

**EFFICIENCY AND EFFECTIVENESS OF HUMAN CAPITAL
MANAGEMENT INFORMATION SYSTEM IN MANAGING
GHOST WORKERS FRAUD:**

**A CASE OF PRESIDENT'S OFFICE, PUBLIC SERVICE
MANAGEMENT AND GOOD GOVERNANCE (PO-PSMGG)-
TANZANIA**

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TANZANIA**

By

Kassim Abubakar Bwaki.

**A Dissertation Submitted to the School of Public Administration and Management
in Partial Fulfillment of the Requirement for Award of Degree Master of Science in
Human Resource Management (MSc-HRM) of Mzumbe University.**

2018

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, dissertation entitled “**Efficiency and Effectiveness of Human Capital Management Information System in Managing Ghost Workers Fraud: A Case of President’s Office, Public Service Management and Good Governance (PO-PSMGG)-Tanzania**” in partial fulfillment of the requirements for award of the degree of Masters of Science in Human Resource Management of the Mzumbe University.

Signature _____

Major Supervisor

Date _____

Signature _____

Internal Examiner

Date _____

Signature _____

External Examiner

Date _____

Accepted for the Board of School of Public Administration and Management

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DECLARATION

I, Kassim Abubakar Bwaki, declare that this dissertation is my own original work and it has not been presented and will not be presented at any other University for a similar or any other degree award.

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May our Almighty God bless you all AMEN

DEDICATION

I dedicate this dissertation to my lovely family. Thanks for unconditional support, thanks for believing me and allowing me to further my studies. I am very proud of you and for that reason this work is your reward.

LIST OF ABBREVIATIONS AND ACRONYMS

BIC	Biometric Identification Cards
CFEs	Association of Certified Fraud Examiners
CGA Canada	Certified General Accountants Association
CIMA	Chartered Institute of Management Accountants
CSD	Civil Service Department
DHCMD	Director of the Human Capital Division
GSPP	Government Salary Payment Platform
HCMD	Human Capital Management Division
HCMIS	Human Capital Management Information System
HCMOs	Human Capital Management Officers
HRM	Human Resource Management
HRMIS	Human Resource Management Information System
HROs	Human Resource Officers
IHRPS	Integrated Human Resource and Payroll System
IPPIS	Integrated Personnel and Payroll Information System
IRMT	International Records Management Trust
JADS	Judiciary Statistical Dashboard System
MDAs	Ministerial Department and Agencies
NACTE	National Examination Council
NAO	National Audit Office
NIDA	National Identification Authority
NPDE	National Pay Day Exercise
NSSF	National Social Security Fund
PCISP	Personnel Control and Information Systems Project
PMSOs	Payroll Management Section Officers
PO-PSM	President's Office – Public Service Management
PO-PSMGG	President's Office–Public Service Management and Good Governance

PRF	Personal Record Form
PSC	Public Service Census
PSSSF	Public Service Social Security
PVE	Payroll Verification Exercise
PVE	Payroll Verification Exercise
RITA	Registration Insolvency and Trusteeship Agency
SAPs	Structural Adjustment Programmes
SISOs	Staff Inspection Section Officers
Tsh	Tanzania Shillings
VPN	Virtual Private Network

ABSTRACT

The government of Tanzania introduced HCMIS as solution to manage and eradicate the problem of the ghost workers fraud it has been facing in its public sector. The system facilitates to know the exact nature of workforce and wage bill on a monthly basis and storage of human resource information hence increase efficiency and effectiveness of public services. Despite this initiative done still challenges of the ghost workers fraud persists. Therefore, this study specifically intends to investigate the efficiency and effectiveness of HCMIS in managing the problem of the ghost workers fraud at PO-PSMGG. Specifically, the study sought to find out how the ghost workers appeared in the payroll systems; examine how HCMIS can improve efficiency and effectiveness in managing human resource; and to explore persistence of ghost workers on payroll systems. The study adopted case study research design and qualitative approach was used in order to achieve the study objectives. Purposive sampling and random sampling techniques were used to a sample of 10 respondents. The data was collected through in-depth interview and documentary review methods, and then qualitative data were analysed by using content analysis and presented with direct quotations.

The study revealed that ghost workers appeared in the wage bill because they were not removed from the payroll systems. Additionally, the study revealed that HCMIS successfully combats the ghost names in payroll systems, and able to identify and remove automatically the staff who have reached age of retirement 60 years. However, the findings show that HCMIS fail to identify and remove other forms of ghost workers such as deceased, voluntarily retired and dead employees. Further, the study revealed that ghost workers persist into the system because did not integrate with other human resource systems.

The study recommends that HCMIS was maximum inefficiency and ineffectiveness on managing the ghost workers frauds, it need others systems from public institutions to support the operations.

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CHAPTER ONE

INTRODUCTION AND PROBLEM SETTING

1.0 Introduction

This chapter covers the background of the study, statement of the problem, objectives, research questions, significance of the study, scope of the study, limitations of the study and definition of key terms.

1.1 Background

Ghost workers fraud has been a serious growing global problem facing both developed and developing countries. The laws, regulations and policies against this type of fraud vary from country to country (CIMA, 2009). According to the Association of Certified Fraud Examiners which investigated in 2012, reported 1,388 cases of occupation fraud from 96 countries from six continents. The examiners reported that in the United States of America the payroll fraud which related to non-existence of employees in the payroll system was about 11.6%, Asia 6.4%, Africa 9.8%, Canadian 5.2%, European 9.0%, and Latin American and Caribbean 1.0% annually loses (ACFE, 2012). That means the nature and threat of existence of ghost workers in the payroll system is truly universal.

Fraudulent practices as ghost workers in the payroll were one of the factors that contributed to the need of civil service reforms worldwide (Sawe and Maimu, 2001). During the 1980s, many of African countries adopted Structural Adjustment Programmes that heavily emphasized on cost cutting initiatives in the public service through retrenchment and the identification of ghost workers and their removal of from the payrolls (Stevens and Teggemann, 2004). However, ghost worker fraud in African countries continued getting momentum and popularity. For instance, in 2007 Ghana reported over 1937 ghost employees were deleted from the payroll after conducting headcount census, and in 2012 the government took initiative by introducing a biometric

registration system for public servants which involves the capturing of unique features such as finger prints, iris and photographs of individuals, through that government cut down the expenditure on headcount exercises and saved public funds for national development (Nyaledzigbor, 2015). Friedman (2011) explains that in 2008 Liberia established a centralised automated civil service personnel database, and issued biometric identification cards to all civil servants to eliminate the ghost workers. Cleaning the payroll brings order to the civil service and saves the government money. In August 2013 government of Zimbabwe conducted civil service audit and the report had more than 75000 ghost workers on the wage bill but nothing was done to remedy the situation (Moyo, 2017). In Kenya, a 2014 audit found that at least \$1m a month was lost in payments to ghost workers (Kempe, 2014). In 2007 Nigeria introduced the IPPIS to combat payroll fraud, between 2007 and 2010 over 33 million dollars (75 billion Tsh) was saved, and at the end of 2014 about the 60,000 ghost workers were identified and in 2016 another 50,000 ghost workers were identified and removed from the payroll (Haruna et al., 2015). However, the question of sustainability of Integrated Personnel and Payroll Information System (IPPIS) and other payroll systems is debatable due to persistence of the problem (Oguzierem and Sofiri, 2017). From those experiences it proves that ghost worker fraud is a cross geographical phenomenon of the world (Nangih & Davies, 2017).

In 1985, the Government of Tanzania much got interested in reducing the size and burden of operational cost over the public civil services. Until that year, the government used payroll system which was installed in the 1960s. The Ministry of Finance was processing the system while all personnel information was managed on paper-based files separately by the Civil Service Department (Sawa and Maimu 2001). Nevertheless, there were no interconnections between the personnel information with the payroll system, hence it was difficult to identify the ghost workers (Girishankar and Migliorisi, 2013).

From that, in 1988 the government introduced Public service census, among the objectives was to recognize the ghost employees and to formulate the database system which composed all information of the civil servants. The census was conducted to 350,000 civil servants, and about 16,000 ghost workers were identified (Sawa and Maimu 2001). Although the government succeeded to identify the ghost workers still to reconcile the data with the payroll system was ineffective, this was due to the weakness of the database designed (ibid).

During 1991, the government launched the Civil Service Reform Program (CSRP), among the objectives were; staff retrenchment, identification of ghost workers and establishment of payroll controls (Teskey and Hooper, 1999). When the reform program started, the government still had no personnel record system. In 1995, the government took initiative by establishing the Personnel Control and Information Systems Project (HCMIS) as part of the Public Sector Reform Programme, the project aimed to manage personnel records into one database. Nevertheless, there were weaknesses. Information required populating the personnel and payroll system was not readily accessible. Numbers of paper personnel files were not available and the core documents were missing (IRMT, 2002).

In order to develop the systems in 1997, government introduced Payroll Verification Exercise (PVE) to gather employees' data and those data served as source for the interim database. Furthermore, in these exercises the employers were required to authenticate their parts of the payroll, to sign off against payroll sourced lists for each employee whose presence they could personally show. Through this procedure, about 4,600 ghost employees were identified (Kiragu, 1999). However, this programme was ineffective because it was easy to be manipulated with personal interest (Sawa and Maimu 2001).

At the beginning of 1998, the construction of single streamlined data program began. After the long investigations and analysis the government advertised the bids, and the Lawson Software, a company based in St.Paul, Minnesota won (Schalkwyk and Widner, 2012). To ensure the accuracy and streamline the system the reformer conducted

investigation by taking two lists of civil servants from the Public Service Management office and from the Finance Ministry by making comparison if the personnel information matched in both lists.

Those employees appeared on both lists were entered into the new combined payroll management system, and those who appeared on only one list, the reformer sent request to verify the employment (ibid). By doing so, the reformers identified about 14,000 ghost employees and removed them from the payrolls (ibid). In addition, at that time it was possible for employees to collude with pay staff over salary payment but had been less likely with the new system (IRMT, 2007).

On 20st June 2000, the government officially inaugurated and installed the largest and most sophisticated integrated personnel and payroll management system (HCMIS) (Sawa and Maimu 2001). The government began to know exactly nature of its workforce and wage bill on a monthly basis, further every public employee assigned payroll identification numbers which remained in a lifetime without which no salaries are paid. HCMIS was centralised and administered jointly by the PO-PSMGG (formally PO-PSM), MOF and all MDAs linked through fibre optic cabling, and main server located in the MOF server room. Due to HCMIS, routine data checks and validation were carried out (IRMT, 2007). The new system proved to be very effective at eradicate double employment and ghost workers, it was reported that in one month the system thwarted 127 fraud attempts (Stevens & Teggemann, 2004). Despite these initiatives, all information from LGAs sent to PO-PSMGG was in paper based form to be fed into the system (Njau, 2017). This could lead to PO-PSMGG office to be overloaded with the documents from LGAs all over the country, hence PO-PSMGG decided to decentralise the system to LGAs.

In 2011, the government introduced HCMIS which affect all LGAs and public institutions. The major target was to diminish the manual or traditional workload of the administrative activities and to enable administrators to maintain employees' information using application software (Daniel, 2015).

Nevertheless, in 2016, the government identified and removed more than 10,000 ghost workers from its public sector payroll (Deloitte, 2017). A task force that conducted a special exercise to identify ghost workers in various public institutions revealed this. The situations produced ambiguities over the efficiency and effectiveness of the HCMIS in Tanzania in managing ghost workers fraud in the payroll system.

Poncian and Mpambije (2015), examined the limited financial argument with a view of establishing the context into which LGAs work fail to meet objective, and possible causes for failure to utilise funds as intended, and what that implies to the poor Tanzanians. The findings reveal that employees themselves are the ones committing ghost workers fraud for their own benefits. However, this study fails to determine how the employees conduct the ghost workers fraud.

Njau (2017), explored the challenges encountered in the use of HCMIS in LGAs specifically Mwanza City Council. The study found out that despite the adoption of HCMIS at Mwanza City Council still payroll problems exist. Issue of ghost workers still persists which is contrary to the expectation of the central government. The data shows that the council had 71 ghost workers, and there 03% of employees whose salaries have not been changed despite having promotion letters. In addition, the study found out that none of the human resource officers had knowledge to fully use the system. There was poor flow of information from other departments to human resource department and; the system users were not happy with the support given by approvers at PO-PSMGG. The reviewed literature is replete with causative factors and initiatives taken by the different nations on combating the problem of ghost workers and its impacts, without showing an in-depth demonstration of how those ghost workers appear on the payroll systems they developed. This made a gap that needed to be addressed in the literature.

