

**GOVERNMENT DIGITAL ACCOUNTING SYSTEMS AND FRAUD OCCURRENCE IN  
FEDERAL PUBLIC ENTERPRISES IN RIVERS STATE, NIGERIA.**

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**ABSTRACT**

*The study examined government digital accounting systems and fraud occurrence in federal public enterprises in Rivers state, Nigeria. The objectives of the study among others are; To examine the relationship between government integrated financial management information system (GIFMIS) and payroll fraud (PF). Also, to examine the relationship between treasury single account (TSA) and payroll fraud (PF). To examine the relationship between integrated payroll and personnel information system (IPPIS) and embezzlement. This study adopted correlational survey research design. The targeted population was fifteen (15) federal public enterprises in Rivers state, Nigeria. The instrument for this study was primary data. The formulated research questions were analyzed with descriptive statistics. The hypotheses were tested using the Ordinary Least Square (OLS) Model regression analysis with the aid of E-view (10). The findings of the study among others were that; there is a significant relationship between government integrated financial management information system and payroll fraud in Nigeria public enterprises. Also, there is a significant relationship between treasury single account and payroll fraud in Nigeria public enterprises. And there is no significant relationship between treasury single account and payroll fraud in Nigeria public enterprises. Based on the findings, the study advanced the following recommendations that though, government integrated financial management information system has contributed significantly to payroll fraud occurrence. The Economic and Financial Crime Commission (EFCC) should be fortified financially and technologically for effective lope holes in digital accounting strategies. The anti-graft agency should also add forensic accountants for professional detection of evidences which will assist litigation in the court of law, State and Local governments across the nation should endeavor to adopt the operation of single treasury account for effective and efficient management of public finance, especially in the areas of fraud control and accurate accounting. Again, training Bureaus of the federal civil service should be empowered to train accountants to specialize in forensic auditing. Upon completion of their studies, these accountants should be deployed to man all the Ministries, Departments, and Agencies government integrated financial management information system to continuous mitigating fraud in the public service.*

**KEYWORDS:** *Government Digital Accounting System, Fraud Occurrence, Embezzlement, Payroll Fraud, IPPIS, TSA, GIFMIS*

**INTRODUCTION**

Over the years, fraud occurrence has been difficult to handle at all tiers of government and has negative effect on economic development. The problem is so entrenched and harmful in the Nigerian bureaucracy that the nation is losing billions Oseloka, (2016). All government enterprises are faced with the problem of large number of ghost workers (payroll fraud), and other financial crimes. Similarly, government owned enterprises are mostly associated with mismanagement and

misappropriation or diseconomy of funds meant to be used in the provision of public goods (Dinapoli, 2007). This is especially as most of those at the helms of affairs in these government owned enterprises ascend to their positions as a reward for political support. These managers mostly take their reign in those positions as a time to reap bountifully and continuously defraud the treasury. This is usually at the expense of the citizens. Hence, service delivery or performance is always at its lowest and fraud occurrence is doubtful. Thus, digital accounting system is aimed at mitigating, detecting and preventing public fraud and other corrupt practices in Nigeria public enterprises.

In an attempt to address this problem, prior empirical studies (Emeh & Obi, 2013; Enofe, et al, 2015) report that effectiveness of audit and fraud prevention, the presence of audit can reduce the occurrence of fraud. These studies mainly concentrated on the use of audit detecting or investigating financial crimes or frauds in various sectors / industries especially in the deposit money banks, while a hand full on payroll fraud and integrated payroll and personnel system. These studies above, to the best of the researcher's knowledge cannot make a general conclusion on digital accounting and fraud occurrence in public enterprises, Thus, from the extant literatures reviewed the previous research utilized more of private industries, and were carried out in different states and other countries of the world. It is on these note that this research work filled the gaps in literature, methodology and location. To the best of my knowledge as at the time of this research this work is the most current on digital accounting system and fraud occurrence in Nigeria public enterprises. Also, the study utilize Nigeria government digital accounting dimensions of government integrated financial management information system (GIFMIS), treasury single account (TSA) and integrated payroll and personnel system (IPPIS) and measures of payroll fraud and embezzlement of fund that have not been wholistically used by other studies. The study also, introduced 'Organizational size as a moderating variable of the study. Hence the study seeks to investigate digital accounting system and fraud occurrence in Nigeria public enterprises.

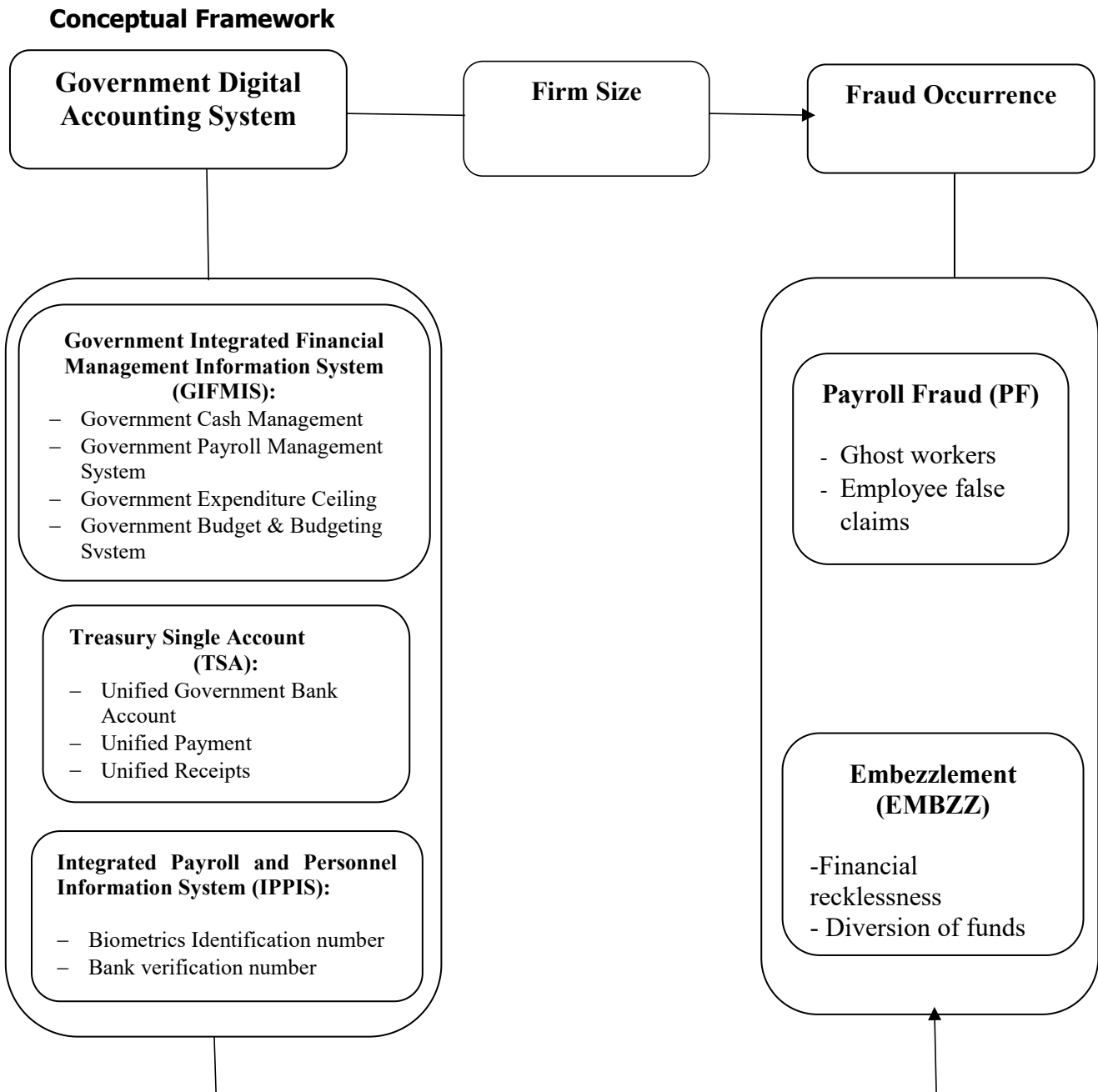


Figure 1.1 Conceptual Framework Model

*Sources of conceptualization:* Ogundiya (2012), Evrim (2017), Mahdi & Zhila, (2018). Onowu J.U & Oludi, (2024). Adeniji 2004 and Institute of chartered Accountant Nigeria ICAN 2016, researcher's input, 2024.

