# APPLYING AN INTEGRATIVE MODEL IN PREDICTING FINANCIAL IRREGULARITIES IN CHIBOMBO DISTRICT

**BY**

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## DECLARATION

I, **Lewis Kafula,** do hereby solemnly declare that this report represents my own work, and does not incorporate any published work or material from another report, except where otherwise acknowledged, and that has never been previously submitted for academic purposes at the University of Zambia or any other University.

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## APPROVAL

This dissertation of Lewis Kafula has been approved as partial fulfilment of the requirements for the award of the degree of Master of Science in Accounting and Finance by the University of Zambia.

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## ABSTRACT

Chibombo is a new district which was not expected to have a wide range of financial irregularities following staff having been trained in Financial Administrative Management Systems in the public sector. These irregularities have negatively affected the operations of key activities and service delivery in the District. This study was aimed describing the demographic profile of staff that is involved in financial irregularities and to profile the patterns of these irregularities in the public institutions in Chibombo District.

A cross sectional survey quantitative study design, based on a stratified sample drew respondents from six public sectors. Data was analysed using the Statistical Package for the Social Sciences (SPSS), Version 22.0. Measures of central tendency and variations of critical variables and linear egression to establish cause and effect were done. The significance level was set at $p \leq 0.05$.

The study revealed that public servants have experienced predominantly three types of financial irregularities and these relate to the introduction to payroll without authority, irregular use of accountable imprest and irregular payment of subsistence and meal allowances. One sample t tests showed that men and women did not statistically differ significantly in perceiving financial irregularities $p < 0.01$.

This study is original and differs from other studies because it has examined two theories and a wide range of financial irregularities that are generally difficult to be accessed by researchers to be published in an academic journal. The variables of findings of this study are inferred from the Auditor General's Report that is not private and not confidential.

The findings provided by this study are important because they provide a deeper understanding of the linkage between predictors in financial irregularities and acts committed by public servants. The study also contributes knowledge about possible solutions to the commitment of financial irregularities. Future research may cover more districts and to consider embracing a mixed methods study design.

This is a premier study in Zambia and one of the first to use two theories (Fraud Triangle Theory and Diamond Fraud Theory) to examine factors that influence public servants to commit financial irregularities.



**Keywords:** *Financial Irregularities, Fraud Triangle, and Diamond Fraud Theory, Chibombo*

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My special gratitude goes to Dr. Mwanza my supervisor for the encouragement and guidance throughout the process of this study. His assistance in this work has been truly useful and without his professional support and cooperation, this work would not have been completed. Sincere thanks go to all course mates in Accounting and Finance from the University Of Zambia Graduate School Of Business for moral support and assistance.

To God be the Glory for giving me the strength, endurance, and courage to overcome all the obstacles I encountered during my study.

## DEDICATION

This report is dedicated first to the Lord Jesus Christ Almighty to whom I owe all my strength in everything I do. I also dedicate it to my loving wife Shella Kafula, my daughter Shelly Kafula and my supervisor Dr. Mwanza for their encouragement, moral and spiritual support.

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# CHAPTER ONE: INTRODUCTION

## 1.0 Introduction

Financial irregularities are of particular interest to auditors since they have legal responsibilities for detecting and reporting such irregularities. Material financial irregularities include management fraud, employee fraud, error, intentional acts, other illegal acts and, finally, intentional but not fraudulent or other illegal misstatements (AUSB, 1995). Financial irregularities can be defined as acts that involve the use of deception to obtain an illegal advantage. A number of surveys (Krambia-Kapardis, 2002) have documented the increasing incidence and cost of financial irregularities against corporations. In addition to the financial cost incurred by the victims, the cost of financial irregularities includes the financial costs arising out of litigation, against auditors who fail to detect financial irregularities, as well as damage to the accounting profession's credibility.

Financial irregularities for or against a company can take the form of fraudulent financial reporting, also known as management fraud, and misappropriation of assets or employee fraud, also known as defalcation. Due to the nature of auditing and its inherent limitations, fraud is very difficult to detect for a number of reasons:

It may be committed by people who are familiar with accounting procedures and can cover it up auditors do not possess all the necessary skills to detect fraud (Wells, 1993; Monroe and Woodliff, 1994; APB, 1995).

a) Time pressure on auditors
b) There is built-in conflict since auditors are asked to investigate upper management who indirectly are the same group that hired them.
c) By detecting fraud an auditor may well be facing 'the spectre of protracted litigation, grand juries, and trials, and one immediately sees why the auditor may hope the issue of fraud never sees the light of day'.

The ability of the external auditor to detect material irregularities, including fraud, has come under increasing scrutiny and auditors are under considerable pressure to accept

legal responsibility for detecting material fraud.7 One cannot overemphasise the need to enhance auditors' fraud- detection ability in order to:

a) Reduce the performance component of the expectation gap.
b) Lower the risk of litigation for auditors for having breached their duty of care to their client and/or a third party in carrying out the audit.
c) Detect fraud that may be instrumental in causing significant financial loss if not the complete collapse of a corporation.

Audit experience alone, however, cannot make auditors fraud-detection experts. A number of surveys in the 1990s showed that audit beneficiaries want an expanded role for auditors as society's corporate watchdog; in other words, that auditors should be legally responsible for detecting material fraud. This view contrasts with that of auditors themselves.

### 1.1 Background to the Study

In the past fifteen years, public institutions' financial accounting irregularities in Zambia no longer become unexpected news of the day. In the 2017 report for instance, the auditor general highlighted significant audit results bordering on failure to follow legislation, Government regulations and instructions, weaknesses in internal controls resulting in failure to collect or bank revenues on time, failure to account for funds and delays in implementing projects among others. The audit covered areas that cut across all the five (5) Developmental Strategic Areas of the Seventh National Development Plan. The issues mentioned in this report are those which could not be resolved during the audit process and those which were highlighted in the previous reports, but had not been rectified at the time of producing this report (AGR, 2017:iv).

These costly financial irregularities have led to the erosion of investors and public confidence in the public sector as has been the case in some financial markets (see, Peterson and Buckhoff, 2004; Rezaee, Crumbley and Elmore, 2004 in Bierstaker, Brody and Pacini 2006).

A dearh of studies has been done in Zambia on the public sector as well as the private sector. However, many studies have discussed financial irregularities from a fraud perspective. The general view is that financial irregularities prevention should be the main focus and in this study, one may take the same position. It is less expensive and more effective to prevent financial

irregularities from happening than to detect it after the occurrence. Usually, by the time financial irregularities are discovered, the money is unrecoverable or the chance to recover the full amount of the loss is very slim (OECD, 2006). Furthermore, it is costly and time consuming to investigate financial irregularities especially involving large-scale operations as seen in the AGs report. However, if the focus is on financial irregularities prevention all the monetary losses, time and effort to reconstruct financial irregularities transactions, track down the perpetrator, and reclaim missing funds can be saved (Brewer and Hentschke, 2009). Thanasak (2013:1) states that before making any efforts to reduce financial irregularities and manage the risks proactively, it is important for the business organizations to identify the factors leading to financial irregularities behaviour by understanding who are the financial actors, when and why financial irregularities are committed (Clarke ,2008). Various theories have attempted to explain the causes of fraud and not financial irregularities and the two most cited theories are the Fraud Triangle Theory (FTT) of Cressey (1950) and Fraud Diamond Theory (FDT) of Wolfe and Hermanson (2004). Though these two theories are about fraud, this researcher desires to apply them in this study as their assumptions may apply. Both of them identify the elements that lead perpetrators to commit fraud. According to Dorminey, Fleming, Kranacher, and Riley (2010), the origin of the FTT dates to the works of Edwin Sutherland (1939) who coined the term white-collar crime, and Cressey was one of Sutherland's former students. Cressey (1950) focused his research on the factors that lead individuals to engage in fraudulent and unethical activity. His research later became known as the FTT. This theory consists of three elements that are necessary for fraud to occur: (i) perceived pressure, (ii) opportunity, and (iii) rationalization. David T. Wolfe and Dana R. Hermanson believed that the former FTT has to be enhancing to improve both fraud prevention and detection by considering an additional element above the three, mentioned elements of FTT. They considered four sided FDT thereby adding capability as the fourth element. Wolfe and Hermanson (2004, p. 38) state that fraud cannot successfully conceal unless the fraudster has the capability to have all personal traits and abilities even in the presence of the other three elements. In their separate works, Wolfe and Hermanson (2004), Thanasak (2013), Norman and Faizal (2010), Florenz (2012), Gbegi and Adebisi (2013) examined and discussed the FDT. Their main conclusion was that the FDT is an extended or improved version of the FTT with an addition of "capability" added to the three basic elements of fraud in the FTT.

Financial irregularities and mainly fraud in the corporate and public sector worlds has been extensively studied, resulting in well-established theoretical framework. The general view expressed in many of these financial irregularities- related studies is that prevention financial irregularities are more cost effective than detection. It is less expensive and more effective to prevent financial irregularities from happening than detect it after the occurrence. Usually, by the time financial irregularities are discovered, the money is unrecoverable or the chance to recover the full amount of the loss is very slim (Abdullahi and Mansor, 2015). This has been the case in the public sector in Zambia as shown by the Auditor general's Reports.

### 1.2 Problem Statement

Organizations are frequently exposed to different types of occupational financial irregularities by their employees. The incidences of these irregularities affect a wide range of people from management, employees, auditors, creditors, investors, and donors. The public sector appears not to be making efforts to reduce and prevent these irregularities and proactively manage risks. While financial irregularities are widespread in the public sector, Chibombo is a new district and it was not expected to have a wide range of financial irregularities following staff having been trained in Financial Administrative Management Systems in the public sector. These irregularities have negatively affected the operations of key activities and service delivery in the District. Below in Table 1 are some irregularities and amounts involved in Chibombo District with the education sector standing out as shown in the auditor general report of 2018.

**Table 1: Financial Irregularities Cited in the AGR**

| Government Unit | Irregularity | Amount Involved |
|---|---|---|
| District Social Welfare Office | Retirement details to the DSWO for funds in amounts meant to pay beneficiaries in Chibombo were not availed for audit. | K 24,120 |
| Liteta Local Court | Delayed banking | K 4,792 was delayed for 31 to 121 |
| Chibombo District Medical Office | Introduction to Payroll Without Authority | K 138,846 (covering two officers) |
| Chibombo District Medical Office | Irregular Use of Accountable Imprest | K 137,865 |
| Chibombo District Education Secretary Boards | Drawing of Salaries on Wrong Salary Scales | K 30,075 |
| Chibombo District Education Secretary Boards | Failure to Remit Tax | K 28,337 |
| Chibombo District Education Secretary Boards | Irregular Payment of Subsistence and Meal Allowances | K 6,000 |
| Chibombo District Education Secretary Boards | Claims without Obtaining Prior Authority | K 58, 120 |

Possible causes of these financial irregularities in spite of training remain unknown. It is important for the public sector to identify the factors leading to such behaviour by understanding the characteristics of the perpetrators and why these irregularities are committed. Perhaps a study which focusses on profiling demographic characteristics of people who are involved in financial irregularities, the patterns of financial irregularities is appropriate before developing a mitigation model.

### 1.2 Aim

This study was grounded on testing two theories, namely Fraud Tringle Theory and Fraud Diamond Theory to determine the causes of financial irregularities in Chibombo District with a view to develop a mitigation model.

### 1.3 Research Objective

1) To describe the demographic profile of staff that is involved in financial irregularities in the public institutions in Chibombo District.

2) To profile the patterns of financial irregularities in in the Public institutions in Chibombo District.

3) To test the Fraud Tringle Theory and Fraud Diamond Theory to determine which of the two holds in accounting for the observed financial irregularities in the public institutions in Chibombo District.

### 1.4 Research Questions

1) What is the demographic profile of staff that is involved in financial irregularities in the public sector in Chibombo District?

2) What are the patterns of financial irregularities in the public institutions in Chibombo District?

3) Why are there financial irregularities in the public institutions in Chibombo District?

## 1.5 Scope of Study

The main focus of the study is to assess the implications of financial irregularities in Public institutions in Chibombo District. However, it will be limited to determining its source of funds and how collected funds were applied for the past two (2) years of 2016 to 2017. The study was carried out on Public institutions in Chibombo District in Chibombo District of Central Province. Specifically the area of study is limited to Public institutions in Chibombo District as the study target. The findings and recommendations may be used for similar public schools of the country.

## 1.6 Organization of the Study

The study is organized into five chapters. The first comprises the background of the study, the statement of the problem, objectives of the study, the research questions, the significance of the study, and the organization of the study. Chapter two reviews literature on sources of funding and other central ideas. Chapter three outlines the research methodology. Thus, the target population, the sample size and sampling technique, the research instrument and data collection procedures are outlined. The data analysis, interpretation, and discussions are contained in chapter four. Chapter five presents the summary, conclusions and recommendations of the study.

# CHAPTER TWO: LITERATURE REVIEW

## 2.0 Introduction

## 2.1 Fundamental Concept of Financial Irregularities

Fraud has grown rapidly over the last few years. Among the financial irregularities, ACFE (2010) and Sutherland (1943) occupational fraud is the process of using one's occupation or responsibility to satisfy his personal interest by enriching himself through the deliberate abuse of power. Abuse of power by the fraud perpetrators includes deliberate mismanagement, and misrepresentation of organizational resources (fixed and current assets). Regardless of the type or nature of the sectors, various category of financial crime are taking place such as corruption, theft, manipulation, fraud, misleading financial statements, asset misappropriation, recognition of anticipated income and overvaluation of assets and undervaluation of liabilities among others (Duffield and Grabosky, 2001; Levi, 2008; ACFE, 2010; Kiragu et al., 2013; Manurung and Hadian, 2013). The details of the notable financial irregularities seen the literature are presented in Table 2 below.

**Table 2: Finance Financial irregularities typology**

| Author | Article | Typology of financial irregularities |
|---|---|---|
| Petter Gottschalk, (2010)[1] | Categories of financial crime", | Corruption, theft, manipulation |
| Raymond A.K. Cox, Thomas R. Weirich, (2002)[2] | The stock market reaction to fraudulent financial reporting | fraudulent financial<br>Misleading financial statement |
| Modugu, K. P and Anyaduba, J. O. (2013)[3] | Forensic Accounting And Financial Fraud In Nigeria:<br>An Empirical Approach | Bribery<br>Asset Misappropriation |
| Rezaee, Z. (2005)[4] | Causes , consequences , and deterrence of financial statement fraud | a) Financial statement fraud<br>b) Asset Misappropriation |

| | | |
|---|---|---|
| | | c) Corruption |
| Holtfreter, K. (2005)[5] | Is occupational fraud "typical" white-collar crime? A comparison of individual and organizational characteristics | Occupational Fraud |
| Beasley et al. (2000)[6] | Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms | Revenue fraud: fictitious revenues, recognition of anticipated income and overvaluation of assets and undervaluation of liabilities |
| Levi, M. (2008)[7] | Organized fraud and organizing frauds Unpacking research on networks and organization | Organizational fraud or corporate crime |
| Gerety, M., & Lehn, K. (1997)[8] | The causes and consequences of accounting fraud | Accounting fraud |
| Hogan, C. E., Rezaee, Z., Riley Jr, R. A., & Velury, U. K. (2008)[9] | Financial statement fraud: Insights from the academic literature. Auditing | Financial statement fraud |
| Compin, F. (2015)[10] | Tax fraud: a socially acceptable financial crime in France? | Tax fraud |

## 2.2 Extent of financial irregularities

Organizations of all types and sizes are subject to fraud. On a number of occasions over the past few decades, major public companies have experienced financial reporting fraud, resulting in turmoil in the U.S. capital markets, a loss of shareholder value, and, in some cases, the bankruptcy of the company itself. Although it is generally accepted that the Sarbanes-Oxley Act has improved corporate governance and decreased the incidence of fraud, recent studies and surveys indicate that investors and management continue to have concerns about financial statement fraud. For example:

1) The Association of Certified Fraud Examiners' (ACFE) "2010 Report to the Nations on Occupational Fraud and Abuse" found that financial statement fraud, while representing less than five percent of the cases of fraud in its report, was by far the most costly, with a median loss of $1.7 million per incident. Survey participants estimated that the typical organization loses 5% of its revenues to fraud each year. Applied to the 2011 Gross World Product, this figure translates to a potential projected annual fraud loss of more than $3.5 trillion. The median loss caused by the occupational fraud cases in our study was $140,000. More than one-fifth of these cases caused losses of at least $1 million. The frauds reported to us lasted a median of 18 months before being detected.
2) "Fraudulent Financial Reporting: 1998–2007," from the Committee of Sponsoring Organizations of the Treadway Commission (the 2010 COSO Fraud Report), analysed 347 frauds investigated by the U.S. Securities and Exchange Commission (SEC) from 1998 to 2007 and found that the median dollar amount of each instance of fraud had increased three times from the level in a similar 1999 study, from a median of $4.1 million in the 1999 study to $12 million. In addition, the median size of the company involved in fraudulent financial reporting increased approximately six-fold, from $16 million to $93 million in total assets and from $13 million to $72 million in revenues.
3) A "2009 KPMG Survey" of 204 executives of U.S. companies with annual revenues of $250 million or more found that 65 percent of the respondents considered fraud to be a significant risk to their organizations in the next year, and more than one-third of those identified financial reporting fraud as one of the highest risks.

4) Fifty-six percent of the approximately 2,100 business professionals surveyed during a "Deloitte Forensic Centre" webcast about reducing fraud risk predicted that more financial statement fraud would be uncovered in 2010 and 2011 as compared to the previous three years. Almost half of those surveyed (46 percent) pointed to the recession as the reason for this increase.
5) According to "Annual Fraud Indicator 2012" conducted by the National Fraud Authority (U.K.), "The scale of fraud losses in 2012, against all victims in the UK, is in the region of £73 billion per annum. In 2006, 2010 and 2011, it was £13, and 38 billion, respectively. The 2012 estimate is significantly greater than the previous figures because it includes new and improved estimates in a number of areas, in particular against the private sector. Fraud harms all areas of the UK economy."

The 2010 ACFE Report is based on 1,843 fraud cases examined by its members in more than 100 countries between January 2008 and December 2009. The Report identified the entity types which were victims of fraud, as shown in Table 3. It also presented data with respect to victim size, measured in terms of number of employees. For small organizations (under 100 employees), the frequency of fraud cases exceeded that of larger organizations, and the median loss was comparable to that for the largest of the four size categories reported. The Report cites the limited amount of financial and human resources available for fraud prevention in small organizations as a major driver of the results. In addition, leadership of small organizations typically has closer relationships with, and trust in, their employees, and thus, may engage in less oversight. Internal controls are the first-line of defence against fraud. When strong controls are lacking, or when controls are in place but are not actually followed, the environment for fraud is enhanced. There are gaps as seen. The gaps are that the report did not cover schools in order for this research to gain knowledge on patters of financial irregularities.

