

UNIVERSITY OF GHANA

AUDITOR PERSONAL CHARACTERISTICS AND FRAUD DETECTION SKILLS:

THE MEDIATING ROLE OF PROFESSIONAL SCEPTICISM

BY

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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN
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DECLARATION

I do hereby declare that this work is the result of my research and has not been presented by anyone for any academic award in this or any other university. All references used in this work have been fully acknowledged.

I do bear sole responsibility for any shortcoming.

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CERTIFICATION

I hereby certify that this thesis was supervised in accordance with the procedures laid down by the university.

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DEDICATION

I first and foremost dedicate this work to the Almighty God for the grace granted me to complete this work. This is further dedicated to my mother, Ms Ellen Apprey-King and my late aunt, Ms Caroline Apprey- King.

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All glory and honour belong to the Almighty God for His Grace that sustained me throughout the thesis. I am also grateful to my supervisors Dr Godfred M.Y. Owusu and Mr James Otieku for their support and guidance. A special thanks to Mrs Edem Welbeck for the constructive comments and support.

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TABLE OF CONTENTS

DECLARATION.....	i
CERTIFICATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	Error! Bookmark not defined.
LIST OF FIGURES.....	xi
LIST OF ABBREVIATIONS.....	xii
ABSTRACT.....	xiii
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Problem Statement.....	4
1.3 Research Objectives.....	8
1.4 Significance of the Study.....	8
1.5 Structure of the Study.....	9
CHAPTER TWO.....	11
LITERATURE REVIEW.....	11

2.0 Introduction.....	11
2.1 Professional Scepticism.....	11
2.2.1 Trait professional scepticism.....	15
2.2.2 State professional scepticism.....	15
2.3 Application perspectives of professional scepticism.....	16
2.3.1 The neutral perspective of professional scepticism.....	17
2.3.2 Presumptive doubt perspective of professional scepticism.....	18
2.4 Auditor Characteristics, Professional Scepticism and Fraud Detection Skills.....	19
2.5 Fraud detection.....	21
2.5.1 Corporate culture and external relationships.....	22
2.5.2 Perpetrators.....	24
2.5.3 Symptoms related to financial resources & accounting practice.....	27
2.5.4 Measurement of fraud detection skills.....	27
2.6 Affective mood.....	28
2.6.1 Measurement of Mood.....	30
2.7 Motivation.....	31
2.6.1 Intrinsic Motivation.....	32
2.6.2 Extrinsic motivation.....	33
2.7 Trust.....	36
2.7.2 Situational trust and distrust.....	39

2.7.3 Measurement of dispositional trust.....	40
2.8 Theory of Cognitive Dissonance.....	41
2.9 The Conceptual Framework for the Study.....	42
2.10 Hypotheses Development.....	45
2.10.1 Extrinsic Motivation and Professional Scepticism.....	45
2.10.2 Intrinsic Motivation and Professional Scepticism.....	45
2.10.3 Negative & Positive Mood and Professional Scepticism.....	46
2.10.4 Trust and Professional Scepticism.....	47
CHAPTER THREE.....	49
METHODOLOGY.....	49
3.0 Introduction.....	49
3.1 Research Philosophy.....	49
3.2 Research Design.....	50
3.3 Unit of Analysis.....	51
3.4 Population and Sampling.....	51
3.5 Survey Instrument.....	52
3.6 Definition and Measurement of Constructs.....	53
3.7 Data Collection.....	53
3.8 Structural Equation Modelling.....	54
3.8.1 Covariance Based Structural Equation Modelling (CB-SEM).....	57

3.8.2 Partial Least Square Structural Equation Modelling (PLS-SEM).....	58
3.8.3 Choosing between CB-SEM and PLS-SEM.....	58
3.9 Assessing the Measurement Model.....	60
3.9.1 Internal Consistency.....	61
3.9.2 Indicator Reliability.....	61
3.9.3 Convergent Validity.....	62
3.9.4 Discriminant Validity.....	62
3.10 Assessment of Structural Model.....	62
3.11 Predictive Value.....	63
CHAPTER FOUR.....	64
ANALYSIS AND DISCUSSION OF RESULTS.....	64
4.0 Introduction.....	64
4.1 Profile of Respondents.....	64
4.2 Descriptive Statistics of Constructs.....	67
4.4 Conceptual Framework.....	78
4.5 Empirical Results from PLS-SEM.....	80
4.6 Internal Consistency Reliability.....	83
4.7 Convergent Validity.....	83
4.8 Discriminant Validity.....	85
4.10 Analysis of the Structural Model Results.....	88

4.11 Variance Inflation Factor (VIF) Results.....	89
4.12 Co-efficient of Determination.....	89
4.13 Blindfolding.....	90
4.14 Evaluation of Path Coefficients.....	91
4.13.1 Hypothesis Testing.....	92
4.13.2 Discussion of Results.....	93
4.13.3 Discussion of Mediation Analysis.....	99
CHAPTER FIVE.....	104
SUMMARY, RECOMMENDATION AND CONCLUSION.....	104
5.0 Introduction.....	104
5.1 Summary of Findings.....	104
5.3 Conclusions.....	107
5.5 Contributions.....	108
5.4 Limitations of the Study.....	109
5.4 Recommendations for Policy and Practice.....	110
5.5 Recommendations for Future Research.....	111
REFERENCES.....	113
APPENDIX-QUESTIONNAIRE.....	136