### **Aim and Objectives of the Study**

The purpose of the study was to examine government digital accounting systems and fraud occurrence in federal public enterprises in Rivers State, Nigeria. The specific objectives of the study are:

1. To examine the relationship between government integrated financial management information system (GIFMIS) and payroll fraud (PF).

2. To examine the relationship between treasury single account (TSA) and payroll fraud (PF).
3. To examine the relationship between integrated payroll and personnel information system (IPPIS).
4. To examine the relationship between government integrated financial management information system (GIFMIS) and embezzlement of funds (EF).
5. To examine the relationship between treasury single account (TSA) and embezzlement of funds (EF).
6. To examine the relationship between Integrated Payroll and Personnel Information System (IPPIS) and Embezzlement of Funds (EF).
7. Study the moderating influence of firm size in the relationship between digital accounting systems and fraud occurrence in Nigeria public enterprises.

### **Research Questions**

1. What is the relationship between government integrated financial management information system (GIFMIS) and payroll fraud (PF)?
2. What is the relationship between treasury single account (TSA) and payroll fraud (PF)?
3. What is the relationship between integrated payroll and personnel information system (IPPIS)?
4. What is the relationship between government integrated financial management information system (GIFMIS) and embezzlement of funds (EF)?
5. What is the relationship between treasury single account (TSA) and embezzlement of funds (EF)?
6. What is the relationship between integrated payroll and personnel information system (IPPIS) and embezzlement of funds (EF)?
7. What is the moderating influence of firm size in the relationship between digital accounting system and fraud occurrence in Nigeria public enterprises?

### **Research Hypotheses**

- Ho<sub>1</sub>: There is no significant relationship between government integrated financial management information system (GIFMIS) and payroll fraud (PF).
- Ho<sub>2</sub>: There is no significant between treasury single account (TSA) and payroll fraud (PF).
- Ho<sub>3</sub>: There is no significant relationship between Integrated Payroll and Personnel Information System (IPPIS) and payroll fraud (PF).
- Ho<sub>4</sub>: There is no significant relationship between government integrated financial management information system (GIFMIS) and Embezzlement of Funds (EF).
- Ho<sub>5</sub>: There is no significant relationship between treasury single account (TSA) and embezzlement of funds (EF).
- Ho<sub>6</sub>: There is no significant relationship between integrated payroll and personnel information System (IPPIS) and embezzlement of funds (EF).
- Ho<sub>7</sub>: firm size does not have moderate influence in the relationship between digital accounting systems and fraud occurrence in Nigeria public enterprises.

## **REVIEW OF RELATED LITERATURE**

### **Conceptual Review**

#### **Government Digital Accounting**

According to Adewumi (2012), digital accounting refers to the creation, representation, and transfer of financial information in an electronic format. Instead of using papers, all accounting transactions are conducted in an electronic environment. Onowu J.U & Oludi (2024), asserted that modern digital accounting systems are designed to provide a comprehensive and integrated solution for financial management. The core and non-core feature modules include: Accounts

payable. Accounts receivable, Financial reporting. Non-core modules; examples include Payroll management, Inventory management, Project management, Compliance and regulatory reporting. Ismail (2016), suggested that digital accounting has allowed government and their accountants to complete functional tasks more quickly and accurately, as well as interpret and report data more efficiently. This way, government can focus on their strategic roles and handle complex issues, such as ensuring better cash management, payroll management system, expenditure ceiling and government budget and budgetary system. Hussein (2011), digital accounting is a system of recording financial and costing transactions in one self-contained ledger, called the integrated ledger. It implies maintenance of only one set of books for both financial and cost accounts. Digital accounting saves time and money, and increases account accuracy. Accountants who wish to remain competitive in the contemporary workforce need to keep their paperless accounting skills up to date. Accounting firms need to embrace digital accounting to remain competitive in the digital age.

Previously, the responsibilities area of finance and accounting professionals were mostly capture and update data, produce reports and do bank reconciliation or bookkeeping activities. However, the current utilization of smart technologies, artificial intelligence, opportunities and benefits seems limitless, for example, the increase in productivity, safer working conditions, as well as creating the opportunity for finance and accountants professional to step up and become knowledgeable in the new technologies, in addition to the creation of more high value jobs resulting from digital transformation (Irani et al., 2007). The financial and accounting roles are no longer just simply checking the numbers and keeping the records, but are more to assist current businesses in optimizing their finances. It will bring new challenges, notwithstanding the benefits of digitalization, its deployment in the public sector can be a challenge (Falk et al., 2017). Generally, the nature of the culture and structures in the public sector can be barriers to digital innovation (Heeks & Stanforth, 2007; Irani et al., 2007; Weerakkody et al., 2011). The traditional public sector is characterized by hierarchical and disparate structures as well as bureaucracy and paper-based processes (Davison et al., 2005; West, 2004) that cause inefficiencies and delays (Beynon-Davies, 2007). Paradoxically, bureaucracy in the public sector was intended to promote efficiency, equality and democracy (Cordella&Iannacci, 2010). Yet, it has increasingly become a source of delays, inefficiencies (Davison et al., 2005) and excessive paperwork (Wiredu, 2012). Other problems resulting from the public sector structure and culture include operational divisions and politics (Beynon-Davies, 2007; Irani et al., 2007) as well as resistance to innovation (Seng et al, 2010; Zhao & Khan, 2013). Functional insularity as well as lack of integration and information sharing across departments and agencies also poses challenges to digitalization (Davison et al., 2005). Resistance from civil servants due to fear of losing jobs (Falk et al., 2017), also constrains digitalization in the public sector. Despite its usefulness, digitalization of documents and activities in the public sector has been associated with challenges as it sometimes fails to consider differences between agencies in terms of access to technologies and related resources (Calvo& Campos, 2017). In situations where, some agencies are more advanced than others, formalizing and standardizing digital processes across horizontal and vertical hierarchies of governments can be problematic (Falk et al., 2017).

