

ELECTRONIC PAYMENT SYSTEM AND PAYROLL FRAUD IN PUBLIC INSTITUTIONS IN NIGERIA

THANKGOD C. AGWOR
Department of Accountancy
Rivers State University
Port Harcourt

MAUDLYN I. VICTOR-IKOH
Department of Accounting
Federal University Otuoke
Bayelsa State

ABSTRACT

This study investigated the impact of electronic payment system on payroll fraud in public institutions in Nigeria. This was substantiated by a review of the extant literature and formulation of hypotheses. To generate the necessary data for the study, the historical research design was adopted and data were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin and Reports of the National Bureau of Statistics of various years covering the period of 2009 to 2015. The proxies used for electronic payment system in the study are point of sale (POS) and mobile payment (MOP) while payroll fraud was measured by ghost workers fraud. The data for this study were analyzed with the regression model and this was achieved with the help of the statistical package for social sciences (SPSS) version 22. The result shows that a percentage increase in the use of point of purchase as an electronic payment system in Nigerian public institutions leads to 25.1% decrease in payroll fraud. Similarly, a percentage increase in the use of mobile payment as an electronic payment system in Nigerian public institutions leads to 18.9% decrease in payroll fraud in Nigerian public institutions. Based on the findings, it was therefore recommended that public institutions in Nigeria should adopt the use of electronic payment system if the problem of payroll fraud must be minimized.

Keywords: Electronic payment system, payroll fraud, public institutions

INTRODUCTION

The payment of salaries to employees is a statutory obligation, which is not negotiable. To ensure regular, accurate and prompt payments of wages and salaries at the end of every month, the payroll section of Finance and Supplies Department has been empowered by law to be solely responsible for the preparation of workers' wages and salaries (Agburu, 2012). According to Ihe (2013) the payment system in any organization or institution is very paramount. In public institutions, there are two major types of payment expenditures which include capital expenditures and recurrent expenditures. Under recurrent expenditure are personnel costs and overhead costs. Personnel cost is the payment of staff salaries or wages. In the payment of staff salaries or wages, the affected staff has to be payrolled. A payroll is a list of employees or staff receiving wages or salaries with amount due to each. The payroll consists

mainly of two sections, viz: (a) payroll payment and (b) payroll deductions. Payroll payments consist of the annual basic salary, the monthly basic salary, grade level, and allowances of each staff. While the payroll deductions consist of deductions that are made out of the employee's total emolument such as deductions for tax, pensions, union dues etc. In the process of doing this, different type of payroll fraud is being committed by the payroll staff and at times in collaboration with other employees.

Okoye (2016) noted that the bane of financial mismanagement in the Nigerian public sector since the oil boom may have led to the existence of weak structural control mechanism that has birthed variety of loopholes which have facilitated and sustained fraudulent practices in Nigeria. Billions of Naira is lost in the public sector every year through fraudulent means. Common cases of payroll fraud in Nigeria include the misappropriation of pension funds, hoarding of staff salaries, and scores of ghost workers on the payroll. Atchison (2007), states that payroll fraud is the theft of cash from an organization via the payroll processing system. There are several ways in which employees can commit payroll fraud. Payroll fraud is a massive source of accounting fraud and employee theft. In a research on payroll fraud, 70% of people admit that they would commit a fraud if they were confident that they could get away with it and so it is important that business owners and personnel directors take reasonable steps to reduce the temptation. Taking action to reduce and prevent payroll fraud is crucial, particularly at this time of economic recession in Nigeria when the temptation for an employee to commit payroll fraud is very high.

Adeosun (2016) in various media reported that payroll fraud in Nigeria has exposed the nation's revenue system to serious financial leakages. Though payroll fraud permeates all organizations, its rate of occurrence in Nigerian public institutions is assuming a tremendous dimension. This therefore calls for the need to institute electronic payment system to salvage and remedy the situation from total collapse.

Prior empirical studies have shown that a relationship exists between electronic payment system and payroll fraud. But most of the studies are of foreign origin and therefore lack local contents. Environmental differences could cause differences in research findings. This therefore created a gap in the literature. In order to close this gap and increase the frontier of knowledge in this area of study, this research work is being consummated to investigate the impact of electronic payment system on payroll fraud in Nigerian public institutions. Based on the above, the following null hypotheses were raised:

- (i) H_{01} : Point of Sales System has no significant effect on payroll fraud in Nigerian public institutions.
- (ii) H_{02} : Mobile payment system has no significant impact on payroll fraud in Nigerian public institutions.

