# E-Governance and Fraud Control in the Nigerian Public Service: An Assessment of Integrated Personnel and Payroll Information System

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**Abstract:-** **The study examined the effect of Electronics-Governance on fraud control in the Nigeria Public service: An assessment of the Integrated Personnel and Payroll Information System. The objective of the study was to determine the extent the implementation of Integrated personnel and payroll information system program has impacted on payroll fraud in the Ministry, ascertain the extent Integrated personnel and payroll information system has enhanced the accurate payment of salaries and remittance of payroll deduction of employees to third parties; and the extent Integrated personnel and payroll information system has enhanced the management of Federal staff records. The objectives were developed into hypothses. The study adopted the fraud diamond theory; applied a descriptive survey research design with structured questionnaire as the instrument for data collection on population of 223. The data collected were analyzed using table and percentages, while the hypotheses were tested using the chi-square statistical tool. The findings of the study revealed amongst others that the implementation of Integrated personnel and payroll information system program has reasonably eliminated payroll fraud in the Federal Ministry of Finance, Abuja also, the Integrated personnel and payroll information system has to a great extent enhanced the accurate payment of salaries and remittance of payroll deduction of employees of the Federal Ministry of Finance, Abuja to third parties. The study recommended that the federal government should continue to ensure strict implementation of the integrated personnel and payroll information system program in order to completely eliminate payroll fraud, accurate payment of salaries and remittance of payroll deductions of employees not just the Federal Ministry of Finance, Abuja but in all the MDAs in the country.**

*Keywords:- IPPIS, E -governance, Civil Service.*

## I. INTRODUCTION

The predominance of corruption in any society invariably means backwardness and underdevelopment. The level of corruption in a country, determines the level of development, and it affects societies in multiple ways, in worst cases; it costs lives (Transparency International, 2017). Nigeria as a country has been battling with the issue of corruption for a very long time. This corruption permeates the political, economic, social, and virtually every sector of the economy. Nigerian public service was a model to emulate from inception. According to Ogunrui and Erhijakpor (2009:106), misappropriation of public funds was difficult and very rare during that era, and that the service was very efficient, and greatly contributed to the formulation and implementation of public policies. However, over time, inefficiency and corruption became rife in the Nigerian civil service, and this had eaten deep into the fabrics of the Nigerian public servants (El-Rufai, 2010). It was at this stage of rethink that many Nigerians started nursing the idea of reforms into the public service generally.

According to the World Bank (2002), there was a strong consensus in the international development community on the need for civil public reforms in developing nations. It was therefore a topical issue of the moment as developing nations all over the world engaged in the struggle to better their existence through the process of reforms for efficient and effective service delivery. In pursuance of the global reform agenda, Murana*et al* (2016) opined that Nigeria's development objective is to be in the league of the 20 leading economies in the world by the year 2020. The main philosophy underlying vision 20-20-20 therefore is the transcendence of the country from the category of a developing nation struggling to attain the millennium development goals (MDGs). This aspiration emerged at the twilight of the last millennium in 1999, when Nigeria embraced democracy after several years of military dictatorship (BPSR, 2009).

According to Micah &Moses (2018), the Nigerian civil service witnessed several administrative and public service reform programmes dating as far back as pre-independence. The major reforms which this study focuses on came up as from 1999 and beyond with the heralding of the new civilian regimes of Chief Olusegun Obasanjo and Umaru Musa Yar'Adua/Goodluck Jonathan. The Nigeria vision of the public service reforms of 1999 was to positively transform the civil service into an ideal, competent, professional, development-oriented, public-spirited, and customer-friendly, capable of responding effectively and exhibiting core values of political neutrality, impartiality, integrity, loyalty, transparency and accountability that was improved upon to the point of being competitively well remunerated and innovative, according to Bureau of Public Service Reform (BPSR, 2009).

Consequently, in the words of Adekunle (2016),the reforms came in the major aspects of government administration which include: Restructuring of the civil service; Monetization policy; Civil service salary review; Overhaul of procurement system; Sustained crusade against corruption; Capacity building; ICT development; Review of the public service rules; Regulations and procedures; Rightsizing the civil service; Integrated payroll and Personnel Information System (IPPIS); and Due process. These major reforms were introduced and implemented since the inception of Obasanjo's regime and YarAdua's administration, and were targeted at realizing the vision of the public service reform agenda aforementioned.