**Table 3: Fraud Victims by Type of Organization and Entity Size**

| Type of Organization | Percent of Fraud Cases | Median Loss in $ |
|---|---|---|
| Private companies | 42.1 | 231,000 |
| Public companies | 32.1 | 200,000 |
| Government | 16.3 | 100,000 |
| Not-for-profit | 9.6 | 90,000 |
| Size of Entity | | |
| Less than 100 employees | 30.8 | 155,000 |
| 100 –999 employees | 22.8 | 200,000 |
| 1,000 – 9,999 employees | 25.9 | 139,000 |
| More than 10,000 employees | 20.6 | 164,000 |

(Source: Association of Certified Fraud Examiners, 2010 "Report to the Nation on Occupational Fraud and Abuse," pp. 27-29, http:/www.acfe.com/rttn/rttn-2010.pdf)

### 2.3 Reasons for Financial irregularities (fraud)

Cole & Kelly (2011) postulates that the basic goal of the control role in management is to weigh performance against goals, objectives and benchmarks with the purpose of letting corrective actions to be taken where appropriate to help plans stay on track. Primarily, control is a matter of building feedback systems within the entire organization by seeing to it that there is growth, accuracy and deviations if any to be made to keep on track. Financial control chooses as its subjects of desired performances as it benchmarks, then systematically put together information which has a bearing on actual performance (usually on monthly basis) and identifies the variations between target and real performance. The basic objectives of financial controls encompasses the following; establishing short-term business plans, determining progress towards achieving short-term goals, ensuring coordination between cardinal aspects of the firm, assigning measurable duties to managers whilst not losing control and providing regulated easiness for meeting change in the short-term. However, literature has shown that the dominant reasons are as follows:

a) Pressure, Opportunity and Rationalization
b) Job dissatisfaction
c) Misfit between values and norms
d) Lack of transparency, Poor management information
e) Poor accounting controls
f) Economic factors such as Poverty, Recession, and Inflation
g) Personal circumstances
h) Incentive, opportunity, rationalisation, and capability.
i) The chances of detection of fraud are negligible
j) Poverty, greedy, individual circumstances
k) Poor internal control system, weak operational guidelines

These are profiled in the studies below in Table 4.

**Table 4: Profile of Reasons for financial irregularities**

| Author | Article | Reasons |
|---|---|---|
| Cressey ( 2013)[1] | "The fraud triangle and what you can do about it" | Pressure, Opportunity and Rationalization |
| Kamoche, K. (2011)[2] | Contemporary developments in the management of human resources in Africa | Job dissatisfaction |
| Mbaku, J. M. (2014)[3] | Corruption in Africa: Causes, consequences and clean-ups | Misfit between values and norms |
| Rezaee, Z. (2005)[4] | Causes, consequences, and deterrence of financial statement fraud | Lack of transparency, Poor management information |

| | | |
|---|---|---|
| Watts, R. L., & Zimmerman, J. L. (1986)[5] | Positive accounting theory | Poor accounting controls |
| Gerety, M., & Lehn, K. (1997)[6] | The causes and consequences of accounting fraud | Economic factors such as Poverty, Recession, Inflation Personal circumstances |
| Wolfe, D. T., & Hermanson, D. R. (2004)[7] | The fraud diamond: Considering the four elements of fraud | Incentive, opportunity, rationalisation and capability. |
| Modugu, K. P and Anyaduba, J. O. (2013)[8] | Forensic Accounting and Financial Fraud in Nigeria: An Empirical Approach | The chances of detection of fraud are negligible |
| Blanton, Kimberly. (2012)[9] | The Rise of Financial Fraud: Scams Never Change but Disguises Do | Poverty, greedy, individual circumstances |
| Mahdi, S. and Zhila, A. (2008)[10] | "Fraud Detection and Audit Expectation Gap: Empirical Evidence from Iranian Banks, | Poor internal control system, weak operational guidelines |

## 2.4 Theories of Financial Irregularities (fraud)

Research looking at finance irregularities shows that there are numerous theories that are used (See Table 5). These theories appear in summary below.

a) Finance Theory
b) Agency Theory
c) Theory of Fraud
d) Triangle
e) Social Theory and Social Structure
f) Differential Opportunity Theory
g) General theory of profit-driven crimes
h) "Broken Trust" Theory
i) Cognitive Dissonance Theory
j) Moral Disengagement Theory
k) Stewardship Theory
l) Theory of white-collar crime
m) Positive accounting theory
n) Fraud diamond theory

**Table 5: Theories used in finance irregularities**

| Author | Article | Theory |
|---|---|---|
| Fisher, R. C. (1982)[1] | Income and grant effects on local expenditure: The flypaper effect and other difficulties | Finance Theory |
| Jensen, M. C., & Meckling, W. H. (1976)[2] | Theory of the firm: Managerial behaviour, agency costs and ownership structure | Agency Theory |
| Cressey, D. R. (1950)[3] | The criminal violation of financial trust | Theory of Fraud Triangle |
| Mui, G., & Mailley, J. (2015)[4] | A tale of two triangles: comparing the Fraud Triangle Theory with criminology's Crime Triangle | Social Theory and Social Structure |
| Cloward, R. A., & Ohlin, L. E. (2013)[5] | Delinquency and opportunity: A study of delinquent gangs (Vol. 6) | Differential Opportunity Theory |
| Naylor, R. T. (2003)[6] | Towards a General Theory of Profit-Driven Crimes | General theory of profit-driven crimes |
| Albrecht, W. S., Albrecht, C. C., & Albrecht, C. O. (2004)[7] | Fraud and corporate executives: Agency, stewardship and broken trust | "Broken Trust" Theory |
| Festinger (1962)[8] | A theory of cognitive dissonance | Cognitive Dissonance Theory |

| | | |
|---|---|---|
| Bandura, A. (1991)[9] | Social cognitive theory of self-regulation. Organizational behaviour and human decision processes | Moral Disengagement Theory |
| Donaldson, L., & Davis, J. H. (1991)[10] | Stewardship theory or agency theory: CEO governance and shareholder returns | Stewardship Theory |
| Coleman, J. W. (1987)[11] | Toward an integrated theory of white-collar crime | Theory of white-collar crime |
| Watts, R. L., & Zimmerman, J. L. (1986)[12] | Positive accounting theory | Positive accounting theory |
| Wolfe, D. T., & Hermanson, D. R. (2004)[13] | The fraud diamond: Considering the four elements of fraud | Fraud diamond theory |

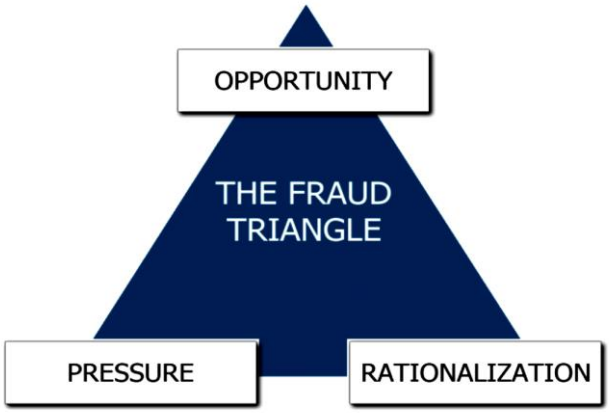
In order to lay ground for the causes of financial irregularities, two theories form the theoretical framework of this study and these are the fraud triangle theory and Fraud Diamond Theory. The two theories are discussed below.

### 2.4.1 The Fraud Triangle Theory

According to Dorminey et al (2010), the origin of the FTT dates to the work of Edwin Sutherland (1939) who coined the term white-collar crime, and Cressey was one of sutherland's former student. Cressey (1950) research later became known as the Fraud Triangle Theory (FTT). This theory consists of three elements that are necessary for fraud to occur: (i) perceived pressure (ii) opportunity and (iii) rationalization (Crassey 1953: 742). In the broadcast sense, the causes of fraud are summarized in an axiom known as the Fraud Triangle, developed from the work of Donald Cressey. The three elements of the fraud triangle are: pressure or motive, opportunity and rationalization.

Cressey concluded that individuals commit fraud when the three factors are present:

a. A financial need that cannot be shared (motive)
b. A perceived opportunity for illicit gain or gain improper access to fund (opportunity)
c. A personal justification of the act to themselves (Rationalization)




Source: Cressey (1953)

**Figure 1: Fraud Triangle Theory**

The three elements of fraud summarized by Cressey (1953) are commonly presented in a diagram shown in Figure 1. The top element of the diagram represents the pressure or motive to commit the fraudulent act while the two elements at the bottom are perceived opportunity and rationalization (Wells 2011 in Rasha and Andrew, 2012). Over the years, the fraud proposition has become well-known as the FTT. The details of the three constructs are thus explained below.

### 2.4.2 Pressure/Incentive/Motive

Perceived pressure refers to the factors that lead to unethical behaviours. Every fraud perpetrator faces some pressure to commit unethical behaviour (Abdullahi and Mansor, 2015a). These pressures can either be financial of non-financial pressures. Albrecht et al. (2006) pointed out that, since the pressure to commit fraud may not be real it is important to use the word perceived. If the perpetrators believed that they were pressurized, this belief could lead to fraud. Perceived pressure can exist in various ways, especially in non-sharable financial need. Financial pressure is recognized as the most common factor that lead an entity to engage in an evil action. Specifically,

about 95% of all fraud cases have been perpetrated due to the fraudster's financial pressures (Albrecht et al., 2006). Lister (2007) states that pressure is a significant factor to commit fraud. He determines three types of pressure which are personal, employment stress, and external pressure. Vona (2008) further examines personal and corporate forces as motivations' proxies for fraud commitment. Examples of perceived pressure include greed, living beyond one's means, large expenses or personal debt, family financial problem or health, drug addiction and gambling.

Lister (2007:63) defined the pressure to commit fraud as "the source of heat for the fire." But having this pressure does not become a reason for someone to commit fraud. Murdock (2008) also argued that the pressure could be related to financial, non-financial, political and social. Political and social pressure occurs in a situation whereby a person feels and believes that they cannot afford to fail due to their status or reputation. According to Rae and Subramanian (2008) pressure relates to employees' motivation to commit fraud because of greed or personal financial pressure. Along the same line, Vona (2008) and Rasha and Andrew (2012) believed that personal and corporate pressures are the key motive to commit fraud. The interaction of the elements above causes an individual to commit fraud (Rosefield, 1988; Vona, 2008; Okezie, 2012 and Rasha and Andrew, 2012). Chen and Elder (2007) recognized six basic categories for pressure as a transgression of obligations, personal problems, corporate inversion, position achievement and relationship between employees. Albrecht et al. (2008) categorized pressure in four groups including economic, vice, job-related and other pressures. Hooper and Pornelli (2010) opine that pressure can be either a positive or negative force.

### 2.4.3 Perceived Opportunity

The second necessary element of fraud to occur is perceived opportunity. Opportunity is created by ineffective control or governance system that allows an individual to commit organizational fraud. In the field of accounting, this is termed as internal control weaknesses. The concept of perceived opportunity suggests that people will take advantage of circumstances available to them (Kelly and Hartley, 2010). The nature of perceived opportunity is like perceived pressure in the sense that the opportunity does not have to be real too. However, the opportunity exists in the perception and belief of the perpetrator. In most cases, the lower the risk of being caught, the more likely it is that fraud will take place (Cressey 1953). Several factors lead to the existence of an

opportunity to commit fraudulent activities in an organization such as negligence of employee's breach of policies and lack of disciplinary action (Sauser, 2007). Wilson (2004) explains "opportunity" as the ability to override fraud controls. Rae and Subramanian (2008) alarm that opportunity refers to the ability and power of an employee to realize the weaknesses of the organizational system and taking advantage of it by making fraud possible. Furthermore, Srivastava, Mock and Turner (2005) and Hooper et, al. (2010) argue that, even when the pressure is extreme, financial fraud cannot occur unless an opportunity is present. An opportunity has two aspects: (i) the inherent susceptibility of the organization to manipulation, and (ii) the organizational conditions that may warrant a fraud to occur. For example, if there is an inadequate job division, weak internal control, irregular audit, and the like, then the conditions will be favorable for the employee to commits fraud. Chen and Elder (2007) and Fazli, Mohd and Muhammad (2014) used three proxies based on the Thailand Statement of Audit Standard No. 43 to measure an opportunity to commit fraud. The proxies used including related party transactions, CEO duality and the difference between control and cash flow rights. Moyes *et al.* (2005) report that the presence of related party transactions ranks the second amongst the most frequently encountered opportunity. In a study by Wilks and Zimbelman (2004), the related party transactions were placed the third amongst the most common of opportunity to the fraudster. Similarly, Ming and Wong (2003) also used related party transactions as a proxy to measure the opportunity. Vance (1983) state that another proxy for opportunity was ineffective monitoring that was attributed to the weak directorship in the public sector. Vance (1983) suggested that the effectiveness of the organizational board of directors in ensuring accurate control over management activities can be weakened by the domination of the CEO. Kenyon and Tilton (2006) lament that weak internal controls, lack of supervision, inadequate segregation of duties may create an opportunity to commit fraud. Lindquist and Singleton (2006), stated that Association of Certified Fraud Examiners revealed that irregular job rotation is contributing to the employees and managers exploit organizational failure to commit fraud, Ewa and Udoayang (2012) successfully without fear and stress.

### 2.4.4 Rationalization

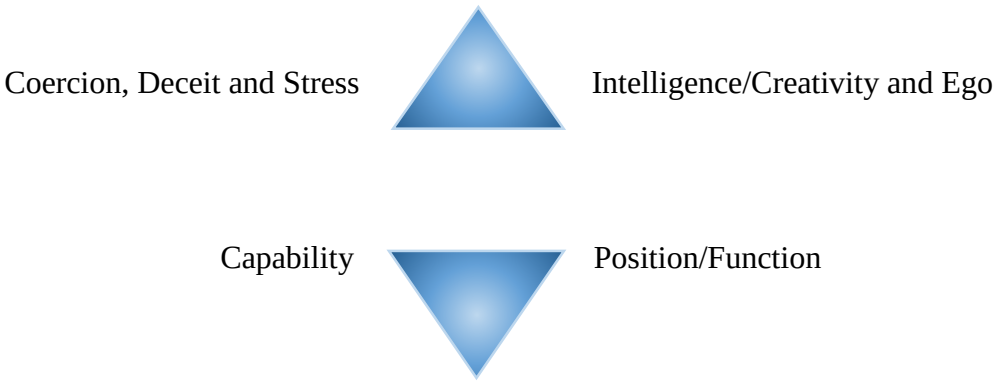
The rationalization is the third element of the FTT. This concept indicates that the perpetrator must formulate some morally acceptable idea to him before engaging in unethical behaviour.

Rationalization refers to the justification and excuses that the immoral conduct different from criminal activity. If an individual cannot justify dishonest actions, it is unlikely that he or she will engage in fraud. Some examples of rationalizations of fraudulent behaviour include "I was only borrowing the money", "I was entitled to the money because my employer is cheating me." Additionally, some fraudster excuses their action as "I had to steal to provide for my family", "some people did it why not me too" (Cressey, 1953). Rationalization is difficult to notice, as it is impossible to read the mind of the fraud perpetrator. Individuals who commit fraud possess a particular mind-set that allows them to justify or excuse their fraudulent actions (Hooper and Pornelli, 2010). Rationalization is a justification of fraudulent behaviour because of an employee's lack of personal integrity, or moral reasoning (Rae and Subramanian, 2008). The propensity to commit fraud depends on ethical values as well as on their personal attitudes of individuals (Kenyon and Tilton, 2006). Howe and Malgwi (2006) concluded that a bridge between incentive/pressure and opportunity is created when an individual can rationalize the fraudulent behaviour.

Although, Cressey's fraud triangle was supported and used by Audit, critics have argued that the model cannot solve the fraud problem alone because two sides of the fraud triangle, pressure and rationalization cannot be easily observed (Dorminey et al 2010 as cited in Kazsem and Higson 2012).

### 2.5 The Fraud Diamond Theory

The FDT was first presented by Wolfe and Hermanson in the CPA Journal in December 2004. It is viewed as an improved and expanded version of the FTT. Figure 2 shows the diagram for FDT. According to Wolfe and Hermanson (2004) cited in Kassem and Higson (2012) many frauds would not have occurred without the right person with right capabilities implementing the details of the fraud. In other words, the potential fraud perpetrator must have the skills and ability to commit fraud. According to Wolfe and Hermanson (2004) cited in Abdullahi and Mansor (2015), opportunity opens the doorway to fraud, and incentive (i.e. pressure) and rationalization lead a person towards the door. However, capability enables the person to recognize the open doorway as an opportunity and to take advantages of it by walking through repeatedly (Wolfe and Hermanson, 2004).




***Source:*** Wolfe and Hermanson (2004)

**Figure 2: The fraud diamond**

### 2.5.1 Capability

This is the situation of having the necessary traits or skills and abilities for the person to commit fraud. It is where the fraudster recognized the particular fraud opportunity and ability to turn it into reality. Position, intelligence, ego, coercion, deceit, and stress, are the supporting elements of capability (Wolfe and Hermanson 2004). Mackevicius and Giriunas (2013), not every person who possessed motivation, opportunities, and realization may commit fraud due to the lack of the capability to carry it out or to conceal it. Albrecht, Williams, and Wernz (1995) opine that this element is of particular importance when it concerns a large-scale or long-term fraud. Furthermore, Albrecht *et al.* (1995) believe that only the person who has an extremely high capacity will be able to understand the existing internal control, to identify its weaknesses and to use them in planning the implementation of fraud. . Similarly, Wilson (2004) discloses that rationalization and capability are all inter-related, and the strength of each element influences the others.

### 2.5.2 Position/Function

The initial factor to enable the fraudster to have the capability to commit fraud is the function or position holding in an organization. Wolfe and Hermanson (2004) state that position and role owned by the employee may perfect his way to breach the organizational trust. They further explain the findings of the analysis of public companies carried out by Beasley *et al.* in 1999 that over 70% of the fraud cases CEOs of that companies were found must of the fraud CEOs were implicated in over 70 percent of publicly company's accounting frauds. They also report that many

organizations do not implement sufficient checks and balances to mitigate their CEO's capabilities to influence and perpetuate frauds.

### 2.5.3 Intelligence/Creativity and Ego

The fraudster is someone who understands and capable of exploiting internal control weaknesses and using the position; function or authorized access to the greatest advantage (Abdullahi and Mansor, 2015b). Intelligent, experienced, creative people with a solid grasp of controls and vulnerabilities, commit many of today's largest frauds. This knowledge is used to influence the individual's concern for authorize access to systems or assets (Wolfe and Hermanson, 2004:40). According to the Association of Certified Fraud Examiners (2003), 51% of the criminals of occupational fraud had at least a bachelor's degree, and 49% of the fraudsters were over 40 years old. Also, managers or executives committed 46% of the frauds based on the Association's recent study.

