Governance and Management Review (GMR)

Vol.4, No. 2, July-Dec 2019

Implementation of Digital Integrated Personnel and Payroll Information System: Lesson from Kenya, Ghana and Nigeria

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ABSTRACT

Management of public finance in Africa and even beyond has been suffering a setback for quite some decades now. This is partly because the management of public finance was based on manual and semi-manual operations. This situation gave birth to several personnel and payroll irregularities and fraudulent behaviours. To mitigate against this ugly scenario, countries in Africa deemed it fit that financial services in the public sectors be migrated to be digitally-based. This informed the advent of digital integrated personnel and payroll information systems of most African countries. The introduction of the electronic financial governance system in the public sector of the African economies was immensely clouded with several shortcomings. It is because of this, that this paper attempts to examine the effectiveness, identify the challenges and the mitigating factors put in place to cushion the effects of the challenges using IPPIS or IPPD as the case might be. Using three African countries, namely, Kenya, Ghana and Nigeria, the paper found via views articulated from journal articles, newspapers and a few published works that IPPIS or IPPD has achieved some level of success in term of accuracy, timeliness, reliability in personnel and financial data generation and processing. These helped in weeding out ghost workers, resulting in huge financial savings for the government. Notwithstanding, pockets of challenges were found, namely, lack of Oracle-based training and retraining and arbitrary posting of IPPIS staff, inability to carry out data cleansing exercise before migrating them to the digital devices, failure to introduce any relevant modules that could cover some personnel and payroll activities like staff retirement and termination of appointment. To avert these troubles, some mitigating strategies like improved version and Oracle-based system of the IPPIS or IPPD were developed. Also, there is an existing policy in some of the countries stipulating that IPPIS staff can only be posted after three years on the desk and should only be moved to a similar desk in MDAs where IPPIS is operational. The paper recommends, among others, that no technology is perfect, therefore, there is a need for continuous improvement and upgrades in the digital facilities for managing public finance to stay ahead of the challenges. Again, data cleansing exercise should be thoroughly carried out before they are migrated from paper to digital devices.

Keywords: E-Governance, Public Financial Management, Digital, Integrated Personnel, Payroll, Information System

Introduction

E-governance's relevance in improving the capacity of government organisations and the interaction with their citizens is no longer a hidden knowledge to governments across the globe (Ebrahim and Irani cited in Rabaa'i, Zogheib, ALshatti, ALjamal, 2016). Thus, it becomes a duty on the part of the government to utilize e-governance to enhance connections between citizens and the public sector via upgraded, savvy and efficient conveyance of services, information and awareness (Chen, Chins, Huang & Ching, 2006). Consequently, public sector administrations across the globe have adopted information communication technology to make service delivery and governance procedure digital-driven (International Telecommunication Union, (ITU), 2008). It is in line with the foregoing, that countries in Africa have also determined to embrace computer-based technologies in their governance processes. The governments of African countries have for a long time been particularly worried over the constant horrible backwardness in the management of their Public Finance. This is partly because information obtained from their public financial systems are undependable and untimely for decision making. Hence, governments in African countries have been progressively searching for techniques and structures to revolutionalise and enhance public financial management.

The search for a better option led to the introduction of the IPPIS or IPPD as one of the most famous financial management transformation system. Its relevance are seen from the perspective that it is prominently focused on the advancement of proficiency, viability, accountability, openness, improved security of information management and extensive financial reporting. The IPPD or IPPIS as the case might be is a digital-based platform devised to supplant the labour intensive manual and semi-manual framework, which was awkward, causing pay delays, incorrectness in deciding staffing levels and prompting financial corruption. IPPIS or IPPD includes procedures and methods targeted at organising, accumulating and handling data for effective and dynamic decision making. IPPIS or IPPD embraces processes and procedures aimed at gathering, storing and processing information for effective and efficient decision making.

Notwithstanding, there has been a public outcry that the system is not performing optimally. Therefore, using three countries, namely, Kenya, Ghana and Nigeria, this study sought to answer the following questions: how effective is the implementation of IPPIS or IPPD in the selected African countries understudy? What are the challenges affecting the implementation of IPPIS in the countries understudy? What are the mitigating strategies evolved by the various countries? The choice of the three countries was informed by the fact that they operate a similar digital payroll and personnel system known as IPPD and IPPIS respectively.