In Nigeria all the Ministries, Departments and Agencies (MDA's) draw their personnel cost from the Consolidated Revenue Fund (CRF). The exert number of Personnel being paid in the Nation cannot be easily ascertained due to non-availability of required and necessary information. As a result of none availability of the exert number of Public servants in the country, it has become difficult for government to have an accurate wage data for planning and budgeting purpose.The IPPIS project as the core subject of this study started as a world Bank-assisted programme under the Economic Reforms and Governance Project (ERGP) and was instituted in 2006 to provide a reliable and comprehensive database for the public service to facilitate manpower planning; eliminate records and payroll fraud; facilitate easy storage, update and retrieval of personnel records for administrative and pension processes; and facilitate staff remuneration payment with minimal leakages and wastages. The Integrated Personnel and Payroll Information System (IPPIS) project seeks to resolve this and also reduce the Federal Government expenditure on Overheads. In 2007, the Federal Government of Nigeria and the World Bank initiated Integrated Personnel and Payroll Information System (Bhoi, 2017).

Englewood (2018) contends that amongst the objectives of the reforms of Government is to entrench transparency and accountability in the public service Human Resources (HR) records and payroll administration. Successive Government has observed gross inadequacies in the payroll and personnel records in the public service. Several efforts have been made to reduce these challenges, but it tends to worsen with time, resulting to greater difference in accessing reliable data for human resources planning and management, chaotic state of pension administration; 'ghost worker' syndrome and various forms of payroll and credential fraud.

Ghost worker syndrome is not a new thing in Nigerian Public service, where a non existing employee is being paid monthly. There are multiple payments of emoluments to a single employee and credentials are falsified. People have access to their age of retirement. It is a big challenge, that at this age when almost every aspect of the world economy is computerized, Nigeria is still depending on manual records for her personnel and payroll information. Workers data are kept in paper files, their salaries are calculated manually and as such mistakes and fraud in form of overpayment, underpayment and payment of ghost workers always occur. Government of Nigeria does not have the accurate number of civil servants and her budget is always an estimate. This has created some loop holes, whereby some ministries budget more than they require and use the excess for some other things other than payment of salary and allowances. In the insight of the above, this study tends to examine the effect of Integrated Personnel and Payroll Information System on reduction of fraud in Nigerian public service with preference to the Federal Ministry of Finance, Budget and national planning Abuja.

## II. CONCEPTUAL REVIEW

### A. ELECTRONIC GOVERNANCE

E- Governance refers to the use of internet technology as a platform to exchanging information, providing services and transacting with citizens, Business and other arms of government. E-governance is also a democratic practice that is gradually gaining universal acceptance and applicability. It refers to a governmental type aimed at achieving effective service delivery from government to citizens, moving governance from traditionalist bureaucratization to modernist participatory administration. E-governance is not just merely computerizing existing government; it is transforming the existing government. E-governance is the ICT-enabled route to achieving good governance.

The application of ICT to disseminate information to the citizens, businesses and among sections, units or departments of government, faster and better delivery of public services, improving internal efficiency, cost reduction, boosting income, reorganising administrative processes for improved quality of services (UN, 2005). Similarly, e-governance is the process of enhancing governance system through the application of ICT within and without the various levels of government (Okot-Uma, 2000).In a similar vein, Backus (2001), views e- governance as the use of electronic means in the network of relationship between government and the public, government and businesses, as well as in operations within governmental systems to simplify and improve democracy, government and business aspects of governance. Gil-Garcia and Luna-Reyes (2006) aligned their perception of e-governance to the foregoing, when they assert that enhancing managerial effectiveness, promoting democratic values and

mechanisms, a regulatory framework aimed at initiating intensive information and the advancement of knowledge society via the use of ICT is e-governance. Closely related to the above, E-governance is the performance of governance using the electronic gadgets to disseminate information that are characterised with speed, efficiency and transparency to the citizens and agencies of government for performing government administrative activities (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2005).

Deducing from the above, electronic governance is the use of electronic media in governance to facilitate data storage, accessibility, transparency and interaction between and among levels, organs of governments and the public which include business organisations and the citizens. All the definitions cited above corroborate the fact that E-governance entails the use of electronic media in governance to facilitate the interface between and among segments within and without the government. Kariuki and Kiragu (2011), identify the different interactions that exist in e-governance to include systems and services between government to citizens (G2C), Government to Business (G2B), Government to Government (G2G) and Government to Employees (G2E). Out of the listed levels of interactions, IPPIS can be categorised under Government to Employees (G2E), which denotes a regular interface between the government and its employees. This interaction is not a one way traffic mode between the government and the employees. It is a dual mode relationship to help employees maintain communication with the government and their own colleagues using online tools, sources and articles. With this arrangement, documents can now be stored and shared with other colleagues online. Paperlessness of the office and the ease with which to send documents back and forth withcolleagues across the globe as substitute to printouts are other accrued advantages. In addition, personnel records of employees are maintained with the aid of a software via the interface of G2E. The software helps keep all personnel information in one location and also promotes regular update of personnel information such as social security numbers, tax information, current address and other information (https://en.wikipedia.org/wiki/E- governance). IPPIS as an example of G2E, deals typically with personnel and payroll related issues. It keeps vital information such as names, addresses, employment information of employees, and also a good interactive framework for calculating and printing payroll checks, as its operational focus, is majorly on electronic personnel records and electronic payment (Chima, Ahmadu and Folorunsho 2019). HR/payroll database integration automates many of the functions of payroll, saving time and ensuring correct accounting and prompt payment of salaries. From the above, it can be deduced that IPPIS is an aspect of electronic governance.

