of ghost workers reduces personnel cost of ministry.	740 148 29	524 131 26	279 93 18	142 71 14	65 65 13	1772 508 100%	3.41	1.418	Agree
4. IPPIS personnel and payroll records reduces multiple payments of emolument to a single employee in your ministry.	1120 224 44	232 58 11	279 93 18	202 101 20	32 32 7	1865 508 100%	3.67	1.372	Agree
5. IPPIS stoppage multiple payments of emolument to a single employee reduces personnel cost of your ministry	575 115 23	984 246 48	195 65 13	102 51 10	31 31 6	1887 508 100%	3.71	1.107	Agree
Total grand mean and standard deviation							3.55	6.160	

Source: Field Survey, 2019

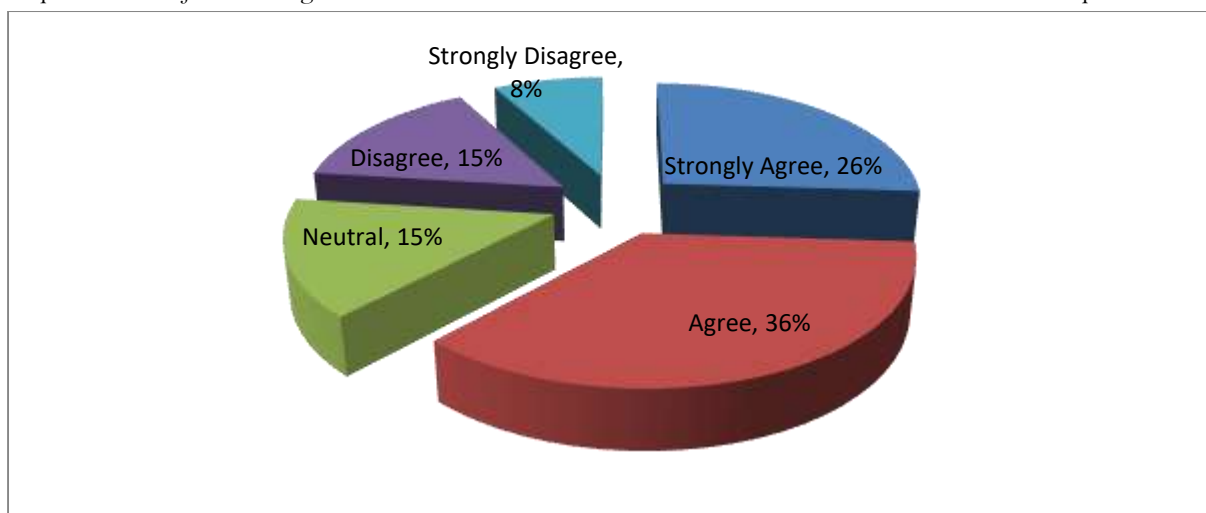


Figure 1: Personnel records influence performance (personnel cost reduction)

Table 3, observed that IPPIS personnel records provides accurate staff strength of all federal ministries in the South- East Nigeria with mean score of 3.29 and standard deviation of 1.064. IPPIS personnel and payroll records have expunged ghost workers with mean score of 3.69 and standard deviation of 1.198. IPPIS detection of ghost workers reduces personnel cost with mean score of 3.41 and standard deviation of 1.418. IPPIS personnel records reduces multiple payments of emolument to a single employee with mean score of 3.67 and standard deviation of 1.372 and IPPIS stoppage multiple payments of emolument to a single employee reduces personnel cost with mean score of 3.71 and standard deviation of 1.107. Finally, it was agreed that personnel records influence performance (personnel cost reduction) of Federal ministries in South East, Nigeria with grand mean score of 3.55 and total standard deviation of 6.160 to a great extent.

Table 3: Influence of IPPIS planning and budgeting records on performance Federal Ministries (personnel cost reduction) in South East, Nigeria?