Objectives of the Study

The objectives are to:

a. Examine the effectiveness of IPPIS in managing public finance of the countries understudy;
b. Discuss the challenges affecting the implementation of IPPIS in the countries under study.
c. Identify strategies for mitigating the identified challenges in the countries under study.

Methodology

The study was exploratory since it focuses on identifying factors that influence the success stories as well as challenges of IPPIS or IPPD in managing the public financial sector of the selected countries under study. Since the paper is an exploratory study, it did not attempt to do any empirical examination. It arrives at its decision by articulating opinions from different views on the pages of national dailies and few secondary information via descriptive analysis.

Conceptual Review

E-governance

Emphasis has been shifted from the traditional way of delivering public service to a more innovative mode. The traditional model has been described to be manually inclined. Hence, the paradigms shift towards the electronic service delivery method, popularly called electronic-governance. Definitionally, Electronic-governance is: “The governance in an electronic environment. It is both governance of that environment and governance within that environment using electronic tools” (Sharman, 2004). Operationalising the foregoing definition, Sharma considers electronic governance as the utilization by government organizations of information and communication technologies (ICT), (for example, Wide Area Networks, the web, etc.) that can revolutionalise relationship between or among the nationals of a country, business, and different arms of government. It has been variously defined by the United Nations and the Council of European cited in Orihuela and Obi (2007). The United Nations characterizes it as the process of transforming information and delivery of services, enhancing citizens’ engagement in the affairs of a country, making government increasingly responsible, open and more result-oriented by the public sector through Information and Communication Technologies (ICT). The Council of Europe considers it to be: “The use of information and communication technology to raise the quality of the services government delivers to the citizens, to reinforce the connection between public officials and communities, thereby leading to a stronger and more accountable and inclusive democracy’’ (Orihuela and Obi, 2007:28).

The ultimate aims of e-governance as can be derived from above are enhanced provision of services to the taxpayers, a transformed system of collaborations with business and industries, citizens' welfare through seamless access to data, and result-oriented governmental system Additional advantages can be less fraud, expanded openness in government transitions, easy accessibility to government services, improved income generation, as well as cost reduction. The domains of electronic-governance are many. These include electronic-health, electronic-education, electronic-agriculture, e-parliament and electronic-finance.

Public Financial Management (PFM)

PFM IS a set of rules and regulations, frameworks and procedures utilized by sovereign countries (and sub-national governments), to generate income, distribute public revenues, dispense public funds, accounts for the fund and appraise results (Lawson, 2015). The objectives of PFM as can derived from above definition are as follows:

i. Ensuring total fiscal control. PFM guarantees that total degrees of tax collected and expenditure are in line with the objectives for the fiscal deficit and do not create unsustainable level of government borrowing.

ii. Again, a PFM framework ought to guarantee that the resources of the government are apportioned in consonance with vital societal needs. Put differently, that allocative efficiency is accomplished.

iii. Moreover, the PFM framework ought to guarantee that operational efficiency is accomplished. In this sense, achieving optimal value for money through the provision of public goods is the ultimate

iv. Finally, the PFM framework ought to be channeled through the normal process. This should manifest by making all data public and accessible as well as the application of governance rules like checks and balances for proper accountability.

Corroborating Lawson, it can be seen as activities that underlie all governmental affairs, spanning from generation of income; the allotment of these incomes to different sectors; determination of how the income is utilized and providing details of expended income for future reference (Simson, Sharma and Aziz, 2011). Similar, but somehow different, it has been defined as: "The system by which the financial aspects of the public services' business are directed, controlled and influenced, to support the delivery of the sector's goals"(Chartered Institute of Public Finance and Accountancy (CIPFA), 2009:17).

From the foregoing definition, PFM is explicitly oriented towards the delivery of public service. It implies that PFM is not just about financial discipline, decency and compliance. Rather, it is aimed at the management of public goods and services and attaining monetary values for public resources and stimulating socio-economic progress in the public sector, and to empower the public sector to advance and adjust to new challenging situations. Toeing a similar line with the above definitions, Allen, Hemming and Potter (2013) sees PFM as a field of study that focuses on rules and regulations, associations, frameworks and methods accessible to governments to ensure adequate security and utilization of public resources in the best possible manners. The authors of the above definitions went further to express that the focal point of PFM is beyond incomes from tax and other government incomes, borrowing and debt management, but significantly focused on how the resources are expended, particularly with regards to the public budget.