*B. The Concept of Integrated Payroll and Personnel Information System (IPPIS)*

The Integrated Payroll and Personnel Information System (IPPIS) is information Communications Technology (ICT) based computerized Human Resource and accounting Management Information System project initiated by the Federal Government of Nigeria (FGN) to improve the effectiveness and efficiency of payroll administration for its Ministries, Departments and Agencies (IPPIS, OAGF, 2019). IPPIS provides a platform for computer application in government payroll management as it calculates each employees monthly basic pay, bonuses, arrears, national housing fund and pension contributions.

According to Nwaodu *et al* (2014),The IPPIS introduced in the Federal Service was a major step towards reforming and transforming the service for better service delivery in the country. The IPPIS is an enterprise-wide, integrated, computerize and efficient human resource management information system that is used by the ministries, departments, agencies and local governments to undertake human resource management activities from recruitment to separation, including payroll and pension processing. The IPPIS is designed to make use of modern information and communication technologies to help the government manage the human resource of the public service more efficiently and effectively (Kinyeki, 2015).

The IPPIS, which is an ICT-based system, is a principal component of the public sector reform initiative that was designed to achieve a set of objectives. These objectives include to:

- Facilitate planning: Having all the civil service records in a centralized database will aid manpower planning as well as assist in providing information for decision making;
- Aid Budgeting: An accurate recurrent expenditure on emoluments could be planned and budgeted for on a yearly basis;
- Monitor the monthly payment of staff emoluments against what was provided for in the budget to ensure convenient staff remuneration payment with minimum leakages and wastages;
- Ensure database integrity so that personnel information are correct and intact using database integrity constraints that built into ICT-based system that once entered cannot be manipulated by unauthorized This will prevent alteration of sensitive employee data like dates of birth and appointment;
- Eliminate payroll fraud, such as the ghost workers syndrome where a non-existing employee is being paid monthly; multiple payments of emoluments to a single employee; and credentials falsification;
- Facilitate easy storage, uploading and retrieval of personnel records for administrative and pension processes;
- Provide a good working environment that is conducive and supportive to the operations of modern, proactive service that is innovative and technologically driven (OAGF: IPPIS Operational Manual, 2008).

## C. The Concept of Fraud

Larson (2018) defined fraud as an act that is intentionally deceptive and is designed to provide the perpetrator with an unlawful gain or access to resources or to deny a right to a victim. Fraud involves the false representation of facts, whether by intentionally withholding important information or providing false statements to another party for the specific purpose of gaining something that may not have been provided without the deception.

However, the Payroll fraud and ghost workers fraud are arguably the biggest and most persistent type of fraud in Nigeria costing the government hundreds of billions of Nigeria every year in lost revenue to the fraudsters. Osisioma*et al* (2016) defined Ghost workers and payroll fraud as processes of employee impersonations that have salary cost implication on the government. It includes all illegal, unauthorized, unqualified, fictitious and non-existing staff that makes salary claims from the government coffers. The foregoing implies that underage, overage, backdated employments, inherited employments, unqualified staff and unauthorized staffs even though they report for work daily; are categorized as part of ghost workers and payroll fraud in the public service. In some instances, these fraudulent public officeholders forge the necessary documents and authorizations to add an employee on the payroll.

Ghost workers are therefore nonexistent employees whose names and other particulars are kept on the organization's payroll and salaries paid to them but received by others (most likely the fraud) who had the name included or left in the register. Ghost workers may be kept on the payroll if payroll managers delay in removing the names of individuals who no longer staff of the organization from the payroll (Lekubu, 2013). In some cases, payroll clerks may include names of fictitious or separated employees on the payroll, forge their signatures, and collect the salaries on their behalf (Izedonmi&Ibadin, 2012).

And due to the large number of employees in the public sector, head count exercises are usually conducted by governments to identify the ghost workers and remove them from the staff roll (Tanzi, 2013). But these exercises hardly yield the required results again because of collusion by insiders.