	5 SA	4 A	3 N	2 DA	1 SD	$\sum fX$	\bar{X}	Std.D	Decision
1. IPPIS provision of relevant data for Personnel planning and budgeting in your ministry has enhanced reduction in personnel cost.	955	692	144	124	34	1949	3.84	1.240	Agree
	191	173	48	62	34	508			
	38	34	9	12	7	100%			
2. IPPIS personnel cost, planning and budgeting based on actual verified aim and not estimates has reduced personnel cost of your ministry	850	540	261	8	15	1674	3.56	1.400	Agree
	170	135	87	42	74	508			
	33	27	17	8	15	100%			
3. IPPIS projection of cost increase has reduced personnel cost of your ministry.	1135	620	174	102	17	2048	4.03	1.125	Agree
	227	155	58	51	17	508			
	45	31	11	10	3	100%			
4. IPPIS records framework for personnel planning and budgeting reduces personnel cost in your ministry.	660	1032	177	54	32	1955	4.05	1.163	Agree
	132	258	59	27	32	508			
	26	51	12	5	6	100%			
5. IPPIS provision of qualified staff and facilities for personnel data for planning and budgeting of recurrent expenditure in your ministry has reduced personnel cost	1145	704	132	68	25	2074	4.08	1.115	Agree
	229	176	44	34	25	508			
	45	34	9	7	5	100%			
Total grand mean and standard deviation							3.91	6.040	

Source: Field Survey, 2019

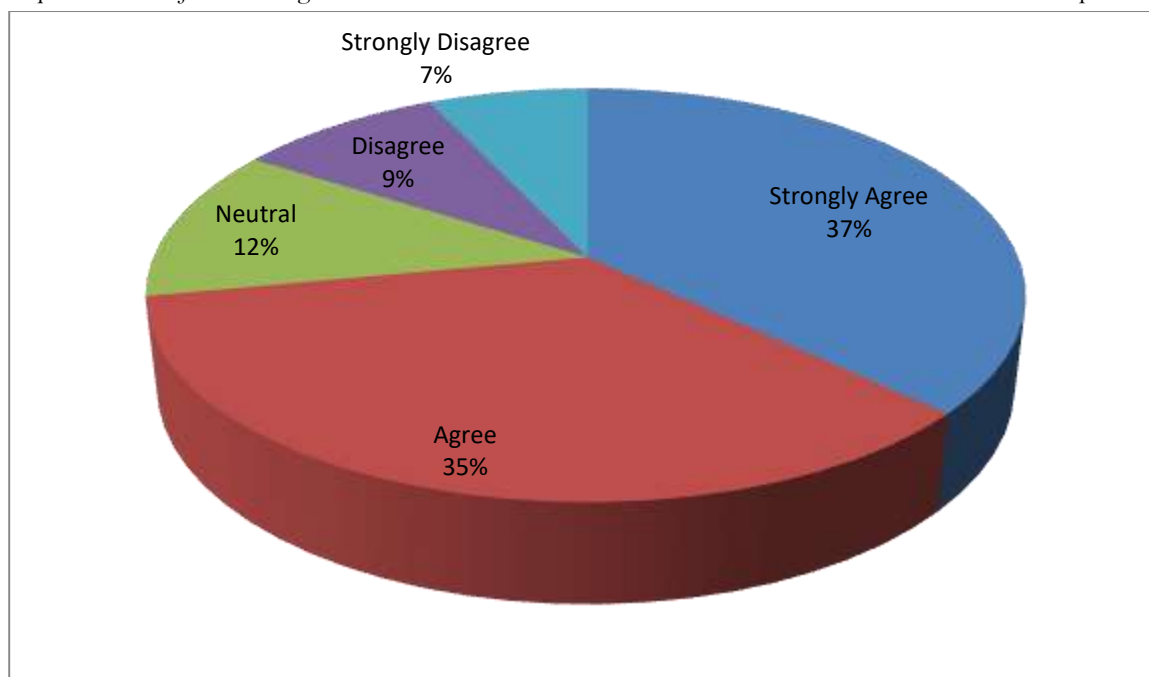


Figure 2: Influence of IPPIS planning and budgeting records on performance (personnel cost reduction)