Evolving efficient as well as effective ways of managing resources (human and financial) in the public sector, results in the paradigm shift from the manual method to automated-approach across the globe. It is the same good intention that prompted governments in African countries to adopt automated measures like Digital integrated personnel and payroll information system in the various government organisations.

This section focuses on the selected countries' experience in operating the IPPIS or IPPD. Among the countries that will be captured in this segment include Kenya, Ghana and Nigeria. The choice of the three countries was informed by the fact that they operate a similar digital payroll and personnel system known as IPPD and IPPIS respectively. Thus, the need to examine the effectiveness of the digital packages in managing public finance of the countries understudy, discuss the challenges affecting the implementation of IPPIS in the countries under study, identify strategies for mitigating the challenges in the countries under study and draw lessons they could learn from one another.

The Integrated Payroll and Personnel Database (IPPD) in Kenya: An Overview

Extensive discussion on how to invent an effective payroll system in Kenya was paramount in the years 1994 and 1995 (http://unpan1.un.org/). Eventually, the Integrated Payroll and Personnel Database (IPPD) activity was initiated to address the difficulties associated with the manual method of payroll. IPPD is an electronic package that was brought on board in 2004 to supplant manual and semi-manual human resource and payroll system. Before the implementation of IPPD, the procedures were clumsy, causing pay delays, error in deciding staffing levels, prompting poor recording keeping system (DPM Reports, 2014). Therefore, IPPD as per (unpan1.un.org) was invented in the public sector of Kenya to accomplish the following specific targets. The targets are to:

i. Keep up exact and reliable individual information in the Public Service.
ii. Realize consistency in the administration of staff records in the units/sections by capturing identity card numbers, educational qualification, dates of birth and appointment dates.
iii. Get rid of delay in the payment of salary, promoting exact data capturing on staffing levels through eliminating difficulties in manual complement control, payroll, and staff registries, skill inventories and financial planning of Personal

Emoluments created by the old payment system.

iv. Avoid unnecessary expenditures previously incurred through frequent printing of papers on personnel matters.

v. Make it feasible to utilize data for speeding up decision making on such issues as discipline, evaluation of liabilities for computation of the annuity and payment of gratuity.

Before IPPD was birthed, issues like staffing, training, postings, transfer, seniority list, career progression and retirement were pretty difficult to establish. Also, determination of salary on a timely basis, implementation of statuary deduction, handling of loans request and advances and guaranteeing their recuperation was difficult to ascertain. Other issues manually processed include annual leave and yearly increments. Basic information such as educational qualification, dates of birth and appointments, identity card number, etc. were lacking in the old system. More so, bulky printouts through the Government Computer Services (GCS) which were not too useful characterized the old system. Data integrity was also at stake as payroll information from Ministries, Departments and Agencies were submitted via diskettes besides the fact that they are not financially savvy. Due to a lack of stable network before the introduction IPPD, framework could not frameworks could not share data. Hence, data gathering and entry were duplicated resulting in time wastage, inconsistent and unreliable service delivery (unpan1.un.org).

However, after the introduction of IPPD, the following success stories were recorded according to (unpan1.un.org). Personnel information was reliably, accurately and timely made available for decision making which led to efficient and effective performance in the system. This achievement produces other results such as speedy data generation and processing that led to paperless offices as against the pre-IPPD era. The quest for more space was no longer tenable as large data can be retrieved, managed and stored efficiently unlike in the paper files. Records were more secured compared with the former. The danger of wrecking data which was a typical element in the manual framework was also apparently limited under the IPPD. Aside from that, errors in report generation were reduced, and report generation also became an automatic exercise. IPPD can synchronize data, making similar the complement statistics with the payroll and individual emoluments budget report.

The system is unique in Government human resource and payroll data processing in Kenya because it is used to undertake pay reform, competency analysis, staffing norms, and many critical processes of HR management and payroll. Given its great usefulness, the government of Kenya in the last decade devoted considerable resources to support its redevelopment which involves improving the in-house developed software, as well as training and building the capacity of the public servants. In 2014, DPM started work to introduce the Government Human Resource Information System (GHRIS), a new version of IPPD. Currently, the IPPD embraces processes and procedures aimed at gathering, storing and processing information for effective and efficient decision making. The system is decentralized in all the ministries and has modules that address staff establishment, payroll, leave management and discipline (DPM cited in Kinyeki, 2015).