This challenge is particularly pronounced in the developing world, where due to digital divides, agencies lack equal access to technologies. Some developing countries have initiated programmes to digitalize government processes for more effective and efficient public administration and service delivery. However, in most cases, the outcome has been a failure due to institutional, socio-cultural and technological barriers (Siddiquee, 2016). Among the barriers identified are complex and multi-level bureaucratic structures inherited from past colonial administration (Imran, 2013), e-illiteracy and inadequate ICT infrastructure (Bertot et al., 2010; Heeks& Stanforth, 2007; Hendriks, 2013). Other challenges include resistance to change, power struggles and lack of cross-

agency collaboration (Schuppan, 2009) as well as failure to update existing laws (Basu, 2004). When machines take over repetitive, time-consuming and redundant tasks, it will force the finance and accounting professional to do more in-depth, higher-level analysis and consultation support for their clients and business. Even though machines will become professional's most valued colleagues in the future, there's nothing that can replace the emotional intelligence humans bring to a job, and this includes the finance and accounting sector.

### **Dimensions of the Predictor Variable**

#### **Government Integrated Financial Information System (GIFMIS)**

In government operations, GIFMIS refers to the computerization of public financial management processes, from budget preparation and execution to accounting and reporting, with the help of an integrated system for the purpose of financial management (Lianzuala & Khawlhing, 2018). According to Diamond and Khemani (20016) in Chene (2009), a well-designed Integrated Financial Management Information System (IFMIS) is a management tool that provides a wide range of non-financial and financial information. Bhatia (2013), defines IFMIS as an information system that integrates budget preparation, budget execution, accounting, financial management and reporting activities for effective financial management. Integrated financial system involves computerization of public expenditure management processes including budget formulation, budget execution, and accounting with the help of a fully integrated system for financial management of the line ministries (LMs) and other spending agencies (DFID, 2003). This is a system in which Financial Management System (FMIS) and other Public Financial System (PFM) information systems (e.g. FIRMIS/Payroll, Procurement) share the same central database to record and report all daily financial transactions, offering reliable consolidated results for decision support, performance monitoring and web publishing.

In Nigeria we have GIFMIS which is aimed at improving the acquisition, allocation, utilization and conservation of public financial resources using automated and integrated, effective, efficient and economic information system. It is an IT based system for budget management and accounting being adopted as part of a wider Public Service Reform Strategy by the federal government of Nigeria starting in the early 2000s. It is meant to improve the public expenditure management process, enhance accountability and transparency across MDAs. It helps the government to plan and use its financial resources more effectively and efficiently (Danfulani, 2013).

#### **Integrated Payroll and Personnel Information System (IPPIS)**

IPPIS is a product of the government initiated to turnaround the dwindling performance of the public and civil service. In 1999 after the Nigeria's return to democratic rule, the Federal Government carried out a Public Service Reform (PSR) study and the result was the development of the National Strategy for Public Service Reform (NSPSR) in 2003 (Mede, 2016). The strategy was to be implemented through four cardinal programmes known as the four (4) pillars of NSPSR. One of the pillars, precisely pillar 3 was aimed at "implementing a public financial management reform to achieve strategic, efficient and effective mobilization, allocation and use of public resources, fiscal discipline, transparency, integrity and accountability through timely reporting". Accordingly, in order to achieve pillar 3, the Economic Reform and Governance Project of which the government Integrated Financial Management Information System /GIFFMIS) and Integrated Personal and Payroll Information System (IPPIS) (Taiwo, 2015), These are digital based programme aimed at Public Financial Management (PFM) and the Human Resource and Payroll issues at the federal level respectively. Thus, IPPIS is a form of identity system management aimed at providing a centralized database to support personal planning and decision making, automated storage of personnel records to aid staff enrolment, and monitoring against budgeting and prevention of wastages and leakages based on factual personnel records and information ([www.oagf.gov.ng/IPPIS](http://www.oagf.gov.ng/IPPIS)). Essentially, IPPIS captures facial images, finger prints of 'government

employees, and store in a digitalized data based library which can be accessed with authorization anywhere.

The Integrated Payroll and Personnel Information System (IPPIS) according to Enakirerhi and Temile (2017), as cited in Onukelobi 2019, is one of the Federal government strategic implementations to digitalize the manual based and files system marred with corruption, inefficiency and inaccuracy of the number of personnel in the civil service of Nigeria. In the same vein, Okoye et al (2017), defined IPPIS as a child of circumstance emanating from government's series of public financial management systems and their challenges. It was in a bid to oversee and control government spending that led to creation of reform strategies one of which is IPPIS. According to the World Bank (2010), "The purpose of IPPIS was to procure and implement and integrate solution that would improve the effectiveness and efficiency in transaction services, enhance the confidence in payroll costs and budgeting and greatly improve management reporting and information". The reform actually focused on a minimum set of serious or critical reforms issues across the board that would later provide a platform for subsequent reforms. One of the critical components was the ability to manage services of the establishment and Payroll within the context of public service productivity and constraints of government revenues, priorities and budget.

### **Treasury Single Account (TSA)**

Kanu (2016), views TSA as one of the financial policies implemented by the federal government of Nigeria to integrate all revenues and treasuries from all ministries, departments and agencies and extra ministerial departments in the country where all the collections are paid into money depositing banks trailed to a single account at the apex bank of the nation (CBN).

Treasury Single Account is a form of public accounting in which all government revenue, expenditure and profits are paid into a single account, traditionally operated by the country's central bank and all payments made through that account (Okereke et al, 2017). The primary purpose is to ensure accountability of government revenue, enhance transparency and prevent abuse of public funds. It is hoped that maintaining a Treasury Single Account will help ensure proper cash management by removing idle funds that are usually left to numerous commercial banks and reinforcing the reporting of profit collection and payment (Adeolu, 201 5).

Oti, et al (2016), defined treasury single account as a public accounting system under which all government income, receipts and revenue are collected into on singles account, and payment as well and it is usually maintained by the country's central bank. The major aim is to reduce corruption, ensure proper cash management, eliminate idle fund and enhance reconciliation of revenue collection and payment. TSA is a unified structure of government bank accounts enabling optimal utilization and consolidation of cash resources, through these linked bank accounts, government transacts all its payments and receipts, and gets a view of its consolidated cash position at any given time. For better consolidation of cash balances, Treasury Single Account (TSA) implementation has commenced in various federal government Ministries, Department and Agencies (MDAs) in other to facilitate efficient payment mechanism, ensure absolute, real-time information on government cash resources, prepare reliable and accurate cash flow forecasts, and optimize the cost of government operations. Under TSA, the cash balances is rolled-up to a single account, instead of the use of multiple bank account, payments from all spending units are controlled by TSA. Treasury single account is multiple accounts rolled up to a single account, not just a single bank account, it is therefore a unified structure of government bank accounts that gives a consolidated view of government cash resources. It could be one account or a set of linked accounts.

### **Fraud Occurrence**

Onowu, J.U (2024). Fraud occurrence refers to the act or instance of fraudulent activity taking place within an organization, government, or individual's financial transactions or operations. It involves intentional deception, misrepresentation, or manipulation of financial information, assets, or resources for personal or organizational gain. Fraud as it is having different meaning to different people, therefore, tend to define it based on the circumstances, situations, observation, conclusion, organization culture, academic view, legal perceptions personal experience and so on.

Eseoghene (2010) defined fraud as an intentional act of deception that is aimed at getting an undue advantage at the expense of individual or organization losing properties or some lawful rights. Black's law dictionary (2004) posited that fraud is the misrepresentation of the truth or concealment of a material fact to induce another to act to his or her detriment. In the broadcast sense, fraud can encompass any crime for crime for gain uses deception as its principle modus operators. Consequently, fraud includes any intention or deliberate act that deprives another person of his/her property or money by guile, deception, or other unfair means. Fraud can be committed either internally by employees, managers, officers, or owners of the company, or externally by customers, vendors, and other related parties. Association of Certified Fraud Examiners [ACFE] (2012) defines fraud as "any illegal acts characterized by deceit, concealment, or violation of trust. These acts are not dependent upon the application of threat of violence or of physical force. Frauds are perpetrated by individuals and organizations to obtain money; or to secure personal or business advantage.