1.2 Statement of the problem

Tanzania introduced a number of reforms and initiatives over the years aimed to build well managed and eradicate the problem of ghost workers fraud from its public services in the country. as the initiatives included Public Service Census (PSC) of 1988, which primary aimed to determine the exact size civil service, identify the ghost workers and provide database on the profiles of every servant (Sawa and Maimu 2001). On that census, about 16,000 ghost workers were identified out of 350,000 employees. However, to reconcile the census data with payroll system was unsuccessful due to weakness of database designed (ibid). In 1995, the government introduced Personnel Control and Information Systems Project, initial focus was to improve systems for personnel control and data management at selected pilot ministries. This led to management of personnel information, ability to target the wage bill and plan human resource deployment. During 1999, Integrated Human resource and Payroll System known as HCMIS was first activated, now the government in position to know the exact nature of workforce and wage bill on a monthly basis. The system was successful eradicate double employment and ghost workers, it was reported that in one month the system thwarted 127 fraud attempts. In addition, on June 2017, the Government initiated Government Salary Payment Platform (GSPP) in the Ministry of finance as decision support system, to facilitate Electronic Funds Transfer (EFT) in payment of salaries to government employees. The system offers speed, safety, reliability to payment recipients and cost saving to the government.

Despite these initiatives done, and literature provided number of identified ghost workers over the years and their harmful effects on the country's economy. Poncian (2014), in his study of Fallacy of limited resources for development in Tanzania has provide that salaries paid to ghost workers have been on the rise since 2008 from 178 to 832 billion in 2013, and revealed the funds lost to this fraud was huge and distorting government development plans, and most of these ghost workers are served by the LGAs. Again, in 2016 the government removed more than 10,000 ghost workers which

have been costing more than 4.5 billion from its public sector payroll (Delloitte, 2017). Further, National Audit Office in 2017 reported that on the review of Pension funds, the funds are yet to receive the names and details of ghost workers from the treasury (NAO, 2017). Nevertheless, all that related literature says nothing on how these ghost workers appear on the wage bill. Therefore, this study intended to fill the gap specifically by investigating the efficiency and effectiveness of HCMIS in managing ghost workers fraud.

1.3 Objectives of the study

1.3.1 General objectives of the study

The main objective of this study was to investigate the efficiency and effectiveness of Human Resource Management Information System in managing ghost workers fraud.

1.3.2 Specific objectives

Specific objectives of the study were:

- i. To examine how the ghost workers appear on the wage bill.
- ii. To examine how HCMIS can improve efficiency and effectiveness in managing human resource in Tanzania.
- iii. To explore persistence of ghost workers on payroll systems in Tanzania.

1.4 Research Questions

The study sought to answer the key questions:

- i. How do ghost workers appear in the payroll systems?
- ii. How can HCMIS significantly reduce or stop ghost workers on the wage bill in Tanzania?
- iii. Why there is persistence of ghost workers in the organisations while there are payroll systems?

1.5 Significance of the study

The significance of the study is to make the government and Tanzanians aware of the efficiency and effectiveness of the HCMIS in managing the problem of the ghost workers fraud.

The study also constitutes knowledge and provides guidance to PO-PSMGG, researchers as well as other beneficiaries in designing solutions in eradicating the problem of ghost workers fraud in the wage bill.

The study was expected to provide feedback to the HCMIS users and policy makers for possible refinement of the payroll system management.

The study could be also expected to bring new information which might be of interest to various stakeholders such as government agencies, higher learning institutions, NGO's, and donors who are in a position to help the governments in fulfilling its various activities.

1.6 Scope of the study

This study examined the efficiency and effectiveness of HCMIS in managing ghost worker fraud in Tanzania. The research focused on the Ministry of President's Office, Public Service Management and Good Governance (PO PSMGG)-Dodoma since it is not possible to conduct in all public institutions due to associated costs. PO-PSMGG was chosen due to the fact that it was an effect of centralisation of payroll system in the government's ministries. The study went through the individual employees from Human Capital Management Division in PO-PSMGG including Director, Human Capital Management officers, Payroll Management Section Officers and Staff Inspection Section Officers. The period of one year was covered.

1.7 Limitations of the study

In studies, hindrances are unavoidable. On the course of learning, the researcher met the following limitations.

- i. Little has been written concerning ghost workers fraud in Tanzania and therefore contributed to intricacies in undertaking comprehensive literature review for this study.
- ii. Confidentiality: Some information related to workers' database was treated as highly confidential hence was not amenable to easy access by other people, hence it was difficult for the researcher to get such information as respondents were hesitant to do so. However, the researcher asked for assistance from one human capital management officer who offered mutual support and relevant data to the study.
- iii. The study was costly in terms of funds and time. The researcher encountered deficiency in terms of finance and time to better run the study.

1.8 Definition of key terms

1.8.1 Ghost workers

In this study ghost a worker refers to employees who are ineligible to be paid the salary but receives payment. Those ghost workers can be either created by the perpetrator or employers to defraud the organisation.

1.8.2 Human Capital Management Information System (HCMIS)

HCMIS in this study means, the tool which was used for gathering, storing, analysing, controlling and manipulation of the human resource information throughout an organisation. The tool is useful to access important employee's information in order to make several managerial decisions on salary, payroll, compensation, accident, leave, superannuation for pension and other benefits.

1.8.3 Fraud

In this study, fraud refers to perpetrator's act of cheating the payroll system at the place of employment to receive funds which they are not entitled by adding a false employee to the list and collecting the wages (payroll fraud).

1.8.4 Wage bill

Wage bill in this study means, the total amount of money that a government pays to its employees at particular period. Wages comprise all remuneration, earnings, allowance, tips and service charges.

1.8.5 Efficiency

In this study the term efficiency refers to functioning or producing effectively and with least waste and effort. In this regard, efficiency should not only be a measurement of budgeted against expenditure, but also of whether HCMIS deliver on its initial goals and objectives. For instance, efficiency of HCMIS is characterized by ability of HCMIS to identify fake employee registration into the payroll system; accurate disbursement to the right employee; virtually eliminating duplicate registration of employee in any form; and minimization of fraudulent transactions, if not eliminated. Therefore, efficiency is often the means for achieving effectiveness.

1.8.6 Effectiveness

Effectiveness refers to degree to which something is successful in producing desired results. Effectiveness is results driven. Thus, the study examined to what extent the HCMIS is giving correct and proper information, judgments as well as combating the problem of the ghost workers in the payroll system. For example, indicators of HCMIS effectiveness are, automated payroll system driven completely from a HRIS; clean payroll data devoid of fake workers based on biometric capture of personnel; harmonization of nominal roles with payroll; prompt of salaries to employees; strength

of HCMIS against manipulation; and minimization of ghost worker fraudulent activities, if not eliminated.

1.9 Organisation of the dissertation

This dissertation is organised into six chapters. Chapter one covers the background of the study, statement of the problem, general objective of the study, specific objectives of study, research questions, significance of the study, scope of the study, limitations of the study and definition of key terms. The second chapter contain theoretical literature review, literature review from earlier studies and conceptual framework. Chapter three dwells on research methodologies. Chapter four covers data analysis and presentation of findings; Chapter Five dwells on discussion of findings and the last Chapter covers summary, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter encompasses relevant literature reviews by exploring theories and earlier studies related to Human Capital Management Information System on management of the problem of ghost workers. Afterward the conceptual framework and research gap (synthesis) is presented.

2.1 Theoretical Literature Review

Theoretical framework of this study was based on the fraud triangle theory and fraud management theory. The first theory based on different sources of fraud, and second theory discusses various techniques on how to eliminate the fraud.

2.1.1 The Fraud Triangle Theory

This theory developed by a criminologist, Donald Cressey in 1950. The study started by arguing that there must be a reason behind everything people does. A question such as why people commit fraud is a building point of his study. The theory proposes that there are three factors simultaneously present in order for ordinary person to commit fraud. Those factors are; Pressure, Opportunity and Rationalization (Cressey, 1953).

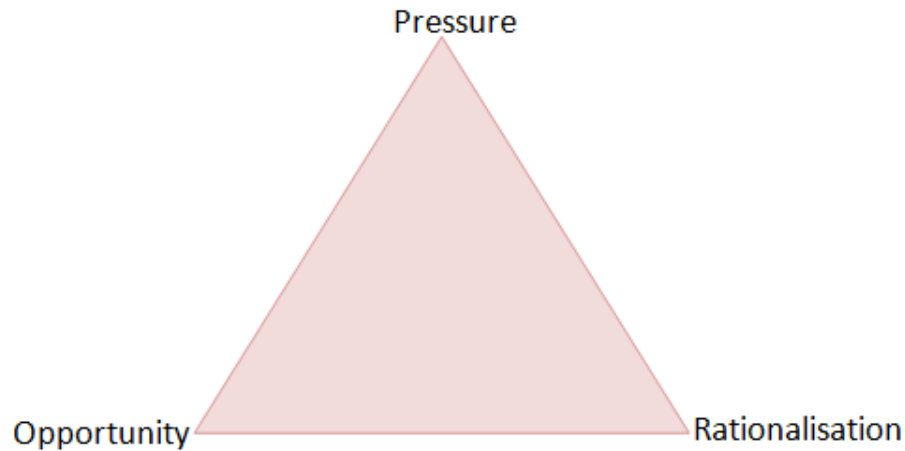


Figure 2.1: Fraud Triangle

Source: Abdullahi et al. (2015)

Pressure is motivation to commit the fraudulent act (ibid). Kassem and Higson (2012) argued that pressure could be a financial, non-financial, political and social pressure. Non-financial pressure can be derived from lavish lifestyle or lack of personal discipline like gambling, drug addiction, while social and political pressure happens when people feel they cannot appear to fail due to their status or reputation. Opportunity is created by weak internal controls, misuse of authority or poor management system that allows an individual to commit fraud (Abdullahi et al., 2015). Lastly, Rationalization; refers to the justification and excuses that the immoral conduct is different from criminal activity. For instance, “some people did it why not me too”, other excuses their action as “I had to steal to provide for my family” (Cressey, 1953 cited in Abdullahi et al., 2015, p33).

The theory is limited in that it is concerned with the causes of fraud other than demonstrate how the fraud can be assessed, detected and resolved (Kiragu, 2015). However, the theory is a relevant approach to the study particularly it considers weakness in the system as opportunity for sources of fraud. Thus, the failure to establish effective system like HCMIS to detect fraudulent activity increases the opportunity for ghost workers to occur in the payroll system.

2.1.2 The Fraud Management Lifecycle Theory

This study adopted Fraud Management Lifecycle theory as the theoretical framework. Wilhelm (2004) developed the theory, according to him, fraud management lifecycle theory is a network lifecycle where each stage in the lifecycle, is an aggregated entity that is made up of interdependent, interrelated and independent actions, functions and operations. The theory of Fraud Management Lifecycle is made up of eight stages; deterrence, prevention, detection, mitigation, analysis, policy, investigation and prosecution. **Deterrence**, the first stage, is characterized by actions intended to prevent or discourage fraud before it is attempted, for example, card activation programs. **Prevention** is second stage; it involves activities to prevent fraud from occurring. In **detection**, intent to reveal the presence of fraud attempt, for instance statistical monitoring programs are used to identify prior fraud.

Followed stage is **mitigation**; it aims to stop losses from occurring or completing the fraudulent activity, for instance by blocking an account. **Analysis** is stage five, is characterized by activities to identify and understand losses that occurred in spite of deterrence, detection, prevention and mitigation activities, and studied to determine the factors the loss situation, impacts and find solutions, method like root cause analysis is used. Stage six is **policy**, is characterized by activities to create, evaluate, communicate, and assist in the deployment of policies to reduce the incidence of fraud. Another stage is **investigation**; investigation activities obtain enough evidence and information to stop fraudulent activity, to obtain recovery of assets, and to provide information and support for the successful prosecution and conviction of the fraudsters. Last stage, **prosecution**, is culmination of all the successes and failures in the Fraud Management lifecycle. Prosecution includes asset recovery, criminal restitution, and conviction with its attendant deterrent value. The proposition of the theory is that the effective management of the entire fraud management lifecycle would lead to reduction of fraud in the organisations and society.

However, the theory has the weaknesses, such as; does not clarify the sources of fraud within the organisations (Oguzierem and Sofiri, 2017). In addition, does not make clear the actions needed when such systems and processes fail (Kiragu, 2015). Continuous existence of the problem of ghost workers in the payroll systems draws attention for adoption of this theory in the study. Despite the weaknesses identifies, the theory is important because it offers the stages of fraud management in sequence manner (ibid). Is adaptive and transforming and emphasizing on uses of analysis method therefore it considers each aspect of the problem of fraud (Kiragu, 2015). Theory assumes uniform legal, cultural and technological applications in fraud management, and the theory is more proactive rather than reactive (Oguzierem and Sofiri, 2017). The eight stages embedded in the theory it considers all components and necessary techniques to eradicate the problem ghost workers in the payroll system (Wilhelm, 2004).