Figure 2 indicated that IPPIS provision of relevant data for Personnel planning and budgeting in your ministry has enhanced reduction in personnel cost with mean score of 3.84 and standard deviation of 1.240. IPPIS personnel cost, planning and budgeting based on actual verified aim and not estimates has reduced personnel cost of your ministry with mean score of 3.59 and standard deviation of 1.400. IPPIS projection of cost increase has reduced personnel cost of your ministry with mean score of 4.03 and standard deviation of 1.125. IPPIS records framework for personnel planning and budgeting reduces personnel cost in your ministry with mean score of 4.05 and standard deviation of 1.163 and IPPIS provision of qualified staff and facilities for personnel data for planning and budgeting of recurrent expenditure in your ministry has reduced personnel cost with mean score of 4.08 and standard deviation of 1.115. Finally, it was agreed that IPPIS planning and budgeting records have a great influence of on performance (personnel cost reduction) of Federal Ministries in South East, Nigeria with grand mean score of 3.91 and total standard deviation of 6.040.

Hypothesis One

HO: IPPIS personnel records have no significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

H1: IPPIS personnel records have significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Table 4: Contingency table of cumulative responses of Research Question One

Options	χ	F	$F\chi$	$\bar{\chi} - \chi = \chi_1$	$F(\chi_1)^2$	$\Sigma f(\chi_1)^2$
Strongly agree	5	647	3235	-1.216	647 x (1.216) ²	956.690
Agree	4	918	3672	.216	918 x (.216) ²	42.830
Neutral	3	388	1164	.784	388 x (.784) ²	238.487
Disagree	2	385	770	1.784	385 x (1.784) ²	1225.323
Strongly Disagree	1	202	202	2.784	202 x (2.784) ²	1565.633
	15	2540	9611			4028.963

Source: Field Survey, 2019

$$\text{Mean score } \chi = \frac{F\chi}{N} = \frac{9611}{2540} = 3.784$$

$$\text{Variance } (S^2) = \frac{\Sigma f(\chi_1)^2}{N-1} = \frac{4028}{2539} = 1.585$$

$$\text{Standard deviation} = \sqrt{S^2} = \sqrt{1.585} = 1.126$$

$$\text{Level of confidence} = 0.05$$

$$\text{Critical value} = 1.96$$

Table 5: Descriptive statistic on IPPIS personnel records influence on personnel cost reduction in Federal Ministries in South-East Nigeria

	N	Mean	Std. Deviation	Minimum	Maximum
	508	3.784	1.126	1	5

Table 6: Z – test on the IPPIS personnel records influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

			IPPIS personnel records has no significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.
N			508
Normal Parameters	Mean		3.784
	Std Deviation		1.126
Most Extreme	Absolute		.290
Most Extreme	Positive		.290
Differences	Negative		-.219
Kolmogorov-Smirnon Z			15.680
Asymp. Sig.(2-tailed)			.000

- a. Test distribution is Normal
- b. Calculated from data

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e. $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

RESULTS

With Kolmogorov-Smirnon Z – value of 15.680 and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms that the assertion of the IPPIS personnel records had significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Decision

Furthermore, comparing the calculated Z- value of 15.580 against the critical Z- value of 1.96 (2-tailed test at 95% level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that IPPIS personnel records had significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Test of the Hypothesis Two

HO₂: IPPIS Planning and budgeting records has no significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria

H1₂: IPPIS Planning and budgeting records has significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria

Table 7: Contingency table of cumulative responses of Research Question Two

Options	χ	F	$F\chi$	$\bar{\chi} - \chi = \chi_1$	$F(\chi_1)^2$	$\Sigma f(\chi_1)^2$
Strongly agree	5	949	4745	-1.128	$949 \times (1.128)^2$	1207.492
Agree	4	897	3588	.128	$897 \times (.128)^2$	14.696
Neutral	3	296	888	.872	$296 \times (-.872)^2$	225.074
Disagree	2	216	432	1.872	$216 \times (-1.872)^2$	756.947
Strongly Disagree	1	182	182	2.872	$182 \times (-2.872)^2$	1501.206
	15	2540	9835			3705.415

Source: Field Survey, 2019

Mean score $\chi = \frac{F\chi}{N} = \frac{9835}{2540} = 3.872$

Variance $(S^2) = \frac{ef(\chi_1)^2}{N-1} = \frac{3705.415}{2540} = 1.459$

Standard deviation $= \sqrt{S^2} = \sqrt{1.459} = 1.208$

Level of confidence = 0.05

Critical value = 1.96

Statistic tool used: Z-test

Table 8: Descriptive statistic on IPPIS Planning and budgeting records influence on personnel cost reduction in Federal Ministries in South-East Nigeria