The fraudster has a strong ego and great confidence that he will not be detected, or believes that he could easily take himself out of trouble if caught. Such confidence or arrogance can affect one's cost-benefit analysis of engaging in fraud. The more confident the person, the lower the estimated cost of fraud will be (Wolfe and Hermanson, 2004:40). In an article entitled, "The Human Face of Fraud" it is noted that one of the common personality types among fraudsters is the ego. An egoistic person refers to someone who is "driven to succeed at all costs, self-absorbed, self-confident and narcissistic" (Duffield and Grabosky, 2001). "The Psychology of Fraud" notes that, in addition to financial strain, an aspect of aspect of motivation that may apply to some or all types of fraud is ego/power. Wolfe and Hermanson (2004) quoting Sutherland (1977) "Theory of White Collar Criminals" state that, "As fraudsters found themselves successful at this crime, they began to gain some secondary delight in the knowledge that they are fooling world, that they are showing their superiority to others". The individuals committing fraud must have a strong ego and great confidence that they will not be detected. The common personality types include someone who is driven to succeed at all costs, self-absorbed, self-confident, and often-narcissistic (Rudewicz, 2011). According to the Diagnostic and Statistical Manual of Mental Disorders (DSMMD), as cited by Rudewicz (2011) narcissistic personality disorder is a pervasive pattern of grandiosity, a need for admiration and a lack of empathy for others. Individuals with this disorder believe they

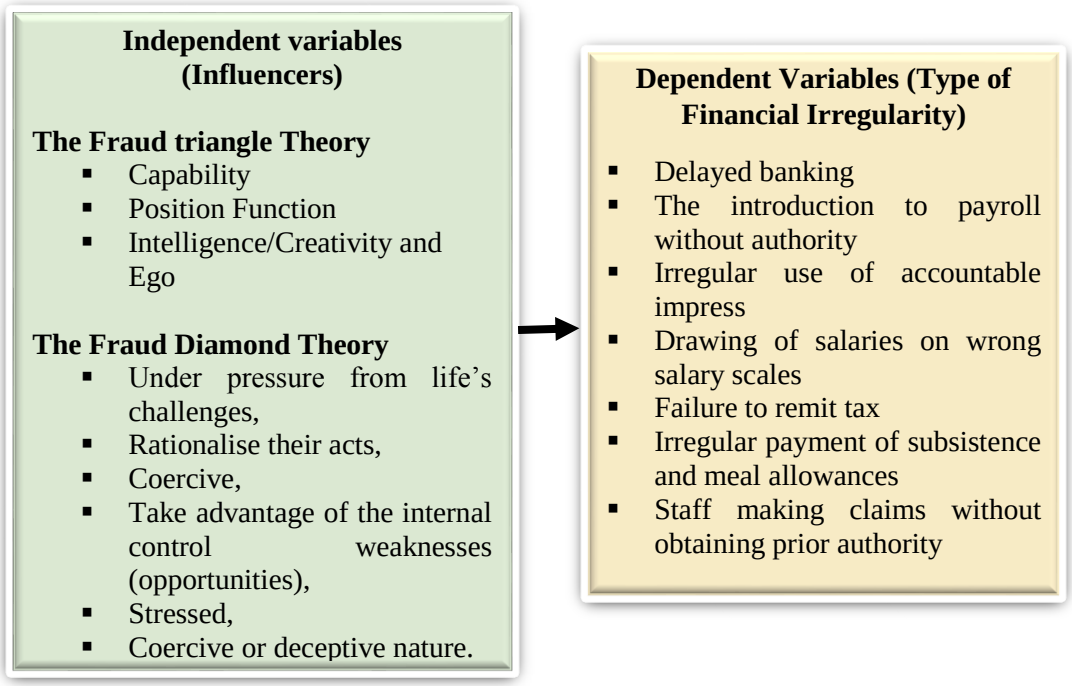
are superior or unique, and they are likely to have inflated views of their own accomplishments and abilities.

### 2.5.4 Coercion, Deceit and Stress

A successful fraudster can coerce others to commit or conceal fraud Rudewicz (2011). A person with a very persuasive personality may be able to convince others to go along with a fraud or to simply look the other way. In addition it is noted that, a common personality type among fraudsters is the "bully," who "makes unusual and significant demands of those who work for him or her, cultivates fear rather than respect and consequently avoids being subject to the same rules and procedures as others" (Wolfe and Hermanson 2004:41). Many financial reporting frauds are committed by subordinates reacting to an edict from above to "make your numbers at all costs, or else."(Wolfe and Hermanson 2004:40).

According to Wolfe and Hermanson (2004) and Rudewicz, (2011) a successful fraudster must also lie effectively and consistently. To avoid detection, the fraudster must look at the auditors, investors, and others right in the eye and convincingly tell them lies. Thus, the fraudster should also possess the skill to keep track of the lies, so that the overall story remains consistent. In the Phai-Mor fraud, the auditors claimed that Phar-Mor had formed a team of fraudsters made-up of executives and former auditors whose function is to ensure they are working continuously to hide evidence of frauds. Among other, the auditors claimed that the fraud team not only lying but also forged documents and 'scrubbed' everything the auditors saw to hide any indications of malfeasance (Cottrell and Glover, 1997 in Wolfe and Hermanson 2004). Another strong characteristic of fraudsters is their ability to handle stress (Wolfe and Hermanson, 2004). Committing frauds require and managing the frauds over a long period of time and can be stressful. There is the risk of detection, with its personal ramifications, as well as the constant need to conceal the fraud on a daily basis. The individual must be able to control their stress, as committing the fraudulent act and keeping it concealed can be extremely stressful (Rudewicz, 2011).The theoretical framework guiding this study is a triangulation of two fraud theories and is set as follows in Figure 3.

**Figure 3: Model of Causation of financial irregularities**




## 2.6 Measures of Addressing financial irregularities

Fraud detection and prevention is at the heart of every fraud management system. Detection of fraud is highly complex, and a large percentage of fraud cases are actually detected externally (such as by the media or external auditors) or by accident. However, approaches such as lifecycle monitoring and verification can be used to reduce the incidence of fraud overall.

According to Weiss (2013) the fraud management lifecycle can be used to encapsulate the process of fraud prevention. This cycle consists of eight stages, including deterrence, prevention, detection, mitigation, analysis, policy, investigation, and prosecution (Weiss, 2013). The deterrence stage involves activities that hinder or discourage fraud through fear of consequences (Weiss, 2013). On the other hand prevention activities hinder, check, keep away or stop the fraudster from committing fraudulent activities. The detection stage uncovers existing or attempted fraud while mitigation includes activities designed to stop the continuation of the fraud e.g. blocking access to the bank account. The analysis stage seeks to determine the root cause of the fraud and the factors that led to the occurrence of the fraudulent activity. The policy stage is characterised by the creation, evaluation and communication of policies aimed at reducing fraud e.g. fixing limits to the authority

to incur expenditure such as any transaction over K10, 000, for example, should be reported. The seventh stage of investigation brings together any evidence and information to curb further fraudulent activity, recover assets or secure restitution and gather evidence necessary for the successful prosecution of the fraudsters. Many known frauds are not prosecuted due to concerns about the damage such prosecution could cause to the image and reputation of the organization. The combination of internal factors (information technology, risk tolerance, fraud management philosophy etc.) and external factors (regulatory requirements, competitors, fraud methods etc.) all play a part in influencing fraud management. The complexity of fraud management increases with a dynamic and ever growing environment (Weiss, 2013).

Specific signs of potential fraud by insider employees that Kranacher, Riley and Wells (2011) identified included long hours, refusal to delegate, different behavioural patterns than expected, copying data, over riding controls, and relatively low levels of documentation. This suggests identifying these factors is crucially important for detecting fraud. The rest of this section discusses auditing as a measure of fraud management. Also discussed is how firms can prevent fraud as well as how fraud can be detected.

### 2.6.1. Auditing

Often a strong system of internal controls is the frontline defence that an organization can employ to prevent and detect fraud. The absence of internal controls does not always preclude the occurrence of fraud but it does leave potentially an open door for it to happen. Poor internal controls manifest themselves through: poor inventory control, lack of proper documentation and support for cash payments, lack of segregation of duties, ineffective or obsolete accounting software, and the absence of independent verification (Dozier and Miceli, 2015).

To prevent these failures, companies should conduct periodic risk assessments, led by either internal or external auditing staff. The assessments should focus on high-risk areas, such as physical controls relating to high-value fixed assets, cash, marketable securities, payroll, and inventory.

Specific questions should be raised during these assessments, including:

a) Is there a policy of locking doors and filing cabinets after business hours?

b) Does the company require the use of identification numbers and passwords, which are kept, secured and rotated on a regular basis? Does the company have a policy of mandatory vacations and job rotations?

c) Does the company have at least one backup copy of all data and software files stored at a secure offsite storage location?

d) Does the company run background checks on new employees?

Internal and external auditing, or oversight by independent accounting professionals of the company's accounts and reports, is a major approach to fraud reduction (Wells, 2014). Evidence regarding auditing indicates that many companies actually desire audits even in the absence of regulation requiring it (Oremade, 2012). For example, following the 2011 relaxation of mandating auditing statements for private corporations in Canada, 73% of the companies that had previously been required to audit continued to do so even though it was no longer required (Weiss, 2013). Of the remaining 27%, many firms continued to use a review engagement rather than a formal audit (Weiss, 2013). This is consistent with agency and information theory, which indicate that auditing is an important element in reducing agency problems and providing full information to owners (and not only to regulators). Auditing tends to police internal controls like, poor supervision and failure to enforcing sanctions. This is a situation where employees make unethical decisions for their best interest to the detriment of organisation's best interest. In this study, one could infer that instrumental climate in the public sector was a key factor enhancing unethical financial acts.

### 2.6.2 Whistle blowers and regulatory requirements

Whistle blowing is traditionally a voluntary practice of individuals who observe something incorrect about a given auditing or accounting situation and bring it to the attention of auditors (Vinten, 2014). However, there has also been a movement in recent years to introduce a regulatory requirement for whistle blowers, or to induce some regulatory compensation or incentive to blow the whistle (Vinten, 2014). Schmidt (2014) found that a variety of measures in the US, UK and

Germany have been identified and intended to enforce the obligation for whistle blowing. These include the US Sarbanes-Oxley (SOX) Act of 2012, the British Public Interest Disclosure Act (PIDA) of 1998, and a variety of special-purpose German regulations and case law (Vinten, 2014). Although the specifics of each law vary, the ultimate intent is to influence the whistle blower to bring the irregularity to attention either through positive influence (monetary incentive) or negative influence (the potential to be prosecuted if it is found out) (Vinten, 2014). Whistle-blowers may face significant social pressures in African societies, however, which may mean that regardless of incentives, there may be a strong incidence of retaliation that will act as a negative incentive to engage in the disclosure activity (Van Dijk & Terlouw, 2011). There are also structural impediments to whistle blowing, such as elements of the African Union Convention on Preventing and Combating Corruption, which promotes a presumption of guilt that whistle-blowers must overcome (Van Dijk & Terlouw, 2011). A famous Kenyan whistle-blower, John Githingo, a journalist, resigned his job and fled the country two years after unearthing evidence of corruption, fraud and graft at high levels of government in Kenya (Van Dijk & Terlouw, 2011). Such cases discourage the practice of whistle-blowing. Even though some laws have been passed to protect the whistle-blower there is still lack of effective legal protection for whistle-62 blowers (Van Dijk & Terlouw, 2011). Thus, whistleblowing, though it is considered to be valuable in a Western context, may not be effective in the Zambian environment.

### 2.6.3 Financial Policy & Internal Control

According to (Mestry, 2004), a view supported by (Clarke, 2008), the administrative body of all public schools should see to it that properly laid down policies and procedures exist to ensure effectual application of the school's finances.

Internal controls are systems, procedures and processes that are implemented to minimize the risk (and any financial consequences) to which the department (school) might otherwise be exposed to as a result of fraud, negligence, error, incapacity or other cause (Guidelines for Accounting Officers, 2000). The purpose of a control system is to minimize opportunities for misapplication and fraud as well as to protect the schools personnel from charges of misapplication and fraud, to ensure that the schools money is spent for the purpose it is intended, that is educational purposes only. Internal controls are designed to "provide reasonable assurances that the organizations

objectives are achieved efficiently, effectively and economically" (Guidelines for Accounting Officers, 2000).

### 2.6.4 World Bank Fraud Detection and Prevention Rules

A major factor in the modernization of the Kenyan banking system has been the imposition of World Bank rules for development lending (McGee, 2012; Muhoro & McGee, 2012). Thus, World Bank rules are likely to be highly relevant for the development of fraud detection systems in the Zambian education. The World Bank has its own series of rules for fraud and corruption prevention and detection in World Bank projects. They include specific anticorruption policies intended to address corruption in the bidding and loan processes in general bank operations and case studies that highlight where and when fraud may be found (Aguilar et al., 2011). The guidelines also include a specific ethical guidance for bank staff intended to address problems of ethical practice by bank employees, for instance.

### 2.6.5 Supervision

Fraud commonly emerges as a response to inadequate supervisory conditions (Elliot & Willingham, 2010). Supervision at the government level is arranged in different ways depending on the jurisdiction. While the European Union has a central and single supervisory structure, the United States has shared supervision structures. This can lead to uncertainty regarding business management, including the understanding of what would occur if the firm failed as well as who bears responsibility for losses from fraud. This can be particularly difficult in the case of international banks, where different levels of supervision and different supervisors may be present in the different countries. Thus, a firm that may be appropriately controlled in the home country may not be subject to appropriate oversight in other countries (Elliot & Willingham, 2010).

### 2.6.6 Human Resources Strategies (Recruitment and Selection)

One major individual response that banks may use in order to reduce fraud is to use recruitment and selection strategies to limit the exposure to those believed to be untrustworthy. However, this has not been very effective in the African context for a variety of reasons.

Human resources management practices, including recruitment and selection, are seen as a means of controlling for risk management (Hofstede, 2010). However, some firms in Africa (as in Hofstede's study in South Africa) often have poor recruitment practices, such as not checking CVs or references prior to the hiring of the employee. Recruitment and selection practices including not checking CVs or references can often be seen to be related to structural issues, such as not being able to rely on support from previous employers and sabotage by employees (Hofstede, 2010). Thus, while firms should rely on recruitment and selection practices to lessen the potential for internal theft or other risks, in practice this may not always occur (Hofstede, 2010). Another issue, observed in Tanzania, is that a bank may outsource or share its back office operations, and in the process lose full control of the recruitment processes used to select the employees working on its accounts (Hofstede, 2010). Furthermore, as in the Tanzanian case, the issue of social relationships and its impact on the recruitment practices may also influence the effectiveness of recruitment for risk management (Hofstede, 2010). While it might be presumed that the risk of recruitment would be higher for positions such as clerks or cashiers, in fact this is not true; a study of Nigerian banks revealed that between 2011 and 2014, the most frequent perpetrators of fraud were supervisors, managers, or assistants in these roles (Hofstede, 2010). As such, increased skills and responsibility cannot be substituted for effective recruitment practices.

### 2.7. Negative returns of financial Irregularities

The majority of papers regarding corporate fraud are about the consequences of this misconduct for the accused firm. The consensus of those studies is one: the initial disclosure of corporate fraud causes negative (and significant) abnormal returns for accused companies (Karpoff and Lott (1993); Karpoff et al. (2008); Armour et al. (2010); Palmrose et al. (2004); Murphy et al. (2009).

Another proven fact is that legal sanctions cannot fully explain the losses of the firm accused of misconduct. It has been shown that other than the legal sanctions the loss in firm's reputation plays a major role in the punishment of the company. Legal sanctions are simply the fines, fees or penalties that the company is obliged to pay. Reputation can be defined as "expectations of partners of the benefits of trading with it in the future" (Armour et al. (2011)). This penalty imposed by the market can be explained by the fact that the firm might be non-reliable in the future. Such revisions of the expectations would affect the terms of trade in the future, its costs and operations. Those

negative changes in input and output price would decrease the firm's earnings and, as a consequence, its market value (Klein and Leffer (1981) and Jarrell and Peltzman (1985).

Already in the 80s Klein and Leffer (1981) showed that reputation is related to firm's reliance on the implicit contracts. The implication of this finding is that companies with large research and development expenditures and greater growth opportunities are more exposed to reputational losses than analogue companies operating on less implicit contracts and reputation.

The first meaningful research on the corporate fraud was conducted by Karpoff and Lott (1993). After analysing 132 cases of corporate fraud from US market they found that companies accused of committing a fraud face huge reputational losses, comparing to legal sanctions. Only 6.5 percent of the losses of companies can be attributed to court-imposed costs, penalties account for 1.4 percent; the rest, meaning over 90 percent, can be assigned to reputational losses. What is more, corporate fraud contributes to an average decrease in common stock values of 1.34 percent. The loss is even higher in case of fraud against government agencies, a 5.05 percent decrease, on average. They also claim that the actual losses for the companies are higher than the costs of crime and regulators should endeavour to reduce the court-imposed penalties.

Following research confirmed results of Karpoff and Lott. Karpoff et al. (2008) discovered that the highest penalties are imposed by the market, not regulators. "For each dollar of inflated value when a firm's books are cooked, firm value decreases by that dollar when its misrepresentation is revealed; in addition firm value declines $0.36 more due to fines and class-action settlements and $2.71 due to lost reputation. For firms that survive the enforcement process as independent entities, the estimate of lost reputation is even greater at $3.83 per dollar of inflated value".

Armour et al. (2011) used a more recent sample from UK that the authors claim are more explanatory comparing to the US examples because British Financial Services Authority does not disclose investigations of misconduct until they have been concluded and found against the company and that the penalty is set. They found that stock prices of companies that are found guilty experience abnormal losses of around nine times the penalties paid. However, reputational losses occurred just in related-party offenses, i.e. cases in which misconduct involved violation of implicit contracts; whilst in cases where victim was third party (not directly related) results were not statistically significant and losses were the consequence of the fees paid. Additionally,

reputational losses are more intensive in the post-crisis period. The confirmation of the argument that reputational losses affect companies in which victim party is directly related, can be found in other papers as well, e.g. Murphy et al. (2009).

On the other hand, some authors show that the losses can be attributed to the different factors. Karpoff et al. (2005) examined cases of violation of environmental laws and they got to the conclusion that the change in the returns is explained almost solely by the fine paid. Karpoff et al. (1999), who analysed defence procurement frauds, found that influential contractors are penalized lighter than similar companies with less connections, experiencing not significant market share decrease.

### 2.7.1 Implications of fraud to cost of capital

Companies committing fraud faced increase in cost of capital due to changes in the terms of trade. Allegations of fraud can result in revision of existing contracts, including bank loans, a major source of financing for the companies. The study of bank loans allows understanding the real financial consequences of misreporting since the implications for the cost of debt can be assessed, both in a direct (interest rates) and indirect way (maturity, covenants etc.).

The literature focuses on the restatements, not corporate fraud in particular. Restatement of the financial statements means that bank has to re-evaluate the company because previous valuation was based on false financial information. It creates uncertainty about the reliability on the firm and deepens asymmetric information.