LITERATURE REVIEW

Payrolling is the process of listing the names of people employed by a company showing the amount of money to be paid to each of them (Hornby, 2001). It is obvious from the above statement that payrolling is an exercise that is done in every establishment that has some employees, which in all intent, are paid by the employers. In this respect, payrolling becomes an exercise that is carried out both in the private and public organizations. Therefore, it may not be out of place if payrolling, with respect to local government system, is defined as the

listing of all the people who are employed by the local government council, showing the actual amount to be paid to each worker at the end of every month. In other words, before any person is payrolled in the local government, he or she must be a bonafide worker of the council.

All employees of the government are usually rated according to their ranks on appropriate grade levels. Within each grade level is a point or increment which an employee progresses as the years go by until when they are promoted to the next grade level. Basic salary of an employee is normally supplemented by some approved allowances such as transport, rent, utility, hazard and bonuses. In contrast, there are deductions which include taxes (PAYE), union dues, levies, loan refunds, etc. These allowances and deductions can be regular or interim. They are regular when they are constant and do not change quite often while allowances and deductions are interim when they are paid and deducted respectively for particular purposes. At the end, net pay is arrived at gross earnings (basic salary + regular allowances) minus approved regular deductions.

Powell and Xiao (2006) states that a salary voucher is usually prepared for each department and shows for each worker the following information: name of employee, rank, basic salary grade level and step, salary per annum and basic pay. To the basic pay is added the following regular allowances to arrive at the gross pay: meal, rent, transport, utility, hazard and arrears. From the gross pay, the following deductions are made to arrive at the net pay: (i) PAYE income tax (ii) union check-off dues (iii) staff welfare association (iv) NHIF (v) pension (vi) housing scheme (vi) refund of loans and personal advances plus accrued interest (vii) other deductions. Constitutionally, it is binding on the payroll officers to ensure that all letters of newly appointed staff are duly signed by the personnel officer before payrolling such staff. It is tantamount to breaking of law should payrolling of any staff is carried out without the appointment letters duly signed by the authorized personnel.

The payrolling system cannot be complete without the signature of the internal auditor who according to Section 40.1 of the Financial Memoranda (FM) provides a complete and continuous auditing of the accounts and records of revenue and expenditure of government organizations. Stressing further on the role of internal audit unit in the payrolling process in the government system section 40.10 of the same FM states that before any payment including salaries of workers is made, a prepayment auditing of vouchers and the supporting documents shall be made by the internal auditor. This is to ensure that the provisions of the FM are followed in all respect, that payment is one properly authorized and correctly charged to the stated sub-head or account, and that sufficient funds are available to meet such payment. From the foregoing, the internal audit unit is indispensable in the financial operations of public organizations. It is important to point out that the signatories of other authorized officers become null and void if the internal auditor has not vetted and appended his own signature to the payroll sheet.

It is equally binding on the Payroll Officers to ensure that Heads of different Departments in the government institutions must certify the payrolled sheet containing all the names of staff from their individual departments. This is to ensure that all bonafide staff of each department is correctly payrolled and no name is missing, while in contrast, none member of any department should be in the voucher. The above is in consonant with section 15.22 of the Financial Memoranda, which states that "a Head of Department shall be personally

responsible for notifying the Treasurer of the death or dismissal of any employee or any other matter affecting the payment of his emoluments". In addition, the Head of a Department may be held personally liable for any irrecoverable overpayment, which is due to his failure to give prompt information to the Treasurer" (Federal Republic of Nigeria, 2009:129).

Payroll software programs are becoming more popular everyday. A growing number of business organization and government institutions are using computer accounting solutions to automate the process of paying salaries and wages. The essential features of a good payroll system are presented below; (a) Ability to calculate taxes: This includes: Federal income; Social security; Medicare; State income; and City income (b) State and Federal unemployment; (c) State disability insurance (d) Support for different types of deductions (e) Ability to print pay checks, check stubs and ability to create detailed reports.