	N	Mean	Std. Deviation	Minimum	Maximum
	508	3.872	1.208	1	5

Table 9 : Z – test on IPPIS Planning and budgeting records influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

	IPPIS Planning and budgeting records has no significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria
N	508
Normal Parameters	Mean 3.872 Std Deviation 1.208
Most Extreme Differences	Absolute .280 Positive .280 Negative 211
Kolmogorov-Smirnon Z	16.148
Asymp. Sig.(2-tailed)	.000

- a. Test distribution is Normal
- b. Calculated from data

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

RESULTS

With Kolmogorov-Smirnon Z – value of 16.148 and on Asymp. Significance of 0.000, the responses from the respondents as displayed in the table is normally distributed. This affirms the assertion of the most of the respondents that IPPIS Planning and budgeting records had significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Decision

Furthermore, comparing the calculated Z- value of 16.148 against the critical Z- value of 1.96 (2-tailed test at 95% level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that IPPIS Planning and budgeting records had significant influence on personnel cost reduction in Federal Ministries in South-East Nigeria.

Discussion of the Findings

The Influence of IPPIS Personnel Records on Personnel Cost Reduction in Federal Ministries in South East, Nigeria

The findings of this study showed that the test of hypothesis affirmed that IPPIS personnel records had significant influence on personnel cost reduction Federal Ministries in South East Nigeria. The test showed comparing the Z-value of 15.580 against the critical z-value of ± 1.96 (for two tailed test at 95% level of confidence) therefore, null hypothesis was rejected. The implication of this findings is that the computerized biometric data of civil servants created by IPPIS which eliminated headcount within the Federal ministries are critical in the reduction of Personnel cost. IPPIS was able to achieve this through attachment of financial data to personnel records. With the attachment of financial data of all employees of federal ministries to IPPIS personnel records, it is very difficult for civil servants to receive feigned pay through irregularities. The findings is in tandem with the findings of [8] who also observed that there was a significant difference in the actual personnel cost of federal government ministries, departments and agencies following the introduction of IPPIS. It was discovered by this study that the reason for the reduction in personnel is as a result of computerized personnel records which require enormous requirements to fulfill before registration and subsequent capturing. It is important to note that many employees/civil servants who could not fulfill these requirements for registration into IPPIS database were churned out of the system. The findings in the study showed that IPPIS was able to detect and weed out ghost workers in the payroll of the federal government ($X = 3.14$ and $SD \pm 1.418$) respectively. This finding collaborated the claim of El [17], who claimed that the implementation of IPPIS in the pilot Federal Ministries selected for this study led to saving of over 416 million naira from the payroll of the agencies in the first month. Furthermore, [17], supported the claim of this study and regretted that the Federal Government showed that 43,000 fictitious names exist in the payroll of the Federal Ministries.

Influence of IPPIS Planning and Budget on Personnel Cost Reduction in Federal Ministries

The findings of the study showed that IPPIS planning and budgeting records has significant influence on reduction of personnel cost in Federal Ministries in South East, Nigeria. This was shown on the calculated z-value of 16.148 against the critical z-value of ± 1.96 (2-tailed test at 95% level of confidence). The implication of this findings is that IPPIS planning and budgeting records addresses personnel needs both in quantities and qualitative terms as well as an accurate recurrent expenditure on emoluments could be budgeted for on a yearly basis. IPPIS planning records can authoritatively answer two basic questions; how many workers and what sort of workers are in the payroll of the Federal Ministries in South East? With IPPIS planning records, forecast can be make of future workers' demands based on issues. The important issues include new positions needed, positions to be eliminated and so on. Effective use of IPPIS planning records may help Federal Ministries to know how to forecast personnel needs and manage performance more effective. However, majority of the respondents in the study held the opinion that IPPIS personnel plan records provides reliable data for actual employee cost incurred in Federal Ministries in South East. This was achieved through elimination of multiple payments of emoluments to a single employee and other payroll fraud. IPPIS records more secure, accurate and reliable for budgeting and strategic personnel planning. With the help of IPPIS Federal Ministries ensures that it has a specified number of people at the right place and at the right time doing things for which they are being paid monthly. IPPIS Personnel Planning and Budget Record Unit supplies total relevant, total data for projecting cost increase and provides reliable number of staff head count.