Graham et al. (2008) stressed that in the United States in the period between January 1997 and June 2002 about 10 percent of all listed companies restated their financial statements at least once, and the market value of restating company in this period increased from $500 million to $2 billion. They found the evidence that after restatement, loan spread increases on average by 42.5 percent, but if the restatement is fraud-based the spread increases by 68.9 percent. Other implication is non-direct consequences of restatement such as: “loans contracted after restatement announcements have significantly shorter maturity, higher likelihood of being secured and more covenant restrictions.” The availability of loans in general decreases, firms have to depend on the short-time financing, what implies that the company might have to give up some investment opportunities.

This last finding is consistent with the Diamond's (1991) theory that debt maturity is a function of risk ratings.

Similar studies however present varied results depending on the data used. Palmrose et al. (2004) found there is no significant change in spreads during the short period surrounding the announcement date (day -2 to day +1). Anderson and Yohn (2002) found increase in bid-ask spreads only for restatements regarding revenue recognition problems and only for longer periods (7-day window). Nevertheless, combining these results with findings on the increasing cost of equity and decreasing market value lead to the conclusion that effect of fraud on cost of capital can be catastrophic for the company.

A, number of studies concentrate on the impact of fraud on the fraud company itself. However, more recent studies (e.g. Goldman et al. (2012); Grande and Lewis (2009); Beatty et al. (2013)) attempt to find the implications of restatement to the whole industries, but this phenomenon is not well explored in case of corporate frauds. Impact of disclosure of fraud of one company on its peers is called spill over effect or contagion effect.

There are two possible outcomes. The rival companies lose as a result of fraud within the industry because it is thought that the information provided by the companies is not reliable anymore, or the rival companies benefit from customers outflow from the accused company and reduced competition. Goldman et al. (2012) called those effects information spill over effect and industry competition effect, respectively. The total effect of fraud on rival firms depends on magnitude of those two effects.

Goldman et al. (2012) analysed the cases from Karpoff et al. (2008) dataset. They showed that on average the value of the firm directly connected to fraud decreases by 19.7 percent and its rivals' value drops by 0.54 percent on average in the three-day window surrounding the event. Among the rival companies, firms operating in less competitive industries experience higher cumulative abnormal returns (CAR) than others; if the rival company belongs to less competitive industry and has high sales, CAR is even higher (though still negative on average). It means that prior clients of the company that committed fraud prefer to choose big company within the industry. What is more, company that experienced stock price declines while accused firm announced high earnings prior to disclosure, benefits from the disclosure of fraud. CAR is also subject to information spill

over effect. As CAR of the accused company is more negative, the lower the CAR of its peers (the exceptions are competitive industries where industry competition effect is stronger). For firms with higher uncertainty, market will take into account more recent (negative) information and CARs will be lower. Goldman et al. (2012) found that for "firms predicted to be most affected by the industry competition effect (rivals in the least competitive industries, rivals of large accused firms with very negative event date CARs, least opaque rivals, and most opaque accused firms), the average three-day CAR is 3.2 percent. For the subsample of rival firms predicted to be most affected by the information spillover effect (rivals in the most competitive industries, large accused firms with very negative CARs, most opaque rivals, and least opaque accused firms), the average three-day CAR is -1.5 percent."

Grande and Lewis (2009) investigated the effect of shareholder-initiated class action lawsuits on the industry. They showed that "there is an average abnormal price decline of -0.34 percent over a 3 day announcement period for related firms (…). Over the 12-day event window [-10, +1] the average industry loss is $825.76 million". Bonini and Boraschi (2010) showed consistent results. They found that competitors decrease their debt issuance during the fraud period. It could mean that investors (including banks) perceive the fraud as the risk for the whole industry and restrict the availability of financing sources. Additional findings concluded that stocks of peers experience negative returns around the announcement date. It can be more severe due to capital structure changes imposed after disclosure of fraud. Though, the results are similar to Grande and Lewis (2009) (CAR equal to -0.21 percent, -0.56 percent and -0.75 percent for the [-1,0], [-5,+5] and [-10,+10] windows, respectively). Gleason et al. (2007) also found the effect of contagion and stressed that the prices declines are higher when Peer Company has high earnings and high accruals and when peer and restating firms use the same external auditor.

Beatty et al. (2013) showed the impact of corporate fraud on peer firms' investments. Focusing on the biggest financial scandals, they documented that capital expenditures of rival companies are higher during fraud period (before the disclosure) than in the preceding 3 years and are associated with earnings overstatement. Additionally, rivals' investments are higher in the industries, in which investor sentiment is higher, cost of capital lower and managers' private benefits higher. Moreover, investments made in fraud periods have low efficiency. There was no significant difference in those effects when comparing high and low growth industries or competitive and

concentrated industries. Similar results were obtained by Li (2012), who found that competitors have unexpectedly high expenses on research and development, fixed assets and customer acquisition.

Yu et al. (2010) took a bit different perspective. They showed the importance of corporate governance in the spill over effect. The better quality of corporate governance of the peer companies, the smaller the uncertainty and, as a result, the weaker is the contagion effect after fraud disclosure. The core for better corporate governance is external governance, ownership structure and external auditors; less important is composition of the board. In case of frauds auditors play the major role.

# CHAPTER THREE: RESEARCH METHODOLOGY

## 3.0 Research setting

When writing up the results of a study, it is important that the researcher provide specific information about and a detailed description of her subject(s), location, methods, role in the study, etc. This is commonly referred to as "thick description" of methods and findings; it is important because it allows readers to make an informed judgment about whether they can transfer the findings to their own situation. According to Li (2004), thick description "enables judgments about how well the research context fits other contexts, thick descriptive data, i.e. a rich and extensive set of details concerning methodology and context, should be included in the research report" (p. 305). Thick description involves the researcher elucidating all the research processes, from data collection, context of the study to production of the final report.

Thick description helps others researchers to replicate the study with similar conditions in other settings. Shenton (2004) argued that "without this insight [thick description], it is difficult for the reader of the final account to determine the extent to which the overall findings "ring true" (p. 69). Therefore, to ensure transferability of qualitative inquiry the researcher must "collect thick" descriptive data which allows" comparison of this context to other possible contexts to which transfer might be contemplated" and produce a thick description of the context in order to make a judgment about it fitting in with other possible contexts(Guba, 1981: 86). It is the qualitative inquirer's role to provide thick descriptions of the study to ensure its transferability.

Chibombo is a town in the Central Province of Zambia, and is headquarters of Chibombo District. The town lies near the Lukanga Swamp. The administrative centre is about 95km from Lusaka and approximately 50km from Kabwe. Chibombo is centrally located at the heart of Zambia and shares boundaries with Lusaka on the South, Kabwe on the North, Chongwe and Chisamba on the East and Mumbwa and Shibuyunji on the West, Kapiri-Mposhi and Ngabwe on North West and Mkushi Districts on the North Easte part. It covers a total surface area of 8, 342km2 and a population of 199,626 with a growth rate of 2.6 %. The population projection for 2018 was 244,863 (see Table 6).

**Table 6: Chibombo District Population profile**

| Name | Status | Population Census 2000-10-20 | Population Census 2010-10-16 | Population Projection 2018-07-01 |
|---|---|---|---|---|
| Chibombo | District | 154,235 | 199,536 | 244,863 |
| Area: 8,184 km² – Density: 29.92/km² [2018] – Change: +2.69%/year [2010 → 2018] Chibombo District: district of Zambia – Elevation: 1,158 m | | | | |

The district falls within one of the country's most active agricultural region with significant tracks of arable land for crop and livestock agriculture. There is potential for mixed farming at both commercial and small scale level especially for crops such as maize, tomatoes, cabbages, soya beans, wheat, and tobacco among others.

*District Comparative Advantages*

The following are the district's comparative advantages:

Proximity to the major local markets and linkage to regional trade routes into the greater SADC region. It is a transitory District, positioning it for hosting facilities such as lodges and guest houses Fertile soils, favourable climatic condition and plenty of land for crop and livestock agriculture Unexploited opportunities for agro-processing for the many fruits and vegetables as well as animal skins processing due to availability of livestock and game ranching in the District. The District has unexploited tourism potential in the Lukanga swamps for bird watching.

**Table 7: Research Design Matrix**

| Research Question | Research Objective | Population and sampling | Data Collection instruments | Data analysis |
|---|---|---|---|---|
| What is the demographic profile of staff that are involved in financial irregularities in the Public sector in Chibombo District? (Realist ontology and induction) | To describe the demographic profile of staff that are involved in financial irregularities in the Public sector in Chibombo District | Publish servants in the district by cluster sampling | Survey questionnaire | Univariate and bivariate analysis |
| Why is there financial irregularities in Chibombo District? (Realist ontology and deduction as well as nominalist ontology and abduction) | To test the fraud theory if it holds in explaining financial irregularities | Public servants in the government departments in Chibombo | Survey questionnaire | Bivariate and Multivariate analysis analysis |
| How can financial irregularities be mitigated in Chibombo District? (Pragmatism) | To develop a framework that could be used to enhance adherence to FAMS | - | - | This shall be a research outcome |

### 3.1 Research Design and Methodology

This is a cross sectional quantitative study. A cross sectional design of such nature has been chosen because very little is known in such an area and the researcher wants to show what is happening on the ground in Chibombo at the moment. In addition, the researcher will be in a position to describe events and then organize and tabulate the data to what the actual reality on the ground are like according to Gliner et al., (2000) and Creswell (2002). A cross sectional study is justified because the researcher is limited with time and does not wish to focus on change over a long time and this fits what Creswell (2005), Burns and Grove (1997; 1999) have advised when researchers intend to undertake cross sectional studies.

#### 3.1.1 Piloting

A pilot test was used as the final step in the questionnaire development (Churchill, 1979). In this study, the questionnaires were pilot-tested by the public sector employees Nyimba which was seen to be at the same level of governance like Chibombo. To ensure the readability of the scenarios and wording used in the questionnaires, two focus groups were set-up for the pilot test. Twenty public sector employees attended the two focus group discussions which were done on the same day. The scenarios and question items were checked by these employees. The questions were further discussed in the focus group meeting. The questions included what they thought of the research purpose and design of the questionnaires was like if it reflected the language used in audit reports. The participants agreed that the scenarios represented possible financial irregularities and causes in the public sector. The participants' comments on the questionnaire design were then used to make a few minor corrections concerning questionnaire wording. After the pilot test, we made the final version of the questionnaires.

*Construct checks*

Prior to the data analysis, this study conducted a construct check to assess the reliability and the discriminant validity of the scale measurement. This study examined the factor loadings, composite reliability, Cronbach's α, average variance extracted (AVE) and $R^2$ by using statistical procedurals. The factor loadings were checked, with values greater than 0.7 being retained and items with loading values lower than 0.7 being dropped. As will be seen, the values were higher

than the recommended value of 0.5, showing appropriate convergent validity. The values of variance inflation factors were lower than 4, indicating no serious problems with the multicollinearity issue.

Even though this study had a rigorous process of validating the data collection tool during the piloting process, the researcher went further to conduct a reliability analysis based on exploratory factor analysis. This was done to assess further the consistency and stability in the results of the questions that were asked domain by domain (human social capital resources, physical capital resources, and organisational capital resources domains). The method of one test administration was used. The researcher desired to estimate reliability by focussing on how consistently the participants performed or scored across subsets of items on the single test/scale form. The reliability estimates generated the one test method that was used employed factor analysis to assess internal consistency.

Following the piloting experience factor analyses were conducted to examine the underlying reliability patterns of the measurement scales. The researcher employed Cronbach's **α** to measure the internal consistency of the variable. Following the analysis, inter item consistency was found to fall within the range of 0.70 – 0.92. The alpha reliability for the three main domains were as follows: Financial irregularities were 0.878; and influencers was 0.888. This confirms that the domains offered very high reliability (See Table 8). Based on this, common method bias should not be a serious threat in this study (Podsakoff et al., 2003).

**Table 8: Factor Analysis Results of the Constructs of Antecedents**

| ***Factors*** | ***Factor loading range for*** | ***Variance*** | ***Reliab*** |
|---|---|---|---|

Looking at the factor loading ranges for the variables in each domain shows that the scores of the participants are consistent across subsets of items on the single test/scale form. We can conclude that that these items or subsets of items came from the same content domain and were constructed according to the same specifications we have some confidence that this performance would generalize to other possible items in the content domain.

### 3.2 Recruitment and the Sampling Procedure

In order to have an adequate and representative sample; it is just research prudence that each sample unit in the population has a chance of being selected. Since there is a sampling list of public servants in all the departmental units, systematic sampling was be used. In order to determine who was to be selected, the first element is chosen at random and subsequent elements are chosen using a fixed interval say 'k' (e.g., every tenth element) until the researcher reached the desired sample size. The researcher ensured that the chosen sampling interval did not hide a pattern as any pattern would have threatened randomness. In this sampling, every $k^{th}$ name on the list was chosen in each department. The term $k^{th}$ stands for a number between 0 and the size of the sample that the researcher wants to select. Using Yamane's (1967) sampling formula described below was used to determine the sample size in each unit:

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

Where: ***n*** is the desired sample size

***N*** is the known population size and

***e*** is the precision set at .05

The level of precision ***e*** or reasonable certainty, sometimes called sampling error, is the range in which the true value of the population is estimated to be. This range is often expressed in percentage points, (e.g., ± 5 percent). In other words, this means that, if a 95% confidence level is selected, 95 out of 100 samples will have the true population value within the range of precision specified earlier. There is always a chance that the sample you obtain does not represent the true population value. It should be stated that Yamane's formula factors 10% to the sample size to compensate for persons that the researcher is unable to contact. Further the formula embodies 30% to compensate for non-response.

### 3.3 Logic Guiding the Inquiry

In this particular study, the researcher will use the inductive research strategy as described by Blaikie (2000). With reference to inductive research strategy, which is associated with the positivist ontology of discovery that measures phenomena based on regular patterns seen in the literature (Blaikie, 2000: 102-103). Since the researcher has discounted the use of theory, the researcher relied on the observed patterns in the literature (Longino, 1990, 26). Frequently-mentioned sexual behavior descriptors were identified. The identified descriptors were then included in the questionnaire for study.

In essence, Longino and Blaikie observe that using the inductive strategy in this way presupposes that explanations about the workings of the world should only be based on facts gained from pure, dispassionate and neutral observations, rather than on preconceived notions, or theories or values and not even what is presumed to be actual. It can be seen that the inductive strategy can be used for exploratory and descriptive objectives that are quantitative in nature and as such it qualifies to answer the "what" questions (Blaikie, 2010) described in the research questions section.

### 3.4 Data Collection Tool

The data collection tool that is appropriate in this study is a survey questionnaire. A novel self-administered standard structured questionnaire (see appendix IV) was used to collect data for this study. The survey questionnaire was developed following an inductive literature search of peered reviewed journals covering the subject under investigation. The survey questionnaire was developed following a critical assessment of variables that were used in the most cited studies. In order for the questionnaire to meet content and face validity the researcher used the qualitative guidelines offered by (Alderson and Banerjee, 2002). These authors have supported the qualitative process of developing a questionnaire. These authors caution that researchers typically agree, in theory, that both qualitative and quantitative methodologies are essential to the accurate development and validation of a new questionnaire. They further note that quantitative methods of research have probably been over dominant and most notably the use of reliability analysis. In this particular study, the researcher has used deductive realism to tease out key variables from the two models to test the theoretical assumptions. The survey questionnaire was self-administered.

### 3.5 Data Analysis

Quantitative data from the survey questionnaire was analysed using the Statistical Package for the Social Sciences (SPSS), Version 22.0. The descriptive statistics for the demographic characteristics were run and included frequency distributions for categorical demographic variables, the means and standard deviations for a participants' , analysis of variance and chi-square tests of association. The significance level were set at $\mathbf{p} \leq 0.05$.

# CHAPTER FOUR: FINDINGS

## 4.0 Introduction

The results of this study are from a survey that was conducted from May to June 2019.

## 4.1 Demographics

Just over half of the health workers n = 86 (60.1%) had worked for over eight years implying that the sample was composed of pubic workers with some considerable service. The mean service years were 12. Of the 129 public servants who participated in the study, n = 78 (60.5%) were males and n =51 (39.5%) were females and their mean age was 38.2 ± 4.5 years. The oldest was 61 and the youngest was 21 years. As expected, slightly large group of public servants who participated in this study were from the education sector n = 44 (34.1%). School leavers dominated the sample n = 51 (395%) and those with masters were in the minority n = 5 (3.9%). The least number were from the judiciary n = 12 (9.3%). Table 9 shows some socio-demographic characteristics of the public servants who were studied.

**Table 9: Demographic profile**

| ***Social demographic Characteristic*** | ***f*** | ***%*** |
|---|---|---|
| ***Sex*** | | |
| Male | 78 | 60.5 |
| Female | 51 | 39.5 |
| ***Level of education*** | | |
| Certificate | 29 | 22.5 |
| Diploma | 29 | 22.5 |
| Bachelor | 15 | 11.6 |
| Masters | 5 | 3.9 |
| School leaver | 51 | 39.5 |
| ***Department*** | | |
| Education | 44 | 34.1 |
| Health | 32 | 24.8 |
| Agriculture | 23 | 17.8 |
| Judiciary | 12 | 9.3 |
| Social Welfare | 18 | 14.0 |

### 4.2 Demographic profile of staff involved in financial irregularities

Three variables were used to determine the demographic profile of perceived perpetrators of financial irregularities. The variables were sex, age and professional group. Below are the perceived distributions of financial irregularities.

Regarding sex, public servants perceived that financial irregularities were committed more by men n = 86 (67% than females n = 43 (33%) (Figure 4 below).

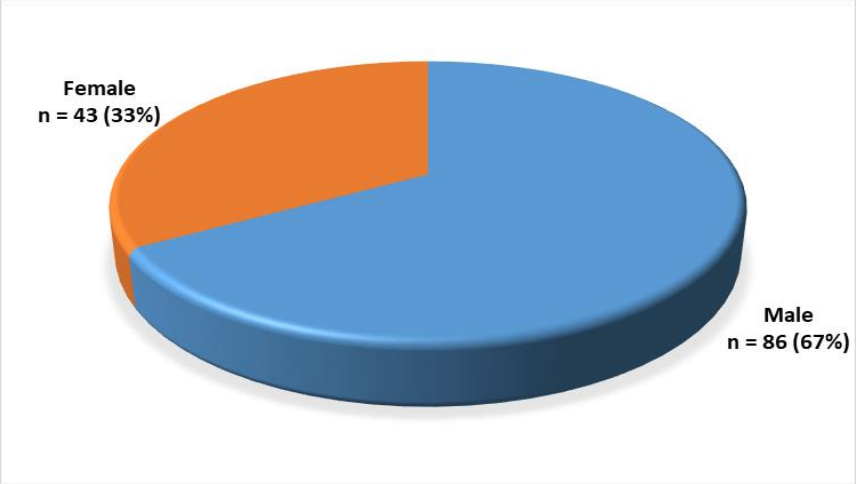



**Figure 4: Sex distribution of perceived perpetrators**

In all departments except for social welfare, the proportion of men to women shows that men were perceived to be involved more in financial irregularities than women (Table : 10). There was in turn a statistically significant association observed between gender being involved in financial irregularities and department of respondent (Pearson Chi-Square obs = 9.216; df = 4 and Asymp. Sig. (2-sided) = 0.056).