LIST OF TABLES

Table 3. 1 Definition and Measurement of Variables.....	54
Table 4. 1 Demographics.....	66
Table 4. 2 <u>Descriptives of Constructs</u>	69
Table 4. 3 <u>Indicator Loadings</u>	81
Table 4. 4 Internal Consistency And Convergent Validity.....	84
Table 4. 5 <u>Fornell-Lacker Criterion</u>	86
Table 4. 6 Inner VIF Values.....	89
Table 4. 7 Co-efficient of Determination.....	90
Table 4. 8 Blindfolding.....	91
Table 4. 9 Path <u>Co-efficients</u> , Direct Effect (P-Value), Significant Level for All Hypothesised Paths.....	92
Table 4. 10 Path Coefficients, Specific Indirect Effect (P-value), Significant Level for All Hypothesized Paths.....	100

LIST OF FIGURES

Figure 2. 1: Diagrammatic representation of the theory of cognitive dissonance.....	44
Figure 4. 1 Conceptual Framework.....	79
Figure 4. 2 Structural Model of the Study.....	88

LIST OF ABBREVIATIONS

Abbreviation/Acronym	Meaning
AVE	Average Variance Extracted
CB-SEM	Covariance Based Structural Equation Modelling
CR	Composite Reliability
HPSS	Hurt Professional Skepticism Scale
IAASB	International Auditing & Assurance Standards Board
ICAG	Institute of Chartered Accountants Ghana
IFAC	International Federation of Accountants
PCAOB	Public Company Accounting Oversight Board
PLS-SEM	Partial Least Squares Structural Equation Modelling
SAS	Statements on Auditing Standards
WPI	Work Preference Inventory
VIF	Value Inflation Factor

ABSTRACT

Corporate scandals have made stakeholders question the display of professional scepticism by auditors. This has prompted stakeholders to reassess the trust they place in the audit opinion. Research into professional scepticism has, therefore, caught the attention of practitioners and academia. There is a belief that: to win back the increasingly eroding trust of stakeholders, there is a need to understand the nature of the display of professional scepticism. The study, therefore, examines the relationship between personal characteristics and professional scepticism displayed by auditors. Also, the study examines the mediating role of professional scepticism between personal characteristics and fraud detection skills. To achieve this aim, the quantitative research approach is employed. A questionnaire was employed to gather data from 305 auditors while PLS-SEM was used for the analysis of data. The results revealed that there is a significant positive relationship between intrinsic motivation, and positive mood, as predictors, and professional scepticism. Also, the results show that persons that are less trusting are generally more sceptical. Furthermore, professional scepticism mediated the relationship between personal characteristics of auditors and their fraud detection skills. The results consequently recommend that practitioners should be aware of personal characteristics of auditors and should inform their hiring, training and appraisal practitioners. Government Audit Agencies should also find the recommendation relevant.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Quality information is critical to the decisions made by market participants to either buy, hold or dispose of equity and debt instruments of entities. Major stakeholders require information to make decisions with regard to the provision of resources to the corporate entities (Zhai & Wang, 2016). The decisions of providers of resources are likely to be ineffective without relevant and faithfully represented financial information. Consequently, auditors have the objective to ensure financial information is true and fair (Kwok, 2017).

Auditors adhere to rigorous standards to arrive at the opinion that - financial information is true and fair. Audit standards pronounce that: auditors display professional scepticism in the conduct of an audit. Farag and Elias (2016) define Professional Scepticism (hereafter may be abbreviated as PS) as having a questioning mind and a critical assessment of evidence. The authors argue that professional scepticism is important to the quality information that providers of resources employ for decision-making. Audit Standards amplify the call to display professional scepticism when there is an increased risk of fraud (DeZoort & Harrison, 2018). Studies on fraud in corporate entities highlight the lack of display of professional scepticism by auditors, to be complicit in the eventual collapse of such entities (Endrawes, 2010; Enofe, Ekpulu, & Ajala, 2015; Romney, Albrecht & Cherrington, 1980).

The occurrences of corporate collapses make the ability of auditors to detect fraud, questionable. This doubt is rife amongst stakeholders whose losses that accompany fraud-related collapses run into several billions of dollars and includes pension funds. The losses of pension funds extend the issue of corporate fraud from a financial issue to a social one (Cadbury,2006) . The social responsibility of businesses and auditors, to uphold the interest of the public, is relevant thereof.

Auditors perceive that they are not responsible for fraud detection, but to examine whether or not the financial statements show a true and fair view of the financial performance and position of the entity (Nolder & Kadous, 2018; Quadackers, Groot, & Wright, 2014; Toba, 2011). The legal substance of the argument cannot be denied, however, stakeholders with a financial interest may perceive a different view. Stakeholders find value in the ability of auditors to detect fraud which helps prevent losses. The possible avoidance of unfavourable consequences that can result from an inaccurate audit opinion, gives importance to auditors' ability to detect fraud. It is based on this realisation that the users of financial information value fraud detection as a key skill of auditors.