## D. THE NIGERIAN CIVIL SERVICE

Civil service refers to all organization that exists as part of government's machinery for implementing policies and programmes as well as for delivering services to meet the need of citizens. According to Smith (2007),the civil service is part of the public service. It is often referred to as the "core" service because it directly services the executive branch of government. Accordingly, officers in ministries and extra ministerial departments and those whose recruitment and career progression are determined by the Federation and the Federal Civil Service Commission are civil servants.

The public service or the public bureaucracy on the other hand, is often referred to as the "enlarged" service. It is made up of other service outside of the core civil service, and inclusive of the civil service, to encompass the following:

- The police service and other security agencies.
- The armed forces (army, navy, air force)
- The national (or state) assembly services
- The judicial service
- Parastatals and agencies-regulatory agencies, educational institutions, research institutes, infrastructure agencies, statutory agencies and other services providers owned by government and established by Acts of the National Assembly.
- Companies or enterprise in which Government or its agency owns controlling shares or interest (Uzochukwu, 2018).

## E. WAYS INTEGRATED PERSONNEL AND PAYROLL INFORMATION SYSTEM HAS IMPACTED ON FRAUD REDUCTION IN NIGERIAN PUBLIC SERVICE

The Integrated Payroll and Personnel Information System (IPPIS) is one of the transformation agenda of the federal government of Nigeria. It has an aim to create a centralized database system for Nigerian public service with a single, accurate source of employee information that provides integration with other business applications. IPPIS commenced in April 2007 and by year 2010, it had been implemented in around 17 Ministries, Departments and Agencies. But prior to its commencement by the federal government, there were a lot of challenges faced, particularly personnel information and payroll. Launched by the former Coordinating Minister for the Economy, Dr Ngozi Okonjo-Iweala, the system uncovered most of the fraud using biometric data capture machine. Because ghosts' workers have no fingerprints, the bubble burst for those behind the inflated staff figures. The fake workers who have regularly survived the pay at sight charade of the ministries, departments and agencies (MDAs) stood out like sore thumbs. The level of collusion here is really the issue and until such issues are sorted out, government will continue to lose billions of Naira to unscrupulous officials (Agbatogun, 2019).

The introduction of the IPPIS in the Nigerian civil service has immensely contributed to the reduction of fraud as regards payroll fraud and ghost workers in the country's public service. The Nigerian Public service is reportedly heavily burdened with a fraud especially payroll fraud and ghost workers who not only unexpectedly write job applications and present themselves for interviews, but who also open bank accounts and collect salaries, despite their human shortcomings! Curiously, the CBN"s "know your customers" directive to banks was obviously no deterrent to the establishment of bank accounts for such ghosts (Micah & Moses, 2018)..

In July 2011, the Rivers State Universal Basic Education Board reported losses of N2.4bn annually to 1477 ghost workers, while the National Identity Management Commission, also revealed that, after conducting a biometric data exercise, it had uncovered 4000 ghost workers out of about 10,300 employees on its payroll. Furthermore, the Ekiti State Governor, Dr. Kayode Fayemi, in the first tenor also observed ghost workers, prior to his administration, Ekiti State government lost over N3bn annually to ghost workers out of a projected annual budget of N80bn (Garbade, 2018).Unfortunately, the federal government is not immune to such fraudulent revenue leakages; Indeed, in 2001, the incumbent Accountant General of the Federation, Chief Joseph Naiyeju, reported the discovery of 40,000 ghost workers following a man-power verification exercise. Similarly, 6000 ghost workers were detected after the completion of a staff audit.

In May 2009, the House of Representative Committees on Customs and Excise also discovered that about 50% of the 20,000 workforce in the Nigeria Customs Service were ghost worker. Former Finance Minister, Mr. Olusegun Aganga, in July 2011, reported that the federal government had removed a total of 43,000 ghost workers from the old payroll of 112,000 employees in several MDAs, between 2010 and 2011, through the implementation of the IPPIS. Curiously, the Chairman of the Nigeria Pension Reform Task team, Ahaji Abdulrasheed Maina disclosed in February 2012, that on completion of a successful nationwide biometric verification of pensioners, his team detected 71,133 fake pensioners. Furthermore, N151bn fraud was also uncovered in Pension offices across the country. Inexplicably, despite the available documentary evidence, especially from banks, none of the identified beneficiaries of the ghost worker scam has ever been prosecuted and convicted or indeed, constrained to return either all the stolen funds or forfeit all assets or property derived there from. Inexplicably, over 3years, thereafter, these invisible „blood sucking" demons still oppressively flourish and haunt us, as the following, more recent media reports confirm. Federal Government probes 11,000 ghost workers" (King, 2016).