The Integrated Payroll And Personnel Database (IPPD) in Ghana: An Overview

Since 1995 upwards, payroll has been one of the significant reform instrument in the public financial management of Ghana. Managing public finance effectively prompted the introduction of the Integrated Personnel and Payroll Database (IPPD) framework. It was launched as an integrated computer system to handle staff data for government employees, teachers and health personnel and to improve workforce and payroll control. The initial IPPD was provided by Consillers en Gestion et Informatique (CGI) of Paris, France and executed within the period of three (3) years (1993 to 1995). The data inputted into the IPPD were gotten from staff records in the files, however, the data obtained from these records were considered to be deficient or inaccurate, as well as inability to cover non-pensionable posts. Pension data, for instance, were obtained from the Controller and Accountant General Department (CAGD) pension system. This prompted the disappointment got from the first IPPD in such instance like a date could be entered and approved for a date of birth, either in error or as a default. Individual identities were difficult to know as the full names of employees could not be inputted into the system. This generated a lot of confusion. Status of employees, for instance, could be recorded inactive with no matching effective date. Also, the system was not users' friendly, and also has dysfunctional report generation ability. Due to the foregoing abnormalities or inconsistencies, the system, on the whole, has to be shut down for at least fourteen days on a monthly basis. Despite the shortcomings, substantial effort and creativity were engendered to keep the system functional and ongoing. Part of the effort was the replacement of the initial IPPD with an oracle-based package, called IPPD2. This IPPD2 provided fortified human resource management functionality. Unfortunately, data cleansing exercise was not done before old data considered unreliable were migrated from IPPD1 to IPPD2. This invariably suggests that the inaccurate data were inherited with its challenges into the IPPD2. Verification exercise started in 2003 to ascertain the reliability of the data moved into IPPD2 by Accountant General's Department, for instance, to address mistakes in dates of birth. However, the exercise was truncated partly because of the paucity of funds for the acquisition of network infrastructure, workstation, hardware, installation of IPPD2 in MDAs. On the whole, no huge progress was made on the IPPD2 project.

Some of the ugly tragedies that followed in 2003 due to the truncation of the development of IPPD2 were illegitimate payment of unmerited salary to the tune of ¢3.25 billion to staff. Besides, an increase of ¢1.18 billion was detected by the Auditor-General despite the usage of IPPD2 (International Record Management, 2008). Given the foregoing, it was deemed fit to re-examine the IPPD2 project with donor partners in 2004. While the review lapsed, salary payment was delayed for some months, and that portends that its collapse was inescapable. Without mincing words, the first re-examination brought huge success by ending manual payments as well as the introduction of payroll discipline via the issuance of ID number. Despite this success story, the staff strength of government employees was unknown. It was not possible to know the staff's strength due to questionable and fragmented data and procedural error in updating the payroll. Consequently, the system was marred with irregularities and fraud as submitted by Auditor General's Reports (International Record Management, 2008). To worsen the situation, the personnel records at the disposal of the employing authorities were poor in quality, containing incomplete contents and above all the records were not accessible. This shows that the records were not properly documented. A 'Public Sector Employee Census' carried out in 2003 had it that there was no single destination where information related to government employees was available. Yet, their salaries were paid from the Government of Ghana's Consolidated Fund.

Apart from the above, staff files and job titles were missing or were not available for many staff. Consequently, personnel issues were treated on a verbal basis as opposed to the use of archival documents. This increased the number of ghost workers due to the discrepancies between the list prepared locally and the one submitted from the Ministries. Apparently, this suggests that the centre was not in charge. The inherent danger here is that, workers were paid without proper verification with regards to their status as genuine staff or not. This scenario prompted payroll irregularities and fraud courtesy of procedural errors, poor record-keeping, intrigues among government employees, weak internal control system of the personnel and payroll records. Despite all these challenges, the government considers it crucial to improving personnel and payroll management. In an attempt to achieve this, the government puts purity of data or data cleansing as a top priority in the IPPD as a strategy and basic condition for personnel and payroll reform. Interestingly, actualizing a coordinated human resource information system was a key objective for the government. However, the implementation of the integrated personnel and payroll system was a job half done by the government in Ghana as just 50% of the public service was covered. Consequently, the government has little control over staffing levels and thereby paving ways for uncontrollable fraud (International Record Management Trust, 2008).