Major stakeholders have criticised auditors in cases of corporate collapses, especially when the perpetrators of fraud are employees and managers (Bollen, Mertens, van Raak, Meuwissen, & Schelleman, 2005; Hassink, Bollen, Meuwissen, & de Vries, 2009). Studies (e.g Baron, Johnson, Searfoss, & Smith, 1977; Jizi, Nehme, & Elhout, 2016) question the extra value audit provides to investors and capital markets if it lacks the ability to detect fraud. Investors avoid making bad decisions based on the information on the financial statements provided by entities. Participants of capital markets find value in the fraud detection skills of the auditor

The recognition of this value inspires studies which examine the antecedents of the fraud detection skills of auditors. Studies indicate a positive relationship between professional scepticism and fraud detection skills in many contexts (Fullerton & Durtschi, 2005; Jizi *et al.*, 2016; Lee, Welker, & Wang, 2013; Zimbelman, 1997). These studies profess that the level of fraud detection skills of an auditor is positively related to the level of professional scepticism. Therefore, researchers are keen to understand the level of professional scepticism that is exhibited by an auditor before and especially, during the conduct of the audit.

Sections of the Audit Standards (IFAC, 2007; ISA 240.23-25) make mention of the exercise of professional scepticism, especially in the conduct of audit where there are encounters with clues of fraud. Audit standards suggest that auditors presume doubt on the inexistence of fraud. Evidence is found in studies that reveal that; auditors are able to adopt a mental perspective of presumptive doubt in audit planning and evidence evaluation under conditions of fraud risk (Mock & Turner, 2005; Rose & Rose, 2003; and Zimbelman, 1997).

The understanding that professional scepticism is key to the ability to detect fraud, projects the importance of examining the antecedents of professional scepticism. Prior studies have examined some antecedents of professional scepticism. Some of these antecedents include the objectivity of audit evidence (Robertson, 2010), the integrity of management (Earley & Gramling, 2010), the riskiness of the client (Farmer & Rittenberg, 1987; Hackenbrack & Nelson, 1996) , the complexity of the client (Brewster, 2012; Tucker, Subramanyam, & Matsumura, 2003), and accountability to reviewers (Peecher, Schwartz, & Solomon, 2007).

These predictors of professional scepticism can be categorized into predictors that are related to evidence such as the objectivity of audit evidence ; those related to the client characteristics such as the integrity of management, the riskiness of the client, the complexity of the client ; and

predictors related to the relationship of client with external environment such as accountability to reviewers, accountability to regulators. (Brewster, 2012; Earley, Hoffman, Joe, Earley, & Joe, 2008; Peecher *et al.*, 2007; Robertson, 2010; Tucker *et al.*, 2003). The understanding of the influencers of professional scepticism has become important because of the consensus that the display of professional scepticism is low in so many an audit (Endrawes, 2010).

1.2 Problem Statement

The collapse of seven universal banks has the attention of the Ghanaian public focused on corporate fraud. The overwhelming public pressure on regulatory authorities has seen regulatory authorities apply sanctions to managing directors, CEOs, Board Chairmen and Auditors (Joy Business, 2019b). The Disciplinary Committee of The Institute of Chartered Accountants Ghana (ICAG) - the regulatory body for Accountants and Auditors in Ghana- sanctioned 4 audit firms for various irregularities in their respective audits (Joy Business, 2019a). The irregularities stem from the discovery that the capital positions of these defunct banks were falsified purposely to continue holding banking licenses (Frimpong, 2019). Consequently, there is a sustained interest in the national discourse on how to restore trust in audited financial statements. One reason the trust of important stakeholders in audited financial statements may have declined is that: there may have been losses suffered by taking decisions on the basis of the financial statements.

The task of detecting fraud by external auditors is considered to be a complex one. According to Adnan and Kiswanto (2017), fraud detection requires comprehensive knowledge about the characteristics and the ways fraud is perpetrated. These characteristics and means are conceptualised, by Fullerton and Durtschi (2005), as red flags. Fullerton and Durtschi (2005) followed the conceptualization by ascertaining how internal auditors' professional scepticism can influence fraud detection skills. The authors concluded that professional scepticism is positively

related to fraud detection skills amongst internal auditors. The authors also advised that a simple generalization of this finding to external auditors may be inappropriate. This is because the objectives, nature, extents and timing of similar procedures used by both internal and external auditors might differ. There is, therefore, an opportunity to understand how professional scepticism of external auditors influences fraud detection skills.

The professional scepticism displayed by auditors may be influenced by their individual characteristics. Aside from the situational characteristics of the audit context, individual characteristics can determine the level of scepticism displayed (Nolder & Kadous, 2018). These personal characteristics have received mention in prior literature (e.g Nelson, 2009; Hurtt *et al*, 2013) to influence professional scepticism. There lie possibilities to examine individual characteristics that influence professional scepticism. Accordingly, Nelson (2009) asserts that motivation influences professional scepticism although it may be complicated by the structure of the reward system. Extrinsic motivation, as noted by Bazerman and Tenbrusel (2011), is found to influence the sceptical actions of auditors. Consequently, in order to arrive at a positive outcome (e.g going concern of client assured, meeting the deadline, recognition) the auditors may pursue or overlook doubt – a psychological phenomenon called motivated blindness. Peecher *et al*.(2010) also criticized regulatory bodies for overemphasizing on negative outcomes (fraud, collapse, etc.). This overemphasis reinforces auditors' preference for positive outcomes to proper procedures.