A lot of factors come into play while determining the emolument of employees. Several scholars, Nwachukwu (2000), Ogunbameru, (2004), Agbonifoh et al (2005) in their studies have emphasized the need to place premium on productivity in wage and salary administration. According to Agburu (2012), the main wages and salaries structure determinants have been identified to include job worth, training, economic value or market value of an item, employee tastes and preferences, and unions. Other determinants of wage structure as embraced by Ngu (2005) are highlighted thus: (a) Discrimination: The trend nowadays is to shift away from wage differentials based on sex or race. (b) Industrial Relations Factors: Both industrial relations scholars and labour economists are involved. The industrial relation relations scholars base their views mostly on non-economic forces while the labour economists emphasized on such criteria as productivity, efficiency and general performance of the employee. (c) Social Determinants: These include such things as equity, status, and the preservation of customary relations.

Payroll fraud can be a serious threat for public institutions that have not safeguarded themselves properly, which can lead to complications with their accounts, putting the organization out of pocket as well as their employees. Having safe and secure systems is one of the best ways to prevent payroll fraud. Using a trusted payroll provider as such electronic payment system is one way to safeguard the government against payroll fraud. Taking action to reduce and prevent payroll fraud is very crucial. A government that doesn't have proper controls and a powerful payroll solution will almost certainly experience a payroll fraud (Agburu, 2012).

When it comes to committing fraud – there is no better payment instrument available than cash. Cash is hard to control, easy to take and impossible to track and therefore, all serious organizations should minimise the use of cash in all transactions. The most common types of payroll frauds are ghost employees' fraud, falsification of time sheets, faking an illness by the employee and false expense report.

A ghost employee is an employee of a company that doesn't exist. A ghost employee is the creation of a fraudster for the purpose of collecting that ghost employee's salary. Often a ghost employee might be an employee that recently left the company that the fraudster didn't remove from the payroll system. It also could be an entirely made-up persona or a friend or even a relative of a fraudster, who can cash the pay cheque by forging the endorsement or collect the envelope of cash on payday (Oyelakin, 1999).

Without the appropriate systems and controls, ghost employee fraud can continue unnoticed for a long time. Could this be avoided? Certainly yes. The organization has to make sure that **(1)** proper policies and systems are in place for departing employees and **(2)** a quarterly payroll reconciliation procedure is done by someone other than the person responsible for day-to-day payroll operations. The best way to prevent ghost employees is to pay employees electronically – unlike cash and cheques, electronic transfers can be traced and the offenders caught (Ovaga & Eme, 2013).

Falsification of a time card and over-emphasized wage claims are fairly common in any workplace. It mostly takes place in a company where employees are being paid on an hourly basis or when they have a solid guarantee for overtime pay. Most employees feel under-appreciated, underpaid or overworked at some point during their employment, resulting in the willingness to log extra hours or even extra days in their time sheets or ask their coworkers to clock in and clock out for them (Ngu, 2005).

Collusion is the hardest type of fraud to stop. No system or controls can stop a group of people that are working together to break the rules. The most important thing any manager can do to prevent their staff from committing this type of fraud is fostering the right type of workplace culture` so employees don't want to commit fraud to begin with and by monitoring employee productivity against transparent KPIs to detect any potential outliers.

Employees might go even further and fake their injuries or illnesses to be eligible to collect sick leave payments. In some extreme scenarios, workers had other full-time jobs whilst their employer paid them to stay at home and get well. According to Ngu (2005), most employers try to limit the risk of this through a range of policies aimed at limiting the impact of 'taking a sick leave'. In many countries it is normal that employees are entitled only to a limited number of sick days per year and many employers reserve the right to ask for a medical certificate or to ask the sick employee to attend an examination at a doctor trusted by the organization (Ovaga & Eme, 2013).

Human Resource Directors and CEOs should consider the costs and benefits of adding these policies, in particular if they do not have payroll software in place. Payroll is complicated to calculate manually already without the added complexity of tracking and limiting sick days. In most cases, companies should only implement these policies if their payroll software can support it (Oyelakin, 1999).

Most governments normally have reimbursement policies for work-related expenses. For employees, it is another tempting way to commit a fraud by inflating or falsifying their expenses in order to receive extra cash. It could involve claiming for expenses that never occurred, claiming the same expenses twice or claiming personal expenditure as a business expense (Ovaga & Eme, 2013). False expense report fraud is a serious issue for any business and government. Best practices for combating expense fraud involves setting daily spending limits for claimable expenses and to require employees provide tax invoices or receipts in support of all expenses claimed.