IPPIS IN Nigeria: An Overview

The Payroll reform in Nigeria, being part of the overall Civil Service Reform was a World Bank Assisted Project under the Economic and Governance Project (ERGP) initiated during President Olusegun Obasanjo's era, facilitated through World Bank funding. The funding was acquired easily with the effort and support given by the then Minister of Finance (Dr. Ngozi Okonjo Iweala) who was a former executive in the Bank. The pilot phase of the IPPIS Project was supported technically and financially with a World Bank loan facility of **USD4.99 Million** (Mede, 2016).

The pre-reform issues associated with the payroll system in the Federal Public Service reveals that payroll of MDAs funded from the Consolidated Revenue Fund (CRF) was based on budget figures and not on the actual number of personnel on their nominal rolls. Payroll systems were decentralized, making the monitoring of personnel emoluments against the Federal Government's budget and achievement of effective planning on personnel matters difficult. These paved ways for the proliferation of "ghost workers" or non-existent staff and other forms of payroll abuses to justify the deliberate huge personnel budget allocation. Moreover, the manual computation of personnel information and salary administration in the Nigerian Federal Civil Service resulted to the inaccurate computation of salary leading to overpayment, underpayment, the omission of staff names in the payment, wrong calculation of promotion and pension, easy manipulation of personnel records, unreliable data for human resource planning and management and other various forms of payroll and credential fraud.

The Federal Government was duty-bound to provide a solution that will get rid of these enormous challenges and save the huge resources in personnel through fraudulent practices characterized by a general lack of accountability. Government efforts to reduce these inadequacies led to the introduction of the Integrated Personnel and Payroll Information System (IPPIS) in 2007. The Integrated personnel and payroll Information System (IPPIS) was set up to provide a reliable, comprehensive and centralised database for the public service which will help to reduce government expenditure and overheads, entrench transparency and accountability in the public service human resource records and payroll administration. The objectives of IPPIS amongst others are to ensure centralised payment of salaries, ease convenient staff remuneration payment with minimal wastage, facilitate easy storage, updating and retrieval of personnel record for administrative and pension processing, aid manpower planning and budgeting, ascertain actual personnel emoluments of the Federal Government employee, prompt deduction and remittance to accounts of all third parties such as Pension Fund Administrators (PFAs), National Housing Fund Scheme (NHF), Pay As You Earn (PAYE) and many others and biometric capturing of all staff.

Its implementation commenced at the Bureau of Public Service Reforms before its management was transferred to the office of the Accountant General of the Federation (OAGF) in October 2008, though the policy became operational in 2007. It was piloted in six ministries namely; Education, Foreign Affairs, Finance, Works, Information and Communication. Later in 2009, it was extended to eleven (11) other Ministries, Departments and Agencies of government, including: Aviation, Health, Agriculture, Petroleum Resources, Transport, Office of the Accountant General, Office of the Head of Service, Office of the Secretary to the Government and Federal Civil Service Commission (Folorunson, 2017). Before 2016, over 153,019 staff from various Ministries, Departments and Agencies (MDAs) were captured under IPPIS while the remaining MDAs were proposed to be captured before the end of the year 2016 (Ministry of Finance, 2016). The outstanding MDAs include the Nigerian Police Force and other paramilitary agencies (Nigerian Prisons, Nigerian Immigration Service, Nigerian Security and Civil defence Corps) as well as agencies in the petroleum sector.

The pilot implementation of the IPPIS in the seventeen (17) MDAs saved the nation over **N12 Billion (or USD60.91 Million)** between 2007 and 2010. Besides, the government had achieved a cumulative savings of about **N160 billion (or USD812.18 Million)** through weeding out of 60,000 ghost workers from the payroll at the end of 2014 (Mede, 2016). The federal government saved over N185 billion by removing 65,000 ghost workers since the implementation of IPPIS. In addition, the system was said to have discovered and led to the identification of 11,000 ghost workers and the removal of 23,000 workers from its payroll, which has reduced monthly payroll by 2.29 billion (Bola & Kauther, 2016).