Furthermore, Rosman (2011) studied the link between intrinsic (inherent) motivation and the influence it has on PS. The researcher discovered that inherently motivated persons display high levels of professional scepticism. However, lowly motivated persons displayed inconsistent levels of professional scepticism. Additionally, few studies have attempted to examine the influence of both forms of motivation on Professional Scepticism simultaneously, although it has

been found that both forms of motivations can co-exist (Kadous & Zhou ,2019). The current study attempt to fill this gap by examining both extrinsic and intrinsic motivation and their influence on professional scepticism. Moreso, the influence of PS on fraud detection combined with the lack of studies of the influence of motivation on fraud detection skills, provides an opportunity for further research. This study, therefore, attempts to examine the relationship between motivation and fraud detection skills.

Interestingly, there are few studies on the relationship between mood and professional scepticism. Hurtt *et al.*(2013) attribute that to the debate on the reliability of the measurement of mood. Prior research concurs on the unreliability of measurements of mood (Watson, 1985). This current study, however, utilizes the Positive and Negative Affect Schedule (PANAS) to measure the mood of auditors. Mood literature recommends that the PANAS is reliable and its results are generalizable. (Dalglish & Power, 2015; Ryff & Keyes, 1995).

Also, Chung *et al.*(2009) revealed that the mood of accountants influenced inventory valuation judgement. Persons in a positive mood were unconservative (less cautious) with inventory valuation, however, persons in a negative mood were conservative with inventory valuation. The conservativeness was measured by how low the valuation of the inventory was determined, avoiding overestimation. The current study, on the basis of the possible influence of mood on judgements, explores the relationship between mood and professional scepticism. Furthermore, there is a dearth in studies on the influence of mood on fraud detection skills. This is curious as there is a possible relationship between mood and judgements (Chung *et al.*2009). The current study attempts to examine the influence of mood on fraud detection skills.

More so, there is extensive research on the relationship between trust and professional scepticism (Aschauer, Fink, Moro, van Bakel-Auer, & Warming-Rasmussen, 2017; Harding, Azim, Jidin, & Muir, 2016; Quadackers, Groot, & Wright, 2009; Quadackers *et al.*, 2014; Toba, 2011). The common theme of prior research is that: trust has an inverse relationship with professional scepticism. For instance, Quadackers *et al.*(2009) used the inverse of the Rotters Interpersonal Trust Scale as the measure of professional scepticism. This is evidence that the relationship between trust and professional scepticism is well researched. However, the same cannot be said for the relationship between trust and fraud detection skills. A few studies have ventured in that research space. Hernandez & Groot (2006) discovered that trust negatively influences fraud risk assessments. The current study, therefore, extends this examination to ascertain the influence of trust on fraud detection skills of auditors.

Furthermore, few studies have examined the mediating role of professional scepticism. Adnan and Kiswanto (2017) examined how PS mediates the relationship between the following variables and fraud detection skills; fraud risk assessment, time pressure, and training. Also, Aminudin and Suryandi (2016) examined the following variables: fraud risk assessment, personality type, and experience; through professional scepticism. Interestingly both studies were conducted in Indonesia. Also, mediation analysis in this study situates the importance of the display of PS in FDS and, reinforces the reason for the relationship between auditor characteristics and FDS (Hafeman & Schwartz, 2009) . Thus, the current study attempts to investigate the mediating role of professional scepticism in the relationship between trust, mood, motivation; and their respective relationship with fraud detection skills of Ghanaian auditors.

1.3 Research Objectives

The research objectives are as follows;

1. To investigate the level of professional scepticism displayed by auditors
2. To examine the factors that influence professional scepticism
3. To examine the effect of professional scepticism on fraud detection skills
4. To investigate the mediating role of professional scepticism between auditor personal characteristics and fraud detection skills.

1.4 Significance of the Study

The importance of this study to society is worth noting. Its significance to academia, practice and policy are explored in the following paragraphs.

Academia has seen a rising interest in the study of professional scepticism. This interest has been generated because of the practical application of this issue in practice, which influences academia to enhance the examination of the area. This underscores the current study as a welcome inclusion to the body of research concerning Professional Scepticism.

In audit practice, functional areas benefit from the findings. These functions include but not limited to, hiring, training, performance appraisal, and review practices (Bowlin, Hobson, & Piercey, 2015). For instance, the current study informs the audit firm in the selection of persons in a hiring pool with particular characteristics possessed by persons with inherently high levels of professional scepticism. This is because persons displaying high professional scepticism can prove to be an important inclusion to the team involved in the conduct of the audit. Also, the design of training programmes for external auditors can benefit from the current study. Training programmes can be designed to enhance professional scepticism displayed by persons with

characteristics related to the low display of professional scepticism. More so, the current study can provide a new perspective to performance appraisal and review of audit personnel, where characteristics that constitute their strengths are taken into consideration. Personnel with characteristics that do not influence professional scepticism positively may be deemed to be incompetent. This determination may be the case, where the understanding of the influence of personal characteristics on professional scepticism is lacking. The current study hopes to enrich this understanding.

Furthermore, the public sector may find the current study useful. The significance of the study to private audit practice discussed can be extrapolated to the public sector since similar procedures are employed in public sector audit.

1.5 Structure of the Study

The organization of the study is structured in six chapters with briefs on each chapter in the following paragraphs.

Chapter one discusses the background of the study which introduces the topic of study. The rest of the chapter elaborates on the importance of the study, objectives and the research problem.