Influence of IPPIS Payroll and Remuneration Records on Personnel Cost in Federal Ministries

The findings of the study affirmed that IPPIS payroll and remuneration records had significant influence on Personnel cost reduction in Federal Ministries in South East. This was shown on the calculated z-value of 15.208 against the critical z-value of ± 1.96 (2-tailed test at 95% level of confidence). The database integrity constraints built with ICT based payroll and remuneration records of IPPIS made it impossible to manipulate this records by unauthorized users. IPPIS payroll and remuneration records ensure easy and convenient remuneration of civil servants in Federal Ministries with minimum leakages and wastages. The fraudulent practices inherent in the old form of handling remuneration records have been eliminated by IPPIS. This have grossly reduced the personnel cost of Federal Ministries in South East Nigeria. The connivance tendencies of both personnel and payroll units to manipulate remuneration records of their ministries which cause over bloated personnel cost has been hindered by IPPIS. The findings further showed that due to the reduction in

personnel cost, employees of Federal Ministries now receive their salaries without delays. This was affirmed by the majority of the respondents who supported the claim that IPPIS ensure prompt payment of salaries of employees of Federal Ministries in South East. Furthermore, the findings show that the majority of the respondents affirmed that IPPIS calculates and pay various allowances of the employees of the Federal Ministries without delay. The study observed that IPPIS also reduced the persistent delay and/or denial of allowances accrue to employees or personnel of Federal Ministries by payroll units of their respective ministries.

Page | 12 **The influence of IPPIS retirement records on personnel cost of Federal Ministries in South-East Nigeria**

Result of the analysis carried out showed the computed $r = 0.74$ to be greater than the table value of .195, thus, the null hypothesis is rejected. Therefore, the study affirmed that there was significant relationship between IPPIS retirement records and personnel cost of Federal Ministries in South-East Nigeria as reported in the probability value of ($r=.74, p<.05$). The outcome of this study was in line with the study of [18], on “the impact of contributory pension scheme on workers’ savings and investment in Nigeria using Anambra State as a case study.” [18], findings are: that majority of the respondents prefer to save outside any pension scheme, most respondents are not aware of their employers own contribution to their contributory pension scheme. Their study concluded that among other things that the Nigerian government should create more awareness and enlightenment campaign on the workers contributory pension scheme geared towards retirement. In a related study, [19], perception of university employees on the impact of contributory pension scheme on employee’s welfare. The statistical analysis results revealed that the new pension scheme gives the employees the choice as to how their pension funds are managed and gives them the assurance about the security of their retirement benefits. The result of the analysis also revealed that there was no significant relationship between awareness of new pension scheme and the welfare of employees of federal universities in Nigeria. With the introduction of IPPIS, it was easy for pension administrators to ascertain staff that are due for retirement and adequately prepare for them. It should be noted that IPPIS personnel records contain among other things, age of employees and year of first appointment into the civil service. These two components are vital in the determination of retirement year of civil servants. With adequate record maintenance, rigorous staff verification exercises are not needed to identify those that are due for retirement. Also, personnel and payroll records kept by IPPIS are always handy in the computation of staff gratuities and subsequent pension plan. Pension administrators are easily availed with information necessary in appropriate retirement planning for civil servants. On the other hand, IPPIS retirement records has helped to reduce to the barest minimum incidences of age falsifications, manual file alterations, removal of vital documents such as birth certificate, first school leaving certificate or letter of first appointment from the file of civil servants in Federal Ministries in South East.