Electronic Payment System

The issues of electronics and payment of employee's monthly emolument is pivotal in the accounting system of every organization. The term emolument here implies the aggregate amount of money paid to somebody for work performed. Hence, this can represent salaries and wages, allowance and other financial benefits payable to an employee for services rendered.

The computation and payment of monthly emolument, no doubt, involves a lot of procedures/processes which may not be easily tackled using manual accounting system. Computer systems can manipulate large amounts of information and generate a wide range of information products. This brings to the force the use of computerized accounting system in computing employee's monthly emolument. Nevertheless, at time, some salary earners seem to be unsatisfied and uncomfortable with the so called computerized accounting system as it concerns the computation of their monthly emoluments.

Most salary earners, especially those that are not conversant with an electronic payment environment, might feel that the system does not give them the breakdown of the emolument received. In other words, they expect a detailed analysis of their basic pay, total allowances, statutory and non- statutory deductions, before arriving at the net amount. This scenario is however common in the absence of a pay slip. David (1995) argues that computers are excellent tools for manipulating information, but they are much less reliable as a means of keeping records.

According to ICAN (2006), the following factors should be considered in developing electronic payment system: the department that would benefit from investment in the computerization of the accounting system; flexibility to make future amendments; the availability of manpower, in terms of skills and training to operate and manage the new system; the cost associated with new system in terms of hardware, software, management commitment, documentation of and maintenance and the reliability of the system.

According to Mukharji & Hanif (2000), the significance of electronic payment systems can be summarized as follows:

Cost: Electronic accounting system for payment of salaries and wages offer several advantages to organizations. Most systems can be purchased off the shelf at low cost. These programs allow administrators and managers to see the organization's financial position in "real-time" and make adjustments when needed. Electronic accounting systems can also provide instant reports on inventory valuation, profit and loss, customer accounts and payroll and sales analysis. In addition, transactions need to be input only once, and, with some training, anyone in the organization can handle the inputting.

Time: Using an electronic accounting system for payment of salaries can save time. Accounting software allows faster data entry than traditional accounting, and allows documents such as invoices, purchase orders and payroll to be collated and printed quickly and accurately. Because of its efficiency and ease of use, Modern accounting systems also allow you to improve inventory control and payment collection, saving time and improving cash flow. Because electronic accounting systems update some records automatically, account records will always be up to date, saving time in updating (Mukharji & Hanif, 2000).

Increased functionality: Electronic payment systems have also improved the functionality of accounting departments by increasing the timeliness of accounting information. By improving the timeliness of financial information, accountants can prepare reports and operations analyses that give management an accurate picture of current operations. The number of financial reports has also been improved by electronic systems; cash flow statements, departmental profit and loss, and market share reports are now more accessible with computerized systems.

Improved accuracy

Most electronic payment systems have internal check and balance measures to ensure that all transactions and accounts are properly balanced before financial statements are prepared. Electronic systems will also not allow journal entries to be out of balance when posting, ensuring that individual transactions are properly recorded. Accuracy is also improved by limiting the number of accountants that have access to financial information. Less access by accountants ensures that financial information is adjusted only by qualified supervisors.

Faster Processing

Electronic payment systems allow accountants to process large amounts of financial information and process it quickly through the accounting system (Balvant, 2005). Quicker processing times for individual transactions has also lessened the amount of time needed to close out each accounting period. Month- or year-end closing periods can be especially taxing on accounting departments, resulting in longer hours and higher labor expense. Shortening this time period aids companies in cost control, which increases overall company efficiency.

Electronic payment system comes with its own set of problems, such as the need to protect against data loss through power failure or viruses, and the danger of hackers stealing data. Computer fraud is also a concern, and one need to instigate a system of controls for who has access to the information, particularly customer information. If there is a security breach and data is stolen, management can be held personally liable for the loss of data. One also need to make sure that the data has been correctly entered into the system, as a mistake in data entry can throw off a whole set of data (Mukharji & Hanif, 2000).