IPPIS is targeted at eliminating a financial form of corruption such as ghost workers, multiple salaries, overpayment of salaries and undue entitlements. There are shreds of evidence across other African countries that show that the implementation of IPPIS is effective in detecting and deterring financial fraud. With particular reference to Nigeria just like other African countries presented above, Murana*et al*, (2016) contend that the introduction of IPPIS as a reform measure in the public financial management system in Nigeria has achieved a lot. The table 2.1 below presents the details of this assertion.

| System Name | Period | Effect on Ghost Workers | Effect on payroll | Source |
|---|---|---|---|---|
| IPPIS | 2010 | 43, 000 ghost workers removed | 12 billion was saved. It reduced government monthly payroll by N2.2 billion | Gabriel (2011) |
| | 2013 | 46,821 ghost workers in 215 Ministries, Departments and Agencies | | Leyira& Temple (2018) |
| | 2014 | The number of ghost workers removed rose to 60,000 | | Bola &Kauther (2016) |
| | 2016 | | N185billion saved since inception | Adekunle (2016) |

Table 1: Effect On Ghost Workers

Source: Researcher's construct 2022

From the table 1 above, IPPIS as outlined by Gabriel (2011) saved N12 billion in the first phase alone as a result of eliminating payroll fraud. Also, it reduced the government monthly payroll by N2.2 billion. From this, it is evident that when there is a reduction in fraud, there will be a corresponding reduction in the amount budgeted for payment in salaries. Moreover, IPPIS led to the removal of forty-three thousand (43,000) ghost workers from various MDAs at an annual cost of over N12 billion (Kadiri, 2018). However, it was not clear how long the ghost workers had been on the payroll and who had been collecting salaries and fringe benefits on behalf of the ghost workers.

Also, Okafor (2012), asserted that seventeen thousand (17,000) fraudulent workers were eliminated from the Power Holding Company of Nigeria (PHCN) payroll alone. Moreover, Bola &Kauther (2016) reported that as of 2014, the ghost names removed, had risen to sixty thousand (60, 000) while Adekunle (2016), revealed that towards the end of 2016, over sixty-five thousand (65,000) ghost workers have been removed and N185 billion was saved by the government since its inception. Despite the success story of IPPIS, Bola (2016), reported that a civil servant was detected to be collecting 20 salaries from different places. This, according to Bola et al was detected courtesy of the application of Bank Verification Number (BVN) along with IPPIS in certain MDAs where IPPIS was introduced.

The above shows that if BVN was not introduced, the particular civil servant may not have been detected despite the existence of IPPIS. Notwithstanding the shortcomings noticed in Nigeria and other countries cited above, the policy has proven its usefulness in exposing and deterring certain financial crimes committed in the Public Service, which can ardently be reported to have contributed to reducing corruption in Nigeria and in other countries where the initiative is being implemented (Murana*et al*, 2016).

## F. FACTORS MILITATING AGAINST THE EFFECTIVE IMPLEMENTATION OF IPPIS IN THE REDUCTION OF FRAUD IN NIGERIAN PUBLIC SERVICE

It is pertinent to note that, to a great extent, IPPIS has its enormous advantages and benefits, but however, is no doubt without its challenges. As noted by Mauldin & Ruchala, obvious challenges marred the effectiveness of IPPIS implementation till date. However, some of these challenges were either as a result of the nation under development in terms of technological infrastructure and expertise or simply the unwillingness of the authority to fully carry out the implementation. Some of the challenges enumerated by Ibrahim et al (2017) and Mauldin & Ruchala (2016) are:

- The noncompliance of all MDA's to join the system.
- Incompetence on the part of the IPPIS staff, which reflects in the computation of inaccurate data by officers when filling IPPIS forms.
- IPPIS cumbersomeness in getting errors committed on the system corrected.
- Workers waiting endlessly for errors made on their accounts to be corrected.
- Difficulty in getting information from the IPPIS office as whatever one gets is almost final. Sometimes there are human errors which could lead to omission in salary payments.
- Also, because IPPIS is a garbage in garbage out system, public servants who make errors in their data input are sure to get errors on their records and subsequently get affected.
- Lack of sufficient skills transfer to government personnel which prolong consultants stay on the project.
- Poor state of supporting infrastructure such as low internet penetration, technological barrier etc.
- Problem associated with transfer of pay point due to the posting of employees from IPPIS MDA to non-IPPIS MDA.
- Resistance from stake holders which have prolonged implementation, etc.