The influence of IPPIS Audit Records on Personnel Cost of Federal Ministries in South East Nigeria

The findings in this study affirmed that there is a significant relationship between IPPIS payroll audit records and personnel cost reduction (performance) of Federal Ministries in South East Nigeria. These affirmation was found to correlate significantly with responses as shown in the computed $r = 0.78$ is greater than the table value of .195 ($r = .78, p < .05$). It was observed that IPPIS conduct periodic audit of their payroll records through this means those employees who receive feigned pay are reversed and made to refund whatever they have earned in excesses. IPPIS payroll audit have blocked lapses that are inherent in government payroll system across all the Federal Ministries. The use of forensic auditing by IPPIS has reduced fraud in the payroll of the Federal Government and minimizes dubious practices inherent in the manual and file based payroll auditing. It is through the report of forensic auditors that led to the exposure of unethical and fraudulent practices going on in payroll of Federal civil service. Today, there is no report of loss of government money through payroll fraud. Similarly, majority of the respondents submitted that there is no periodic check of records of payment of allowances in all Federal Ministries in South East Nigeria. However, it is regretted that majority of IPPIS workers opined that IPPIS do not have competent staff (forensic auditors) enough to examine and address allegations of fraud and misconduct in payroll of the Nigerian civil service. Through the auditing of the payroll many unscrupulous civil servants have been identified to be responsible for the fraud going on in the payroll of the Federal Government while none have been sanctioned nor punished. However, in corroboration of the findings of this study on IPPIS payroll audit and personnel cost reduction, [20] revealed that technological barriers is a major challenge to payroll auditing under IPPIS as most of IPPIS staff has not been exposed to oracle training.

CONCLUSION, RECOMMENDATIONS, CONTRIBUTION TO KNOWLEDGE

Summary of Findings

After appropriate analysis and interpretation of diverse data gathered in the course of the research, useful findings were made. The findings of the research revealed that the six alternate hypotheses were accepted in line with the decision rule.

1. IPPIS personnel records had significant influence on performance (personnel cost reduction) of Federal Ministries in South-East Nigeria.

2. IPPIS Planning and budgeting records had significant influence on performance (personnel cost reduction) of Federal Ministries in South-East Nigeria.

CONCLUSION

Based on the above findings, the following conclusions were made. The study concluded that IPPIS personnel records, planning and budgeting records had significant influence on performance (personnel cost reduction) of the federal ministries. The Integrated Personnel and Payroll Information System (IPPIS) has improved the effectiveness and efficiency of the federal government in checking wastages and leakages of public funds through elimination of payroll fraud and facilitate for easy storage, update and retrieval of payroll and personnel records. The personnel costs are now centralized, it is now easier for the Office of the Auditor General of the Federation (OAGF) to monitor fund.

Recommendations

As a panacea to the above findings and conclusions, the research made the following recommendations.

1. In order to consolidate on the achievements of IPPIS in personnel cost reduction, (savings) the federal government should ensure adequate maintenance and safe guard of personnel and payroll records of the Ministries, Departments and Agencies, so as to avoid the inclusion imaginary names.
- 2, The Budget Office of the Federation (BOF), Office of the Accountant General of the Federation (OAGF), National Bureau of Statistics (NBS) and National Planning Commission (NPC) and other related agencies should ensure strict utilization and application IPPIS planning and budgeting records in drafting the National budget.

Contribution to Knowledge

The study had made significant contribution to knowledge in a variety of ways. It has contributed to more existing literature on IPPIS and performance of Federal Ministries. It is pertinent to note that most studies centered on the effectiveness of IPPIS in addressing ghost workers' syndrome, emphasis was laid on the use of IPPIS to reduce and checkmate payroll fraud, wage administration and civil service productivity, effect of IPPIS on Federal government recurrent expenditure, effect of manpower planning, on development, of civil service, in Lagos state, corruption in civil service; a study of payroll fraud, labour turnover and productivity of employees in federal agencies in Southwest, Nigeria; Use of TSA, IPPIS, and IFMS application and implementation; its effect on fraud management; impact of wages and salaries on civil service productivity; effectiveness of IPPIS in addressing ghost worker's syndrome in Nigerian Public sector. However, this present study took a wholistic approach to Ministry performance as an entity rather than individual staff performance.

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CITE AS: Anikeze Nnaemeka Hillary (2024). Influence of Integrated Personnel and Payroll Information System (IPPIS) on Personnel Cost Reduction in Federal Ministries in South-East Nigeria. EURASIAN EXPERIMENT JOURNAL OF HUMANITIES AND SOCIAL SCIENCES, 5(1): 1-14