Chapter two acknowledges prior studies that have been done about the antecedents and consequences of professional scepticism. The chapter discusses mood, motivation and trust as antecedents of professional scepticism. It discusses the consequences of professional scepticism on fraud detection.

Chapter three of the study discusses the theory used for the research and the conceptual framework. The hypotheses used for the study is also developed in this chapter. The chapter describes the main variables and the relationship that is expected to exist between the constructs.

Chapter four elaborates on the methodology used for the research. It examines the research design, target population, research strategy, sampling technique, data collection and tools used during the study.

Chapter five of the study presents the data analysis and the interpretation of the data that was collected from the respondents. The discussion is focused on the findings from the study and also compares the findings to the previous researches.

Chapter six discusses the conclusions, limitations to the study and the recommendations for future or further studies. The Appendix and References follow this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews extant literature on professional scepticism, affective mood, motivation, and trust. The chapter is organised into six main sections. The first section gives an introduction to professional scepticism research; theoretical forms and perspectives of professional scepticism. The second section presents studies on fraud detection. The third section examines literature on affective mood. The fifth section reviews literature on motivation and a review of the literature of trust follows.

2.1 Professional Scepticism

The well - known scandals involving Enron and WorldCom at the dawn of the millennium places the auditing profession in need of a repair of its reputation (Benston & Hartgraves, 2002; Brickey, 2003; Unerman & O'Dwyer, 2004). This reputational damage has encouraged many coordinated actions spearheaded by international auditing agencies to suggest that the professional development of auditors and the continued sustenance of such development need to be emphasized (Bell, Peecher, & Solomon, 2005). The emphasis on professional scepticism, however, began some decades before the advent of the popular scandals such as Enron and WorldCom. The Securities and Exchange Commission of the United States, in the Cohen Commission Report, expressed concern about auditor professional scepticism. (Commission, 1978).

The report emphasized:

“The exercise of professional skill and care requires healthy scepticism—a disposition to question and test the validity of all material management representations. The independent auditor should approach an examination with an open mind about the integrity and good faith of management. He should neither assume that management is dishonest nor take management’s integrity and good faith for granted. The auditor’s tests of the validity of transactions and resulting financial statement amounts or other evidence may cause him to question management’s honesty or good faith.” (Toba, 2011,p 6)

Professional scepticism receives considerable highlight in standards governing the conduct of an audit. Auditors are encouraged to display scepticism in every phase of the audit process: before, during and sometimes after, the conduct of every audit engagement (IFAC, 2007; ISA 240.23-25). The inclination to question the reliability of evidence is characteristic of the appropriate application of professional scepticism and recommended by international audit guidelines. In Additionally, alertness to clues and fraud indicators, management bias, and critically examining audit evidence are important characteristics of professional scepticism. The International Auditing and Assurance Standards Board (IASB) is of the view that scepticism minimizes the risks of audit failure and making wrong conclusions based on audit evidence. It also prevents the formation of the incoherent basis in planning audit procedures and assessing the results from the conduct of the audit (IFAC, 2007; ISA 240). Thus, scepticism is necessary for auditors in detecting errors, misstatements and indicators of fraud. This necessarily implies that an appropriate level of professional scepticism is valuable to the proper conduct and execution of an audit.

2.2 Perspectives of professional scepticism.

Researchers debate on a comprehensive and accepted definition of professional scepticism. Some researchers defer to the reference by International audit standard guidelines. Audit Standards refer to professional scepticism as an attitude that includes a questioning mind and a critical assessment of the evidence (IFAC, 2007; ISA 240.23-25). Studies have reported auditors to perceive professional scepticism as a mental approach that influences the judgment of auditors (Glover & Prawitt, 2014; Nelson, 2009).

While neither group has taken clear steps to determine how professional scepticism is measured or documented, regulators often point to the assertion that professional scepticism, and especially the lack of it, to be the cause of audit deficiencies. (Cohen, Dalton, & Harp, 2017; Nelson, 2009).

In studies concerning professional scepticism, some researchers perceive professional scepticism as a characteristic that can be attributed to an individual or as would be termed in psychology, a personality trait (Cohen *et al.*, 2017; Hurtt, 2010; Quadackers *et al.*, 2014). Other studies, however, perceive an auditor with a characteristic of professional scepticism differently. Sceptical auditors are perceived as those who carefully assesses the prospects that the financial statements are not representative of what they purport to represent. This has made some researchers conclude that scepticism is best metered by complex risk assessments and an elaborate need for evidence (Nelson, 2009).

In Nelson's (2009) model of professional scepticism, he argues that sceptical judgments and sceptical actions are significantly impacted by traits, incentives, knowledge, training and experience received by the auditor. These five factors, namely: incentives, traits, knowledge, and experience and training also has an impact on the possibility that sceptical judgments result in

actions responding to such judgment. Hurtt *et al.*(2013) extended Nelson's model by the inclusion of moderators of sceptical judgments. These include three new factors namely, characteristics of client, evidence, and environment. These widely acknowledged models, however, are not clear in the definition of the professional scepticism construct, so researchers employ definitions that are close to the mindset of scepticism and its related measures of scepticism (Glover & Prawitt, 2014; Hurtt, 2010; Nelson, 2009).