**Table 10: Financial Irregularities by Gender**

| | | Sex involved in financial irregularities | | Total |
|---|---|---|---|---|
| | | Male | Female | |
| Department | Education | 32 | 12 | 44 |
| | Health | 23 | 9 | 32 |
| | Agriculture | 14 | 9 | 23 |
| | Judiciary | 10 | 2 | 12 |
| | Social Welfare | 7 | 11 | 18 |
| Total | | 86 | 43 | 129 |

Considering age, public servants perceived that financial irregularities were committed more by staff who were between 31 to 40 years n = 68 (53%) than the other age groups (Figure 5 below).

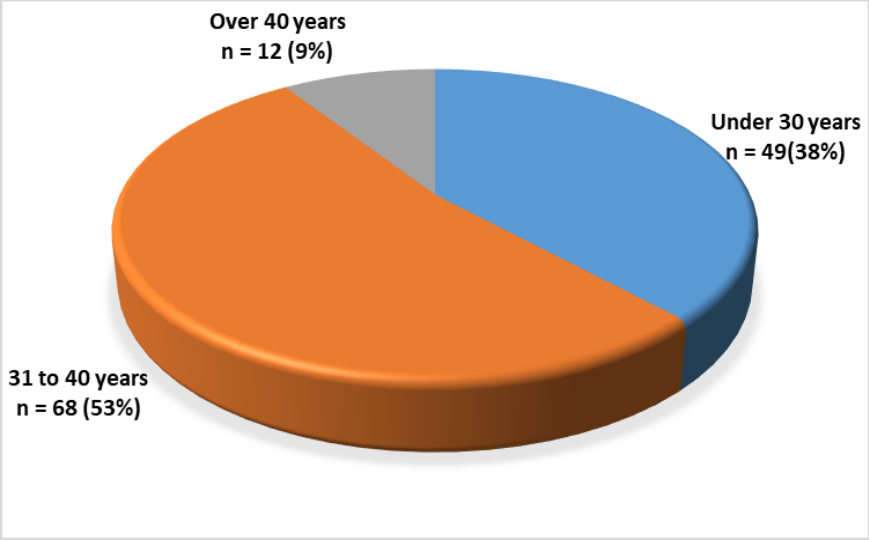



**Figure 5: Age distribution of perceived perpetrators**

In all departments, the public servants perceived the 31 to 40 years age group to be involved more in financial irregularities than the other two groups (Table : 11). However, there was no association observed between age being involved in financial irregularities and department of respondent (Pearson Chi-Square obs = 3.994; df = 8 and Asymp. Sig. (2-sided) = 0.858).

**Table 11: Financial Irregularities by Age**

| | | Age group involved in financial irregularities | | | Total |
|---|---|---|---|---|---|
| | | Under 30 years | 31 to 40 years | Over 40 years | |
| Department where one was working | Education | 16 | 23 | 5 | 44 |
| | Health | 12 | 17 | 3 | 32 |
| | Agriculture | 10 | 11 | 2 | 23 |
| | Judiciary | 5 | 5 | 2 | 12 |
| | Social Welfare | 6 | 12 | 0 | 18 |
| Total | | 49 | 68 | 12 | 129 |

Regarding position of perceived perpetrators, public servants perceived that financial irregularities were committed more by accounting staff n = 77 (60%) than bosses alone or bosses with accounting staff (Figure 6 below).

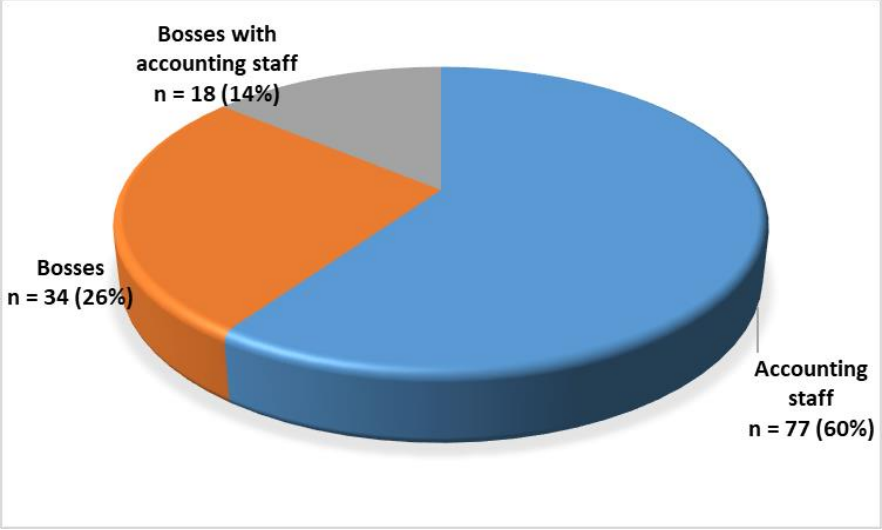



**Figure 6: Distribution by position of perceived perpetrators**

In all departments, the public servants perceived the 31 to 40 years age group to be involved more in financial irregularities than the other two groups (Table : 12). However, there was no association observed between the age of respondents being involved in financial irregularities and the department where respondent was working (Pearson Chi-Square obs = 3.994; df = 8 and Asymp. Sig. (2-sided) = 0.858).

**Table 12: Financial Irregularities by Department**

| | | Who in your view is associated more with financial irregularities in your department? | | | Total |
|---|---|---|---|---|---|
| | | Accounting staff | Bosses | Bosses with accounting staff | |
| Department where one was working | Education | 24 | 10 | 10 | 44 |
| | Health | 20 | 10 | 2 | 32 |
| | Agriculture | 13 | 7 | 3 | 23 |
| | Judiciary | 7 | 5 | 0 | 12 |
| | Social Welfare | 13 | 2 | 3 | 18 |
| Total | | 77 | 34 | 18 | 129 |

In all departments, the public servants perceived accounting staff to be involved more in financial irregularities than the other two positions (Table: 12). There was however no association observed between the position of person being involved in financial irregularities and government department of respondent (Pearson Chi-Square obs = 9.635; df = 8 and Asymp. Sig. (2-sided) = 0.292).

### 4.3 Patterns of financial irregularities

Out of the six types of financial irregularities that were surveyed, public servants have experienced predominantly three types of finacial irregularities and these relate to the introduction to payroll without authority to be common, irregular use of accountable impress to be common and irregular payment of subsistence and meal allowances to be common. This is noted in that the cumulative frequencies for strongly agree and agree are more than those of disagree and strongly disagree (see Table 13).

**Table 13: Profile of Financial irregularities**

| **Type of financial irregularity** | **Not Sure** | ***S.Agree*** | ***Agree*** | ***SW.Agree*** | ***Disagree*** | ***S.Disagree*** |
|---|---|---|---|---|---|---|
| **I see delayed banking to be common** | **0** | **9** | **0** | **0** | **73** | **47** |
| **I see the introduction to payroll without authority to be common*** | **0** | **76** | **41** | **0** | **12** | **0** |
| **I see Irregular use of accountable impress to be common*** | **0** | **74** | **0** | **1** | **32** | **22** |
| **I see drawing of salaries on wrong** | **0** | **34** | **12** | **0** | **0** | **83** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **salary scales to be common** | | | | | | |
| **I see failure to remit tax to be common** | **116** | **8** | **5** | **0** | **0** | **0** |
| **I see Irregular payment of subsistence and meal allowances to be common*** | **0** | **66** | **39** | **3** | **9** | **12** |
| **I see staff making claims without obtaining prior authority** | **0** | **23** | **8** | **5** | **53** | **40** |

These observations were further analysed to determine the perceived score of severity of financial irregularities in Chibombo whether they could be graded as (a) Negligible and acceptable (b) Moderate and not acceptable and (c) high and not acceptable at all. This entailed summing up all agreements per respondent. Three categorical levels were developed based on the range of scores as follows (a) Low and acceptable, (b) Moderate and somewhat not acceptable and (c) high and not acceptable. In order to make this determination since the initial preferences were ordinal, the Likert items for each respondent were summed up. The ideal score was set at 28-35. The three categories scores were as follows: 7 to 14 were graded as high financial irregularities occurrence and not this would not be acceptable, 15 to 27 were graded as moderate occurrence of financial irregularities and this would not be acceptable; 28-35 was graded as low financial occurrence of irregularities and this would be somewhat acceptable. The scores in this study was 16.2 (± SD) and it fell within moderate occurrence of financial irregularities and this would not be acceptable (See Table 14).

**Table 14: Statistics for perceived level of occurrence of financial irregularities**

| | |
|---|---|
| Mean | 16.27 |
| Median | 16.00 |
| Mode | 17.00 |
| Std. Deviation | 3.88 |
| Range | 17.00 |
| Minimum | 9.00 |
| Maximum | 26.00 |

Categorising the scores, just over half n = 71 (55%) of the respondents considered the occurrence of financial irregularities as being as being moderate and not acceptable as compared to n = 58 (54%) who considered the occurrence of financial irregularities as high and not acceptable at all (See Table 15).

**Table 15: Perceived Level of Occurrence Financial Irregularities**

| | Frequency | Percent |
|---|---|---|
| Moderate and not acceptable | 71 | 55.0 |
| High and not acceptable at all | 58 | 45.0 |
| Total | 129 | 100.0 |

The researcher computed the mean scores for the perceived financial irregularities of both men and women to see whether there were any differences. The mean scores for males were 16.5 and for females were 16.8 which could be graded as moderate occurrence of financial irregularities and not acceptable (see Table 16 and Figure 1).

**Table 16: Perceived score of financial irregularities**

| Gender | | | Statistic |
|---|---|---|---|
| Male | Mean | | 16.5443 |
| | 95% Confidence Interval for Mean | Lower Bound | 15.6535 |
| | | Upper Bound | 17.4351 |
| | 5% Trimmed Mean | | 16.4515 |
| | Median | | 16.0000 |
| | Std. Deviation | | 3.97685 |
| | Minimum | | 9.00 |
| | Maximum | | 26.00 |
| Female | Mean | | 15.8400 |
| | 95% Confidence Interval for Mean | Lower Bound | 14.7823 |
| | | Upper Bound | 16.8977 |
| | 5% Trimmed Mean | | 15.8556 |
| | Median | | 16.0000 |
| | Std. Deviation | | 3.72175 |
| | Minimum | | 9.00 |
| | Maximum | | 23.00 |

Below, the researcher uses a boxplot, also called a box and whisker plot, is a way to show the spread of a data set the box whisker plot (Figure 1) appears to show that the median values are in the same plain Distribution of perceived score of financial irregularities scores by gender.

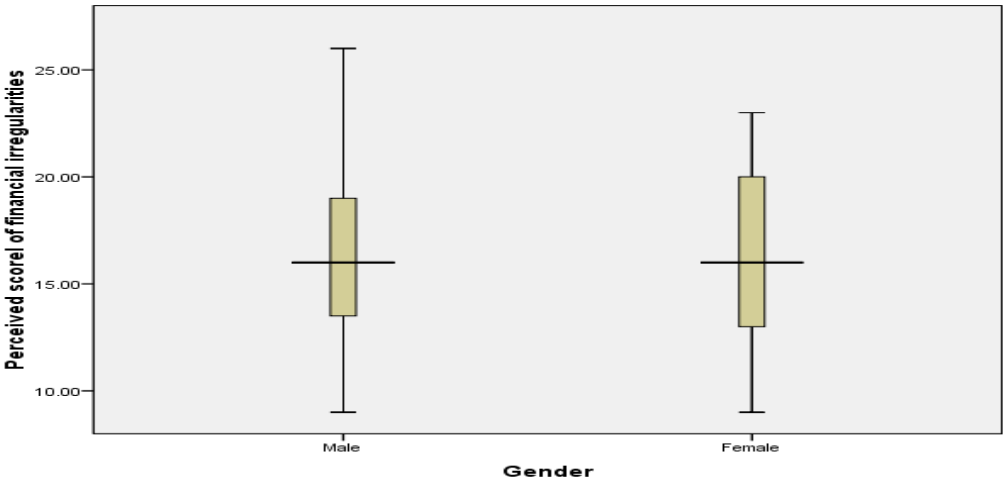



**Figure 7: Perceived score of financial irregularities by Gender**

However, one sample t tests showed that men and women did not statistically differ significantly in perceived financial irregularities as $p < 0.01$ (See tables 18 and 19).

**Table 17: One-Sample Statistics**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Gender | 129 | 1.39 | .489 | .043 |
| Perceived score of financial irregularities | 129 | 16.2713 | 3.88054 | .34166 |

**Table 18: One-Sample Test**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Gender | 32.22 | 128 | .00 | 1.38 | 1.30 | 1.47 |
| Perceived score of financial irregularities | 47.62 | 128 | .00 | 16.272 | 15.59 | 16.94 |

The researcher computed the mean scores for the perceived financial irregularities of the five departments to see whether there were any differences. The mean scores ranged between 15 and 18 which could be graded as moderate occurrence of financial irregularities and not acceptable (see Table 19).

**Table 19: Perceived score of financial irregularities by department**

| Department | | | Statistic |
|---|---|---|---|
| Education | Mean | | 16.0909 |
| | 95% Confidence Interval for Mean | Lower Bound | 14.8541 |

| | | | |
|---|---|---|---|
| | | Upper Bound | 17.3277 |
| | 5% Trimmed Mean | | 16.0556 |
| | Median | | 17.0000 |
| | Std. Deviation | | 4.06813 |
| Health | Mean | | 15.1250 |
| | 95% Confidence Interval for Mean | Lower Bound | 13.8769 |
| | | Upper Bound | 16.3731 |
| | 5% Trimmed Mean | | 14.9861 |
| | Median | | 14.0000 |
| | Variance | | 11.984 |
| | Std. Deviation | | 3.46177 |
| | Kurtosis | | -.027 |
| Agriculture | Mean | | 16.6522 |
| | 95% Confidence Interval for Mean | Lower Bound | 15.2442 |
| | | Upper Bound | 18.0601 |
| | 5% Trimmed Mean | | 16.7174 |
| | Median | | 17.0000 |
| | Variance | | 10.601 |
| | Std. Deviation | | 3.25589 |
| Judiciary | Mean | | 15.7500 |
| | 95% Confidence Interval for Mean | Lower Bound | 12.9855 |
| | | Upper Bound | 18.5145 |
| | 5% Trimmed Mean | | 15.6667 |

| | | | |
|---|---|---|---|
| | Median | | 15.0000 |
| | Variance | | 18.932 |
| | Std. Deviation | | 4.35107 |
| Social welfare | Mean | | 18.6111 |
| | 95% Confidence Interval for Mean | Lower Bound | 16.6879 |
| | | Upper Bound | 20.5344 |
| | 5% Trimmed Mean | | 18.4568 |
| | Median | | 17.0000 |
| | Variance | | 14.958 |
| | Std. Deviation | | 3.86749 |
| | Skewness | | .717 |
| | Kurtosis | | -.477 |

However, one sample t tests showed that men and women did not statistically differ significantly in perceived financial irregularities as $p < 0.01$.

Below, the researcher uses a boxplot, also called a box and whisker plot, to show the spread of a data set. The box whisker plot (Figure 1) appears to show that the median values are not in the same plain of distribution. Education, agriculture, and social welfare appear to have similar median scores. The pattern of spread does not lie in the same plane (Figure 8).

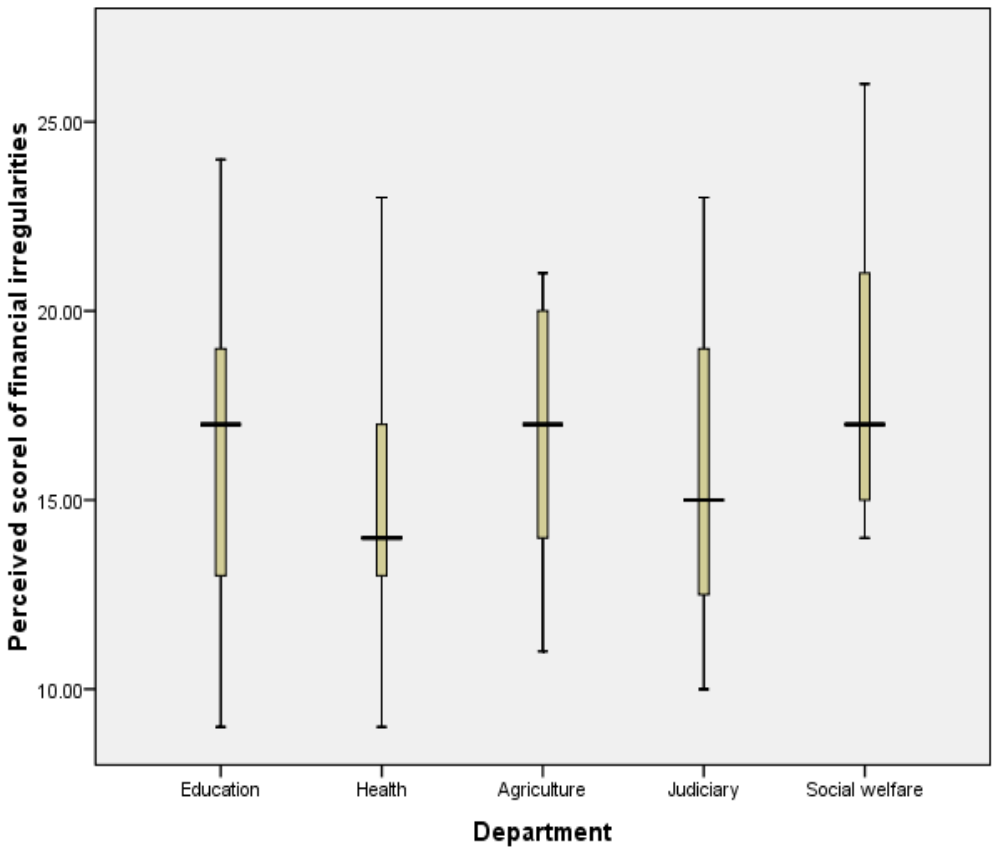



**Figure 8: Perceived score of financial irregularities by Department**

**Table 20: One-Sample Test**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| Department | 19.77 | 128 | .00 | 2.44 | 2.20 | 2.69 |
| Perceived score of financial irregularities | 47.62 | 128 | .00 | 16.272 | 15.59 | 16.94 |

However, one sample t tests showed that the sample group means did not statistically differ significantly in perceived financial irregularities as $p < 0.01$.

### 4.4 Reasons for financial irregularities in the Public institutions in Chibombo District

This section is about the third research question which is ‘‘Why are there financial irregularities in the Public institutions in Chibombo District?’’ In order to answer this section, the key variables of the Fraud Triangle Theory and the Fraud Diamond Theory were analysed using linear regression.

### 4.4.1 Fraud Triangle Theory

In order to determine the extent to which the Fraud Triangle Theory influences financial irregularities, linear regression was used since it is appropriate when the researcher desires to predict the value of a variable based on the value of another variable.