Somehow, the fraud triangle theory is related to fraud management lifecycle theory since both broaden knowledge about fraud and why it occurs. Nevertheless, the theories complement each other, fraud management lifecycle theory intensely clarify techniques on how to eradicate the fraud and fail to elucidate sources of fraud. While fraud triangle theory deeply focused on causes of fraud rather than providing solutions to eradicate fraud activities in the society. With regards to both theories in this study, they assisted in identifying and investigating the remote cause of fraud concealment and effective assessment of fraud risk.

2.2 Integration of HCMIS module

HCMIS is made up of five modules which are integrated by each other. Alter of information in one factor leads to change of information in other sections (HCMIS manual 2010). Below is figure of sections of HCMIS.

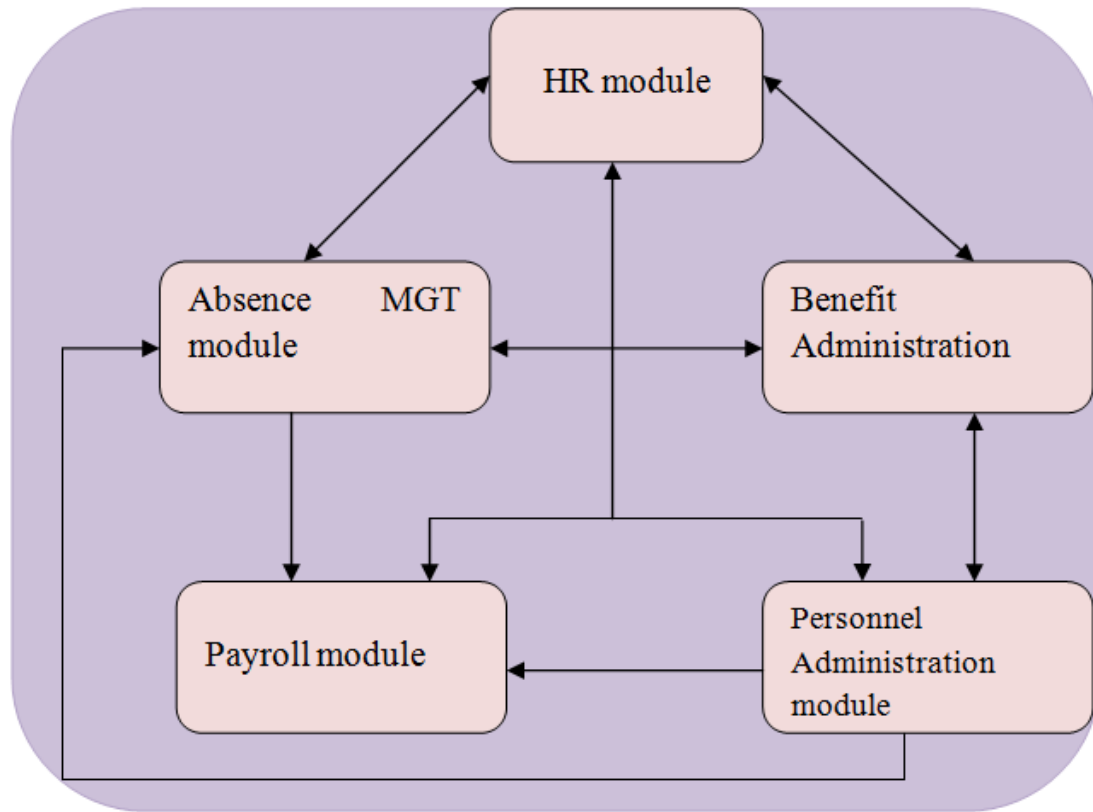


Figure 2.2: HCMIS integration

Source: HCMIS manual, 2010

2.2.1 Human resource module

The section has database with data of all employees. This module usually includes employees' particulars (personal information, academic diplomas, judgments, work experiences and others), data of all previously received wages, data on absenteeism from work, trainings and certificates, estimates on characteristics of employees, information on possible disciplinary action and data of the organisation. An employee's eligibility to receive wage and benefits are indicated by using the employee status (Njau, 2017).

2.2.2 Personnel Administration module

This module is used to manage the costs and processes related to personnel. Personnel action is used to update and maintain employee data without accessing the employee master. Personnel actions comprise: transfer of employees from one to another employer, status change, termination of employees from payroll, personal information change, promotion within vote, and promotion between votes, salary change and bank information change (ibid).

2.2.3 Payroll module

Module automates the pay process by collecting data on employee time and attendance, calculating taxes and deductions, and generating periodic pay cheques and employee tax reports. This module is not full part of the HCMIS, because it heavily integrated into the system for financial management of the organisation or ministry concern (Dusmanescu and Martinovic, 2011). However, the financial management cannot work without other modules like HR module. The module enables user to make all necessary payroll changes such as entering and stopping various deductions in the employee's salary, and entering and changing banks accounts.

2.2.4 Absence management module

Absence management module is used to manage absenteeism of the employees in the working place by using LP51.1, tracking servant information for a leave of absence.

The data entered in this module address the annual leave, maternity leave, secondment, leave pending retirement, paternity leave, compassionate leave, study leave, leave without pay, convalescence leave, sick leave, sabbatical leave and other leaves. The data about these enable HR officer to determine eligibility for future leave time as well as identification of ongoing leave tracking actions such as notifications of leaves ends.

2.2.5 Benefit Administration module

Module offers administration of employee participation in various forms of benefits. The fastest and cheapest way of maintaining the beneficiary database is ability of online access to the data by the employees. The primary function of this module is to monitor all benefit programs and to notice any potential deficiencies. Other important activities are included in pension plans, buying life insurance policies, and distribution of shares of the organisation or division of profits ((Dusmanescu and Martinovic, 2011). Further, it manages the records of benefits enjoyed by the officers such as loans, medical benefit, personal advances, claims, annual allowance and scholarships.

2.3 The benefits of HCMIS in the organisation

The installation of HCMIS has provided more accountability on payroll, integrity and transparency to HROs in dealing with human resource activities. The system signifies a huge investment decision for all organisations regardless of their size. HCMIS facilitates more rapid HR decision making, planning and administration due to availability of information, simplicity of data storage, updating, classification and analysis (Ndaro, 2016). It is simple to track personnel gaps, quality and quantity of the workforce and to plan the future demands.

Through HCMIS human resource officer can receive update report from all public offices. Organisation is able to reports employee information, birthdates from the employee master file, a list of new hires, terminations for a designated time period, employee position, employee profiles include specific employees, a group of employees, employee's qualification for a position, report of payroll deduction amounts and human resource capacity (Kassam, 2013).

Njau (2017) argue that with HCMIS recruitment process can be processes in a minimal of point in time, whereby traditional ways took 8 to 12 months for the procedures to be finalised while with adoption of HCMIS new employees particulars and information are

being processed in a short time and being send to public service and treasury within 3 days and the next month a new employee has to receive monthly salary as required.

HCMIS give power to the employees to own and drive their capabilities, development and career. HCMIS provide user friendly, interactive access to information in areas such as personal current capabilities compared with role requirements, performance goals and achievements linked to unit and organisational goals, history, potential future roles requiring existing capabilities and possible career paths (Hepper, 2013).

The system shifts the focus from the operational (transaction) human resource information to strategic human resource information (Dusmanescu and Martinovic, 2011).

The use of HCMIS the problem of delaying termination of the retired and dead employees has been solved since the employees' particulars are being updated and corrected right away through the system. Further, the system is able to control the public funds by tracking the double payees and help the employer to make informed decisions based on the correct and current employee's information (Ndaro, 2016). Therefore, it reduces the incidence of the ghost workers in the payroll system.

2.4 Empirical Literature Review

Haruna, Joseph and Samson (2015) conducted the study that aimed to explore how the implementation of the integrated personnel payroll and information system (IPPIS) could address the ghost works syndrome in Nigerian local governments. The study found out that there is relationship between ghost workers syndrome and employees' productivity. This is manifested on the negative influences being experience resulting to low employee morale, epic corruption, reduced employee career prospects and dampened efficiency. Further, the study revealed that the political influence of local government administration also constrains its effectiveness and efficiency thus, the introduction of IPPIS would go a long way to address the problem of ghost worker on the wage bill. The study concluded that ghost worker syndrome is highly imminent in

the public service and it has not only affected the employees' performance but has also threatened the nation's economy. Moreover, this study could not examine the sources of the ghost workers in the payroll system.

Nyaledzigbor (2015) and Nafiu, Yalo and Aduku (2016), carried out studies to examine the effects of ghost workers on the country economy. The study found out that there was correlation between the level of opportunities for ghost workers and the number of ghost workers in public institutions. The finding of the study shows a correlation between the size of government establishment and the incidence of ghost workers on the payroll. Further, the studies revealed that though, ghost workers fraud is observed to have positive financial impact on the economic performance of the beneficiaries; some of the likely consequences of ghost employee fraud are: growing disruption in the path to economic development; outrageous increase in the rate of unemployment; stigma of low global reputation and trustworthiness; governments at various levels suffer judicious utilisation of allocated revenue; it hampers plans and actions of the victims; it leaves corpse on management's path; deprives citizens of quality of public services for which they have paid their taxes in order to receive; and causes financial loss and untimely death for victims. However, the studies didn't explain causative factors of the ghost employees and how those ghost employees appear on the wage bill.

Poncian and Mpambije (2015), on their study examined the limited financial resources argument with a view of establishing the context into which the LGAs work and fail to meet objective, and possible causes for failure to utilise funds as intended, and what that implies to the poor Tanzanians. The study revealed that Local government authorities suffer further cases of embezzlement, evidence from the LGAs audit reports indicate that salaries paid to ghost workers have been on the rise since 2007/2008, rising from Tsh 178,066,130 in 2007/2008 to Tsh 832,448,998 in 2012/2013 financial year. Moreover, some LGAs servants for their own benefits embezzled the money. Nonetheless, the study fails to determine how LGAs servant conduct ghost worker fraud, and did not provide other effects of ghost workers apart from the financial matters.

Ndaro (2016), on her study examine the contribution of HCMIS on organisation performance; a case study of Ushetu district council in Shinyanga region. Big bucket theory was adopted as the theoretical framework. The study discovered that the implementation of the HCMIS has contributed to the better extent to the increase in efficiency and effectiveness on undertaking and performing of our daily and strategic human resource functions. It wiped out all the challenges the government of Tanzania had faced for decades. Ghost workers records were tracked and eliminated, all approvals were automated, high degree of customisation were made available, intelligent and flexible report were attainable. Additionally, the findings exposed that 60 percent of the respondents agreed that the HCMIS had been good in detecting the ghost workers therefore enhancing a huge savings. However, this study failed to explain how the ghost workers appeared in the system, what types of ghost workers fraud tracked and how they eliminated.

Njau (2017), explored the challenges encountered in the use of HCMIS in LGAs specifically Mwanza City Council. The study found out that despite the adoption of HCMIS at Mwanza City Council still payroll problems exist, the issue of ghost workers persists which is contrary to the expectation of the central government. The data shows that the council had 71 ghost workers, and there 03% of employees whose salaries have not been changed despite having promotion letters. Also, the study revealed that among the sources of ghost workers is poor flow of information, by delaying in receiving or not receiving at all information of termination of employees from the other department which causes double payment. Further, the study found out that none of the Human resource officers had knowledge to use the system fully, the system users were not happy with the support given by approvers at PO-PSMGG. However, the study did not provide exactly sources of those ghost workers in the council payroll system. Additionally, the study provides individual challenges encountered the HCMIS rather than the weakness from the system itself.

Oguzierem, Sofiri and Okodudu (2017), in their study examined the issue of ghost workers fraud and how it impacts on wage bill and unemployment in primary and secondary education sector in Bayelsa state. The study adopted fraud management theory lifecycle theory by Wilhelm (2004) as theoretical framework, and adopted cross sectional and ex post facto as research designs. The study revealed that there are various dimensions of ghost workers fraud used in the civil service to divert scarce public funds for private use. The various dimensions of the ghost workers fraud found are: double or multiple employment, receiving of double or multiple salaries using different names, receiving of pay or allowance greater than one's entitled grade, backdated employments, inherited employment, employees on leave of absence who still receive full salary, over aged person or children on the payroll, absconded workers who receive salary, and staff who has been transferred or retired but still earns salary. In addition, findings showed that through the occurrence of ghost workers fraud, nominal and payrolls of departments and parastatal in education sector are manipulated for pecuniary reasons. Furthermore, the study indicated that incidents of ghost workers fraud not only bloat the wage bills in public sector, they reduce employment opportunities for qualified applicants. Because of that saturation of nominal and payrolls with ghost names, the situation has forced the government to continually place ban on employment. However, the study failed to examine unauthorised employment as a dimension of ghost workers on payroll and its effects on the wage bills.