In specific terms, the table below shows at a glance the achievements of the IPPIS in Nigeria towards managing public finance in its first phase using the first seven MDAs where the implementation was piloted.

Pre and Post IIPIS Nominal Roll of MDAs					
S/N	MDAs	Nominal Roll Pre IPPIS	Nominal Roll Post IPPIS	DIFFERENCE	Percentage of Ghost Workers
1	Budget Office of the Federation	**1500**	**340**	**1160**	**77.33%**
2	National Planning Commission	**1000**	**251**	**749**	**74.90%**
3	Office of Secretary to the Govt of the Federation	**1773**	**449**	**1324**	**74.68%**
4	Public Service Institute	**69**	**23**	**46**	**66.67%**
5	Fed. Ministry of Niger Delta	**501**	**176**	**325**	**64.87%**
6	Fed. Ministry of Information	**6500**	**2785**	**3715**	**57.15%**
7	Fed. Ministry of Work.	**10,000**	**4833**	**5167**	**57.15%**
Total	**7**	**21343**	**8857**	**12486**	**472.75%**

Okoye PVC, Okoye J.N,
Ndubuisi A.N (2016).

Despite the grandiose accomplishment, IPPIS still faces a few challenges. Among the eminent difficulties, as indicated by the Bureau of Public Service Reforms (BPSR) (2015) are (I) The IPPIS application has not been completely used. Of the seven modules of the product, just the payroll module is in apparent use. The Human Resource modules, which are intended to manage staff enrolment, posting, promotion, training, discipline, and disengagement, are yet to be completely deployed for use by MDAs Service-Wide. The current contractor has not delivered everything contracted and paid for and the project management of the initiative has been weak. (ii) Connectivity remains a noteworthy challenge and MDAs are as yet not ready to connect safely and reliably to the Platform over a Virtual Private Network (VPN). (iii) There is weak network security that affected on IPPIS take-off (iv) Due to non-deployment of HR modules, there are undue postponements in the processing of issues bordering on exit and termination (retirement, expulsion, passing, and so forth) (v) The current structure for IPPIS is such that key control agencies are responsible for a particular aspect of the Scheme. There appears not to be a defined communication line for these agencies, which slows down the implementation. Yet, a proposed administrative structure to deal with this challenge is anticipating endorsement (vi) Most of the IPPIS staff in the MDAs have not been educated to Oracle Training and a few that were exposed to the programme have been redeployed to different MDAs (vii) The IPPIS Personnel Service-Wide is not completely provoked in the area of motivation to match the demanding jobs they perform. (viii) Non-use of IPPIS reports for workforce management by MDAs (ix) The Secondary Data Replication Center, which exists in Gombe is not operational (x) Non-relocation of Officers' Pay Points when sent to other MDAs consequently overstretching staff cost in some MDAs while some are under-used.

Closely related to the foregoing include, lack of adequate skills transferred to government personnel which drag consultants stay on the project, poor condition of supporting infrastructure, for example, low internet penetration, technological barrier, a challenge related to the transfer of pay point due to the posting of workers from IPPIS MDA to non-IPPIS MDA, resistance from stakeholders which have unnecessarily Attempt to rationalise the complications identified with the wrongful posting of IPPIS staff prompted the current policy which stipulates that trained IPPIS Role Players must be posted only after three years on the desk and should just be moved to a similar table in different MDAs. If this policy is entirely clung to, it will address the issue of the too-frequent movement of such officers (BPSR, 2015).

A Comparative Analysis of the Countries Understudy

The discourse is sorted out thematically according to the issue being researched and the goals of the investigation. From the countries studied, one can deduce that the implementation of the DIPPIS was to some degree effective. Before 2004 in Kenya, manual and semi-manual human resource and payroll forms existed. Thus, salary preparation and payment were delayed. Determination of staffing levels was likewise a challenge. The foregoing among different issues influenced adversely personnel and payroll exercises in the public administration of Kenya. The consequence of these difficulties was the absence of transparency and poor accountability of funds recorded in the public service of Kenya. Attempt to lessen these ills triggered the introduction of IPPD to maintain consistency and precision of payroll and personnel information. Interestingly, the paper found that after the introduction of IPPD, personnel and payroll data were to some degree characterized with auspicious, exact and solid outlook. Information generation and handling were rapidly done and less inclined to mistakes. Regardless of the grand accomplishment, it was clouded with a few difficulties. Nonetheless, some alleviating strategies were utilized to dispose of the difficulties as examined in the subsequent section.