The variables the research desired to employ as predictors are:

a) People who are involved in financial irregularities have capabilities.
b) People who are involved in financial irregularities are influenced by the position they hold; and
c) People who are involved in financial irregularities are creative/intelligent at what they do.

The variables the researcher desired to see the effect or as outcome variables influenced by this theory are:

a) I see delayed banking to be common
b) I see the introduction to payroll without authority to be common
c) I see Irregular use of unaccountable impress to be common
d) I see drawing of salaries on wrong salary scales to be common
e) I see failure to remit tax to be common
f) I see Irregular payment of subsistence and meal allowances to be common
g) I see staff making claims without obtaining prior authority

Below are the regression analysis outcomes

#### 4.4.1.1 Delayed Banking and the Fraud Triangle Theory

The model summary below shows the R and R2 values. The R value represents the simple correlation and is 0.105 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see delayed banking to be common’’, can be explained by the three predictor variables. In this case, 10.5% can be explained, which is very low. The first table of interest is the Model Summary table, as shown below:

**Table 21: Model Summary for Fraud Triangle Theory and delayed banking**

| Model Predictor | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .105[a] | .011 | -.013 | .778 |

a) People who are involved in financial irregularities have capabilities
b) People who are involved in financial irregularities are influenced by the position they hold and
c) People who are involved in financial irregularities are creative/intelligent at what they do

The next table is the ANOVA table, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES NOT predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is 0.708 which is more than 0.05, and this indicates that, overall, the regression model is statistically not significant and fails predict the outcome variable (i.e., it is not a good fit for the data).

**Table 22: ANOVA**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **1 Regression** | **.842** | **3** | **.281** | **.464** | **.708[a]** |
| Residual | 75.638 | 125 | .605 | | |
| Total | 76.481 | 128 | | | |

Predictors: (Constant)

a) People who are involved in financial irregularities have capabilities
b) People who are involved in financial irregularities are influenced by the position they hold and
c) Dependent Variable: I see delayed banking to be common

People who are involved in financial irregularities are creative/intelligent at what they do

The Coefficients table provides us with the necessary information to predict delayed banking from the theory, as well as determine whether the three predictor variables contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 24.

**Table 23: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 4.339 | .194 | | 22.31 | .00 |
| People who are involved in financial irregularities have capabilities | -.027 | .038 | -.06 | -.70 | .48 |
| People who are involved in financial irregularities are influenced by the position they hold | .021 | .046 | .04 | .45 | .65 |
| People who are involved in financial irregularities are creative/intelligent at what they do | -.026 | .032 | -.07 | -.81 | .41 |

a. Dependent Variable: I see delayed banking to be common

Importantly, note that two of the ***b*** coefficients are negative numbers and the low scores for the predictors are not associated delayed banking. The column "Sig." holds that ***b*** coefficients are statistically not significant since the ***p***-values are larger than 0.05. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does not do a great job in predicting financial irregularities and particularly delayed banking. On top of that, our ***b*** coeffients are all not statistically significant and do not make perfect intuitive sense.

#### 4.4.1.2 Introduction to payroll without authority and the Fraud Triangle Theory

**Table 24: Model Summary for Fraud Triangle Theory and Introduction To Payroll Without Authority**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .445[a] | .198 | .179 | .813 |

Predictors: (Constant),

a. People who are involved in financial irregularities are creative/intelligent at what they do,
b. People who are involved in financial irregularities have capabilities,
c. People who are involved in financial irregularities are influenced by the position they hold

The model summary below shows the R and R2 values. The R value represents the simple correlation and is 0.445 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ''I see Introduction to payroll without authority to be common'', can be explained by the predictor variables. In this case, 19.8% can be explained, which is very low.

The next table (Table 24) is the ANOVA table fir the dependent variable ‘‘introduction to payroll without authority’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates statistical significance of the regression model that was run. Here, ***p*** is 0.001 which is less than 0.05, and this indicates that, overall, the regression model is statistically significant and predict the outcome variable (i.e., it is a good fit for the data).

**Table 25: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | **Regression** | **20.378** | **3** | **6.793** | **10.272** | **.000[a]** |
| | Residual | 82.661 | 125 | .661 | | |
| | Total | 103.039 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities are creative/intelligent at what they do,
b. People who are involved in financial irregularities have capabilities,
a. People who are involved in financial irregularities are influenced by the position they hold

b. Dependent Variable: I see the introduction to payroll without authority to be common

The Coefficients table provides us with the necessary information to predict price from income, as well as determine whether income contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the

"Unstandardized Coefficients" column, as shown below in Table 26.

**Table 26: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1(Constant) | 2.436 | .203 | - | 11.985 | .000 |
| People who are involved in financial irregularities have capabilities | .002 | .040 | .005 | .061 | .952 |
| People who are involved in financial irregularities are influenced by the position they hold | -.137 | .048 | -.246 | -2.854 | .005 |
| People who are involved in financial irregularities are creative/intelligent at what they do | -.114 | .034 | -.295 | -3.392 | .001 |

a. Dependent Variable: I see the introduction to payroll without authority to be common

Importantly, note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with introduction to payroll without authority. The column "Sig." holds that ***b*** coefficients are statistically not significant for people with capabilities since the ***p***-values are larger than 0.05. However, significant association is evident relating to the position of the employee and those who are creative. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does to some extent do a great job in predicting financial irregularities and particularly introduction to payroll without authority. On top of that, two of the ***b*** coeffients are statistically significant and do make perfect intuitive sense.

#### 4.4.1.3 Irregular use of unaccountable impress and the Fraud Triangle Theory

**Table 27: Model Summary for Fraud Triangle Theory and Irregular use of unaccountable impress**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .314[a] | .099 | .077 | 1.646 |

Predictors: (Constant),

a. People who are involved in financial irregularities are creative/intelligent at what they do,
b. People who are involved in financial irregularities have capabilities,
a. People who are involved in financial irregularities are influenced by the position they hold

The model summary below shows the R and R2 values. The R value represents the simple correlation and is 0.314 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable,

‘‘I see Irregular use of unaccountable impress to be common’’, can be explained by the predictor variables. In this case, 9.9% can be explained, which is very low.

The next table (Table 27) is the ANOVA table fir the dependent variable ‘‘Irregular use of unaccountable impress’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is 0.005 which is less than 0.05, and this indicates that, overall, the regression model is statistically significant and predict the outcome variable (i.e., it is a good fit for the data).

**Table 28: ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | Sum of Squares | df | Mean Square | F | Sig. |
| | **Residual** | **37.104** | **3** | **12.368** | **4.564** | **.005** |
| | Total | 338.710 | 125 | 2.710 | | |

Predictors: (Constant),

a. People who are involved in financial irregularities are creative/intelligent at what they do,
b. People who are involved in financial irregularities have capabilities,
c. People who are involved in financial irregularities are influenced by the position they hold

b. Dependent Variable: I see Irregular use of unaccountable impress to be common

The Coefficients table provides us with the necessary information to predict price from income, as well as determine whether income contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 29.

**Table 29: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1(Constant) | 2.625 | .411 | | 6.380 | .000 |
| People who are involved in financial irregularities have capabilities | .089 | .081 | .095 | 1.091 | .277 |
| People who are involved in financial irregularities are influenced by the position they hold | .111 | .097 | .104 | 1.138 | .257 |
| People who are involved in financial irregularities are creative/intelligent at what they do | -.250 | .068 | -.338 | -3.668 | .000 |

a. Dependent Variable: I see Irregular use of unaccountable impress to be common

Importantly, note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with irregular use of unaccountable impress. The column "Sig." holds that ***b*** coefficients are statistically not significant for people with capabilities since the ***p***-values are larger than 0.05. However, significant association is evident relating only to those who are creative. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does little to some extent do a great job in predicting financial irregularities and particularly irregular use of unaccountable impress. Only one of the ***b*** coeffients is statistically significant and does make perfect intuitive sense.

#### 4.4.1.4 Drawing of salaries on wrong salary scales and the Fraud Triangle Theory

**Table 30: Model Summary for Fraud Triangle Theory and Drawing of salaries on wrong salary scales**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .147a | .021 | -.002 | 1.345 |

Predictors: (Constant),

a. People who are involved in financial irregularities are creative/intelligent at what they do,
b. People who are involved in financial irregularities have capabilities,
c. People who are involved in financial irregularities are influenced by the position they hold

The model summary below shows the R and R2 values. The R value represents the simple correlation and is 0.314 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable,

‘‘I see Drawing of salaries on wrong salary scales to be common’’, can be explained by the predictor variables. In this case, 9.9% can be explained, which is very low.

The next table (Table 27) is the ANOVA table fir the dependent variable ‘‘Drawing of salaries on wrong salary scales’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the absence of statistical significance of the regression model that was run. Here, ***p*** is 0.436 which is more than 0.05, and this indicates that, overall, the regression model is not statistically significant and predict the outcome variable (i.e., it is a good fit for the data).

**Table 31: ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | **Regression** | **4.959** | **3** | **1.653** | **.914** | **.436** |
| | Residual | 225.972 | 125 | 1.808 | | |
| | Total | 230.930 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities are creative/intelligent at what they do,
b. People who are involved in financial irregularities have capabilities,
c. People who are involved in financial irregularities are influenced by the position they hold

b. Dependent Variable: I see Drawing of salaries on wrong salary scales to be common

The Coefficients table provides us with the necessary information to predict price from income, as well as determine whether income contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 32.

**Table 32: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1(Constant) | 3.502 | .336 | | 10.422 | .000 |
| People who are involved in financial irregularities have capabilities | -.076 | .066 | -.105 | -1.152 | .252 |
| People who are involved in financial irregularities are influenced by the position they hold | -.082 | .080 | -.098 | -1.026 | .307 |
| People who are involved in financial irregularities are creative/intelligent at what they do | .017 | .056 | .029 | .297 | .767 |

a. Dependent Variable: I see Drawing of salaries on wrong salary scales to be common

Importantly, note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with drawing of salaries on wrong salary scales. The column "Sig." holds that ***b*** coefficients are statistically not significant for people with capabilities since the ***p***-values are larger than 0.05. However, significant association is evident relating only to those who are creative. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does little to

some extent do a great job in predicting financial irregularities and particularly drawing of salaries on wrong salary scales. Only one of the ***b*** coeffients is statistically significant and does make perfect intuitive sense.

#### 4.4.1.5 Failure to remit tax and Fraud Triangle Theory

The table below provides the R and $R^2$ values. The R value represents the simple correlation and is 0.204 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see Failure to remit tax to be common’’, can be explained by the predictor variables. In this case, 4.2% can be explained, which is very low.

**Table 33: Model Summary for Fraud Triangle Theory and Drawing of salaries on wrong salary scales**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .204 | .042 | .019 | .442 |

Predictors: (Constant),

a. People who are involved in financial irregularities have capabilities
b. People who are involved in financial irregularities are influenced by the position they hold
c. People who are involved in financial irregularities are creative/intelligent at what they do

The next table (Table 35) is the ANOVA table for the dependent variable ‘‘Drawing of salaries on wrong salary scales’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model does not predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical

significance of the regression model that was run. Here, ***p*** is 0.148 which is more than 0.05, and this indicates that, overall, the regression model is not statistically significant and as such cannot predict the outcome variable (i.e., it is a good fit for the data).

**Table 34: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | **Regression** | **1.064** | **3** | **.355** | **1.815** | **.148** |
| | Residual | 24.425 | 125 | .195 | | |
| | Total | 25.488 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities have capabilities
b. People who are involved in financial irregularities are influenced by the position they hold
c. People who are involved in financial irregularities are creative/intelligent at what they do

b. Dependent Variable: I see Failure to remit tax to be common

The Coefficients table provides us with the necessary information to predict drawing of salaries on wrong salary scales, as well as determine whether the Fraud Triangle Theory contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 35.

**Table 35: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .236 | .110 | | 2.138 | .034 |
| People who are involved in financial irregularities have capabilities | .028 | .022 | .115 | 1.278 | .204 |
| People who are involved in financial irregularities are influenced by the position they hold | -.042 | .026 | -.150 | -1.595 | .113 |
| People who are involved in financial irregularities are creative/intelligent at what they do | -.016 | .018 | -.083 | -.874 | .384 |

a. Dependent Variable: I see failure to remit tax to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with failure to remit tax. The model cannot account for the three variables as influencers of failure to remit tax since the ***p***-values are >0.05 and the overall conclusion of this linear regression is that the ***b*** coeffients are not statistically significant and the model does not make perfect intuitive sense.

#### 4.4.1.6 Irregular payment of subsistence and meal allowances

The table below provides the R and $R^2$ values. The R value represents the simple correlation and is 0.207 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see I see Irregular payment of subsistence and meal allowances to be common’’, can be explained by the predictor variables. In this case, 4.3% can be explained, which is very low.

**Table 36: Model Summary for Fraud Triangle Theory and Irregular Payment of Subsistence and Meal Allowances**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .207 | .043 | .020 | 1.275 |

Predictors: (Constant),

a. People who are involved in financial irregularities have capabilities
b. People who are involved in financial irregularities are influenced by the position they hold
c. People who are involved in financial irregularities are creative/intelligent at what they do.

The next table (Table 38) is the ANOVA table fir the dependent variable ‘‘I see Irregular payment of subsistence and meal allowances’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model does predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is > 0.140 which is more than 0.05, and this indicates that, overall, the regression model is not statistically significant and cannot predict the outcome variable (i.e., it is a good fit for the data).

**Table 37: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| **1** | **Regression** | **9.057** | **3** | **3.019** | **1.856** | **.140** |
| | Residual | 203.315 | 125 | 1.627 | | |
| | Total | 212.372 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities have capabilities
b. People who are involved in financial irregularities are influenced by the position they hold
c. People who are involved in financial irregularities are creative/intelligent at what they do

b. Dependent Variable: I see the I see Irregular payment of subsistence and meal allowances to be common

The Coefficients table provides us with the necessary information to predict Irregular payment of subsistence and meal allowances from the fraud theory, as well as whether the predictors from the Diamond Fraud Theory contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 38.

**Table 38: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 2.461 | .319 | | 7.720 | .000 |
| People who are involved in financial irregularities have capabilities | .018 | .063 | .026 | .286 | .775 |
| People who are involved in financial irregularities are influenced by the position they hold | -.151 | .075 | -.188 | -1.994 | .048 |
| People who are involved in financial irregularities are creative/intelligent at what they do | -.027 | .053 | -.049 | -.516 | .607 |

a. Dependent Variable: I see the I see Irregular payment of subsistence and meal allowances to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors. The column "Sig." holds that ***b*** coefficients are statistically not significant except for the variable 'people who are involved in financial irregularities are influenced by the position they hold' since the ***p***-value is 0.48 and this is less than 0.05. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does not to some extent do a great job in predicting financial irregularities. On top of that, only one of the ***b*** coeffients is statistically significant and this model however does not make perfect intuitive sense.

#### 4.4.1.7 Making claims without obtaining prior authority

Table 40 provides the R and $R^2$ values. The R value represents the simple correlation and is 0.304 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable ‘‘I see making claims without obtaining prior authority common’’, can be explained by the three predictor variables. In this case, 9.2% can be explained, which is very low.

**Table 39: Model Summary for Fraud Triangle Theory and Staff Making Claims without Obtaining Prior Authority**

| Model Predictor | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .304 | .092 | .070 | 1.386 |

Predictors: (Constant),

a. People who are involved in financial irregularities have capabilities
b. People who are involved in financial irregularities are influenced by the position they hold
c. People who are involved in financial irregularities are creative/intelligent at what they do

Below is the ANOVA table, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model predicts the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is 0.007 which is less than 0.05, and this indicates that, overall, the regression model is statistically significant and predicts the outcome variable (i.e., it is not a good fit for the data).

**Table 40: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| **1** | **1 Regression** | **24.400** | **3** | **8.133** | **4.232** | **.007** |
| | Residual | 240.220 | 125 | 1.922 | | |
| | Total | 264.620 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities have capabilities
b. People who are involved in financial irregularities are influenced by the position they hold
c. People who are involved in financial irregularities are creative/intelligent at what they do

b. Dependent Variable: I see staff making claims without obtaining prior authority to be common

The Coefficients table provides us with the necessary information to predict staff making claims without obtaining prior authority from the theory, as well as determine whether the three predictor variables from the Fraud Triangle Theory contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 41.

**Table 41: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 3.341 | .346 | | 9.644 | .000 |
| People who are involved in financial irregularities have capabilities | -.036 | .068 | -.046 | -.526 | .600 |
| People who are involved in financial irregularities are influenced by the position they hold | -.092 | .082 | -.103 | -1.123 | .264 |
| People who are involved in financial irregularities are creative/intelligent at what they do | .204 | .057 | .329 | 3.562 | .001 |

a. Dependent Variable: I see staff making claims without obtaining prior authority to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and the low scores for the predictors are not associated staff making claims without obtaining prior authority. The column "Sig." holds that ***b*** coefficients are statistically not significant since the ***p***-values are larger than 0.05 except for one (People who are involved in financial irregularities are creative/intelligent at what they do) whose ***p*** value is 0.01 which is less than 0.05. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does not do a great job in predicting financial irregularities and particularly staff making claims without obtaining prior authority. On top of that, two of our ***b*** coeffients are not statistically significant and do not make perfect intuitive sense.

Figure 8 generally summarises the levels of influence of the fraud triangle theory on financial irregularities. One would say the Fraud triangle theory has an influence in the causation of financial irregularities presented in the Auditor General's Report since the frequency of low influence was low. One would note that there were notable variations in the levels of influence of the theory with just a quarter perceiving it as having high influence, n = 33 (26%), n = 45 (35%) perceiving it having low influence and n = 51 (39%) perceiving it as having moderate influence.

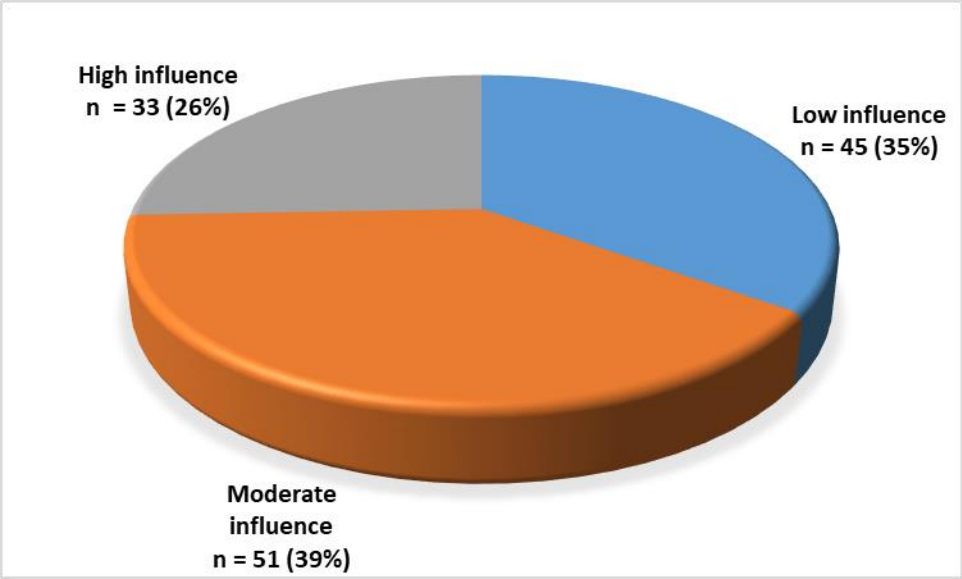



**Figure 9: Influence of the Fraud Triangle Theory on Financial Irregularities**

### 4.4.2 Fraud Diamond Theory

In order to determine the extent to which the Fraud Diamond Theory influences financial irregularities, linear regression was used since it is appropriate when the researcher desires to predict the value of a variable based on the value of another variable.