The American Institute of Public Accountants (AICPA) (2002) defines fraud as "a broad legal concept that is distinguished from error depending on whether action is intentional or unintentional" they broke fraud down into different element and concluded that fraud can only be evident if the elements are present. These elements are as follows: A representation; that is material; which is false; it is intentionally or recklessly so; which is believed by a person; and acted upon by that person; the person suffer damage. Archibong (1992) sees fraud as a predator mined and well planned tried process or device usually undertaken by a person or group of persons, with the sole objective of cheating other persons or organization, to gain illegal advantage, be it monetary or otherwise which could not have acceded in the absence of such deceitful act.

### **Embezzlement**

Refers to a form of white-collar crime in which a person or entity misappropriates the assets entrusted to them. In this type of fraud, the embezzler attains the assets lawfully and has the right to possess them, but the assets are then used for unintended purposes (Anuolam et al, 2016). According to Okoye and Akenbor O. (2009), embezzlement refers to the crime of misappropriating for personal use resources entrusted to a person's care. The difference between embezzlement and stealing is that embezzlement is done from the inside, and involves stealing resources that one was hired to handle or protect. Embezzlement is a common problem, and it can have serious negative effects on the businesses that fall victim to it. Balogun, and Olukowade (2015), embezzlement is defined as the misappropriation of property or funds legally entrusted to someone in their formal position as an agent or guardian. Everyone wants to believe that the people they hire are good employees who can be trusted to perform their responsibilities with integrity. Yet, research shows that embezzlement may arise even among the most well-trained, hardworking and trusted employees in an organization.<sup>1</sup> The scope of corruption and fraud in international aid projects, especially, is frequently under estimated, and may include fraud in the form of inflated or fictitious invoices, padded travel expenses and diversion of project assets to private use.

According to Izedonmi and Ibadin, (2012), embezzlement is the act of withholding assets for the purpose of conversion of such assets, by one or more persons to whom the assets were entrusted,

either to be held or to be used for specific purposes. Embezzlement is a type of financial fraud. For example, a lawyer might embezzle funds from the trust accounts of their clients; a financial advisor might embezzle the funds of investors; and a husband or a wife might embezzle funds from a bank account jointly held with the spouse. The term "embezzlement" is often used in informal speech to mean theft of money, usually from an organization or company such as an employer.

Zachariah, et al (2014), embezzlement is usually a premeditated crime, performed methodically, with precautions that conceal the criminal conversion of the property, which occurs without the knowledge or consent of the affected person. Often it involves the trusted individual embezzling only a small proportion of the total of the funds or resources they receive or control, in an attempt to minimize the risk of the detection of the misallocation of the funds or resources. When successful, embezzlements may continue for many years without detection. The victims often realize that the funds, savings, assets, or other resources, are missing and that they have been duped by the embezzler, only when a relatively large proportion of the funds are needed at one time; or the funds are called upon for another use; or when a major institutional reorganization (the closing or moving of a plant or business office, or a merger/acquisition of a firm) requires the complete and independent accounting of all real and liquid assets, prior to or concurrent with the reorganization.

## **Theoretical Review**

### **White Collar Crime Theory:**

Sutherland, 1949 cited in Michael (2004), defined white collar crime as crime committed by a person of respectable and high social status in the course of his occupation stating that white collar crime are crimes committed respectable and of high-status staff in his place of work. White collar criminals are intelligent, opportunists, affluent and educated individuals who believed they can take advantage of circumstances to accumulate financial gain. Civil servant are highly educated and Fraudulent financial activities are illicit activities committed with the purpose of acquiring riches either individually, in group or organized manner thereby violating existing legislation or accounting policies governing the economic activities and administration of the organization. Hence, digital accounting and forensic accounting is needed to fast track these highly educated fraudulent staff of banks. via relating effectively with litigation of money laundering crimes, litigation of fraudulent loans, adjudication of diversion of financial investment crimes and adjudication of financial statements crimes.

Sutherland noted that in his time, less than 2 percent of the persons committed to Prison in a year belong to the upper class. He tried to establish a relationship between money, social status, and the likelihood of going to jail for a white-collar crime with a more visible, typical crime. He tried to separate and define the difference between the blue collar street crimes like burglary, theft, rape, arson and vandalism which are often blamed on psychological, associational and structural factor with white collar crimes committed by criminals who are opportunists who overtime learn that they can take advantage of their circumstances to accumulate financial gains. These criminals are educated, intelligent, affluent individuals who can get a job which allows them unfettered and unmonitored access to often large sum of money. White collar crimes include such illegal acts which are characterize by deceit, concealment, or violation of trust and which are not dependent on the application of physical force or violence. This study will be anchored on white collar crime. More common crimes, securities and financial statement fraud, diversion of investment and mortgage frauds, money laundering and tax evasion, also constitute white collar crime.

### **Reasons for Anchoring on White Collar Crime Theory**

Thus, the study is based on white collar crime theory stating that white collar crime are crimes committed respectable and of high-status staff in the place of work. White collar criminals are

intelligent, opportunists, affluent and educated individuals who believed they can take advantage of circumstances to accumulate financial gain. Civil servants mostly involve in fraudulent act in Nigeria history are highly educated, intelligent, socially and politically affluence individuals who can get a jobs or contracts which allows them unfettered and unmonitored access to often large sum of money. Fraudulent financial activities are illicit activities committed with the purpose of acquiring riches either individually, in group or organized manner thereby violating existing legislation or accounting policies governing the economic activities and administration of the organization. Hence, digital accounting is needed to fast track these highly educated fraudulent staff of the Nigeria civil service via relating effectively with litigation of money laundering crimes, litigation of payroll fraud, adjudication of embezzlement and diversion of funds and adjudication of financial statements crimes. And the intermediating variable is financial audit report.

White collar crime comprises or is in line with triangle and diamond fraud theories, where; Fraud = f (Pressure, Opportunity, Rationalization, Capability). Most white-collar crimes are committed public enterprises. In many instances, the person committing the white-collar crimes is a trusted acquaintance or senior staff that possesses all pressure, opportunity, rationale and capability and they appear to be innocent while taking advantage of the relationship they have with the enterprises. White collar crimes occur over the course of weeks, months or years. It usually takes some time to establish a relationship of trust and then to carry out the act. Plus, if the white-collar crimes go undetected, the criminal can take advantage of the victim for a long time before being found out, as is sometimes the case when senior civil servants embezzle funds from public enterprise where digital accounting dose not exit or is not effective and we hear it in the dailies and various news mediums. The amount of money lost due to white collar crimes amounts to hundreds of billions of dollars per year in Nigeria.