For Ghana, IPPD was introduced as far back as in the 1990s. The achievement was made feasible with the help of a France counseling consulting in the management and information, prominently known as Consillers en Gestion et Informatique (CGI). The paper found that a very little achievement was recorded under IPPD in Ghana, as it was shrouded with problems from the beginning as examined below.

The paper found that in Nigeria, before 2007, payroll of MDAs depended on the budgeted figures and not the actual number of the workforce on the nominal rolls. Additionally, the policy of payroll operated was decentralized, hence, making it very hard to plan centrally for the MDAs, thus, paving ways for ghost workers. These incidences prompted the introduction of IPPIS in 2007. It was discovered that, with the introduction of IPPIS, immense financial profits were recorded because of the weeding of ghost workers.

The three nations studied have made extraordinary efforts in dealing with their pubic account through the instrument of computerized staff and payroll system. In any case, various challenges are blurring the adequacy of the ICT based workforce and payroll data system. In Kenya, for example, vital modules that could have helped for viable administration of workforce and payroll information system were inadequate. Payroll issues like personnel cost planning and control were not covered with modules. So also, workforce issues like maintenance of employees' information to guarantee compliance with the terms and state of administration were additionally not covered with modules. The result is the failure to process issues related to retirement and termination of appointment like retirement, dismissal, death and so on. Connectivity was also observed to be an issue. MDAs were not able to link up with the platforms. Moreover, workers were hesitant to update their records online, and this is a necessity for the implementation of IPPIS.

The principal challenge related to Ghana, almost similar with that f Kenya, was not with IPPD, itself, however, the data inputted into the system from the personnel files. The data were incomplete and inaccurate. Date of birth and names were mistakenly fed into the system. This made identity management amazingly troublesome, thus, poor reports were generated. For Nigeria, basic modules to cover human resource exercises like enrollment, posting, promotion, training, discipline and even retirement were not given. It was discovered that the consultant neglected to deliver the modules contracted and paid for.

On a general note, the real purpose behind the partial success of the implementation of DIPPIS can be traced to inaccurate manual personnel records kept by these countries studied.

Different reasons include erratic power supply, utilization of obsolete computer, shortage of money, unwillingness of government employees of these nations to enroll under the platform because of the financial rewards they have been getting from the manual operations, absence of political will and partial coverage of the civil servant by the IPPIS, instead of the whole civil service. Once more, the paper found that training in oracle was not given to all the IPPIS staff. Lamentably, those trained were conveyed to NON-IPPIS MDAs. Thus, consultants stay unnecessarily on the project for a more extended period.

Despite the difficulties, it was discovered that some mitigating systems were set up to cushion their effects. A remarkable strategy to address the challenges in Kenya was the development of the improved version of the IPPD called GHRIS. This was to address important issues like staff establishment, payroll, leave management and discipline. In Ghana, a condensed version labeled IPPD2 was set up as an improved edition to the IPPD1. This is unique compared with the IPPD1 because it is oracle-based. Be that as it may, as expressed under the difficulties, the improved alternative could not accomplish much as similar information inputted into IPPD1 was utilized without data purging. This prompted further harms like payment of unmerited pay rates in billions of dollars, late payment of pay rates and other personnel and payroll anomalies and fraud. The major mitigating system found to have been set up in Nigeria was the approach that IPPIS staff must be posted after they have spent three years on the desk, and ought to be moved to a comparable desk in other MDAs. This addresses the issue of the too-frequent movement of officers.

Conclusion and Recommendations

In light of the discoveries obtain from the investigation, the paper presumes that IPPIS or IPPD is a veritable device for public sector financial related reform because to a substantial degree it has the advanced efficiency, effectiveness, accountability, transparency, security of information management and exhaustive financial reporting. In any case, despite the impressive outcome, it has a few inadequacies like lack of modules (human resource modules) that could cover satisfactorily workforce activities, inability of MDAs to interface with the platform, arbitrary posting of trained IPPIS/IPPD staff, supply of inexact data by officers when filling IPPIS forms, leading to migration of unclean information to the IPPIS/IPPD, etc.