## G. THEORETICAL SYNTHESIS

Fraud diamond theory as proposed by Wolfe and Hermanson(2004) was adopted for the study. They posit that fraud is occurs due to four factors. These are the: Incentive/Pressure, Opportunity, capability and Rationalization. According to Wolfe and Hermanson (2004), most frauds would not occur without the right person with the right ability to carry out the fraud. Furthermore, the right person will have to observe and take advantage of an "Opportunity to commit the fraud considering that and incentive and rationalization can draw the person toward it. But the person must have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through, not just once, but time and time again. A closer study of the fraud syndrome indicates that most of the factor as espoused by Wolfe and Hermanson(2004) are present in the public service fraud environment in Nigeria. For Example, the prior system of manual personnel and wage management system basically was an open invitation to commit fraud. Thus, the overworked manual system was an opportunity. Capability to commit the fraud is provided by insiders in positions of authority who see the extra money to be made as an incentive while it is rationalized by the difficult economic environment and other corruption going up higher up in the food chain of the government.

## III. RESEARCH METHODOLOGY

The descriptive survey design was employed in the study. The data for this study were gathered through primary and secondary sources. The primary data were derived from the questionnaire administered to the 223 employees of the Federal Ministry of Finance, Budget and National Planning Abuja of which their responses were elicited in line with the subject matter of the research study. While the secondary data were sourced from textbooks, newspaper, magazines and seminar papers, journals and other unpublished papers.

### A. Data Analysis and Discussion

The raw scores gathered from the responses of our respondents were assembled, tallied and their frequency and percentage worked out. These frequencies and percentages were used to present the research questions that guided the study. The research questions were presented in likert scale form. The three hypotheses postulated for the study were tested using Chi-Square($x^2$) at significant level of 0.05.

### B. TEST OF HYPOTHESIS.

The responses in selected questions of the questions of the questionnaire were used in testing of the hypothesis. The criteria for decision are: Accept $H_1$: if the calculated value of the chi square is less than the critical value. Reject $H_0$: If the calculated value of chi square is greater than the critical value.

**Hypothesis One**

Hi: The implementation of Integrated Personnel and Payroll Information System has to a great extent eliminated payroll fraud in the Federal Ministry of Finance, Abuja

**Degree of Freedom**

df = (r-1) x (c-1)
Where R=5, c=4
df = (5-1) (4-1)
= 4 x 3 = 12
df = 12

If 0.05 level of significance at 12 degree of freedom, the critical value $X^2$ otherwise called chi-square tabulated ($X^2$ tab) is given as = 21.026

| Cell location | Fo | Fe | fo-fe | $\sum(fo-fe)^2$ | $\sum(fo-fe)^2$ Fe |
|---|---|---|---|---|---|
| R1C1 | 50 | 41.6 | 8.4 | 70.56 | 1.70 |
| R1C2 | 50 | 41.6 | 8.4 | 70.56 | 1.70 |
| R1C3 | 10 | 8.3 | 1.7 | 2.89 | 0.35 |
| R1C4 | 10 | 8.3 | 1.7 | 2.89 | 0.35 |
| R2C1 | 57 | 47.5 | 9.5 | 90.25 | 1.9 |
| R2C2 | 38 | 31.7 | 6.3 | 39.69 | 1.25 |
| R2C3 | 3 | 2.5 | 0.5 | 0.25 | 0.1 |
| R2C4 | 22 | 18.3 | 3.7 | 13.69 | 0.75 |
| R3C1 | 27 | 22.5 | 4.5 | 20.25 | 0.9 |
| R3C2 | 30 | 25 | 5 | 25 | 1 |
| R3C3 | 33 | 27.5 | 5.5 | 30.25 | 1.1 |
| R3C4 | 30 | 25 | 5 | 25 | 1 |
| R4C1 | 100 | 83.3 | 16.7 | 278.9 | 3.35 |
| R4C2 | 10 | 8.3 | 1.7 | 2.89 | 0.35 |
| R4C3 | 5 | 4.7 | 0.3 | 0.09 | 0.01 |
| R4C4 | 5 | 4.7 | 0.3 | 0.09 | 0.01 |
| R5C1 | 45 | 37.5 | 7.5 | 56.25 | 1.5 |
| R5C2 | 33 | 27.5 | 5.5 | 30.25 | 1.1 |
| R5C3 | 15 | 12.5 | 2.5 | 6.25 | 0.5 |
| R5C4 | 27 | 22.5 | 4.5 | 20.25 | 0.9 |
| TOTAL | 600 | | | | 19.82 |

Table 2: CALCULATED CHI-SQUARE TABLE

**Calculated value = 19.82**

**Critical Value = 21.026**

**Decision:-** Result. Comparing the calculated value of 19.82 against the critical value of 21.026 at ( 0.05 level of significance at 18 degree of freedom ) the null hypothesis was rejected. Thus the alternate hypothesis was accepted which states that the implementation of Integrated Personnel and Payroll Information System has significantly eliminated payroll fraud in the Federal Ministry of Finance, Abuja.