### **Empirical Review**

Eddy (2024), appraised the effect of electronic accounting in the corporate performance of an organization. (A study of abbot resources Enugu)". The objective of this study includes the following: to identify the effect of electronic accounting on the account receivables of an organization, to examine the extent to which electronic accounting have impact on account payables of an organization. For a successful completion of this research work, the researcher made use of both primary and secondary methods of data collection for information gathering. Primary data were collected through questionnaire administration, oral interview, and personal observations. Secondary data were collected through periodicals and journals, textbooks and lecture note books, and also the Internet. The data collected were presented in tables and analyzed with simple percentage while the hypotheses stated were tested with chi square. The researcher found out that electronic accounting has significant effect on the account receivables of an organization, electronic accounting has impact on financial reporting of an organization. In conclusion, Electronic accounting has impact on account payables of an organization to a very great extent, Electronic accounting has impact on financial reporting of an organization. The researcher recommends that Managers of organizations should critically study the diverse accounting policies and apply them in their decision making processes as they aid managerial decision making in organizations, Organizations should not ignore the use of accounting policies because of the costs involved in using these tools due to the fact that the costs involved in the use of these tools quantify their benefits.

Sunday et al (2019), examines the effect of the implementation TSA, IPPIS and FMIS on fraud in Public Interest Entities in Nigeria. The theoretical structure of the work anchored on the Meta Theory Model, Circumvention Innovation Theory and Public Finance management theory which highlight the relationship between computerized innovations in government establishments and fraud management. The descriptive research design was employed, and questionnaire administered on respondents randomly selected from the studied Ministries. The linear regression

model was employed in establishing the relationship between variables. Results of the statistical test reveal that TSA, IPPIS, and IFMIS have positive and significant relationship with Fraud and fraud management as well as jointly impact the performances of Public Interest Entities. Based on findings of the study, it was recommended among others that IPPIS be fully implemented to address the ghost workers syndrome in Public Interest Entities and that public officers be technologically trained to effectively utilize TSA, IPPIS and IFMIS platforms.

Paul et al (2019), 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.

## **METHODOLOGY**

### **Research Design**

This study basically adopted correlational survey research design. According to Waters (2017), correlational study is a quantitative method of research in which the researcher has two variables from the same group of participants and tries to determine if there is a relationship between the two variables. The correlational survey design was adopted because to the study intends to determine the relationship between digital accounting system and fraud occurrence.

### **Population of the study**

The targeted population is fifteen (15) federal public enterprises in Rivers State, Nigeria. The unit of respondents for the study consist of top administrative / management staff and middle administrative / management staffs that are knowledgeable and competent in fifteen (15) conveniently selected federal public enterprise in Rivers States. At the time of this research, the population of the entire staff above in these public sector organizations were one hundred and sixty-seven (127). (Source: Research Data, 2025).

**Table (1.1) Population Distribution of Respondents in Public Sector Enterprises in Rivers State.**

<b>S/N</b>	<b>Public Sector Organizations</b>	<b>Top management staff</b>	<b>Middle class management staff</b>	<b>Total</b>	<b>Percentage</b>
1	IFRS	4	5	9	7
2	NAFDAC	3	2	5	4

3	NTA	4	3	7	5
4	JAMB	5	4	9	7
5	NNPC	6	4	10	8
6	NPA	4	2	6	5
7	PHCN	5	4	9	7
8	NECO	6	5	11	9
9	NIMASA	5	3	8	6
10	FAAN	5	4	9	7
11	NBC	4	2	6	5
12	NCS	5	3	8	6
13	NESREA	7	5	12	9
14	NRC	5	3	8	6
15	NCC	6	4	10	8
	<i>Total</i>	74	53	127	<b>100</b>

### Sample and Sampling Techniques

The sample size of this study is ninety-six (96). This number is derived by the application or use of Taro Yamane formula for sample size determination. The formula is illustrated as follows:

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

Where:

n = Sample size

N = Population size

I = Constant

e = Level of errors (0.05)<sup>2</sup>

Therefore,

$$n = \frac{127}{1 + 127(0.05)^2}$$

$$n = \frac{127}{1.3175}$$

$$n = 96$$

**Table 1.2) Sample Size Distribution of Respondents**

S/N	Public Sector Organizations	Percentage of Population	Sample Size
1	IFRS	7/100 X 96	7
2	NAFDAC	4/100 x 96	4
3	NTA	5/100 x 96	5
4	JAMB	7/100 x 96	7
5	NNPC	8/100 x 96	7
6	NPA	5/100 x 96	5
7	PHCN	7/100 x 96	7
8	NECO	9/100 x 96	9
9	NIMASA	6/100 x 96	6
10	FAAN	7/100 x 96	7
11	NBC	5/100 x 96	5
12	NCS	6/100 x 96	6
13	NESREA	9/100 x 96	8
14	NRC	6/100 x 96	6

15	NCC	8/100 x96	7
Total			<b>96</b>

Source, Research data, 2025.

### Instrumentation

The instrument for this study was questionnaires designed after an extensive literature review.

### Method of Data Analysis

The data collected from the questionnaire were analyzed in the Statistical Package for Social Sciences (SPSS) Version 22. Demographic data were analyzed using simple percentage. The research questions were analyzed using Mean and Standard Deviation in the distributive statistics tables. A criterion means of 3.0 is set as a guideline for accepting and rejecting option. The criterion mean is calculated as follows:  $5+4+3+2+1/5 = 3.0$ . Fixing the criterion mean at 3.0 implies that for any item to be accepted, it must score a minimum mean value of 3.0 or above, while anything less than 3.0 is rejected.

The formulated hypotheses were tested using the simple bivariate regression analysis with model summary explaining the relationship and determinant percentage of the relationship by the R and R-square respectively. The significance of the variability will be tested using the ANOVA and hypotheses acceptance and rejection at 0.05 levels of significant using Coefficients table with the aid of the SPSS platform.

## DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

### Data Presentation and Analysis

**Table 2.1: Questionnaire Distribution to Respondents and Retrieval**

Questionnaire Copies	Frequency	Percentage %
Administered	96	100
Returned	87	91
Bad / incorrectly filled copies/ non-returned	9	9

Source: Survey Data, 2025.

Prior to table 2.1 above, ninety-six (96) copies of the questionnaire were distributed among the respondents which consisted of top administrative/management staff and middle administrative management staff of the fifteen selected public enterprise in Nigeria. Eighty-seven (87) copies were retrieved which amount to 91%; while nine (9) copies went bad, not returned or incorrectly filled which amount to 9%.

### Univariate Descriptive Analysis and Result Interpretations

This section provides univariate descriptive analysis and result interpretation research questions and variables of the input variables dimension [recurrent expenditure control (REC), capital expenditure control (CAPEX), revenue control (REVC) and resources allocation control (RAC)] also of outcome variable measures net profit margin (NPM) and achievement of budgeted production objectives (ABO), and also Treasury single accounting (TSA)} which containing mean, median, maximum, minimum, standard deviation, skewness and kurtosis, are revealed.

The analysis of research questions was based on descriptive statistics showing the mean and standard deviation of respondents to items, using a criterion mean of 3 as stated in chapter three in method of data analysis above.