A study of Dialoke and Goddey (2017) investigated on ghost workers syndrome and electronic human resource management in local government areas in Imo state in Nigeria. The study adopted a descriptive survey approach. The findings revealed that electronic human resource management could be a pragmatic way of curbing the ghost workers syndrome in Nigerian LGAs especially as it affects detection of ghost names on the payroll system, retaining the names of dead or disengaged workers on the payroll and payment of fictitious and multiple salaries to identified personnel. The study recommends to develop the policy framework for the use of electronic HRM systems in public services and the human resource officers should be trained on the needed skills to

effectively utilise electronic HRM systems. Besides, the study proposed adoption of EHRM, but it didn't explain how Electronic Human Resource Management technology could help to eliminate the ghost workers.

Again, Oguzierem and Sofiri (2017), conducted research titled Ghost Workers and Related Fraud: the impacts of unauthorised employment on local government areas (LGAs) and Rural development (RDAs) in Bayelsa State. The study examined unauthorised employment as an emerging dimension of the ghost workers and payroll fraud and how it affects wage bills on Local Government Areas and Rural Development Areas in Bayelsa state. The study adopted fraud diamond theory by Wolfe and Hermanson (2004) as study theoretical framework. The study found out that for the pecuniary and other reasons, the public officers in the Local Government Authorities and Rural Development Areas were involved in continuous unauthorised employment that has bloated the wage bill and diverted funds meant for development of local areas. More so, the study found various dimension of payroll frauds.

There were fake employees illegally employed by fraudsters, in order to perfect the fraud these illegal employment appointments were backdated. Also, the study revealed that there were persistent cases of inherited employment or transfer of employment status to new beneficiaries in LGAs and RDAs, in order to validate these inherited employments and haphazardly changes of names were done by the beneficiaries. Notable cases discovered were the complete names (surname, first and middle name) of an employee would change at the same time without satisfactory reasons to justify the transfer of legitimacy of the appointment to the beneficiary of the appointment letter in the payroll. Additionally, the study found out that the recruitments process at the LGAs were done arbitrarily and without resort to laid down principles and standards as insisted by the laws and regulations, and public office holders were recruiting friends and relatives, given a room for manipulation and frauds. Even so, the study did not discuss at all contribution electronic human resource management systems on managing these

kinds of frauds, and further did not provide other effects of ghost workers apart from the financial matters.

Nangih and Davies (2017) conducted research on biometrics and bank verification number (BVN) technology and ghost workers identification in rivers state Local government areas. The data gathered was analysed through MannWhitney test (U) using 20.0 version of statistical package for social science (SPSS). The main purpose of the study was to examine the efficiency and effectiveness in the use of biometrics and BVN technology to check menace of ghost worker syndrome and payroll fraud. From the finding, it was revealed that the use of proper biometric and bank verification number technology would greatly reduce payroll fraud and even totally remove the ugly trend of ghost workers from the system. Nevertheless, the study could not identify how the ghost workers appear in the payroll systems and challenges facing organisations in uses of effective BVN technology.

Moyo (2017), conducted study titled A Paper on Ghost Worker Syndrome: A Panacea to Zimbabwe's Bloated Public Services. The paper examined the effects of the ghost workers' syndrome and how the instrumentality of integrated personnel payroll and information system (IPPIS) could address the menace in the public services. The study used both primary and secondary sources of data, the data were analysed using the simple percentages, mean score and spearman rank order correlation, and frequency tables technique. The findings revealed that major effects of the ghost workers' syndrome were low morale among workers, irregular payment of salaries to ghost workers, low efficiency, corruption, reduced career prospects and carrier training opportunities. Though, the staff were eager to advance themselves towards improved efficiency as there is little opportunity for such intellectual advancement due to their low economic power and irregular payment of salaries. This is caused by over the bloated wage bill because of fictitious names of the employees. The study concluded by recommend that the IPPIS should be adopted in the public service to ensure a virile economy through improved productivity. However, the study didn't explain how the

ghost workers appeared on the wage bill, and how the IPPIS could combat the problem ghost workers fraud in the wage bill.

Tuffour (2002), on his paper of ghost names, shadow workers, and the public sector wage bill found out that unearned salaries were paid not only to ghost names but also to shadow workers like resigned, dismissed or retired employees and to existing staff. Moreover, the paper revealed that re engagement of the retired teacher is another mechanism of payroll fraud. Retired teachers were employed, some did not teach at all while other taught for short time than they were paid for. Nonetheless, the study didn't provide how the ghost names appeared on the payroll system, and how the electronic human resource management system can reduce this problem.

2.5 Research gap (Synthesis)

Reviewed literatures show that most of the studies were done to explore the effects of ghost workers fraud in the country economy, wage bill, new employment opportunities and employees' performance. Moreover, they focus on identifying various dimensions of the ghost worker fraud and ways to eradicate it. Nevertheless, knowledge regarding to how the ghost workers appear on the wage bill system and why the problem of ghost workers continues to exist in the organisations is lacking. This study bridges this gap by examining the efficiency and effectiveness of HCMIS in managing ghost workers fraud.

2.6 Conceptual Framework

This section presents a conceptual framework from which the analysis of this study was made. Conceptual framework refers to a set of coherent ideas organised in a manner that makes them easy to communicate to others. The study developed a framework that signifies a relationship of the variables based on the assumptions derived from the literature reviewed. The conceptual framework underlying the study in Figure 2.1, highlights the relationship and interrelationship among independent variable which entails HCMIS attributes and legal protection, and ghost worker frauds (amount of

fraud, number of frauds, how fraud engaged and frequency of frauds), as dependent variables.

According to Article 23 (2) of the Constitution of Republic of Tanzania; every person who works is entitled to just remuneration. More so, according to Section 4 of the Employment and Labour Relation Act of 2004 as amended time to time, remuneration means the total value of all payments, in money or kind, made or owing to an employee arising from the employment of that employee. Thus, is an offence the payment of or generating of fictitious employees.

HCMIS attribute; the objective of the HCMIS is to receive, register, and keep information of all human resources in the organisation. A number of studies reported that HCMIS enhanced delivery of quality and effective services, detecting and discouraging of the payroll fraud. This is because for an employee to be listed in the payroll through HCMIS, he or she must be physically present with all documents (PRF) at specific time and his or her face, own unique check number and stored in a digital database. Unique identity ensures that duplicity of pay points is impossible due to synchronised, centralised database and pay point. That means, if all HCMIS attribute will be made available, will improve reporting and management of information in civil service, and it will block and eradicate all leakages in the payroll system. Therefore, persistence of the ghost worker fraud is direct; has relationship with ineffectiveness and inefficiency of the HCMIS.

Ghost workers fraud; the term ghost worker fraud refers to the fraud attacks on the payroll system with false employees. Through the falsification of personnel or payroll records a fraudster causes paychecks to be generated to a ghost. The reviewed literature shows that in order for a ghost worker scheme to work, there are things that occur, namely, the ghost must be added to the payroll; time keeping and wage rate information must be collected; a paycheck must be issued to the ghost, and paycheck must be delivered to the perpetrators. Then, ghost worker attacks will determine the stability of the HCMIS.

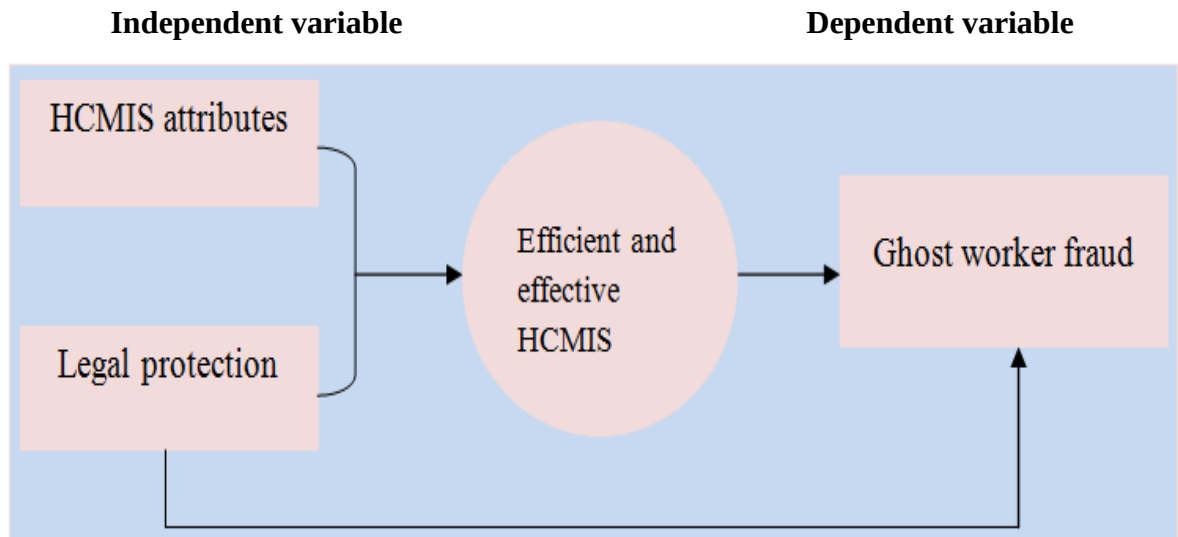


Figure 2.3: Conceptual Framework

Source: Researcher's construct 2018

The study assumes that the level and existence ghost worker frauds and its effects depend on the strengths and weaknesses of the HCMIS attributes. The government would have been successful in combating the problem of ghost workers in the payroll system, if there are effective and efficient electronic human resource managements. It gives an elaboration that ghost workers as dependent variable, cannot reach the effect without considering the efficiency and effectiveness of HCMIS.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents and explains comprehensive methodological techniques that the researcher adopted in the process of carrying out the study. It covers the description of the study area, research design, target population, sampling techniques and sample size, data collection methods, data analysis and ethical consideration involved.

3.1 Research design

This section describes how the study or investigation was conducted. Adam and Kamuzora (2008), argue that research design entails consideration about what, where, when, how much, by what means concerning an inquiry. The researcher used the case study research design due to the following reasons: first, to have a comprehensive analysis and in-depth examination of the efficiency and effectiveness of the HCMIS on managing the problem of ghost workers fraud in the payroll system at President's Office, Public Service Management and Good Governance. Second, the design is too friendly as it enables the researcher to use the scarce resource available since the study focus on single case. Lastly, case study design is an interesting strategy to gain a rich understanding of the context of the research and the process being enacted (Marco, 2011).

3.2 Study area

The study was conducted at President's Office, Public Service Management and Good Governance at Dodoma municipality. The study was carrying there due to the fact that is a main and central controller of Human Capital Management Systems of all government public offices in Tanzania government. Further, currently the organisation is one investigated about the ghost worker fraud in the payroll system and came up with a report on the threats, but has been failing to verify how those ghost workers appear in

the payroll system and why the problem continues to persist despite the fact that there is a payroll system. These made this area to be suitable for conducting a study.

3.3 Research approach

This study employed qualitative approach so as to capture intensive information about efficiency and effectiveness of the human capital management information system (HCMIS) in managing ghost workers fraud on the wage bill. This is because the approach used in-depth studies of small groups of people to guide and support the construction of hypotheses. The results of the approach are descriptive or narratives.

3.4 Study population

The target populations of the study were the employees of President's Office, Public Service Management and Good Governance at Dodoma municipality. Target populations were Human Capital Management Division which makes 10 people.

3.5 Units of Inquiry

The units of inquiry are presented clearly in Table 3.1

Table 3.1: Units of Inquiry

Unit of inquiry	Number	Percentage (%)
Director of the Division	1	10
Human Capital Management	3	30
Staff Inspection Section	4	40
Payroll Management Section	2	20
Total	10	100

Source: PO-PSMGG (2018)

3.6 Sampling techniques

The researcher used purposive and simple random sampling technique to sample the targeted study population. The purposive technique was used to select 1 director of Human Capital Management Division. The respondent was selected purposively into the research because of being an expert in the Human Capital Management and has decision making authority which affects human resource activities at Human Capital Management Division. Simple random sampling technique employed to select 3 respondents from the Human Capital Management Section, 3 from Staff Inspection Section and 3 from Payroll Management Section within Human Capital Management Division. The technique was employed because every employee from each section had equal chance to be selected into the study. In addition, the sampling technique was employed to select PO-PSMGG as an area of study due to PO-PSMGG is central of all human resource activities of the government.

3.7 Sample size

The sample size consisted of 10 respondents from the Human Capital Management Division at President's Office, Public Service Management and Good Governance. The study employed 10 respondents as sample size for the reasons that the study adopted qualitative approach, time limit, thus 10 respondents are deemed enough for in-depth investigation. The results from the sample were used to make generalisations about the entire population as long as it is truly representative of the population.

3.8 Data Collection Methods

The researcher adopted data collection methods named as interview, and documentary analysis in conducting the research work.

3.8.1 Interview

An interview is a direct face-to-face attempt to obtain reliable and valid measures in the form of verbal responses from the respondents. This method was employed in this study

to collect qualitative data used to supplement information gathered through documentary review. Interview was applied to collect fresh information from HROs and director whose are the controllers of HCMIS. Interview guide contained questions which attracted information about efficiency and effectiveness of the HCMIS in managing the problem of the ghost workers fraud.