Point of Sale (POS)

An Electronic Funds Transfer at the Point of Sale is an on-line system that allows customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases (at purchase points). A Point of Sale uses a debit card to activate an Electronic Fund Transfer Process (Chorofas & Dimitris, 1988). Increased banking productivity results from the use of EFTPoS to service customers' payment system requirements instead of clerical duties in handling cheques and cash withdrawals. Furthermore, the system continues after banking hours and hence convenient for any government as a means of payment. It also saves the bank customers' (governments) time and energy in getting to bank branches or ATMs for cash withdrawals which can be harnessed into other productive activities.

Mobile Payment

Mobile payment refers payment made with the help of mobile telecommunication devices. It is a system that allows customers of a financial institution to conduct a number of financial transactions through a mobile device such a mobile phone. It involves the use of mobile phone for settlement of financial transactions. Mobile banking is popular and exciting to the customers given the low infrastructure requirements and a rapidly increasing mobile phone penetration in Nigeria. Services covered by this product include account enquiry, funds transfer, phone vending, changing password, and bill payments (Siyanbola, 2013). Banks like First Bank, Ecobank, Guarantee Trust Bank, United Bank for Africa and others have begun using mobile banking to serve their customers. Drexelius and Herzig (2001) defines mobile banking as the ability to conduct bank transactions via a mobile device, or more broadly to conduct financial

transactions via a mobile terminal. This definition is a suitable working one as it includes not only basic services such as bank account statements and funds transfer but also electronic payment option as well as information based financial services such as alerts on account limit or account balance, access to stock brokering. Mobile banking provides a number of advantages for both banks and customers. Mobile banking removes geographical limitation to customers and therefore bringing convenience. There is no time limitation i.e. banking may be performed throughout the day and in any place. Mobile banking also provides efficient cash management and security of cash.

METHODOLOGY AND MODEL SPECIFICATION

The historical research design is adopted for this study since the data collected were mainly from the secondary source. The instruments for data collection were the Central Bank of Nigeria (CBN) Statistical Bulletin and Reports of the National Bureau of Statistics of various years covering the period of 2009 to 2015. This period is considered due to lack of available data on the study variables before 2009. In this study, electronic payment system was operationalized as point of sale (POS) and mobile payment (MOP) while payroll fraud was measured by ghost workers fraud. According to Xia (2011), ghost workers fraud in government establishment accounts for an average of 7.9% of annual personnel costs. Based on this report, the ghost workers fraud in this study is measured as 7.9% of the Federal Government annual personnel costs. The data for this study were analyzed with the regression model. This was achieved with the help of the statistical package for social sciences (SPSS) version 22.

In this study, the model specification is as shown thus:

$$PRF = f \{ \alpha_0 + \beta_1 POS + \beta_2 MOP + \dots + \mu_i \}$$

Where:

PRF = Payroll Fraud

POB = Point of Sale

MOP = Mobile Payment

α = Regression constant

β_1 = Regression co-efficient

μ_i = Error term

{

Analysis and Discussions

The empirical analysis involves test of hypotheses earlier stated in this study. The first hypothesis states that point of sales system has no significant effect on payroll fraud in Nigerian public institutions. The second hypothesis states that mobile payment system has no significant impact on payroll fraud in Nigerian public institutions. In testing these hypotheses, data generated on point of sale were regressed with data on ghost workers fraud and the results obtained are presented in the Table below.

Table 1: Effect of Electronic Payment System on Payroll Fraud in Public Institutions in Nigeria

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.987	.981		7.103	.006
POS	-.251	.275	-.781	-5.112	.003
MOP	-.189	.317	-.535	-3.359	.012

a. Dependent Variable: PRF

The result presented in the table above revealed correlation coefficients (R) of -0.781 and -0.535 for POS and MOP respectively. This suggests that there is a strong negative relationship between POS, MB and PRF. The p-values (0.003 and 0.012) which are less than 0.05 level of significance indicate a significant relationship. The result also shows that a percentage increase in the use of point of purchase as an electronic payment system in Nigerian public institutions leads to 25.1% decrease in payroll fraud. Similarly, a percentage increase in the use of mobile payment as an electronic payment system in Nigerian public institutions leads to 18.9% decrease in payroll fraud in Nigerian public institutions. These suggest that electronic payment system influences payroll fraud in Nigerian public institutions.

The results of this study agree with previous studies such as Agburu (2012) and Ovaga and Eme (2013). Agburu (2012) reported that having safe and secure systems is one of the best ways to prevent payroll fraud. Using a trusted payroll provider as such electronic payment system is one way to safeguard the government against payroll fraud. More so Ovaga and Eme (2013) concluded that the best way to prevent ghost employees is to pay employees electronically – unlike cash and cheques, electronic transfers can be traced and the offenders caught.