It is also important to note that characteristics of the individual and society can create enduring mindsets which demonstrate itself in many situations. Contextual characteristics, however, causes a shift in the characteristics of people from one mindset to another. This is typical of the work environment whose context influence the mindset of the members of the organisation. Even though contextual or situational factors can influence the judgment of a person, it is not undermining the possibility that some attitudes and mindsets are enduring regardless of the job, task, and across time (Ajzen, 2005). This is a notion that is seen in acknowledged models of professional scepticism (Hurtt *et al.*, 2013; Nelson, 2009), which admits that scepticism is subject to situational changes. This is popular in professional scepticism literature, and known as state professional scepticism compared to trait professional scepticism is perceived as an inherent trait (Farag & Elias, 2016; Gong *et al.*, 2014; Harding *et al.*, 2016; Quadackers, Groot, & Wright, 2009).

Whereas these models interpret scepticism as partially subject to situational contexts, some researchers posit professional scepticism as a strict individual trait. In effect, Hurtt (2010) who suggests scepticism to be impacted by stable personality traits developed the Hurtt Professional Skepticism Scale. Researchers are seen to use Hurtt's Professional Skepticism Scale, which

comprises enduring traits, to measure professional scepticism (Cohen *et al.*, 2017; Quadackers *et al.*, 2014).

2.2.1 Trait professional scepticism

The trait approach to professional scepticism suggests that professional scepticism is an inherent trait where one may possess more of it than another. This means that the source of professional scepticism displayed is the individual make up of traits (Robinson, Curtis, & Robertson, 2017). This approach attempts to measure and use general response tendencies to predict specific judgments and decisions of an auditor across manifold auditing contexts. Hurtt's (2010) scale includes measures of general characteristics or tendencies, including auditors' general desire to learn, a construct termed as the search for knowledge and their tendency to delay on the decision of important issues until information is adequate to merit such a decision; a construct termed in the study as suspension of judgment

Researchers sought to examine the relationship between auditors' sceptical characteristics and sceptical judgments and decisions. The study showed that sceptical characteristics are related to sceptical judgments and decisions (Quadackers *et al.*, 2014). This has not been strongly evidenced by previous studies before this one. In particular, the finding that interpersonal trust is most significantly related to sceptical judgments and decisions warrants further study of the components of the trust variable in order to find more specific trust facets influencing auditors' sceptical judgments and decisions. And it is unclear whether auditors' personality traits are stable.

2.2.2 State professional scepticism

The possible influence of contextual variables on attitudes and mindsets of auditors reveals that PS can be affected by auditors' surroundings. The temporary conditioning of behaviour or

attitude in response to the contextual factors underpins the concept of State Professional Scepticism (Nelson, 2009; Robinson *et al.*, 2017).

Researchers are interested in understanding whether different and varying audit circumstances induce a cognitive state of professional scepticism in auditors. Studies have relied on behavioral changes or awareness of experimental manipulations to make assumptions about the presence or otherwise of state professional scepticism (Hackenbrack & Nelson, 1996; Hurtt *et al.*, 2013; Nelson, 2009). Robinson (2011) suggests that the understanding of professional scepticism is limited due to the difficulty in measuring state professional scepticism. The difficulty may be compounded by the practicality in determining which environmental variables trigger momentary conditioning of professional scepticism.

2.3 Application perspectives of professional scepticism

Divergent views are expressed on the conceptualization of displaying professional scepticism. This non-uniformity in the comprehension of professional scepticism has led to great research interest in the area and its sustained interest in the research community. Consequently, two main perspectives of professional scepticism have emerged and widely accepted by members of the research community interested in the research area. These two perspectives of Professional Scepticism are Neutrality and Presumptive Doubt (Quadackers *et al.*, 2014).

Neutrality refers to a perspective in which, prior to the conduct of the audit, the auditor is unbiased towards management and their representations. (Nelson, 2009; Quadackers *et al.*, 2014).

Presumptive doubt, on the other hand, is a demonstration of an auditor's attitude where an assumption of dishonesty inherent in management actions and representations precedes the

conduct of the audit. This assumption can be diffused only by audit evidence indicative to the contrary (Bell *et al.*, 2005).

Nelson (2009) suggests that the neutrality perspective is the common theme of auditing standards regarding the display of professional scepticism. Contrarily, some researchers assert that expectations from auditors have shifted from the neutral perspective toward the presumptive doubt perspective of professional scepticism, due to major business upsets and corporate collapses (Bell *et al.*, 2005).

This movement can be demonstrated in Nelson (2009, p 1) definition of professional scepticism where he professes to be “indicated by auditor judgments and decisions that reflect a heightened assessment of the risk that an assertion is incorrect, conditional on the information available to the auditor”. Nelson (2009) concurs that this definition is supportive of a presumptive doubt than a neutral view of professional scepticism, implying that auditors who display high professional scepticism require comparatively voluminous persuasive evidence (in terms of quality and/or quantity) to be convinced that an assertion purports to communicate what is a reality.

2.3.1 The neutral perspective of professional scepticism

Hurt (2010) defines professional scepticism considering the various characteristics of sceptics that focus more on having and pursuing doubt upon the revelation of new evidence. Bamber *et al.* (1997) demonstrate neutral professional scepticism as to how auditors review their level of scepticism upon encountering new information. Other studies perceive sceptics to be confident about their risk assessments, as opposed to auditors who are predictably biased (Cushing & Ahlawat, 2000).