The independent variables the research used to apply in this theory called predictors are:

a) People who are involved in financial irregularities are coercive
b) People who are involved in financial irregularities rationalise their acts

c) People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities)
d) People who are involved in financial irregularities are influenced by the coercive or deceptive nature
e) People who are involved in financial irregularities are stressed
f) People who are involved in financial irregularities are under pressure from life's challenges

The variables the researcher desires assess as the outcomes influenced by this theory being the dependent variables (or sometimes, the outcome variable) are:

h) I see delayed banking to be common
i) I see the introduction to payroll without authority to be common
j) I see irregular use of unaccountable impress to be common
k) I see drawing of salaries on wrong salary scales to be common
l) I see failure to remit tax to be common
m) I see irregular payment of subsistence and meal allowances to be common
n) I see staff making claims without obtaining prior authority

#### 4.4.2.1 Delayed Banking

The first table of interest is the Model Summary and it provides the R and R2 values. The R value represents the simple correlation and is 0.488 (the "R" Column), which indicates a low degree of correlation. The $R^2$ value (the "R Square" column) indicates how much of the total variation in the dependent variable, ''I see delayed banking to be common'', can be explained by the three predictor variables. In this case, 23.8% can be explained, which is low.

**Table 42: Model Summary for Fraud Diamond Theory and delayed banking**

| Model Predictor | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .488a | .238 | .201 | .691 |

Predictors: (Constant),

a) People who are involved in financial irregularities are under pressure from life's challenges, People who are involved in financial irregularities rationalise there acts,
b) People who are involved in financial irregularities are coercive,
c) People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
d) People who are involved in financial irregularities are stressed, People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

Below is the ANOVA table, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model does predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run . Here, ***p*** is 0.001 which is < 0.05, and this indicates that, overall, the regression model is statistically significant and predict the outcome variable (i.e., it is not a good fit for the data).

**Table 43: ANOVA**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **1 Regression** | **18.218** | **6** | **3.036** | **6.358** | **.001** |
| Residual | 58.262 | 122 | .478 | | |
| Total | 76.481 | 128 | | | |

Predictors: (Constant),

a) People who are involved in financial irregularities are under pressure from life's challenges,
b) People who are involved in financial irregularities rationalise there acts,
c) People who are involved in financial irregularities are coercive,
d) People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities), People who are involved in financial irregularities are stressed, People who are involved in financial irregularities are influenced by the coercive or deceptive nature

The Coefficients table provides us with the necessary information to predict delayed banking from the theory, as well as determine whether the three predictor variables contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 44.

**Table 44: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 4.704 | .231 | | 20.375 | .000 |
| People who are involved in financial irregularities are coercive | .098 | .033 | .246 | 2.933 | .004 |
| People who are involved in financial irregularities rationalise their acts | -.116 | .039 | -.268 | -2.979 | .003 |

| | | | | | |
|---|---|---|---|---|---|
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | -.099 | .037 | -.230 | -2.715 | .008 |
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | .074 | .058 | .117 | 1.290 | .200 |
| People who are involved in financial irregularities are stressed | -.034 | .110 | -.027 | -.312 | .756 |
| People who are involved in financial irregularities are under pressure from life's challenges | -.149 | .079 | -.158 | -1.884 | .062 |

a. Dependent Variable: I see delayed banking to be common

Importantly, one would note that two predictors are responsible for this financial irregularity and these are (a) people who are involved in financial irregularities rationalise their acts and (b) people who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities). This is because ***p***-values are < 0.05. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does a great job in predicting financial irregularities and particularly delayed banking and this makes perfect intuitive sense.

#### 4.4.2.2 Introduction to payroll without authority

The table below provides the R and R2 values. The R value represents the simple correlation and is 0.445 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see Introduction to payroll without authority to be common’’, can be explained by the predictor variables. In this case, 19.8% can be explained, which is very low.

**Table 45: Model Summary for Fraud Diamond Theory and Introduction to Payroll without Authority**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .536a | .287 | .252 | .776 |

Predictors: (Constant),

a. People who are involved in financial irregularities are under pressure from life's challenges,
b. People who are involved in financial irregularities rationalise there acts,
c. People who are involved in financial irregularities are coercive,
d. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
e. People who are involved in financial irregularities are stressed,
f. People who are involved in financial irregularities are influenced by the coercive or deceptive nature

The next table (Table 47) is the ANOVA table for the dependent variable ‘‘introduction to payroll without authority’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is 0.001 which is less than 0.05, and this indicates that, overall, the regression model is statistically significant and predict the outcome variable (i.e., it is a good fit for the data).

**Table 46: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| **1** | **Regression** | **29.582** | **6** | **4.930** | **8.189** | **.000a** |
| | Residual | 73.456 | 122 | .602 | | |
| | Total | 103.039 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities are under pressure from life's challenges, People who are involved in financial irregularities rationalise there acts, People who are involved in financial irregularities are coercive, People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities), People who are involved in financial irregularities are stressed, People who are involved in financial irregularities are influenced by the coercive or deceptive nature

b. Dependent Variable: I see the introduction to payroll without authority to be common

The Coefficients table provides us with the necessary information to predict introduction to payroll without authority from the fraud theory, as well as determine whether the predictor in the theory contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 47.

**Table 47: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .693 | .259 | | 2.674 | .009 |
| People who are involved in financial irregularities are coercive | .216 | .037 | .467 | 5.767 | .000 |
| People who are involved in financial irregularities rationalise there acts | .066 | .044 | .132 | 1.513 | .133 |
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | .030 | .041 | .061 | .740 | .461 |
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | .049 | .065 | .066 | .757 | .450 |
| People who are involved in financial irregularities are stressed | -.081 | .123 | -.055 | -.656 | .513 |
| People who are involved in financial irregularities are under pressure from life's challenges | .005 | .089 | .005 | .061 | .951 |

a. Dependent Variable: I see the introduction to payroll without authority to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with introduction to payroll without authority. The column "Sig." holds that ***b*** coefficients are statistically not significant for people with capabilities since the ***p***-values are

larger than 0.05. However, significant association is evident relating to the position of the employee and those who are creative. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does to some extent do a great job in predicting financial irregularities and particularly introduction to payroll without authority. On top of that, two of the ***b*** coeffients are statistically significant and do make perfect intuitive sense.

#### 4.4.2.3 Irregular use of unaccountable impress

The table below provides the R and R2 values. The R value represents the simple correlation and is 0.314 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see Irregular use of unaccountable impress to be common’’, can be explained by the predictor variables. In this case, 9.9% can be explained, which is very low.

**Table 48: Model Summary for Fraud Diamond Theory and Irregular use of unaccountable impress**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .471a | .222 | .184 | 1.548 |

Predictors: (Constant),

a) People who are involved in financial irregularities are under pressure from life's challenges,
b) People who are involved in financial irregularities rationalise there acts,
c) People who are involved in financial irregularities are coercive,
d) People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
e) People who are involved in financial irregularities are stressed,
f) People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

The next table (Table 50) is the ANOVA table fir the dependent variable ''Irregular use of unaccountable impress'', which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is 0.001 which is less than 0.05, and this indicates that, overall, the regression model is statistically significant and predict the outcome variable (i.e., it is a good fit for the data).

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .471a | .222 | .184 | 1.548 |

**Table 49: ANOVA**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **Regression** | **83.488** | **6** | **13.915** | **5.807** | **.000** |
| Residual | 292.326 | 122 | 2.396 | | |
| Total | 375.814 | 128 | | | |

Predictors: (Constant),

a) People who are involved in financial irregularities are under pressure from life's challenges,
b) People who are involved in financial irregularities rationalise there acts,
c) People who are involved in financial irregularities are coercive,
d) People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
e) People who are involved in financial irregularities are stressed,
f) People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

The Coefficients table provides us with the necessary information to predict Irregular use of unaccountable impress from the fraud theory, as well as determine whether the predictors from the theory contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 50.

**Table 50: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 3.764 | .517 | | 7.279 | .000 |
| People who are involved in financial irregularities are coercive | .136 | .075 | .154 | 1.819 | .071 |
| People who are involved in financial irregularities rationalise there acts | .168 | .087 | .175 | 1.930 | .056 |
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | -.294 | .082 | -.307 | -3.591 | .000 |
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | -.299 | .129 | -.212 | -2.314 | .022 |
| People who are involved in financial irregularities are stressed | .319 | .246 | .114 | 1.296 | .197 |
| People who are involved in financial irregularities are under pressure from life's challenges | -.461 | .177 | -.221 | -2.607 | .010 |

a. Dependent Variable: I see Irregular use of unaccountable impress to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with irregular use of unaccountable impress. The column "Sig." holds that ***b*** coefficients are statistically not significant for people with capabilities and people being influenced by the position they hold since the ***p***-values are larger than 0.05. However, significant association is evident relating only to those who are creative/intelligent at what they do. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this

linear regression is that the low adjusted R squared tells us that our model does little to some extent in predicting financial irregularities and particularly relating to irregular use of unaccountable impress since only one of the ***b*** coeffients is statistically significant and this does make perfect intuitive sense.

#### 4.4.2.4 Drawing of salaries on wrong salary scales

The table below provides the R and $R^2$ values. The R value represents the simple correlation and is 0.147 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see Drawing of salaries on wrong salary scales to be common’’, can be explained by the predictor variables. In this case, 2.1% can be explained, which is very low.

**Table 51: Model Summary for Fraud Diamond Theory and Drawing of salaries on wrong salary scales**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .414a | .171 | .130 | 1.253 |

Predictors: (Constant),

a. People who are involved in financial irregularities are under pressure from life’s challenges,
b. People who are involved in financial irregularities rationalise there acts,
c. People who are involved in financial irregularities are coercive,
d. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
e. People who are involved in financial irregularities are stressed,

People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

The next table (Table 30) is the ANOVA table for the dependent variable ‘‘Drawing of salaries on wrong salary scales’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is 0.436 which is more than 0.05, and this indicates that, overall, the regression model is not statistically significant and as such cannot predict the outcome variable (i.e., it is a good fit for the data).

**Table 52: ANOVA**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **Regression** | **39.486** | **6** | **6.581** | **4.194** | **.001a** |
| Residual | 191.444 | 122 | 1.569 | | |
| Total | 230.930 | 128 | | | |

Predictors: (Constant),

a. People who are involved in financial irregularities are under pressure from life’s challenges,
b. People who are involved in financial irregularities rationalise there acts,
c. People who are involved in financial irregularities are coercive,
d. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
e. People who are involved in financial irregularities are stressed, People who are involved in financial irregularities are influenced by the coercive or deceptive nature.
f. b. Dependent Variable: I see Drawing of salaries on wrong salary scales to be common

The Coefficients table provides us with the necessary information to predict drawing of salaries on wrong salary scales, as well as determine whether the fraud triangle contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 53.

**Table 53: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 2.776 | .419 | | 6.634 | .000 |
| People who are involved in financial irregularities are coercive | .063 | .061 | .091 | 1.036 | .302 |
| People who are involved in financial irregularities rationalise there acts | .078 | .070 | .104 | 1.108 | .270 |
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | -.220 | .066 | -.293 | -3.321 | .001 |

| | | | | | |
|---|---|---|---|---|---|
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | .035 | .105 | .032 | .334 | .739 |
| People who are involved in financial irregularities are stressed | .682 | .199 | .311 | 3.426 | .001 |
| People who are involved in financial irregularities are under pressure from life's challenges | -.182 | .143 | -.112 | -1.273 | .206 |

a. Dependent Variable: I see Drawing of salaries on wrong salary scales to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with drawing of salaries on wrong salary scales. The column "Sig." holds that ***b*** coefficients are statistically not significant in all cases since the ***p***-values are larger than 0.05. The conclusion of this linear regression is that the ***b*** coeffients are not statistically significant and the model do not make perfect intuitive sense.

#### 4.4.2.5 Failure to remit tax

The table below provides the R and $R^2$ values. The R value represents the simple correlation and is 0.147 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ‘‘I see Failure to remit tax to be common’’, can be explained by the predictor variables. In this case, 2.1% can be explained, which is very low.

**Table 54: Model Summary for Fraud Diamond Theory and Failure to remit tax**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .486a | .236 | .199 | .399 |

Predictors: (Constant),

f. People who are involved in financial irregularities are under pressure from life’s challenges,
g. People who are involved in financial irregularities rationalise there acts,
h. People who are involved in financial irregularities are coercive,
i. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
j. People who are involved in financial irregularities are stressed,
k. People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

The next table (Table 30) is the ANOVA table for the dependent variable ‘‘Failure to remit tax ’’, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run . Here, ***p*** is 0.436 which is more than 0.05, and this indicates that, overall, the

regression model is not statistically significant and as such cannot predict the outcome variable (i.e., it is a good fit for the data).

**Table 55: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | **Regression** | **6.019** | **6** | **1.003** | **6.286** | **.001a** |
| | Residual | 19.470 | 122 | .160 | | |
| | Total | 25.488 | 128 | | | |

Predictors: (Constant),

g. People who are involved in financial irregularities are under pressure from life's challenges,
h. People who are involved in financial irregularities rationalise there acts,
i. People who are involved in financial irregularities are coercive,
j. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
k. People who are involved in financial irregularities are stressed,
l. People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

b. Dependent Variable: I see Failure to remit tax to be common

The Coefficients table provides us with the necessary information to predict failure to remit tax , as well as determine whether the fraud triangle contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 56.

**Table 56: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -.095 | .133 | | -.710 | .479 |
| People who are involved in financial irregularities are coercive | .107 | .019 | .466 | 5.554 | .000 |
| People who are involved in financial irregularities rationalise there acts | -.015 | .022 | -.062 | -.689 | .492 |
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | -.043 | .021 | -.173 | -2.042 | .043 |

| | | | | | |
|---|---|---|---|---|---|
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | -.037 | .033 | -.101 | -1.108 | .270 |
| People who are involved in financial irregularities are stressed | .017 | .064 | .023 | .261 | .795 |
| People who are involved in financial irregularities are under pressure from life's challenges | .099 | .046 | .182 | 2.168 | .032 |

a. Dependent Variable: I see Failure to remit tax to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with failure to remit tax . The column "Sig." holds that ***b*** coefficients are statistically not significant in all cases since the ***p***-values are larger than 0.05. The conclusion of this linear regression is that the ***b*** coeffients are not statistically significant and the model do not make perfect intuitive sense.

#### 4.4.2.6 Irregular payment of subsistence and meal allowances

**Table 57: Model Summary for Fraud Diamond Theory and I see Irregular payment of subsistence and meal allowances**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .397a | .158 | .117 | 1.211 |

Predictors: (Constant),

d. People who are involved in financial irregularities are under pressure from life's challenges,
e. People who are involved in financial irregularities rationalise there acts,
f. People who are involved in financial irregularities are coercive,
g. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
h. People who are involved in financial irregularities are stressed,
i. People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

The table below provides the R and $R^2$ values. The R value represents the simple correlation and is 0.207 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, ''I see I see Irregular payment of subsistence and meal allowances to be common'', can be explained by the predictor variables. In this case, 19.8% can be explained, which is very low.

The next table (Table 33) is the ANOVA table fir the dependent variable ''I see Irregular payment of subsistence and meal allowances'', which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the

regression model DOES predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the presence of statistical significance of the regression model that was run. Here, ***p*** is > 0.140 which is more than 0.05, and this indicates that, overall, the regression model is not statistically significant and cannot predict the outcome variable (i.e., it is a good fit for the data).

**Table 58: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| **1** | **Regression** | **33.543** | **6** | **5.591** | **3.814** | **.002a** |
| | Residual | 178.829 | 122 | 1.466 | | |
| | Total | 212.372 | 128 | | | |

Predictors: (Constant),

d. People who are involved in financial irregularities are under pressure from life's challenges,
e. People who are involved in financial irregularities rationalise there acts,
f. People who are involved in financial irregularities are coercive,
g. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
h. People who are involved in financial irregularities are stressed,
i. People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

b. Dependent Variable: I see the I see Irregular payment of subsistence and meal allowances to be common

The Coefficients table provides us with the necessary information to predict Irregular payment of subsistence and meal allowances from the fraud theory, as well as whether the predictors from the Diamond Fraud Theory contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 59.

**Table 59: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 2.646 | .405 | | 6.542 | .000 |
| People who are involved in financial irregularities are coercive | -.059 | .059 | -.089 | -1.010 | .314 |
| People who are involved in financial irregularities rationalise there acts | .004 | .068 | .006 | .063 | .950 |
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | -.284 | .064 | -.395 | -4.433 | .000 |
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | .231 | .101 | .218 | 2.286 | .024 |
| People who are involved in financial irregularities are stressed | -.006 | .193 | -.003 | -.030 | .976 |

| | | | | | |
|---|---|---|---|---|---|
| People who are involved in financial irregularities are under pressure from life's challenges | .062 | .138 | .040 | .448 | .655 |
| a. Dependent Variable: I see the I see Irregular payment of subsistence and meal allowances to be common | | | | | |

Importantly, one would note that two of the ***b*** coefficients are negative numbers and we see low scores for the predictors with I see Irregular payment of subsistence and meal allowances. The column "Sig." holds that ***b*** coefficients are statistically not significant except for the variable people who are involved in financial irregularities are influenced by the position they hold since the ***p***-value is 0.48 and this is less than 0.05. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does to some extent do a great job in predicting financial irregularities. On top of that, only one of the ***b*** coeffients is statistically significant and this model however does not make perfect intuitive sense.

#### 4.4.2.7 Making claims without obtaining prior authority

Table 61 provides the R and R2 values. The R value represents the simple correlation and is 0.304 (the "R" Column), which indicates a low degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable ''I see Making claims without obtaining prior authority common'', can be explained by the three predictor variables. In this case, 9.2% can be explained, which is very low.