Table 2.3

	Descriptive Statistics						
	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
GIFMIS	197	1.400	5.000	3.85685	.939238	2.773	7.343

TSA	197	1.800	5.000	3.57360	.803890	2.379	6.871
IPPIS	197	2.200	5.000	3.70660	.602552	2.458	8.355
PF	197	2.400	4.800	3.79289	.452826	2.446	4.224
EMBZZ	197	2.000	4.800	3.87513	.547388	3.524	6.038
CS	197	2.400	4.800	3.79289	.554527	3.291	5.532
Valid N (listwise)	197						

Source: Researcher's SPSS (v.24) computation Result, 2025

To answer the research question one, result from table 4.6 above shows a mean response of 3.85685, 3.57360 and 3.70660 for government integrated financial management information system (GIFMIS), treasury single account (TSA) and integrated payroll and personnel information system (IPPIS) which are above criterion mean of 3 indicating that large percentage of the respondents agreed to the items. The standard deviation for GIFMIS, TSA and IPPIS were 0.939238, 0.803890 and 0.602552 respectively, indicating that there was homogeneity or unity of response. Also, the normalcy test of Skewness and Kurtosis calculated mean values, which is a measure of the departure of a distribution from symmetry above, for four study dimensions' GIFMIS, TSA and IPPIS show a positive skewness value that is greater than 1. This indicates that the four study dimensions are normally distributed. The Kurtosis result, which measures the extent of flatness or peakedness of a distribution in relative terms to a normal distribution, confirms that GIFMIS, TSA and IPPIS are normally distributed and are not platykurtic (not having negative values/flattened curved) as their kurtosis coefficient is more than 3.0.

On the other hand, the two measures of the criterion variable of the study, payroll fraud (PF) and Embezzlement (EMBZZ) have calculated average values 3.79289 and 3.87513 respectively. The maximum and minimum values of PF and EMBZZ were 2.400 and 4.800, respectively. On the other hand, the standard deviation values of 0.79289 and 0.554527 signify that the data deviates from the mean values of the two study measures, indicating that there was homogeneity or unity of response. Also the normalcy test of Skewness and Kurtosis calculated mean values, which is a measure of the departure of a distribution from symmetry above, for four study measures PF and EMBZZ show a positive skewness value that is greater than 1. This indicates that the four study dimensions are normally distributed. The Kurtosis result, which measures the extent of flatness or peakedness of a distribution in relative terms to a normal distribution, confirms that PF and EMBZZ are normally distributed and are not platykurtic (not having negative values/flattened curved) as their kurtosis coefficient is more than 3.0.

Lastly, government policy or moderating variable of the study, Organizational size (CS) have a calculated average value of 3.79289. The maximum and minimum values of CS were 2.400 and 4.800 respectively. On the other hand, the standard deviation values of .554527 signify that the data deviates from the mean values of the two study measures, indicating that there was homogeneity or unity of response. Also, the normalcy test of Skewness and Kurtosis calculated mean values, which is a measure of the departure of a distribution from symmetry above, for four study measures CS show a positive skewness value that is greater than 1. This indicates that the four study dimensions are normally distributed. The Kurtosis result, which measures the extent of flatness or peakedness of a distribution in relative terms to a normal distribution, confirms that CS are normally distributed and are not platykurtic (not having negative values/flattened curved) as their kurtosis coefficient is more than 3.0.

**Table 2.2 Summary Stationary Test Result**

Variables	Order of Diff. & Intercept	ADF Statistics	Test critical values at		probability
			1%	5%	
GIFMIS	First difference and individual intercept	-4.521210	1%	-3.632145	0.0085
			5%	-2.896323	
	First difference and		10%	-2.753214	
			1%	-3.737853	

TSA	individual intercept	-6.442312	5%	-2.832154	0.0002
			10%	-2.652314	
IPPIS	First difference and individual intercept	-4.631247	1%	-3.561247	0.0003
			5%	-2.863214	
			10%	-2.563214	
PF	First difference and individual intercept	-6.532147	1%	-3.863214	0.0001
			5%	-2.863215	
			10%	-2.863214	
EMBZZ	First difference and individual intercept	-4.92845	1%	-3.563214	0.0000
			5%	-2.686517	
			10%	-2.753214	
CS	First difference and individual intercept and trend	-8.646898	1%	-3.856324	0.0000
			5%	-2.865321	
			10%	-2.964321	

*Source: Statistical Computation result from Researcher's E-view (v.12), 2025*

From the above table, all the variables are stationary since the ADF values are greater than the corresponding critical values and the probability is less than 0.05 for all variables. Therefore, the data becomes stationary at first difference integrated of order 1 that is 1(1), for {government integrated financial management information system (GIFMIS), treasury single account (TSA) and integrated payroll and personnel information system (IPPIS), and payroll fraud (PF) and Embezzlement (EMBZZ) and Organizational size (CS)}, apart from the log of) at second difference and individual intercept and trend 1(2). See Results appendix b.

### Summary Results Findings

**Table 4.17 Summary Computation of Hypotheses Results**

Hypotheses	Coefficient	Std. Error	T-Stat	P-Value 0.05	Statistical Decision	Result
H0 <sub>1</sub>	0.860	.689	5.214	0.032	Significant	Rejected H0 <sub>1</sub>
H0 <sub>2</sub>	0.739	.048	.548	.004	Significant	Rejected H0 <sub>2</sub>
H0 <sub>3</sub>	0.760	.058	5.321	.584	Not Significant	Accepted H0 <sub>3</sub>
H0 <sub>4</sub>	0.890	.084	2.778	.011	Significant	Rejected H0 <sub>4</sub>
H0 <sub>5</sub>	0.764	.542	3.304	.020	Significant	Rejected H0 <sub>5</sub>
H0 <sub>6</sub>	0.505	.549	2.156	.877	Not Significant	Accepted H0 <sub>6</sub>
H07				.003	Significant	Rejected H07

*Source: Researcher's Computation, 2025*

From the summary of hypotheses table above, the results of the hypotheses of the study were presented in line with the statistical decision rule: 'if the probability value (PV) is less than 0.05 alpha level, we reject the null hypotheses and accept significant relationships. Meanwhile, if the probability value (PV) is greater than 0.05 alpha level, we accept the null hypothesis and accept an insignificant relationship. Hence:

H0<sub>1</sub>: There is significant relationship between in between government integrated financial management information system and payroll fraud in Nigeria public enterprises.

H0<sub>2</sub>: There is a significant relationship between in treasury single account and payroll fraud in Nigeria public enterprises.

H0<sub>3</sub>: There is no significant relationship between in treasury single account and payroll fraud in Nigeria public enterprises.

- H0<sub>4</sub>: There is significant relationship between in government integrated financial management information system and Embezzlement of Funds in Nigeria public enterprises.
- H0<sub>5</sub>: There is significant relationship between treasury single account and Embezzlement of Funds in Nigeria public enterprises.
- H0<sub>6</sub>: There is no significant relationship between in integrated Payroll and Personnel Information System and Embezzlement of Funds in Nigeria public enterprises.
- H0<sub>7</sub>: There is significant influence of technological infrastructure in the relationship digital accounting system and fraud occurrence in Nigeria public enterprises.

### **Discussion of Findings**

The result of the descriptive statistics analysis of table 4.5 for government integrated financial management information system and payroll fraud revealed a mean of 3.85685 and 3.79289, respectively. On the other hand, null hypothesis one was rejected with a (P-Value of  $0.032 < 0.05$  and a coefficient value of .860). Hence, there is significant relationship between in government integrated financial management information system and payroll fraud in Nigeria public enterprises. This finding was in line with T Paul et al (2019), informed the advent of digital integrated personnel and payroll information systems of most African countries. 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. 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.