CONCLUSION AND RECOMMENDATIONS

Employees are expected to be paid their salaries at the end of every month. This requires that the payroll section should build necessary data on every employee for accurate information in processing his earnings. Accordingly, attendance time sheets plus overtime sheets where applicable, are submitted by various departments and units to the payroll section before the end of every month. These sheets are properly checked by the relevant authority (internal auditor) before they are entered in the payroll sheet.

Using an electronic payment system has become the target of many public and private organizations, hence there is need to keep pace with the evolution in e-governmental system. Electronic payment system has to do with the use of electronic means and platforms to make payments. The assessment of every wage/salary administration system is dependent on the efficacy of the settlement and fund transfer approach. An electronic payment system, sequel to its speed and accuracy feature, helps in faster computation and payment of employees' monthly emolument.

Electronic payment of salaries to staff has become a common feature of most government institutions and corporate bodies vis-à-vis employee's wages and salaries administration. E-payment of salaries was introduced with the view to tackling such issues as

ghost workers syndrome, delay in salary payment, errors caused by manual computation of staff emoluments and other payroll misconducts. Nevertheless, the adoption of computerized accounting system in wages and salaries administration has its attendant pros and cons.

The result of this study has demonstrated that the use of electronic payment system reduces payroll fraud in Nigerian public institutions. It is therefore suggested that public institutions in Nigeria should adopt the use of electronic payment system if the problem of payroll fraud must be minimized.

REFERENCES

- Agbonifoh, A.B. & Iyayi, F.I.O. (2005) *Management: A Nigeria Perspective*, Lagos: Malthouse Press Ltd.
- Agburu, J.I. (2012) Recent trends in wage and salary administration in Nigeria: *A Research Project Submitted to the Department of Public Administration*, Zaria: Ahmadu
- Atchison, T. J. (2007) Wage and Salary Administration. *Personnel Administrator and Applied Science*, 1(2); 257-268.
- Balvant M. U. (2005), *Financial Accounting*. Atlantic Publisher and Bello University.
- Chorofas, J. & Dimitris, C. (1988). —How to select the right accounting software. *Journal of Accountancy*. October: 67-77.
- David, B. (1995). Implementing functional recordkeeping systems: A Report on the Distributors. *Economic Euro Journal* 64; 36-53.
- Drexelius, A., & Herzig, T. (2002). *Evidence-based governance in the electronic age; Case Study Financial Records and Information Systems in Tanzania*.
- Federal Republic of Nigeria (2008), *Model Financial Memoranda for Local Government*,
- Hornby, A.S. (2001), *Oxford Advanced Learners' Dictionary*, New York: Oxford. <http://www.c-how.com>
- ICAN (2006). Financial Accounting II. *Students Journal*, 13(1) Jan. – March; 8-10.
- Ihe N.J. (2013). Implication of computerized accounting system on monthly emolument. *Journal of Policy and Development Studies*, 7(1) May; 30-36.
- Mukharji, J. & Hanif, M. (2001). *Modern Accountancy*, Volume 2, Tata McGraw Hill
- Ngu, S.M. (2005) Management principles and worker's motivation in Nigeria: A Nigerian Local Government System, *Singaporean Journal of Business and Economics*, 5 (7); 231-244
- Nwachukwu, C.C. (2000) *Human Resources Management* Port Harcourt: University of Port Harcourt Press.
- Okoye, E.I (2012). Impact of computerized accounting system on external audit functions. *The University Advanced Research Journal*, Issue 3, January-March.
- Ovaga O.H. and Eme O.I. (2013), "The General Rules and Principles of Payrolling in

Oyelakin, O.O. (1999), *Handbook on Local Government Administration*, Abuja: Office
Port Harcourt Press.

Powell, P., & Xiao, Z. Z. (2006). —The extent, mode and quality of IT use in accounting. *Journal of Applied Management Studies*. December, 5(2): 143-158.

Xia O. D. (2012). Effect of payroll fraud on audit risk management in public enterprises: A Case of Kisumu County, Kenya. *Journal of Small Business and Enterprises Development*, 6(3), 240-252.