To measure neutral professional scepticism, Quadackers *et al.* (2014) rely upon the Hurtt (2010) professional scepticism scale. As mentioned by Quadackers *et al.* (2014,p 642), the Hurtt professional scepticism scale “focuses more on having and pursuing doubt than on a particular direction of doubt, which is consistent with the neutrality perspective of professional scepticism”. This means instead of having predetermined bias; bias should be built as and when information encountered suggest it.

2.3.2 Presumptive doubt perspective of professional scepticism.

The literature on Professional Skepticism has recently had the perspective skewed towards the Presumptive Doubt perspective of Professional Skepticism. This is where a level of bias is assumed until there is contrary evidence with respect to the assertions made by management on the face of the financial statements (Quadackers *et al.*, 2014).

Quadackers *et al.* (2014) used a scale that measures the inverse of trust as a metric to measure the presumptive doubt professional scepticism of 174 auditors. This is divergent from the Hurtt Professional Skepticism Scale which is accepted to measure the neutral perspective of professional scepticism in literature in this space (Cohen *et al.*, 2017; Nelson, 2009; Quadackers *et al.*, 2014).

The Rotter’s Interpersonal Trust Scale was adopted by study’s researchers to measure trust auditors have in the assertions of their clients in experimental design research. Its appropriateness to measure presumptive doubt professional scepticism is justified because the Rotter’s Interpersonal Trust Scale has been used and accepted in many studies in psychology to measure trust. The inverse of trust is described by these researchers as scepticism. The cogent

interpretation of this is that lower levels of trust in an entity or event, whether inanimate or animate, translates into sceptical judgments towards such an entity or event.

The neutral perspective of professional scepticism and presumptive doubt perspective of professional scepticism with their respective measurement scales did not correlate which raise the empirical of whether or not the two perspectives; even though divergent; represent the same concept- which in this case is Professional Skepticism (Cohen, Pant, & Sharp, 2001).

2.4 Auditor Characteristics, Professional Scepticism and Fraud Detection Skills

Cushing & Ahlawat (2000) suggested that the attitude of audit client reporting is sometimes based upon whether the client perceives the auditors as trusting, sceptical of the client or plain suspicious. If the client perceives the auditor as sceptical, the client will pursue a mixed strategy which incorporates some probability of truthful reporting and the complementary probability of false reporting to attain some economic benefit. If client perceives the auditor as trusting, the client may report falsely. However, if the client perceives the auditor as suspicious, the client would report truthfully. The finding implies that the efficiency and effectiveness of an audit improves when the auditor is perceived to be sceptical because the client is motivated to report truthfully.

Carpenter, Durtschi, & Gaynor (2002) also investigated the role of experience in increasing professional scepticism. Novices in an audit engagement were found to be eager to attribute a material misstatement to fraud as against error. However, experienced audit seniors would readily attribute a material misstatement to an error as against fraud. This, therefore, meant that the novices demonstrated higher professional scepticism and fraud risk assessments than the seniors.

Payne & Ramsay (2005) examined whether planning-stage fraud risk assessments and experience audit affect the level of professional scepticism displayed by auditors during fieldwork. Results showed that auditors making low fraud risk assessments were less sceptical as compared to those who make high fraud risk assessment concerning the same audit evidence presented. Audit seniors also showed sceptical judgments as compared to the juniors.

Fullerton & Durtschi (2005) also examined whether enhanced levels of scepticism are related to behaviours that might lead to enhanced levels of fraud detection skills of internal auditors. The findings intimated that highly sceptically minded internal auditors desired to follow leads connected to fraud indicators as compared to those rank as lowly sceptically minded. These differences between these two groups seem to be close when training is introduced. The study found it so for several of the personality characteristics related to professional scepticism.

Hurt et al. (2008) sought to explore whether viewing professional scepticism as a trait rather than strictly as a response to audit circumstances provides a clearer link between professional scepticism and auditors' behaviours. Researchers found that auditors with higher levels of professional scepticism detected almost twice as many contradictions as those with lower levels, while the low scepticism auditors detected more mechanical errors in the control condition. However, they found no significant effect on the level of auditors' scepticism on their information search. When the impact of professional scepticism on auditors' generation of alternatives explanations was examined, it was found that auditors with higher levels of professional scepticism generated a moderately higher number of alternatives. The researchers concluded that auditors with higher levels of professional scepticism behave systematically differently than less sceptical auditors

Plumlee *et al.*,(2012) experimented on how specific training materials and aids can help auditors think sceptically. They found that divergent-thinking training increases both the number and quality of explanations generated and receiving both divergent- and convergent-thinking training leads to the likelihood of choosing the correct explanation more than four times that of divergent-thinking training alone. Divergent thinking leads auditors to generate explanations for unusual evidence; convergent thinking guides an evaluation leading to eliminating infeasible explanations.

2.5 Fraud detection

The ability to detect fraud by auditors in every economy is important to the sustenance of its financial and economic settings. The confidence of financial players that the assertions of the economic participants in a financial system are in part residing in the ability and the professional competence to detect fraud as an auditor (Chui & Pike, 2013). The discussion of fraud cannot end without the mention of the major bankruptcy scandals that occurred during the dawn of the millennium; especially that of World Com and Enron. This is where fraudulent accounting practices were employed to conceal financial decline in their respective companies (Benston & Hartgraves, 2002; Brickey, 2003; Unerman & O'Dwyer, 2004).