**Table 60: Model Summary for Fraud Diamond Theory and staff making claims without obtaining prior authority**

| Model Predictor | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .406a | .165 | .124 | 1.346 |

Predictors: (Constant),

d. People who are involved in financial irregularities are under pressure from life's challenges,
e. People who are involved in financial irregularities rationalise there acts,
f. People who are involved in financial irregularities are coercive,
g. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
h. People who are involved in financial irregularities are stressed,
a) People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

Below is the ANOVA table, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below. The ANOVA table indicates that the regression model does predict the dependent variable significantly. We know this because when we look at "Regression" row in red and go to the "Sig." column. This indicates the absence of statistical significance of the regression model that was run. Here, ***p*** is 0.001 which is less than 0.05, and this indicates that, overall, the regression model is statistically significant and predicts the outcome variable (i.e., it is not a good fit for the data).

**Table 61: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| **1** | **1 Regression** | **43.616** | **6** | **7.269** | **4.013** | **.001** |
| | Residual | 221.004 | 122 | 1.812 | | |
| | Total | 264.620 | 128 | | | |

Predictors: (Constant),

d. People who are involved in financial irregularities are under pressure from life's challenges,
e. People who are involved in financial irregularities rationalise there acts,
f. People who are involved in financial irregularities are coercive,
g. People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities),
h. People who are involved in financial irregularities are stressed,
i. People who are involved in financial irregularities are influenced by the coercive or deceptive nature.

b. Dependent Variable: I see staff making claims without obtaining prior authority to be common

The Coefficients table provides us with the necessary information to predict staff making claims without obtaining prior authority from the theory, as well as determine whether the three predictor variables from the Fraud Diamond Theory contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below in Table 62.

**Table 62: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 1.952 | .450 | | 4.341 | .000 |
| People who are involved in financial irregularities are coercive | .204 | .065 | .275 | 3.134 | .002 |
| People who are involved in financial irregularities rationalise there acts | .065 | .076 | .081 | .865 | .389 |
| People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities) | .197 | .071 | .245 | 2.766 | .007 |
| People who are involved in financial irregularities are influenced by the coercive or deceptive nature | -.139 | .112 | -.117 | -1.236 | .219 |

| | | | | | |
|---|---|---|---|---|---|
| People who are involved in financial irregularities are stressed | .264 | .214 | .112 | 1.232 | .220 |
| People who are involved in financial irregularities are under pressure from life's challenges | .021 | .154 | .012 | .135 | .893 |

a. Dependent Variable: I see staff making claims without obtaining prior authority to be common

Importantly, one would note that two of the ***b*** coefficients are negative numbers and the low scores for the predictors are not associated staff making claims without obtaining prior authority. The column "Sig." holds that ***b*** coefficients are statistically not significant since the ***p***-values are larger than 0.05 except for one (People who are involved in financial irregularities are creative/intelligent at what they do) whose p value is 0.01 which is less than 0.05. The beta coefficients allow us to compare the relative strengths of our predictors. The conclusion of this linear regression is that the low adjusted R squared tells us that our model does not do a great job in predicting financial irregularities and particularly staff making claims without obtaining prior authority. On top of that, two of our ***b*** coeffients are not statistically significant and do not make perfect intuitive sense.

Figure 10 generally summarises the levels of influence of the Diamond Fraud Theory on financial irregularities. One would say the theory has little influence in the causation of financial irregularities presented in the Auditor General's Report since more than half of the respondents n = 77 (60%) perceived the influence as low , n = 43 (33%) perceiving it having moderate influence and n = 9 (7%) perceiving it as having high influence.

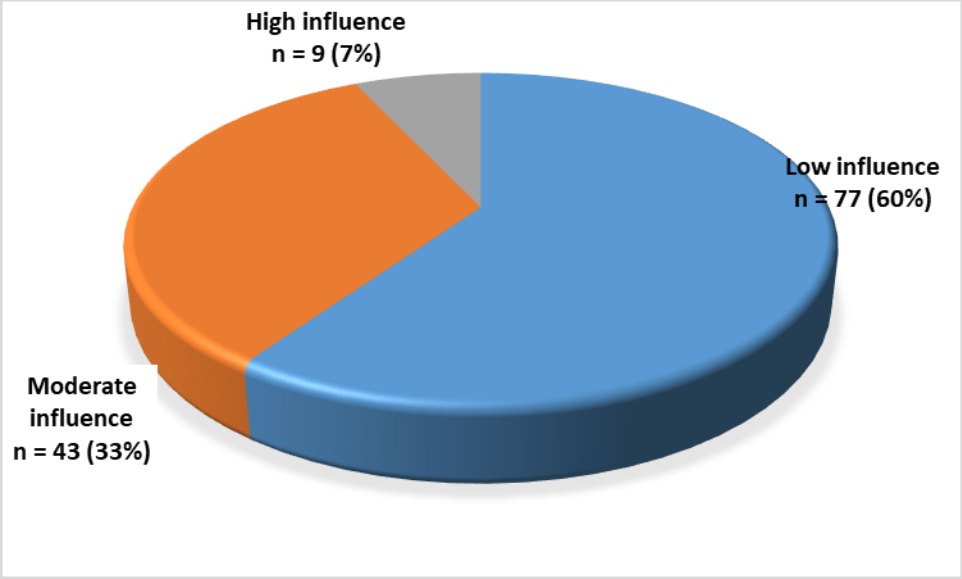



**Figure 10: Influence of the Fraud Diamond Theory on Financial Irregularities**

### 4.5 Summary of findings

Out of the six types of financial irregularities that were surveyed, public servants have experienced predominantly three types of finacial irregularities and these relate to the introduction to payroll without authority to be common, irregular use of accountable impress to be common and irregular payment of subsistence and meal allowances to be common. Generally, the occurrence of financial irregularities was tagged as occurring moderately and this would not be acceptable. One sample t tests showed that men and women did not statistically differ significantly in perceiving financial irregularities $\boldsymbol{p} < 0.01$.

The Fraud Triangle Theory predicted the following:

| *Outcome* | *Model* | *Sum of Squares* | *df* | *Mean Square* | *F* | *Sig.* |
|---|---|---|---|---|---|---|
| Introduction to payroll without authority | Regression | 20.378 | 3 | 6.793 | 10.27 | .001 |
| Irregular use of unaccountable impress | Regression | 37.104 | 3 | 12.368 | 4.564 | .005 |
| staff making claims without obtaining prior authority to be common | Regression | 24.400 | 3 | 8.133 | 4.232 | .007 |

The Fraud Triangle Theory has an influence in the causation of financial irregularities presented in the Auditor General's Report. Specifically financial irregularities are committed by people who are creative/intelligent at what they do.

The Fraud Diamond Theory predicted the following:

| *Outcome* | *Model* | *Sum of Squares* | *df* | *Mean Square* | *F* | *Sig.* |
|---|---|---|---|---|---|---|
| Delayed banking | Regression | 18.218 | 6 | 3.036 | 6.358 | .001 |
| Introduction to payroll without authority | Regression | 29.582 | 6 | 4.930 | 8.189 | .000 |
| Irregular use of unaccountable impress | Regression | 83.488 | 6 | 13.915 | 5.807 | .001 |
| Drawing of salaries on wrong salary scales | Regression | 39.486 | 6 | 6.581 | 4.194 | .001 |
| Failure to remit tax | Regression | 6.019 | 6 | 1.003 | 6.286 | .001 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Irregular payment of subsistence meal allowances | Regression | 33.543 | 6 | 5.591 | 3.814 | .002 |
| Making claims without obtaining prior authority | Regression | 43.616 | 6 | 7.269 | 4.013 | .001 |

The Diamond Fraud Theory has an influence in the causation of financial irregularities presented in the Auditor General's Report. Specifically financial irregularities are committed by people who are involved in financial irregularities are coercive, involved in financial irregularities are influenced by the coercive or deceptive nature,

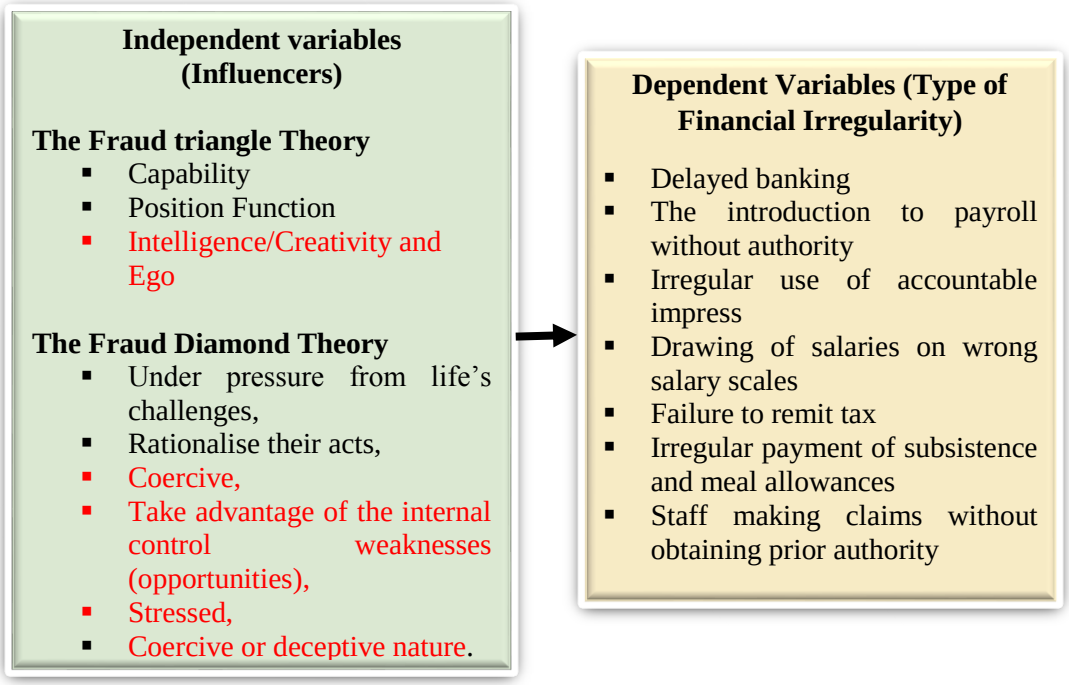
Stress, are under pressure from life's challenges, and take advantage of the internal control weaknesses (opportunities).

# CHAPTER FIVE: DISCUSSION

## 5.0 Introduction

This study aimed at determining the causes of financial irregularities in the educational sector in Chibombo District with a view to develop a mitigation model. This study was conducted to determine which of the two theories could exampling best the causes of financial irregularities. Predominantly three types of financial irregularities that are dominant were identified and these relate to (a) the introduction to payroll without authority, (b) irregular use of accountable impress (c) irregular payment of subsistence and meal allowances. Of the two theories, the Diamond Fraud Theory has greater influence in the causation of financial irregularities presented in the Auditor General's Report than the triangle theory. Specifically, the Fraud Triangle Theory has an influence in the causation of financial irregularities presented in the Auditor General's Report and this is linked to people who are creative/intelligent at what they do. The Diamond Fraud Theory has an influence in the causation of financial irregularities presented in the Auditor General's Report and this is linked to people who are coercive or deceptive nature, stress or are under pressure from life's challenges, and take advantage of internal control weaknesses (or see opportunities). Below in Figure 11, are the predictor variables in red, which are linked to financial irregularities. These are the significant variables.

**Figure 11: Modified Model of Causation of financial irregularities**




Just like Beasley et al. (2000), this study has discovered that the most common tactics used to protect against the threat of employee fraud in the financial sector include turning on internal controls and checks to reduce opportunities for fraudulent behaviour at work. Pressure or stress, which is the second element in the Diamond fraud theory, is usually the result of an immediate problem or pressure or stress from an internal or external environment (Harris, 2008). Although a majority of studies have adopted the fraud triangle theory, some researchers believe that the three elements (capability, position function and intelligence/creativity and ego) in the fraud triangle are not sufficient to prevent and detect fraud.

In the same way, being under pressure from life's challenges, rationalise acts, being coercive, stress are not sufficient conditions in the Fraud Diamond Theory. What is critical is addressing internal week controls which could neutralise capability and position function. Several researchers, including Idolor (2010); Owolabi (2010); Khanna and Arora (2009) and Fadipe-Joseph and Titiloye (2012), have noted that the problem of employee involvement in financial irregularities in the public sector is not limited to any economy, nation, continent or environment; it is a general phenomenon as the public sector system is one of the major cornerstones of an economy.

## 5.1 Model of Addressing Financial Irregularities

The results of this study are similar to those of Zakaria et al. (2016) who investigated internal control weaknesses and how it leads to fraudulent behaviour and found that internal control weaknesses were a major factor that lead to fraud. They also found that several employees colluded to commit fraud taking advantage of opportunities such as poor supervision and improper document control processes. The two theories could point to weaknesses in internal controls like poor supervision, non-prosecution of perpetrators, ineffective anti-fraud programs, failure to continuously disseminating positive information reflecting the organization's policies, failure to enforcing sanctions, as well as failure to publicizing sanctions point to the existence of an instrumental climate. This is a situation where employees make unethical decisions for their best interest to the detriment of organisation's best interest. In this study, one could infer that instrumental climate in the public sector linked to internal controls was a key factor enhancing unethical financial acts.

The preponderance of accountants and bosses to commit such acts seems to suggest that these actors used their position (see Dellaportas, 2013). The positive relationship between the elements of the fraud diamond theory implies owners, directors, managers, and supervisors of businesses ought to do something.

The fact that Capability/Opportunity was associated with unethical financial misconducts when the opportunity is controlled or minimized, the capability of potential fraudsters can be rendered redundant. It is because the capability of people to commit fraud can hardly be removed. However, when there is no opportunity to utilize their capability, financial irregularities can scarcely be perpetuated. A very critical point out of this research is the element of capability as its combinations to all the other financial irregularities elements predict more significant effects. These factors are from the Fraud Diamond Theory and point weak internal controls (Dellaportas, 2013; Zakaria et al., 2016).

Financial irregularities detection and prevention is at the heart of every management system. Detection of financial irregularities is highly complex, and a large percentage of cases are actually detected externally (such as by the media or external auditors) or by accident. However,

approaches such as lifecycle monitoring and verification can be used to reduce the incidence of fraud overall.

According to Weiss (2013) the management lifecycle of financial irregularities can be used to encapsulate the process of prevention these irregularities. In this study, the researcher proposes a model which embraces the application of Weiss cycle. This cycle consists of eight stages, including deterrence, prevention, detection, mitigation, analysis, policy, investigation, and prosecution (Weiss, 2013). These include the following:

The deterrence stage involves activities that hinder or discourage fraud through fear of consequences (Weiss, 2013). On the other hand prevention activities hinder, check, keep away or stop the actor from committing such activities.

The detection stage uncovers existing or attempted financial irregularities while mitigation includes activities designed to stop the continuation of financial irregularities.

The analysis stage seeks to determine the root cause of financial irregularities and the factors that lead to the occurrence of financial irregularities.

The policy stage is characterised by the creation, evaluation and communication of policies aimed at reducing financial irregularities e.g. fixing limits to the authority to incur expenditure such as any transaction over K10, 000, for example, should be reported.

The seventh stage of investigation brings together any evidence and information to curb further activity, recover assets or secure restitution and gather evidence necessary for the successful prosecution of the actors. Many known financial irregularities in Zambia are not prosecuted due to concerns about the damage such prosecution could cause to the image and reputation of some people or even the organization. The combination of internal factors (information technology, risk tolerance, fraud management philosophy etc.) and external factors (regulatory requirements, competitors etc.) all play a part in influencing fraud management. The complexity of management financial irregularities increases with a dynamic and ever growing environment (Weiss, 2013).

## 5.2 Significance and Limitations of Study

First, only one case was selected for the study and this is Chibombo District and as such the results could not be generalisable to other districts. However, from the level of detail the researcher has provided, readers can take certain aspects of this Chibombo experience and apply them to other contexts and situations and this makes the case of Chibombo ideal for transferability in varying degrees to other districts and departments. Transferability in this case is a process performed by readers of this research. Readers will note the specifics of the research situation like un accounted impress in Chibombo and compare it to the specifics of an environment or situation like Lundazi with which they are familiar. If there are enough similarities between the two situations, readers may be able to infer that the results of the research would be the same or similar in their own situation. In other words, they "transfer" the results of a study to another context. To do this effectively, the researcher implores readers of this study to know as much as possible about the original research situation in order to determine whether it is similar to their own.

This study is original and differs from other studies because it has examined two theories and a wide range of financial irregularities that are generally difficult to be accessed by researchers to be published in an academic journal. The variables of findings of this study are inferred from the Auditor General's Report that is not private and not confidential. Future research may cover more districts and to consider embracing a mixed methods study design.

## 5.3 Conclusion

This study has established that three types of finacial irregularities that are dominant and these relate to (a) the introduction to payroll without authority, (b) irregular use of accountable impress (c) irregular payment of subsistence and meal allowances. Of the two theories, the Diamond Fraud Theory has greater influence in the causation of financial irregularities presented in the Auditor General's Report than the triangle theory. Specifically, the Fraud Triangle Theory has an influence in the causation of financial irregularities presented in the Auditor General's Report and this is linked to people who are creative/intelligent at what they do. The Diamond Fraud Theory has an influence in the causation of financial irregularities presented in the Auditor General's Report and this is linked to people who are coercive or deceptive nature, stressed or are under pressure from life's challenges, and take advantage of internal control weaknesses (or see opportunities). Weiss

cycle would be appropriate in the case of Chibombo as a guide for the model to mitigate financial irregularities.

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# APPENDICES

## Appendix 1: Survey Questionnaire

1) Department where one was working
    b) Education
    c) Judiciary
    d) Social Welfare
    e) Agriculture
    f) Heath

2) Qualification
    a) School-leaver
    b) Certificate
    c) Diploma
    d) Bachelor
    e) Masters

3) Years of service……

4) Age……

5) Gender Male…….Female…….

6) Who in your view is associated more with financial irregularities in your department?
    a) General staff
    b) Bosses
    c) Accounting staff
    d) Accounting staff and bosses

7) Gender involved in financial irregularities Male…….Female…….
8) Age group involved in financial irregularities

a) Under 30 years
b) 31 to 40
c) 41 to 50
d) Over 50

9) I see delayed banking to be common

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

10) I see the introduction to payroll without authority to be common

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

11) I see Irregular use of unaccountable impress to be common

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

12) I see drawing of salaries on wrong salary scales to be common

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

13) I see failure to remit tax to be common

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

14) I see Irregular payment of subsistence and meal allowances to be common

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

15) I see staff making claims without obtaining prior authority

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

16) Perceived score of financial irregularities

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

17) Perceived level of financial irregularities

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

18) People who are involved in financial irregularities have capabilities

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

19) People who are involved in financial irregularities are influenced by the position they hold

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

20) People who are involved in financial irregularities are creative/intelligent at what they do

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

21) People who are involved in financial irregularities are coercive

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

22) People who are involved in financial irregularities rationalise their acts

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

23) People who are involved in financial irregularities take advantage of the internal control weaknesses (opportunities)

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

24) People who are involved in financial irregularities are influenced by the coercive or deceptive nature

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

25) People who are involved in financial irregularities are stressed

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |

26) People who are involved in financial irregularities are under pressure from life's challenges

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Not sure | Strongly agree | Agree | Somewhat agree | Disagree | Strongly disagree |