The interview session was guided with interview guides (see appendix I), which comprised open ended questions which offer an opportunity for the respondents to freely express their views on the study.

This method was chosen because it is more suitable for getting in-depth information concerning the study from the respondents who were selected into the study by purposive sampling technique.

3.8.2 Documentary analysis

This involved the activity of extracting the necessary information from the documents. The researcher used this technique during gathering of data to review the activities and procedures of HCMIS and other related payroll systems, if the controls are strictly followed by the concerns. Moreover, to get ready made data and information that was available concerning the ghost worker problem. Documents from library and other research works are used for this study. These documents include papers, journals, magazines, manuals, government and other research reports.

3.9 Validity and Reliability

The term validity seeks to address the question as to whether the study truly measures what it is supposed to measure, therefore the validity of this study rooted in the close alignment of research questions, frame of reference, the design and purpose of the question administered. To ensure research validity in this study, the pilot testing was conducted whereby a sample of questions was tested to 5 HROs from different institutions before going to the field directly to collect the data required.

The researcher used very simple language (Swahili) to translate the intended meaning of relevant questions to the sampled respondents to better communicate the purpose of the study intended. After the investigation, interview questions were modified to ensure accuracy and constancy of the instrument. Additionally, to ensure validity of this study instruments used in this study were presented to academicians and peers for discussions and comments.

For a research to be reliable, it must demonstrate that if it were carried out on a similar group of respondents in a similar context then similar results would be found (Saunders et al., 2000). Reliability is a measure of how consistent the results from a test are in order to ensure the reliability of these research findings. Therefore, the researcher designed the questions in a simple, short and hence not boring format, and questions were structured in a simple language to avoid respondents' confusion. Additionally, the researcher conducted a pre-testing of questions and interview to few respondents to test whether they could generate the sought data. The researcher collected the pilot questions, redesigned them and then redistributed them to the targeted population for final data collection.

3.10 Data analysis

After data collection, analysis of data started immediately. Data analysis entails a number of closely related operations that were performed with the purpose of summarizing the collected data and organising them in such a manner that they yielded answers to the research questions (Madulu, 2016). Data analysis was done qualitatively. Data gathered from interview and documentary review were analysed using content analysis. Content analysis measures the systematic content or what aspects of the message.

Content analysis techniques were employed to analyse the written and the verbal information in order to enhance interpretation of the data collected. The interview records were transcribed and typed for analysis. In this study, the data collected was

analysed through narration and explanation of what the respondents said and what is written in the document obtained. Direct quotations of the respondents' views and opinions were cited to support key points. These facilitated the researcher to interpret data collected and, in the end, make necessary, recommendations and reach a conclusion.

3.11 Ethical Consideration

While conducting the study, the researcher observed ethical standards such as free consent and the voluntary participation whereby; the researcher clarified the aim of the study to the respondents to make them understand the foremost aim of the subject matter being studied before they decided to participate. Director for HCMD and other officers from the sections were not forced to participate on the study. The questions were framed and asked in ways to avoid causing psychological harm to the respondents. Moreover, the researcher secured research clearance from Mzumbe University, and requested for research permit from the Human Capital Management Division at PO-PSMGG.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 Introduction

This chapter contains the findings which were derived from the analysis of the data found from the study case. The results are presented in accordance with the sets of questions and items in the interview schedule. The presentation starts by showing major background characteristics of the respondents, ghost workers on the wage bill, HCMIS and improve inefficiency and ineffective in managing human resource, and persistence of ghost workers on payroll system.

4.2 Background information of the respondents

This part presents data of the respondents particularly job position of respondents and working experiences at PO-PSMGG. Demographic characteristics of the respondents were significant that may suggest the possible reasons for the responses provided by the respondents.

4.2.1 Job Position of Respondent

The motive behind job designation in the interview was to determine views, experiences of the respondents and to observe relationship between sections in relation to the study. Further, to ensure that the questions were answered by the target respondents.

Table 4.1: Distribution of respondents by Job designation

Unit of inquiry	Frequency	Percentage
Director of the Division	1	10
Human Capital Management	3	30
Staff Inspection Section	4	40
Payroll Management Section	2	20
Total	10	100

Source: Field data 2018

The findings show that key informants who are Staff Inspection officers (SIO's) were 40% of the selected sample size, whereby 30% of the respondents were Human Capital Management officers (HCMO's), followed by 20% of Payroll Management officers (PMO's). These happened because they are the ones responsible for developing and operationalising mechanisms for institutionalisation of accountability and controls of payroll malpractices in the public services.

4.2.2 Distribution of respondents by working experiences

The study explored the work experiences among the respondents who took part in the study. The respondents were required to specify the period under which they had worked with Human Capital Management Division. It was expected that the longer the years of experience at HCMD the more likely to obtain reliable information on efficiency and effectiveness of HCMIS and the problem of ghost workers frauds.

Table 4.2: Working experiences

Working Duration	No of respondents	Percentage
00 to 05 years	1	10
06 to 10 years	5	50
11 to 15 years	3	30
Above 16 years	1	10
Total	10	100

Source: Field data 2018

The study revealed that half of the total of respondents (50%) interviewed ranged between 06 to 10 years of experience in using Human Capital Management System, followed by 30% of the respondents in the category of 11 to 15 years. Below 5 years there was 1 respondent as well as above 16 years.

4.3 The ghost workers on the wage bill

This is the foremost objective of this study, which the researcher aimed to examine how the ghost workers appear on the wage bill. The study set out to investigate how the ghost workers appear in the payroll systems.

4.3.1 The ghost workers on the payroll systems

The interview with Director and some of the officers of the Human capital management division revealed that there are various ways ghost workers appear in the government payroll systems such as: ghost names, deceased ghost workers, voluntary retired ghost workers, and dead ghost workers. Director of the Human Capital Division had the following to explain.

Asilimia 90 ya wanyakazi hewa wengi ambao tumewafanyia kazi hivi karibuni ‘2016’, ni wametokana na mfumo wa zamani ambao taarifa za wanyakazi zilihifadhiwa katika makaratasi. Baadae tulipoingia katika mfumo wa kieletroniki taarifa zao ziliingizwa huko. Na hapo ndio chanzo cha wafanyakazi hewa kuingia katika mfumo wa malipo, lakini baada ya kufanya tena uhakiki aina ya wafanyakazi hewa hao hawapo tena au wamepungua kwa 99%.

Translation

90 percent of the most ghost staff, who we are working with recently ‘2016’, were coming from an old system, and their information was kept in paperwork records. Later, when we entered into electronic system their information was imported. And here is the source of ghost workers into the payment system, but after re-auditing such kind of ghost workers frauds are no longer or have been reduced by 99% (DHCM).

Research findings show that high number ‘90 percent’ of ghost employees have come from the old system ‘paper-based record’ which their information was included in the new Human capital management information system. More so, the findings revealed that after auditing the payroll names from the wage bill 99 percent ghost names or fake names were removed from the payroll system.

DHCM continued to say;

lakini inawezekana mtu kastaafu huko katika taasisi ya serikali, lakini muajiri ambae sio muaminifu asimtoe katika mfumo wa ajira, na sisi tukaendelea kufanya malipo. Na hii mara nyingi inatokea kwa wafanyakazi waliostaafu chini ya miaka 60, yaani waliostaafu kwa hiyari. Lakini pia kuna wale ambao wamepewa muda zaidi wa kustaafu kama vile Maprofesa-wahadhiri wa vyuo na Madkari bingwa, mfumo hauwezi kutambua na kuwaondoa katika mfumo wa malipo. Hivyo muajiri asie muaminifu asipowatoa, wafanyakazi hewa wanaweza kutokea apo.

Translation

But possibly a staff retired in a government institution, but an employer who is not honest did not take him out of the payroll system, and we continued to make payments. And this often happens to retired employees below 60 years, i.e. voluntary retirement. But also, those who have been given more time to retire as Professors-lecturers and the Professional doctors, the system cannot identify and conduct automatic termination. So, dishonest employer if do not remove them, the ghost workers can happen there.

Research findings also showed that another source of the ghost workers frauds were the staff retired below 60 years “voluntary retirement” and those above 60 years who gave additional period of working but not being removed from the system. The findings revealed that such kinds of ghost workers appeared because the system was not sated in that position hence unable to identify and remove them, and we are not removed by the dishonest employers who were the one operates HCMIS.

Another perceptive were presented by Human Capital Management Officers (HCMOs)

Human Capital Management officer ‘I’ comment that;

Kuna baadhi ya wafanyakazi ambao wanafukuzwa kutokana na makosa ya kinidhamu, na hufukuzwa na mamlaka ya ofisi husika, sisi hatushiriki katika shughuli hizo. Hivyo waajiri ambao sio waaminifu wanaweza kutokutoa taarifa kwetu wala kumtoa katika mfumo wa malipo, au akatolewa baada ya mwaka au miezi kadhaa, na sisi tukaendelea kufanya malipo kama kawaida na ndio hapo hutokea malipo hewa kwa hufanyakazi hewa.

Translation

There are some employees who are terminated due to disciplinary offenses, and are dismissed by the office authorities; we are not involved in such activities. So, unscrupulous employers may not inform us or remove such staff out of the payment system, or they were removed after a year or months, and we continued to make payments as usual, and that's when ghost payments are paid to ghost workers.

As presented above by the Human Capital Management Officer, the results indicate that employees who have been terminated from employment due to disciplinary offences but not being removed from the system was another source of appearance of the ghost workers in the payroll system. To validate such fraud, the system users did not inform the PO-PSMGG about the termination and delaying of removing the deceased employees from HCMIS hence still earn the salary.

One of the officers II continues to say that;

Pia mfanyakazi anaweza akawa amefariki siku nyingi lakini taarifa haijatolewa wala hajaondolewa katika mfumo wa malipo. Huyo nae ataendelea kulipwa kama kawaida mpaka pale atakapo ondolewa. Mbaya zaidi muajiri anaweza kubadilisha wakati wowote taarifa katika mfumo za mfanyakazi bila kuhakikiwa na mtu yeyote, mfano akaunti namba na kadharika.

Translation

Also, the employee may have died many days ago but the information has not been released or removed from the payment system. He will continue to be paid as usual until he is removed. The worse is dishonest employer can change anytime information of the employee's in system without being verified by anyone, such as account numbers to earn money.

The results show that the perpetrator used the ex-employees as dead staff as sources to defraud from the payroll system. By doing so, the employees who have faced death were not removed from the payroll system thus continued to receive their salaries as usual.

4.3.2 Improve efficiency and effectiveness in managing human resource in Tanzania.

The second objective of this study was to examine how HCMIS can improve efficiency and effectiveness in managing human resource in Tanzania. Regarding to the research objective, the researcher interested to know how can HCMIS significantly reduce or stop ghost workers in the payroll system, how does HCMIS help on the identification of the ghost workers and how does system facilitate to track fictitious compensation.

4.3.3 Reduction or stopping ghost workers on the payroll

This study intended to examine the efficiency and effectiveness of system in managing the ghost workers frauds. Therefore, interviewed respondents were asked to explain how the HCMIS can reduce or stop ghost workers in the payroll system. Human Capital Management officers (HCMOs) had the following to say:

Human Capital Management officer IV explained that;

kupitia mfumo tulionao, mfanyakazi aliefika muda wake wa kustaafu miaka 60, mfumo humuondoa mara moja bila kuamuliwa na mtumiaji wa mfumo.

Translation

Through the system we have, the employee who has reached its retirement age of 60 years, the system immediately removes him without commands from the system user 'automatic termination at 00:01 AM.

The results above show that one of the advantages of the human capital management system in reducing the ghost workers frauds, was to identify the employee's retirement age and remove him immediately after reaching the age of retirement without complying with the employer's decisions. Thus, it helps to prevent continuing paying the salary to the unworthy employee".

Human Capital Management officer VII provides that

Kupitia mfumo ulipo, husaidia kuwa na taarifa za wafanyakazi za kutosha ambazo hutusaidia kufanya ukaguzi na uhakiki wa wafanyakazi na malipo tunapokwenda katika ofisi za kiserikali.

Translation

Through the existing system, it helps to have enough staff information that helps us to conduct physical inspections and carry out audits of employees and payments when we go to government offices.

The results show that the other advantage of having HCMIS in reducing the ghost workers problem is that the system provides a pool of information of employees that is sufficient and which is used to carry several audits to determine whether there any case of ghost workers fraud in various government ministries, regions, district and government institutions.