On this note, the paper suggests, among others, the following:

i. Proper confirmation of data provided by government workers is a prerequisite to having an effective staff and payroll reform through IPPD/IPPIS.

ii. Advanced Oracle-based training is required for the IPPIS/IPPD staff to ensure a strong balance in the use of the package.

iii. Arbitrary posting of the IPPIS/IPPD staff ought to be stopped.

iv. Sensitization programme ought to be widely carried out.

Reference

Public Service Reforms (BPSR) (2015). Key challenges of ippis - public service reforms in nigeria (1999-2014). Available@http://bpsr-nigeria.blogspot.com/2015/11/key-challenges-of-ippis-public-service.html.

Enakirerhi L. I. and Temile S.O (2017). IPPIS in nigeria: challenges, benefits and prospects. International Journal of Social Science and Economic Research. *02*(05). Available@ http://ijsser.org/uploads/ijsser_02__216.pdf.

Lawson A. (2015). Public financial management.Available@ http://www.gsdrc.org/docs/open/reading-packs/pfm_rp.pdf.

Simson R. Sharma N. & Aziz I. (2011). A guide to public financial management literature for practitioners in developing countries. London: Overseas Development Institute. Available http://www.who.int/pmnch/media/events/2013/pfm_literature.pdf

The Chartered Institute of Public Finance and Accountancy (CIPFA) (2009). Financial Management and the PFM International Architecture – A Whole System Approach. Available@ https://blog-pfm.imf.org/files/pfm_ia_whole_system_approach1.pdf.

Allen R., Hemming R. & Potter B.H (ed) (2013). The International Handbook of Public Financial Mangement. Palgrave Macmilla.

Orihuela L and Obi T (2007). E-government and e-governance: Towards a Clarification in the Usage of both concepts. In (T Obi (ed)), E-governance: A global perspective on a new paradigm.

Rabaa'i A.A, Zogheib B, ALshatti A. AlJammal E. (2016). Adoption f e-government in Developing Countries: The Case of State of Kuwait. Journal of Emerging Trends in computing and Information Sciences. Available @ https://www.researchgate.net/.

Chen Y. N., Chen, H. M., Huang W. & Ching R. K. H. (2006). E-Government Strategies in Developed and Developing Countries: An Implementation Framework and Case Study. Journal of Global Information Management, *14*(1), 23-46.

International Telecommunication Union (ITU) (2008). Electronic Government for Developing Countries. Geneva: ICT Applications and Cybersecurity Division (CYB) Policies and Strategies Department.

Mede, F. (2016, May 23). *Nigeria's experience with identity systems for civil service reform*. Paper presented at the ID 4 Africa annual meeting, Rwanda.

Federal Ministry of Finance. (2016). *Federal government sets December deadline for the full implementation of IPPIS and GIFMIS*. Retrieved from http://www.finance.gov.ng/index.php/9-uncatgorised/183-faqs.

Kinyeki, C. (2015). *Adoption and implementation of Integrated Personnel and Payroll Database in Kenya government ministries* (masters'dissertation). University of Nairobi, Kenya.

International Record Management Trust, (2008). *Fostering trust and transparency in governance: Ghana case study*. Retrieved from www.irmt.org.

Bola, G., & Kauther, A. (2016, February12). 23,000 ghostworkers: One civil servant found collecting 20 salaries. *Leadership newspaper*. Retrieved from http://www.leadership.ng/

Sharman, S. (2004). *Assessing e-government implementations.* Electronic government journal, 1(2), 198-212.

Okoye PVC, Okoye J.N, Ndubuisi A.N (2017), Effect of Integrated Personnel and Payroll Information System (IPPIS) on Federal Government Recurrent Expenditure in Nigeria, in B.C Osisioma, O, Akenbor and SC Okaro(ed). Awka: SCOA Heritage Nig. LTD.

Folorunson G.S (2017). Assessment of the implementation of the integrated personnel and payroll system in the office of accountant general of the federation, Abuja. Being a Dissertation Submitted for the Award of M.sc, Public Administration, University of Abuja, Abuja-Nigeria.

http://unpan1.un.org.