The finding of the research question two descriptive statistics analysis of treasury single account and payroll fraud 3.57360 and 3.79289, respectively. On the other hand, null hypothesis two was rejected with a P-Value of  $0.004 < 0.05$  and a coefficient value of .739. Hence, there is positive and significant relationship between in treasury single account and payroll fraud in Nigeria public enterprises. This result is in line with Sunday et al (2019), examines the effect of the implementation TSA, IPPIS and FMIS on fraud in Public Interest Entities in Nigeria. The descriptive research design was employed, and questionnaire administered on respondents randomly selected from the studied Ministries. Results of the statistical test reveal that TSA, IPPIS, and IFMIS have positive and significant relationship with Fraud and fraud management as well as jointly impact the performances of Public Interest Entities.

On the third research question and hypothesis, the descriptive statistics reveal a mean of 3.57360 and 3.79289 for treasury single account and payroll fraud respectively. On the other hand, null hypothesis three was accepted with a (P-Value of  $0.584 > 0.05$  and a coefficient value of .760). Hence, there is positive and no significant relationship between in treasury single account and payroll fraud in Nigeria public enterprises. It is in line with Amos (2020), examined the effect of Treasury Single Account (TSA) on financial accountability, corruption and financial discipline in the Nigerian public sector.

The fourth research question descriptive analysis revealed government integrated financial management information system and Embezzlement of Funds of 3.85685 and 3.87513 respectively. On the other hand, null hypothesis four was rejected with a P-Value of  $0.011 < 0.05$  and a coefficient value of 0.890. Hence, there is significant relationship between in government integrated financial management information system and Embezzlement of Funds in Nigeria public enterprises. The findings were in line with Ogbonna, and Friday (2018), examines the Impact of Government Integrated Financial Management Information System (GIFMIS) on Economic Development of Nigeria. Secondary data was collected from the Budget Office of the Federation, Office of the Accountant- General of the Federation, National Bureau of Statistic and United Nation

Development Programme and analyzed with the use of statistical package for social science (SPSS) and t-test to test the significant difference in independent and dependent variables.

The fifth research question descriptive analysis revealed a mean value for treasury single account and Embezzlement of Funds of 3. 57360 and 3. 87513, respectively. On the other hand, null hypothesis five was rejected with a P-Value of  $0.020 < 0.05$  and a coefficient value of (.764) Hence, there is significant relationship between in treasury single account and Embezzlement of Funds in Nigeria public enterprises. The study findings are in line with Otemu et al (2018), The treasury single account (TSA) is a unifying system of banking that operates from central bank of Nigeria (CBN) which requires all government ministries, departments and Agencies (MDA) to remits all money at their individual account, domiciled at their deposit money banks (DMBs) into the single federal government account called consolidated revenue account (CRA), maintained by the CBN for their various locations either states, cities or towns on a day to day or at a standing interval of time.

The sixth research question descriptive analysis revealed an integrated Payroll and Personnel Information System and Embezzlement of Funds of 3. 70660 and 3. 87513 respectively. On the other hand, null hypothesis six was accepted with a P-Value of  $0.877 > 0.05$  and a coefficient value of (0. 505). Hence, there is no significant relationship between in integrated Payroll and Personnel Information System and Embezzlement of Funds in Nigeria public enterprises. This finding was in corroboration with Fa raj im a kin and Anichebe (2017), examines the effect of the implementation of Integrated Personnel Payroll Information System (IPPIS) on employee welfare using fifty Ministerial. Department and Agency's.

Finally, there is a significant influence of firm size in the relationship digital accounting system and fraud occurrence in Nigeria public enterprises. This is in line with Bahati (20147), examined the impact of computerized accounting system on performance of payroll accounting in Urban Water and Sewerage Authorities. The study made use the primary data collection which includes questionnaires and personal interview, also the secondary data collected from official document of UWASAs, various research work on computerizes accounting system, accounting journal, text books and Open University of Tanzania Library. The main findings indicate that adoption of CAS in accounting practice has both positive and negative impact.

## **SUMMUARY, CONCLUSION, RECOMMENDATIONS AND CONTRIBUTION TO SCHOLARSHIP**

### **Summary**

In line with the statistical decision rule of the probability value (PV) 0.05 alpha level, we rejected five (5) null hypotheses of significant relationship and accepted two (2) null hypotheses of significant relationship. Thus, in view of the stated objectives it was found from the statistical regression analysis employed by the study in testing the hypotheses that under 0.05 alpha level;

1. There is a significant relationship between government integrated financial management information system and payroll fraud in Nigeria public enterprises.
2. There is a significant relationship between treasury single account and payroll fraud in Nigeria public enterprises.
3. There is no significant relationship between treasury single account and payroll fraud in Nigeria public enterprises.
4. There is a significant relationship between government integrated financial management information system and embezzlement of funds in Nigeria public enterprises.
5. There is a significant relationship between treasury single account and embezzlement of funds in Nigeria public enterprises.
6. There is no significant relationship between in integrated payroll and personnel information system and embezzlement of funds in Nigeria public enterprises.

7. There is a significant influence of firm size in the relationship between digital accounting systems and fraud occurrence in Nigeria public enterprises.

Accounting plays an important role of recording and managing funds in any public organization in the most suitable way. But the prominence of fraudulent accounting practices in Nigerian public sector have necessitates the use of digital accounting in government organizations. In Nigeria, the Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices and Other Related Offences Commission (ICPC) were established to combat and limit the corruption threat, especially diversion of government funds. Still, Top civil administrative and management staff are busy embezzling public funds, laundering money and engaging in sharp corrupt practices without fear of getting caught. Thus, the need for digitalizing government accounting system, aimed at mitigating, detecting, and preventing public sector officer's fraud and other corrupt practices.

Thus, the study concludes that there is a significant relationship between government integrated financial management information system and payroll fraud in Nigeria public enterprises, also, there is a significant relationship between treasury single account and payroll fraud in Nigeria public enterprises. Meanwhile there is no significant relationship between in treasury single account and payroll fraud in Nigeria public enterprises. On the other hand, there is significant relationship between in government integrated financial management information system and embezzlement of funds in Nigeria public enterprises. There is significant relationship between treasury single account and embezzlement of funds in Nigeria public enterprises. While there is no significant relationship between in integrated payroll and personnel information system and embezzlement of funds in Nigeria public enterprises. There is significant influence of technological infrastructure in the relationship digital accounting system and fraud occurrence in Nigeria public enterprises.

Corruption is agreeably one of the major enemies of humanity, and the perpetrators are worse than hired assassin. Corruption could deny millions of their sources of basic livelihood, even their very life. Corruption is the only reason why government expenditures never translate to development over time. The fight against corruption through institutional reforms such as TSA, GIFMIS, and IPPIS to mention but a few, come with contemporary challenges that can be addressed by the engagement of forensic accountants and integration of forensic accounting into the governance system. War against corruption with institutional reforms without effective criminal prosecution of individuals accused of corruption will be counterproductive, hence, the need for litigation support services, expert witnessing and investigative auditing to mitigate massive corruption in Nigeria.