Human Capital Management officer VII continues to comments:

Kwa sasa,ili kuweza kuingiza taarifa za mfanyakazi katika mfumo wa malipo unapitia hatua nyingi. Kwa mfano ajira mpya, lazima awe ajira yake imepitia sekretarieti ya ajira, vyeti vyake vya kitaaluma viwe vimehakikiwa na baraza la mitihani, mwajiriwa awe ameripoti ana kwa ana kwa mwajiri wake, mwajiri atatuma taarifa kwa muhakiki wizarani na muhakiki atamuomba mwajiri nakalala ya uthibitisho alivyopewa baraza la mitihani na sekretarieti ya ajira, ili viambatanishwe katika mfumo 'HCMIS'. Na inapotokea kupandishwa vyeo kwa wafanyakazi, watumiaji wa mfumo hutakiwa kuambatanisha barua maalumu katika mfumo ya uthibitisho kutoka kwa katibu mkuu wa serikali baada ya hapo huidhinishwa na muhakiki wa PO-PSMGG. Hivyo, ili mfanyakazi hewa aingie katika mfumo lazima mwajiri au m'badhirifu adanganye kila hatua na viambatanisho vilivyothibitishwa kutoka baraza la mitihani, sekretarieti ya ajira na muhakiki kitu ambacho sio rahisi kabisa. Kama kuna kasoro haraka mfumo unamuondoa mwajiriwa ama una kwama kuendelea kufanya kazi. Hivyo kupitia mfumo hutusaidia kuzuia kuingizwa kwa wafanyakazi hewa katika mfumo wa malipo.

Translation

At the moment, to be able to enter employee information in the payment system you must go through many steps. For example, new employment, employee must be employed through Public Service Recruitment Secretariat, his professional certificates have been verified by the NACTE, the employee has to report physically to his employer, the employer will send the information to the

approver at PO-PSMGG and the approver will ask the employer for a confirmation letters from the NACTE and Secretariat of Recruitment to be attached in the 'HCMIS' system. Moreover, when promotions are made to employees, system users are required to attach a special verification letter to the system from the general secretary of the government, and after it approved by approver of PO-PSMGG. Thus, in order for a ghost worker to enter into the system, an employer or a perpetrator must deceive every step and fake verification from the exams council, employment secretariat and approver which is not easy at all. So, through this system helps us to prevent the entering of ghost workers into the payment system.

The above as presented findings indicate that the HCMIS is stable in the receipt of employee information because it forces the employees to enter information through multiple steps to prevent the replacement of ghost names. More so, the results show that HCMIS it depends heavily on the proper attachments from other institutions to do it job well. Findings conclude that it is difficult for the fraudster to manipulate all steps in order to defraud the system.

Another Human Capital Management Officer V added that:

Mfumo hauruhusu kuingiza taarifa za mfanyakazi zinazofanana. Mfano, mfumo humtaka mtumiaji wa mfumo kujaza wasifu wa mwajiriwa kikamilifu, kuambatanisha vielelezo vyote vilivyohakikiwa kama vile vyeti vya taaluma, kuzaliwa, barua ya ajira, lakini pia una ruhusu kua na namba moja tu ya utambulisho. Hivyo mtumiaji wa mfumo akiingiza taarifa zinazofanana ili malipo yafanyike mara mbili mfumo una kwama kuendelea kufanya kazi.

Translation

The system does not allow entering the same employee information. For example, the system requires the user of HCMIS to fill the full profile of the employee, including all the proven notes such as academic, birth certificates, employment letters, but you also have permissions to have only one check number. Thus, the system user incorporates the same information in order to make a double payment the system stuck to work.

Once again, the results show the ability of the HCMIS to prevent ghost names by avoiding duplication of the information of the employees in the system. The HCMIS prevent the inclusion of similar information such as employee particulars, employment

letter, payments, professional certificates and so forth. By doing, prevent the issue of duplications of employees.

4.3.4 Identification of ghost workers

From the study the researcher aimed to know if the HCMIS can detect and identify ghost workers in the system. Whereby the question was asked to all respondents at PO-PSMGG, and the officers had the following to explain.

Human Capital Management officer IX said that;

Mfumo unaweza kufatilia na kugundua mfanyakazi ambao amefikisha muda wake wa kustaafu ‘miaka 60’. Lakini mfumo kwa vyovyote vile hauwezi kufatilia wala kujua uwepo wa mtu kazini kila siku, hivyo hauwezi kugundua mfanyakazi aliefukuzwa kazi, aliyefariki au aliyestaafu kwa hiyari.

Translation

The system can track and detect an employee who has reached his retirement age of 60’. But the system in any case cannot track or detect the presence of a staff at work every day, so it cannot detect an employee who has been terminated, deceased or voluntary retired.

The results show that by 100 percent the HCMIS can identify and remove the type of employees who will retire involuntary when their age of retirement arrive. However, for the whole percentage the HCMIS cannot really identify and remove voluntary retired employees from the payroll system. Also, the findings revealed that HCMIS unable to identify dead and terminated employees from the payroll system.

Human Capital Management Officer X continues to say;

Mfumo hauwezi kugundua wafanyakazi hewa, lakini kupitia mfumo tunakua na taarifa za kutosha na mara kwa mara tukwenda kufanya ukaguzi kupitia kitengo chetu cha ukaguzi. Huwa tunakwenda ofisi za kiserikali kukagua majina yalipo katika mfumo wa malipo tukilinganisha na wafanyakazi walipo kazini mara nyingi tunakwenda baada ya kusikia fununu za ubadhirifu. Wafanyakazi wote hutakiwa kuwepo na kusaini fomu maalum, ikitokea kuna majina hewa, mwajiri atahojiwa na kuchukuliwa hatua kwa mujibu wa sheria.

Translation

The system cannot detect ghost workers, but through the system we got enough information and we go to check out with our unit of Staff Inspection Section. We go to government offices to check the names we have in the payroll system in comparison with the staff at work and often we go after hearing rumors of frauds. All employees are required to be present and sign a special form, if there are ghost names, the employer will be questioned and acted upon according to the law.

As it shows above, the employers rely much on information available in the Human capital management information system to discover the presence of ghost workers in the wage bill by conducting physical auditing, rather than depending on the HCMIS itself to identify the presence ghost workers in the wage bill.

4.3.5 Tracking fictitious compensation

The researcher put his concern that the employers create a fake employee in the payroll system and alter the payment records because have ability to do so. Therefore, the researcher was interested in knowing how HCMIS facilitates tracking fictitious compensations. Some of HCMD officers had the following to comment:

Human Capital Management officer VIII explained that;

Hapana mfumo kama mfumo hauwezi kugundua malipo hewa, isipokua, wataalam wa ukaguzi wanaweza kutumia taarifa alizonazo katika mfumo kwenda kuhakiki kama mfanyakazi anayelipwa ana stahiri au la.

Translation

No, system as a system cannot detect fictitious compensation, unless, the audit experts can use the information they have in the system to check whether the paid employee is eligible or not.

The findings indicate that the system has not been created to discover the ghost payments ‘compensation’ of employees, but the system is designed to gather accurate and sufficient information for inspectors from PO-PSDMGG to be a prerequisite for the management of the problem of the ghost workers fraud.

Human Capital Management officer II elaborates that;

Mfumo tulionao haukubali kua na akaunti mbili za malipo za mfanyakazi mmoja. Hivyo sio rahisi kufanya malipo mara mbili”. Lakini mtumiaji wa mfumo anaweza badilisha akaunti namba ya benki ya mtumishi bia kuhakikiwa na mtumiaji mwingine wa mfumo, hivyo anaweza kufanya ubadhirifu kwa kujikopesha kimakosa mshahara wa mtumishi mwingine.

Translation

The system we have does not accept two accounts for one employee. So, it is not easy to make a double payment. But the system user can change the account number of the staff without being verified by another user of the system, so he can make extravagance by tampering with other employee's wages.

Human Capital Management Officer V provides that;

Mfumo haumlazimishi mtumiaji wa mfumo wakati anaweka taarifa lazima aweke muda husika yaani tarehe au saa. Kwa mfano, mtumiaji anaweza weka taarifa leo za mfanyakazi aliyefariki miezi mwili iliopita kwa tarehe na muda anaoutaka yeye. Hivyo unaweza kusababisha malipo hewa.

Translation

The system does not force the user when setting the information should be timed exactly i.e. the date or hour. For example, a user may enter information in the system of a worker who has passed away by the date and time he wishes. So, it can lead to fictitious compensation.

As indicated above, the Human Capital Management Information System has provided sufficient freedom to employers to enter employee information in the system without being forced to record the information at the same time when it was inserted into the system. Therefore, it is very easy for system to be manipulated.

4.4 Persistence of ghost workers

The third objective of this study was to explore persistence of ghost workers on are payroll systems in Tanzania. The respondents were asked to explain why there is persistence of ghost workers in the organisations while there payroll systems and what are the measures taken to maintain the problem of ghost workers.

4.4.1 Persistence of ghost workers in the payroll system

The researcher was interested in knowing why there is persistence of ghost workers in the organisations while there are payroll systems. In-depth interviews were conducted with the Director of HCMD and some of section officers and had the following to say:

Ndio, tuna changamoto, kwa sababu mfumo hauwezi kufatilia wala kugundua uwepo wa mfanyakazi kazini kila siku, hivyo haujui nani kafa au nani kafukuzwa kazi au nani kastaafu kwa hiyari isipokua mwajiri mwenyewe. Hivyo mwajiri asiyemwaminifu ataendelea kutumia nafasi hiyo kufanya ubadhirifu ndio maana bado tunakua na changamoto ya kuwepo kwa wafanyakazi hewa.

Translation

Yes, we have challenges, because the system cannot track or identify the existence of an employee at work every day, so you do not know who died or who is being dismissed or who is voluntary retired unless the employer himself. So, perpetrators will continue to use this opportunity to make it frauds. Thus, there is persistence of ghost employees.

The results show that the system was inefficient to track the day to day the presence of the staff at work place. Thus, giving a great opportunity for the employers to day or exclude the unworthy employees from system at a right time because PO-PSMGG cannot know the issue unless conducting physical inspections at specific office. Therefore, the PO-PSMGG will continue making the unhealthy payment. Then fictitious compensation occurs.

Another perceptive provided by director was;

Kwa sababu mfumo haujaandaliwa kufanya kazi kwa 100% peke yake, hutegemea kuamrisha na mtumiaji wa mfumo kufikia maamuzi. Hivyo kwa watumiaji wa mfumo wasio waaminifu wanaendelea kutumia nafasi hiyo kufanya ubadhirifu.

Translation

Because the system is not designed to work 100% alone, it depends on the user's system to reach decisions. So, for dishonest system users, they continue using that opportunity to do extravagance.

The above information indicates that as long as this system is dominated by system users rather than working itself. It provides a great opportunity for unfaithful people to steal without encountering any obstacle.

Continued to say....

Mfumo haujaunganishwa na mifumo mingine ya kiserikali ili kuongezea ufanisi katika utendaji kazi wake zaidi ya ule wa GSPP.

Translation

The system did not link with other government systems rather than GSPP to enhance efficiency in its performance.

As presented above, the system 'HCMIS' is not integrated with other management systems from other government authorities, such system is biometric technology to enhance in its performance except for government salary payment platform. So, it is not easy at all HCMIS to solve the problem of the ghost workers alone.

Human Capital Management officer III commented that:

Mfumo unampa mamlaka makubwa mtumiaji wa mfumo kubadilisha taarifa wakati wowote ule tena bila hata kukaguliwa na mtumiaji mwingine. Kwa mfano kubadili akaunti namba ya malipo, kuzuia mshahara wa mtumishi, kubadili au kutobadili wasifu wa mtumishi, kuendeleza kutoa mwanya ubadhirifu.

Translation

The system gives huge power to the user to change the information at any time and without even being checked by another approver. For example, to change the account number of payments, prevent the salary of the employee or change the profile of the servant. That leads to continued existence of ghost worker frauds.

The findings provide that this system has weaknesses because the employer can change the employee's information without being audited by someone else. So, he could risk the rights of his employees such as to block salaries, account number, promotion and others.

Human Capital Management officer VIII finalised by argue that;

Mfumo ni kama antivirus software huwezi kusema kwamba tatizo haliwezi jirudia au limekwisha kabisa, kwa sababu wabadhirifu kila siku wanabuni mbinu mpya ili waweze kuiba. Lakini kupitia mfumo tatizo la wafanyakazi hewa limepungua kwa kiasi kikubwa sana.

Translation

The system is like antivirus software you cannot say that the problem cannot be repeated or completely gone, because daily perpetrators create new techniques so they can steal. But through the system this the problem of ghost names has reduced to the maximum.

The results show that the system has not been able to manage and to end the problem of the ghost workers and this problem possibly will never end. That is because thieves will never sleep and every day thieves form new approaches to manipulate the system. But through this system at high extent it has been able to solve the problem of replacing fake names into the payroll system.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter is about the interpretation of the findings. The interpretation and discussion were guided by the research objectives. It links to the literature, theories and findings. In this case, the main objective of the study was to investigate efficiency and effectiveness of the HCMIS in managing the problem of the ghost workers in Tanzania and specific objective of the study were; to examine how the ghost workers appear on the wage bill, how HCMIS can improve inefficiency and ineffective in managing human resource in Tanzania and to explore persistence of ghost workers on payroll systems in Tanzania.