**Hypotheses 2:**

Hi: The Integrated Personnel and Payroll Information System have enhanced the accurate payment of salaries and remittance of payroll deductions of employees of the Federal Ministry of Finance, Abuja to third parties.

Ho: The Integrated Personnel and Payroll Information System have not enhanced the accurate payment of salaries and remittance of payroll deductions of employees of the Federal Ministry of Finance, Abuja to third parties.

**Degree of Freedom**
df = (r-1) x (c-1)
Where R=7, c=4
df = (7-1) (4-1)
   = 6 x 3 = 18
df = 18

If 0.05 level of significance at 18 degree of freedom, the critical value $X^2$ otherwise called chi-square tabulated ($X^2$ tab) is given as = 28.71

| Cell location | Fo | Fe | fo-fe | $\sum(fo-fe)^2$ | $\sum\dfrac{(fo-fe)^2}{Fe}$ |
|---|---|---|---|---|---|
| R1C1 | 43 | 35.8 | 7.2 | 51.84 | 1.45 |
| R1C2 | 37 | 30.8 | 6.2 | 38.44 | 1.25 |
| R1C3 | 23 | 19.2 | 3.8 | 14.44 | 0.75 |
| R1C4 | 17 | 14.7 | 2.3 | 5.29 | 0.36 |
| R2C1 | 55 | 45.8 | 9.2 | 84.64 | 1.85 |
| R2C2 | 40 | 33.3 | 6.7 | 44.89 | 1.35 |
| R2C3 | 20 | 16.7 | 3.3 | 10.89 | 0.65 |
| R2C4 | 5 | 4.2 | 0.8 | 0.64 | 0.15 |
| R3C1 | 70 | 58.3 | 11.7 | 136.89 | 2.35 |
| R3C2 | 40 | 33.3 | 6.7 | 44.89 | 1.35 |
| R3C3 | 5 | 4.2 | 0.8 | 0.64 | 0.15 |
| R3C4 | 5 | 4.2 | 0.8 | 0.64 | 0.15 |
| R4C1 | 39 | 32.5 | 6.5 | 42.25 | 1.3 |
| R4C2 | 37 | 30.8 | 6.2 | 38.44 | 1.25 |
| R4C3 | 23 | 19.2 | 3.8 | 14.44 | 0.75 |
| R4C4 | 21 | 17.5 | 3.5 | 12.25 | 0.7 |
| R5C1 | 40 | 33.3 | 6.7 | 44.89 | 1.35 |
| R5C2 | 50 | 41.7 | 8.3 | 68.89 | 1.65 |
| R5C3 | 20 | 16.7 | 3.3 | 10.89 | 0.65 |
| R5C4 | 10 | 8.3 | 1.7 | 2.89 | 0.35 |
| R6C1 | 35 | 29.2 | 5.8 | 33.64 | 1.15 |
| R6C2 | 47 | 39.2 | 7.8 | 60.84 | 1.55 |
| R6C3 | 25 | 20.8 | 4.2 | 17.64 | 0.85 |
| R6C4 | 13 | 10.8 | 2.2 | 4.84 | 0.45 |
| R7C1 | 38 | 31.7 | 6.3 | 39.69 | 1.25 |
| R7C2 | 46 | 38.3 | 7.7 | 59.29 | 1.55 |
| R7C3 | 22 | 18.3 | 3.7 | 13.69 | 0.75 |
| R7C4 | 14 | 11.7 | 2.3 | 5.29 | 0.45 |
| TOTAL | 840 | | | | 27.81 |

Table 3: CALCULATED CHI-SQUARE TABLE

**Calculated value = 27.81**

**Critical Value = 28.87**

**Decision.** Comparing the calculated value of 27.81 against the critical value of 28.87 at ( 0.05 level of significance at 18 degree of freedom ) the null hypothesis was rejected. Therefore, the alternate hypothesis accepted which states that the Integrated Personnel and Payroll Information System have enhanced the accurate payment of salaries and remittance of payroll deductions of employees of the Federal Ministry of Finance, Abuja to third parties;

**Hypotheses 3**

Hi: Integrated personnel and payroll information system has significantly enhanced the management of Federal staff records

Ho: Integrated personnel and payroll information system has not enhance the management of Federal staff records

Degree of Freedom
df = (r-1) x (c-1)
Where R=5, c=4
df = (5-1) (4-1)
    = 4 x 3 = 12
df = 12