### **Recommendations**

Based on the finding of the study, the following recommendations are made:

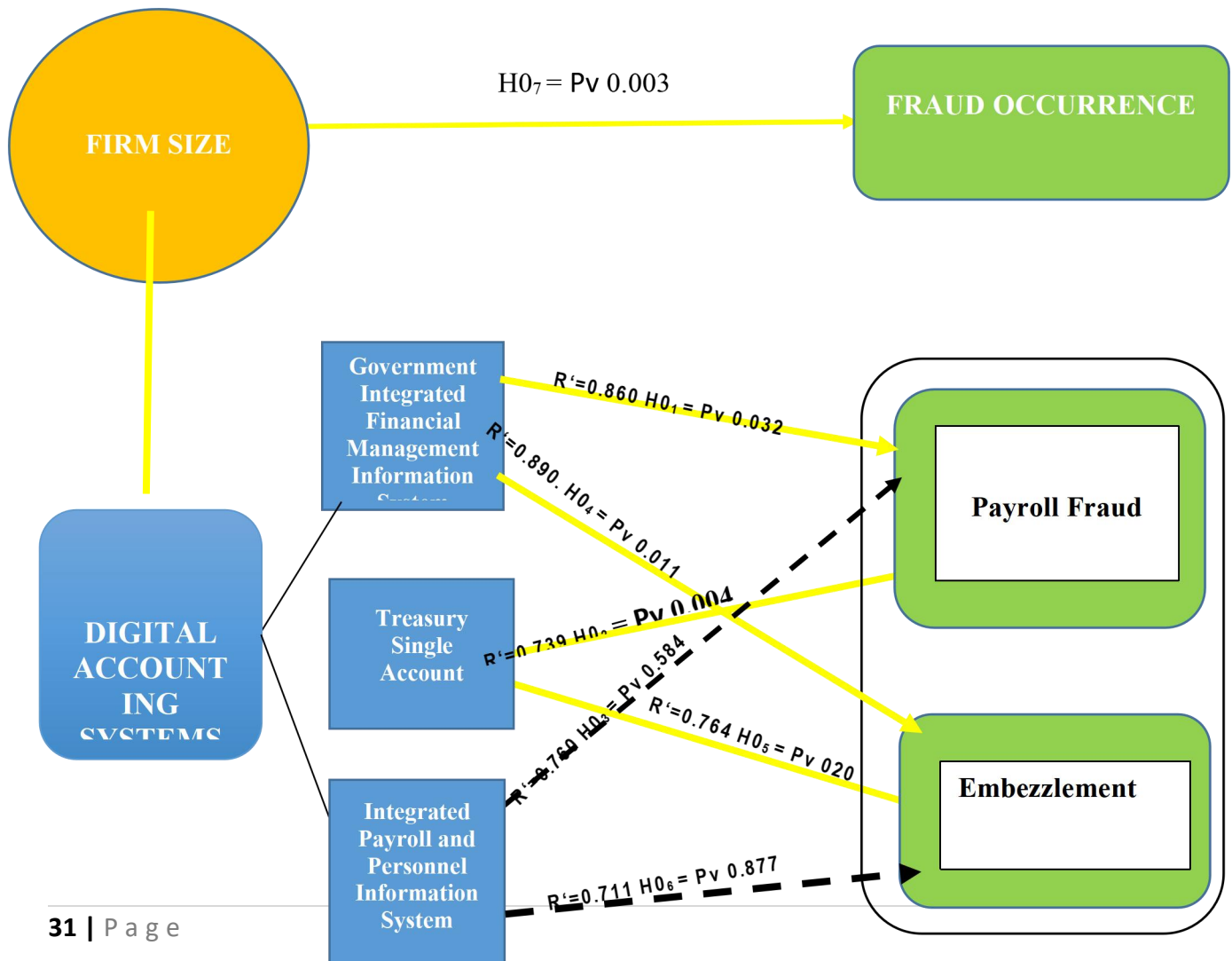
1. Though government integrated financial management information system has contributed significantly to payroll fraud occurrence. There is necessity for the of Nigerian government to be proactive in the combat against fraud in its civil service.
2. The federal government should continue to operate with the principles of single treasury account because of the positive influence it has on the effectiveness of public finance management in areas of fraud control and accurate accounting.
3. Ministries, public enterprises and parastatals should regularly monitor their top administrative and management activities and prosecute any officer(s) found embezzling public funds and make the head of account unit answerable for any such misappropriation.
4. Again, training Bureaus of the federal civil service should be empowered to train accountants to specialize in forensic auditing. Upon completion of their studies, these accountants should be deployed to man all the Ministries, Departments, and Agencies government integrated financial management information system to continuous mitigating fraud in the public service.

5. State and Local governments across the nation should endeavor to adopt the operation of single treasury account for effective and efficient management of public finance especially in the areas of fraud control and accurate accounting.
6. Staff should be trained with regards to the growing trend in ICT in order to be able to effectively utilize the IPPIS frameworks.
7. The Economic and Financial Crime Commission (EFCC) should be fortified financially and technologically for effective lope holes in digital accounting strategies. The anti-graft agency should also add forensic accountants for professional detection of evidences which will assist litigation in the court of law.

**Contributions to Knowledge**

1. The study contributes to knowledge by introducing government integrated financial management information system, treasury single account and integrated payroll and personnel information system as dimensions of the predictor variable and payroll fraud and embezzlement of funds.
2. The study has added to existing literature on digital accounting and fraud occurrence by compiling over hundred empirical reviews and analysis.
3. The introduced six regression models in order to statistically test the relationship between the dimensions of digital accounting and fraud occurrence in Nigeria.
4. The study also contributes to knowledge be introducing a heuristic model.

**Heuristic Model**



**Figure 5.1** *Heuristic Model Showing the Study Hypotheses and Results*

**Key of Heuristic Model**

**Yellow lines = significant relationship**

**Black dotted lines = Not significant relationship**

- Ho<sub>1</sub>:** The first (1<sup>st</sup>) **Yellow** arrow line; represent the relationship and effect of government integrated financial management and payroll fraud. Thus, a R' of 0.860 and p-value of 0.032 i.e. payroll fraud has a significant effect on government integrated financial management
- Ho<sub>2</sub>:** The second (2<sup>nd</sup>) **Yellow** arrow line: represent the relationship and effect of treasury single account and payroll fraud has. Thus, a R' of 0.739 and p-value of 0.004 i.e. payroll fraud has a significant effect on treasury single account.
- Ho<sub>3</sub>:** The first (1<sup>st</sup>) **Black dotted lines**; represent the relationship and effect of integrated payroll and personnel information system on payroll fraud. Thus, a R' of 0.760 and p-value of 0.584 i.e. payroll fraud has no significant effect on integrated payroll and personnel information system.
- Ho<sub>4</sub>:** The fourth (4<sup>th</sup>) **Yellow** arrow line; represent the relationship and effect of government integrated financial management information system on embezzlement of funds in public. Thus, a R' of 0.890 and p-value of 0.011 i.e. Embezzlement of funds in public has a significant effect on government integrated financial management information system.
- Ho<sub>5</sub>:** The fifth (5<sup>th</sup>) **Yellow** arrow line; represent the relationship and effect of treasury single account and Embezzlement of Funds. Thus, a R' of 0.764 and p-value of 0.020 i.e. Embezzlement of funds has a significant effect on treasury single account.
- Ho<sub>6</sub>:** The sixth (6<sup>th</sup>) **Black dotted lines**: represent the relationship and effect of between integrated payroll and personnel information system and embezzlement of funds. Thus, a R' of 0.711 and p-value of 0.877 i.e. personnel information system and embezzlement of funds has no significant effect on integrated payroll.
- Ho<sub>7</sub>:** The first (1<sup>st</sup>) **Yellow** lines: showing 0.003 and P-value of 0.003 represent significant influence of firm size in the relationship between digital accounting system and fraud occurrence in Nigeria public enterprises

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