5.2 The ghost workers in the wage bill

It has been shown in the chapter four (page 35-38) that there various dimensions of ghost workers fraud used in the payroll systems in Tanzania government. The various dimensions of the ghost workers found appear in Tanzania wage bill or payroll systems are: non-employees, terminated staff, dead employees and voluntary retired staff. It implies that there are two sources of the ghost workers in the wage bill, the first was ghost names who were recorded to paper-based record and subsequently transferred into new Human capital management information system; and second was ex-employees (deceased, voluntary retired and dead staff) who are not being removed from the payroll system still earn salary. All these forms of ghost workers fraud are caused by the dishonest system users who intentionally don't remove unworthy employees from the system to defraud the public funds.

The same observation was done by Nafiu, Yalo and Aduku (2016), and Oguzierem, Sofiri and Okodudu (2017), their findings reveal that fictitious employees, dead ghost staff, retired staff and terminated ghost employees are the most rampant fraud in the

government sectors leading to diversion public funds for private use. These findings reiterate the findings of Tuffour (2002), according to him; re-engagement of retired teachers is also another mechanism of payroll fraud. The teachers and senior officials at the headquarters shared the unearned salaries. This implies that such types of ghost workers are common in the payroll system cross geographically, even though the government adopted electronic human resource management systems still faced challenges of fraudulent servants who with intent did not remove the staff from the payroll systems. With reference of fraud triangle theory (Cressey, 1950) all these forms of ghost workers fraud committed by the system users were most caused by the financial pressure and opportunity; employers engaged in an evil action of ghost worker fraud due to financial pressure and ineffective control of the HCMIS that allows individuals to commit such fraud. Therefore, there is a need to improve the HCMIS in order to fill those gaps.

Research findings also showed that high percentage of the ghost workers who appeared into the wage bill were non-employees who were imported from the old system 'paper-based form' to HCMIS. This means that when the government decided to move out from old system of record keeping to HCMIS, it was when ghost workers 'names' were carried and relocated into the new system. It means that there was no enough auditing of human resources before transferring information into a new system. Oguzierem, Sofiri and Okodudu (2017) argued that it is difficult for government to identify and remove the ghost names from payrolls without adopting contemporary biometric and forensic technology. However, Kiragu (1999), and Sawa and Maimu (2001) reported that Tanzania government conducted several physical payroll verification exercises and succeeded to identify a number of the ghost workers even though it had no human resource management technology. For example, service census of 1988 about 16,000 ghost workers were identified, and in 1997 about 4,600 were revealed. Therefore, transfer of employees' data from the paper records to HCMIS without effective physical auditing, has given picture that dishonest employers were aimed at continuing to defraud the public funds in the new system 'HCMIS'.

5.3 Improve inefficiency and ineffective in managing human resource in Tanzania

Following what was presented in page 39 the study revealed that the presence of HCMIS in the government sectors ensures to have enough information of human resources which is used to carry out several payroll investigations in public sectors. This means that the information available in the HCMIS is one of the main tools used by the staff inspection officers at PO-PSMGG in addressing the problem of the ghost workers in government offices. HCMIS provides a central point of access to the employee information, provides a comprehensive employee database solution and simplifies human resource management (Dialoke and Goddey 2017).

These results are in line with those presented by Enakirerhi and Temile (2017), in their study of Integrated Personnel and Payroll Information System (IPPIS) by looking critically at the challenges of implementation of IPPS, benefits to be derived when IPPIS is fully implemented and what the future holds, in this study they came up with a strong argument that IPPIS with other management systems in the country will constitute valuable pool of data for government planning and forecasting. The fraud management lifecycle theory by Wilhelm (2004), proposed that investigation is one of stages of fraud management, but it is impossible to conduct investigation without accurate and enough information. Therefore, HCMIS ensures obtaining of accurate and enough information and evidence to stop fraudulent activities. More so, adoption of electronic human resource management goes in right way in addressing the negative trends of the ghost workers frauds in the payroll systems.

In addition, the findings support the results of Ndaro (2016), in her study of contribution of HCMIS on organisation performance; a case study of Ushetu district council in Shinyanga region where 60 percent of the respondents agreed that the HCMIS had been good in detecting the ghost workers thus enhancing a huge saving. For that reason, electronics human resource information systems like HCMIS improves effectiveness and

efficiency in how the government conducts its operations such as decreasing malpractices, improving on reporting and management of information (Moyo, 2017). It implies that HCMIS is a significant tool for providing accurate information and supporting the successful investigation and conviction of fraudsters. Therefore, HCMIS as a tool should be improved in order to block and eradicate all leakages in the payroll system.

Research also revealed that in order for the system users to enter employee information in the HCMIS it needs to follow several procedures which are not made by one person or institution. For instance, the HCMIS users currently are not the major recruiters unless they apply for workers who are brought by Public Service Recruitment Secretariat with special verifications. Besides, when promotions are made to employees, system users are required to attach a special letter of the verification from the general secretary of the government to the system, and thereafter are approved by approver of PO-PSMGG as presented in page 40. All these procedures and specialisation are adopted as deterrence. Deterrence means stopping of fraud before it happens (Wilhelm, 2004). Therefore, HCMIS designed to bar easy perpetration; hence it is not possible at all for a system user to decide to register anyone with his will or to create ghost names, to create multiple salaries and to enter into the system for his will.

This finding agrees with previous findings by Dialoke and Goddey (2017) in his study of electronic human resource management and ghost worker syndrome in Nigeria, the survey reveals that Electronic human resource Management can be pragmatic way of curbing the ghost workers syndrome in Nigeria Local government authorities especially as it detects nonexistent names on the payroll, retention of the names of dead or disengaged workers on the payroll and payment of fictitious and multiple salaries to identified personnel. This gives us the answer that there is no longer a chance of replacement of fake names in the system, hence HCMIS is efficient in eliminating duplicate registration of employee in any form, accurate disbursement to the right employee and minimization of fraudulent activities.

The findings also showed that the system is able only to detect, identify and remove automatically unworthy employees who have reached age of retirement '60 years' not otherwise. According to the researcher this is weakness and ineffectiveness of the HCMIS on managing the problem of the ghost workers fraud because it does not successfully give desired results, but it gives chances to other type of ghost workers like voluntary ghost employees, terminated staff due to disciplinary cases and dead ghost staff fraud to be conducted as showed in page 42. The finding agrees with Triangle fraud theory by Cressey (1950) which considers weakness in the system as opportunity for sources of fraud. Therefore, weakness of HCMIS to identify unworthy employees is the main source of the ghost workers in the payroll system. Therefore, there is a need of improvement of HCMIS or other support from other systems to reach its effectiveness.

Also, the findings are in line with Ndaro (2016) who revealed that the system reminds about the list of employees who are to be retired and allows for timely retirement but a human resource officer can forget or internationally not terminate a deceased or resigned employee as a result the inefficiency of the system and loophole for ghost workers. Nevertheless, the HCMIS has been successfully efficient and effective in preventing the replacement of names of non-employees into the payment system, but at the same time the system was inefficient and ineffective to remove some of ghost workers who were in the payroll system and lost their reputations of being employees till commanded by the system users. Therefore, in order for HCMIS to work more efficiently and effectively in managing all forms of ghost workers fraud it needs committed staff and other human management supportive systems.

The study found out that the HCMIS is unable to track and detect the fictitious compensations unless PO-PSMGG auditors use HCMIS information to conduct physical inspections. That means if the employers disobey removing or delaying reporting the staff such employees continues receiving salary as usual. For that reason, delaying of the information from government sector or department to another and inefficiency of the HCMS to track fictitious compensation can be sources of the problem of ghost workers

fraud. The findings supported those of Njau (2017) whose study revealed that despite the use of HCMIS in Mwanza city council still the efficiency and effectiveness of the system is confronted with some challenges of the ghost workers fraud, which is caused by most of the heads of the department forgetting to present information and termination information reaches the PO-PSMGG very late and sometimes doesn't get such information at all, that facilitates the problem of fictitious compensations to the ghost workers. So then, the implementations of the systems are marred with problems including laziness of systems users and the unfaithfulness of constituted people to fully implement the project due to its ability to stamp out payroll fraud and corruptions.

Further, the results revealed that it is impossible for doubling-up information of the employee into the HCMIS. The finding implies that the HCMIS does not allow duplicating of information of the employees into the system such as employees particulars, certificates and bank payment account. Consequently, it is not possible for perpetrators to make ghost names into the system to earn multiple salaries. However, the system users are able to make any changes of employees' information without being approved by the approver. The results are supported with the fraud management lifecycle theory by Wilhelm (2004) who maintained that deterrence is the first stage which is characterized by actions intended to discourage fraud before it is attempted. Therefore, ability of HCMIS against duplication proves high efficiency in managing ghost workers fraud.

The results of Oguzierem, Sofiri and Okodudu (2017) against previous findings, it was revealed that even though Nigerian adopted IPPIS in 2004, in 2017 the study revealed that there are various dimensions of ghost workers, fraud that include double or multiple employment and receiving double or multiple salaries. These findings raise doubts regarding the efficiency and effectiveness of the Human resource management systems in managing the problem of ghost worker fraud. Therefore, there is need of improvement of the HCMIS for strategic staffing decisions in the public sector and for improving performance management within the public offices.

5.4 Persistence of ghost workers on payroll systems

In this last objective the researcher wanted to examine why there is persistence of the ghost workers in the public sectors while there is a payroll system (HCMIS). The study findings as highlighted in the page 46 indicated that the HCMIS is not integrated with other government systems apart from the GSPP. The failure of HCMIS to detect, identify and remove all kinds of ghost workers is because HCMIS was not linked to other systems like biometric technology to capture the day to day presence of the employees in the organisations. Tuffour (2002), in his study of ghost names, shadow workers, and the public sector wage bill, argues that HCMIS needs other supportive systems, and says that another antidote of ghost worker lies in the use of technology called biometrics. Because it is extremely difficult, if not impossible, to duplicate individual physical measurement, biometric is finding applications in the provision of access to financial records, and other security sensitive areas, such as access to medical records, buildings, payroll systems, attendance records and banking services. That means it is impossible for HCMIS to be fully efficient and effective in managing the problem of ghost workers fraud in the payroll system in public sectors unless government linked HCMIS with other human resource systems.

Also, the findings show that the HCMIS gives high chances to system users to lead and manipulate the system like changing the information at any time and without being checked by another system approver, so it is easy for HCMIS to be manipulated which might make the system work inefficiently and ineffectively. However, HCMIS user manual (2011) is designed to enable human resource offers from all Ministries Department Authorities, Local Government Authorities and other public sectors to maintain their employee's information in Lawson version 9, environment and make all necessary changes as they needed. The substances are restricted to system users with proper security access. So, it is difficult to non-employers to accesses the system and manipulate. And therefore, this finding gives the picture that employers are main fraudsters in the payroll system.

The findings support the results of the study of Tuffour (2002), which revealed that the syndicate which specializes in the recycling of personal data of the retired teachers, collects the names, staff code, staff number, station, rank and bank account of the retired teachers. After processing a teacher's retirement entitlements, the officers change the payment voucher number and other details, and recycle the teacher on to a different payment voucher in different payment station and feed into the computer and defraud the wage bill. That emerged because the system is not designed to work alone instead it depends much on systems users, therefore it is easy for the system to be manipulated and hence makes it difficult to the HCMIS to reach its effectiveness in management of the ghost workers fraud.

Similar findings regarding manipulation of the HCMIS were revealed by Ndaro (2016), in her study of contribution of HCMIS on organisation performance; she found out that the user departments within the organisation are the main operators of the HCMIS that is Human resource officers and District Executive Directors. The system (HCMIS) cannot detect the user on logging in the system. Whoever perpetrator hacks the security codes and can just access the information and do whatever he or she wishes. And the system will be misused threatening the employees' employment affairs and may generate ghost workers frauds. The findings are in line with Cressey (1950), in his theory of fraud triangle theory which argued that a person cannot perpetrate without being given an opportunity. Therefore, it proves that inefficiency of the HCMIS is the source of fraud activities in the government wage bill.

Moreover, the study findings revealed that the HCMIS is like other antivirus software systems; it cannot fight with all kinds of viruses, and those who manage the software might be the one who formulate other viruses against the system, this is likewise to HCMIS, the system users are number one threats to the system and they can't stop to find other ways to swindle in the payroll system for their own benefits because its generic and inherited employee fraud behaviour. Generic employee fraud behaviour is the kind of fraud which is highly cardinal with the blood. Staff in this category are

enjoying doing fraud, conscience and are unapologetic for repeated fraud activities. While it is inherited employee fraud behaviour, staff is mentored by guidance or boss where an employee is instructed by the boss to engage in unlawful act (Nafiu, Yaho and Aduku, 2016). This finding corresponds with Triangle fraud theory (Cressey, 1950), which maintained that people commit fraud because of rationalization, which means justification of fraudulent behaviour as a result of staff lacking personal integrity and other moral reasoning. Therefore, it is hard to guarantee that the problem of ghost workers fraud will never repeat or not.