If 0.05 level of significance at 12 degree of freedom, the critical value $X^2$ otherwise called chi-square tabulated ($X^2$ tab) is given as = 21.026

| Cell location | Fo | Fe | fo-fe | $\sum$(fo-fe)² | $\sum$(fo-fe)²  Fe |
|---|---|---|---|---|---|
| R1C1 | 43 | 35.8 | 7.2 | 51.84 | 1.45 |
| R1C2 | 37 | 30.8 | 6.2 | 38.44 | 1.25 |
| R1C3 | 23 | 19.2 | 3.8 | 14.44 | 0.75 |
| R1C4 | 17 | 14.7 | 2.3 | 5.29 | 0.36 |
| R2C1 | 55 | 45.8 | 9.2 | 84.64 | 1.85 |
| R2C2 | 40 | 33.3 | 6.7 | 44.89 | 1.35 |
| R2C3 | 20 | 16.7 | 3.3 | 10.89 | 0.65 |
| R2C4 | 5 | 4.2 | 0.8 | 0.64 | 0.15 |
| R3C1 | 70 | 58.3 | 11.7 | 136.89 | 2.35 |
| R3C2 | 40 | 33.3 | 6.7 | 44.89 | 1.35 |
| R3C3 | 5 | 4.2 | 0.8 | 0.64 | 0.15 |
| R3C4 | 5 | 4.2 | 0.8 | 0.64 | 0.15 |
| R4C1 | 100 | 83.3 | 16.7 | 278.9 | 3.35 |
| R4C2 | 10 | 8.3 | 1.7 | 2.89 | 0.35 |
| R4C3 | 5 | 4.7 | 0.3 | 0.09 | 0.01 |
| R4C4 | 5 | 4.7 | 0.3 | 0.09 | 0.01 |
| R5C1 | 57 | 47.5 | 9.5 | 90.25 | 1.9 |
| R5C2 | 50 | 41.7 | 8.3 | 68.89 | 1.7 |
| R5C3 | 10 | 8.3 | 1.7 | 2.89 | 0.35 |
| R5C4 | 3 | 2.5 | 0.5 | 0.25 | 0.1 |
| TOTAL | 600 | | | | 19.82 |

Table 4: CALCULATED CHI-SQUARE TABLE

**Calculated value = 20.05**

**Critical Value = 21.026**

**Decision:** Comparing the calculated value of 20.05 against the critical value of 21.026 at ( 0.05 level of significance at 18 degree of freedom ) the null hypothesis was rejected. Therefore, the alternate hypothesis is accepted which states that Integrated personnel and payroll information system has significantly enhanced the management of Federal staff records.

## IV. DISCUSSION OF FINDINGS

Our first finding revealed that the implementation of IPPIS has to a large extent reduced payroll fraud in the Federal Ministry of Finance, Budget and National Planning Abuja; the implementation of IPPIS in the Federal Ministry of Finance, Abuja led to the uncover of most of the payroll fraud using biometric data capture machine; IPPIS replaced the ineffective manual and file-based personnel system by the Federal Ministry of Finance, Abuja operated which promotes fraud in the Ministry; IPPIS usage in the Federal Ministry of Finance, Abuja reduced fraudulent financial practices in the Ministry; and that the massive financial losses occasioned by payroll fraud are gradually being discovered and eliminated by reason of the introduction of IPPIS in the Federal Ministry of Finance, Abuja

The second finding discovered that IPPIS have enhanced the accurate payment of salaries and remittance of payroll deductions of employees of the Ministry to third parties; IPPIS enhanced the accurate payment of salaries and remittance of payroll deductions of employees of the Ministry to third parties; IPPIS is effective in detecting and deterring financial fraud linking payment of salaries and remittance

The third finding revealed that integrated personnel and payroll information system have significantly enhanced the management of Federal staff records in the ministry of finance, Budget and National planning Abuja.

## V. CONCLUSION AND POLICY RECOMMENDATION

Based on the aforementioned findings, the paper found empirical evidence to conclude that the implementation of IPPIS has to a great extent reduced payroll fraud in the Federal Ministry of Finance, Abuja and enhanced Transparency in Payroll administration in the Nigerian Civil Service. The use of ICT in governance is generally seen as a necessary tool to ensure transparency in the process, accountability for activities and a faster means of the decision-making process. Government all of the world have accepted electronic governance as a new way of leadership, restructuring the administrative process,
improving internal efficiency, reducing cost and a new way of delivering information and service.This paper further recommends that Government should continue to ensure strict implementation of the Integrated personnel and payroll information system program in order to completely eliminate payroll fraud in not just the Federal Ministry of Finance, Abuja but in all the MDAs; ensure strict compliance with laid down rules and regulations governing the operation of IPPIS as well as compliance with the provisions of Financial Regulations and the Civil Service Rule, so as to continuously detect and block any loophole that will give room to fraud; and the government should ensure that all the MDAs , state and even Local Government

staff enroll in IPPIS to help further reduce the Government Overheads.

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