CHAPTER SIX

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

6.1 Introduction

The final chapter of this study gives an overview of findings, conclusion and recommendations drawn from the data analysed and findings. In this context discussion of recommendations has been on what has to be done so as to improve inefficiency and ineffectiveness of HCMIS in managing the ghost workers frauds in Tanzania.

6.2 Summary

Tanzania introduced HCMIS as solution to manage and eradicate the problem of the ghost workers fraud facing from its public sectors. The system facilitates to know the exact nature of workforce and wage bill on a monthly basis, storage and retrieval of human resource information hence increase efficiency and effectiveness of public services. Despite this initiative done at public sectors still challenges of the ghost workers fraud persist. Therefore, this study specifically intended to investigate the efficiency and effectiveness of HCMIS in managing the problem of the ghost workers fraud at President's Office–Public Service Management and Good Governance.

The specific objectives of the study were to examine how the ghost workers appear on the wage bill; to investigate how HCMIS can improve efficiency and effectiveness in managing human resource in Tanzania; and to explore persistence of ghost workers on payroll systems in Tanzania.

The research questions were deliberately to understand how ghost workers appear in the payroll systems, how can HCMIS significantly reduce or stop ghost workers on the wage bill in Tanzania, and why there is persistence of ghost workers in the organisations while there are payroll systems.

A case study research design (PO-PSMGG) and data collection methods (in-depth interview and documentary review) were employed in order to realise the study objectives. Qualitative data were analysed by using content analysis and presented with direct quotations with respect to research objectives. Purposive and simple random sampling techniques were used to select a sample. Purposive sampling technique was used to select one director of HCMD in the study because he was the expert in the Human Capital Management and had decision making authority which affected human resource activities at Human Capital Management Division. Simple random sampling technique was employed to select nine respondents from three sections within HCMD. The technique was employed because every employee from each section has equal chance to be selected into the study, and HCMD officers were main users of the system which affects human resource activities to all public sectors.

The study found that all types of ghost workers that appeared in the wage bill in Tanzania government were caused by dishonest system users intentionally not removing undeserving employees from the payroll system 'HCMIS'. Such ghost workers are dead, voluntary and terminated employees. Also, the findings show that the system is able only to detect, identify and remove automatically unworthy employees who have reached age of retirement '60 years' but not otherwise like dead, voluntary retired and terminated staff, against duplication of information of employees and unable to track and detect the fictitious compensations unless HCMD officers uses HCMIS information to conduct physical inspections to identify the ghost workers fraud at public offices. Further, the study revealed that the system is weak to curb all kinds of ghost workers because the system was highly designed to depend on system users; so easy to be manipulated, the HCMIS is not linked with others governments systems to ensure its efficiency and effectiveness, and lastly the HCMIS is like antivirus software it's not healthy to say it guarantee the problem of the ghost workers fraud will never repeat.

6.3 Conclusion

Based on the objectives of the study, the following conclusions are made:

With respect to the first objective of the study which required explanation on how the ghost workers appear in the government wage bill. The study concludes that all this type of ghost employees appeared into the payroll systems in Tanzania public sectors are caused by the unscrupulous employers intentionally not removing the staff from the payroll system at a right time despite being needed to do so. Currently, in Tanzania there are no fake employees that are included in the payment system as ghost workers; on the contrary all those ghost workers were legitimate employees who were present in HCMIS but lost their reputations as employee from their organisations and not worthy to receive salary but still earn salary because they were not removed from the system. Therefore, HCMIS is efficient and effective in managing of fake names but highly inefficient and ineffective in managing other types of ghost workers who were already in the payroll system.

How HCMIS can improve efficiency and effectiveness in managing human resource was the second objective. The study concludes that the prevention of ghost workers frauds mainly depends on the physical inspections conducted by PO-PSMGG officers by taking information from HCMIS rather than HCMIS itself.

The study concludes that in order to ensure that there is no persistence of the ghost workers and inefficiency and ineffectiveness of HCMIS on managing payroll fraud in the payroll systems in Tanzania. It needs PO-PSMGG to integrate HCMIS with other related government systems from other MDAs and Public institutions rather than to work alone, such as from RITA, NECTA, PSSSF, NSSF, Biometric technology, NIDA system and so on as they did to GSPP from the Ministry of finance and planning.

6.4 Recommendations

Based on the study findings and conclusions presented, the study recommends the following:

The system 'HCMIS' performance and its functionality must be reviewed in order to improve its efficiency, by reducing the system user's authority in the conversion of employee information, and the system should be improved to recognize the system users by capturing of unique features such as finger prints, iris and photographs of individuals when using the system in inserting or changing employee information. But also, the Government and PO-PSMGG are supposed to add a feature of the approver in the system, in which the function will be to review and act as final decisions maker of all decisions made the system users.

The study also recommends that the HCMIS should be linked with National Identification Authority 'NIDA'. Through NIDA it will help to get accurate information 'particulars' of the employee's which will be filled into the system, so possibly will reduce the scope of fake information, hence it will reduce fictitious compensations. But also, if the HCMIS will be linked to NIDA, when the employee's information mismatches with that of NIDA system it can detect and provide notification.

In order to solve the problem of dead ghost workers the study recommends that HCMIS should be linked with Registration Insolvency and Trusteeship Agency 'RITA' in order to obtain correct death information of the employees in time. Through RITA, HCMIS will be able to receive death information even if the employer has not sent the information. Therefore, automatically HCMIS will be able to track, identify and terminate dead ghost staff from the payroll system. Thus, it will reduce or completely end up the problem of the dead ghost staff fraud.

Moreover, the researcher recommends that it is important for HCMIS to be linked with Social Security Fund Systems like Public Service Social Security 'PSSSF' and National Social Security Fund 'NSSF' in order to combat the problem of voluntary retired staff

and terminated ghost workers fraud. Because when staff retires or terminated she or he must go through the social security fund in order to obtain his or her eligibility. For that reason, if the HCMIS integrated with PSSSF and NSSF systems it will be easy to obtain information about resigned employees. Hence, the system will be able to track, identify and remove such kinds of retired ghost workers fraud.

Judging from the study findings, it is very important to government to introduce biometric technology to all public offices, which involve capturing behavioural characteristics such as finger prints, photographs of individuals and iris. So then, HCMIS should be linked with biometric registrations systems to access attendance records of any employee at work. So, if the staff will be absent for a long time at work as those who are dead, voluntary retired or terminated, the system will be able to track and remove them from the payroll systems.

The study also recommends that the HCMIS should be linked with judicial systems - Judiciary Statistical Dashboard System 'JADS2', so, if an employee has been terminated due to criminal offences the HCMIS can access such information. Therefore, the system will be able to automatically track and remove such unworthy staff from the wage bill.

Also, the findings recommend that there is a need of Human Capital Management Information System to be integrated with NECTA system in order to get proper information against fake certificates which might cause generation of fictitious employees in the payroll system.

PO-PSMGG should take regular physical inspection routine payroll and system audits to all MDAs, LGAs and other public institutions for enhancement of accountability and integrity rather than waiting until to hear rumors of frauds even though such operations cost money but can be most effective.

The sated Payroll Staff Inspection task force itself must be subject to several checks and balances, the tenure of the task force members must be variable and their contracts

renewable. Besides, task force members must be randomly rotated from one assignment to the other.

Further, the study recommends that strong actions such as refund the amounts stolen, demotions, suspensions, forced retirements, stiffer punishment must be enacted and be enforced without compassion against the all systems users 'human resource officers, employers and other perpetrators' who abuse the system to defraud the public funds should take place in order to stop habit of frauds action. It is true that if the likelihood of arrest and conviction is low and there is no credible deterrence, the ghost workers fraud will continue.

6.5 Policy Implications

The government 'PO-PSMGG' had taken very imposing steps to develop and introduce new policies and regulations for the management of human resource information such as HCMIS Security policy 2013. A cautionary note was that while new policies and procedures came into effective, there is also a need to have compliance mechanisms and accountability structures to ensure that policies and procedures were followed.

The policy implication resulting from the research findings of this study is that the policy makers should redesign Human Capital Management Information System policy in a way that the HCMIS should be compulsorily integrated with other related government systems to promote efficiency and effectiveness in management of the problem of ghost workers fraud in government institutions instead of working alone.

There was a danger to the government and PO-PSMGG to become locked into the HCMIS application. The upgrade to a new version would improve functionality but data migration, without data verification exercises as a case of paper-based record into HCMIS, was liable to transfer existing data errors, some of which were likely to be the results of fraud. Therefore, there was a need to policy makers to decide whether the HCMIS was a record keeping system as well as information system.

The study findings indicate that the HCMIS users were not audited in terms of their actions by approvers. The proposed standards and guidelines for HCMIS should deal with the issue of abusive alteration of employee information, payroll information and the protection of information from abusive changes of information and unauthorised access. So, alteration of the employee information in the system should be controlled

The HCMIS security policy recognizes system users as Human resource officers, personnel action approver, employers, printer operators and payroll officers. Disappointment of one group to accomplish its work on time will cause the whole system to stack. Thus, this policy should show the relationship between the groups, mode of making one group accountable when create room of fraud activities.

The HCMIS security policy contradicts itself by allowing the use of Virtual Private Network (VPN) in remote areas while at the same time limits the use of HCMIS apart from office premises. From the experiences the VPN is being used in laptops, for this reason the system is no longer restricted as policy insists. Therefore, the security of efficiency and effectiveness of the HCMIS has been reduced by the use of VPN, which may allow misuse of the system and facilitate ghost workers fraud

HCMIS policy clearly defined prevention of unauthorised user access to HCMIS by insisting on using security code, password on logging in into the HCMIS against theft of information by the perpetrators, but the system has no mechanisms to capture behavioural characteristics of the system users, so anyone who can steal the security code and hence can access the system and defraud. Hence, some of good principles are not implemented enough because the system itself is not programmed to facilitate the implementation of the policy.

HCMIS security policy strict recommended that ensure information security events and observed weaknesses associated with HCMIS functionality are communicated in a manner to allow timely corrective action to be taken and reported, but the problem is

information technology infrastructures are not effective they must be strengthened so as to prevent other forms of ghost workers attacks.

6.6 Needs for further researches

The study was conducted in one public organisation that is PO-PSMGG in Dodoma region as case study area, which used only qualitative approach and sample size of 10 respondents that was very small. Therefore, the findings of this study cannot be generalised to all public organisations. This provides important gap to be filled by conducting the similar studies which will include more public organisations, quantitative approach and use of large size of sample size so as to have wider understanding of efficiency and effectiveness of HCMIS in managing the problem of ghost workers fraud.

The findings should be compared with those of other researchers to determine other ways through ghost workers appeared in the system. Lessons that would be drawn from the studies would help to facilitate better planning of the improvement of HCMIS against fraud activities.

Also, the study focused on approvers at PO-PSMGG only and left aside the system users from MDAs, LGAs and Public Institutions. Similar study can be done to include both the system users and approvers because none of them can use the system alone.

The finding of this study revealed that inefficiency and ineffectiveness of the HCMIS on managing of the ghost workers fraud was caused by un-integration of HCMIS with other government related systems. Therefore, the study can be done to survey the benefits of integrating HCMIS with other related public organisation systems

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APPENDICES

Appendices: 1

INTERVIEW GUIDE FOR DIRECTOR AND HUMAN RESOURCE MANAGER FROM DIVISION OF HUMAN CAPITAL MANAGEMENT AT PO-PSMGG

Dear participant, I am Kassim A. Bwaki, a student of Master of Science in Human Resource Management at the Mzumbe University. As part of my dissertation, I am conducting a research on efficiency and effectiveness of HCMIS in managing ghost worker fraud in the payroll system at PO-PSMGG. This research is purely for academic's purposes. The information given will be treated with utmost confidentiality and anonymous. However, your participation is voluntary and that you are free to withdraw from the study at any time, without having to give a reason and without any consequences. Your cooperation is highly appreciated.

Please tick for the correct answer

A: Demographic characteristics of respondents

- i. Working experiences years
- ii. What is your position in PO-PSMGG.....

B: Interview questions

- i. How does HCMIS help on the identification of ghost workers?
- ii. How does HCMIS facilitate to track fictitious compensation?
- iii. Apart from that other ways can HCMIS significantly reduce or stop ghost workers on the wage bill?
- iv. How do ghost workers appear in the payroll systems?
- v. Why there is persistence of ghost workers in the organisations while there are payroll systems?

..... **END**.....