Audit standards are emphatic on the efforts that auditors should embark on to enhance the prospects of detecting fraud when there is a presence of fraud. SAS 99 explicitly mentions that members of an audit team deliberate on the possibilities of client fraud in respect to the assertions on the financial statements (American Institute of Certified Public Accountants., 2012; Fullerton & Durtschi, 2005).

The ability of professionals to identify fraud is linked to the ability to identify fraud symptoms. These are symptomatic elements that trigger the cognition of the professional to follow a line of doubt which eventually leads to the detection of fraud if it exists (Bernardi & Stark, 2018; Kuria & Muturi, 2015). These fraud symptoms have been espoused in literature in three broad categories. These categories are

- 1) Symptoms associated with the corporate culture of an entity and its external relationship
- 2) Symptoms related to Perpetrators of Fraud
- 3) Symptoms related to financial bookkeeping and methods of accounting & practices

2.5.1 Corporate culture and external relationships

There are symptoms associated with organizations that are indicative of the propensity of fraud. This means that certain corporate systems of organizations can serve as breeding grounds for corruption. A centralized hierarchy is one such symptom. Such organisations are also characterized by autocratic management style, where orders are given without recourse to the suitability of employees. This means a hard-tight control on organization makes for disgruntled persons who would search for opportunities to perpetrate fraud. This serves as a form of rebellion towards management for the non-involvement in the decisions of the organisations (Soltani, 2014). Fraud, especially in the form of defalcation of assets and embezzlement of money, is rife in these kinds of organisations. It is therefore important that professionals have a keen interest in managing relationships with employees to ascertain whether there will be a propensity of rebellion on the side of employees in the form of perpetrating fraud (Hockerts, 2015).

Companies which have a preference for short-range planning and with a profit focus are also susceptible to fraud. It is known that there is a risk of fraud to be able to earn profit in the shortest possible time. It is, therefore, logical to view companies or entities who engage in short-term planning with little efforts to embark on long-term planning; as aggressive in making sales or gaining revenue or income (Watson, 2003). The aggressive nature, which is reflected in the manner in which they want to earn income makes perpetrating fraud an attractive venture to embark on. It is therefore important for professional auditors to be alert to the time range in which the entity does its planning. It gives an indication of whether the entity engages in fraud or not. This must be done with caution as it is not always the case, but then it is a good place to start (Albrecht, Wernz, & Williams, 1995).

Firms who have strained relationships with their key support or auxiliary service providers are also symptomatic of fraud perpetration. Frequent unwarranted changes of auditors and attorneys especially is a key red flag of certain unknown circumstances in an organization, which often than not is related to fraud. This is because it becomes questionable the rationale for the frequent changes in legal attorneys and auditors. The trigger in cognition is not only attributed to auditors, but investors are also paying attention and also may question the rationale for these frequent changes. This makes changes in key auxiliary service providers a place to start forming a trail to the eventual detection of fraud on the part of professional auditors (Law, 2011; Singleton, Singleton, Bologna, & Lindquist, 2006; Watson, 2003).

The relationship between management and the internal auditor is also a key place to start a forensic undertaking to uncover fraud, where the relationship is improper in any respect. This fraud symptom is very difficult to ignore and thus should receive the full attention of auditors. This is because internal auditors are "obligated to be alert to the signs and possibilities of fraud"

(Singleton *et al.*, 2006; pp.4). While external auditors focus on misstatements in the financial statements that are material in scope, internal auditors are often in a better position to detect the symptoms that accompany asset theft, as well as financial statement fraud. Unlike external auditors, internal auditors have a continual presence in the company that provides them with a better understanding of the organization and its control system (Perry & Bryan, 1997). Thus, internal auditors are in a position to take on the elevated role established by the Sarbanes Oxley Act to assist external auditors in their search for internal irregularities. In addition, their internal presence should assist in establishing fraud prevention measures (Jauch & Glueck, 1988). Therefore if the scope of the internal auditor's work is constrained, it becomes a red flag which should be pursued; if fraud is to be detected.

2.5.2 Perpetrators

Fraud activities are conducted by persons and it has been found to be repetitive actions committed over a long period of time. It is also noted that perpetrators of fraud follow a similar pattern and thus are likely to be picked out by investigators and auditors as well (Mansor, 2015). The discussion on perpetrators will be done in three sections. First, a discussion on the situational factors that encourage fraud, second, the unexplained behavioural changes of perpetrators and third, the specific demographic profiles of perpetrators (Ramamoorti & Olsen, 2007).

2.5.2.1 Circumstances that Lead to Fraud

Our discussion on fraud suggests that fraud thrives in certain situations as seen in the discussion of corporate cultures. There are also personal situational characteristics that are enablers for the perpetrating of fraud (Fulwider, 1999). Perpetrators of fraud share common situations & characteristics of Pressure, Opportunity and Rationalization. This is known as the Fraud Triangle

(Albrecht *et al.*, 1995). There is pressure on every person with the intention to create fraud. This pressure is what causes one to entertain the thought of perpetrating fraud even before its execution. The pressure could be financial in nature, from the family, or even workplace pressure. This pressure is fuel enough to encourage one to commit fraud.

Furthermore, to be able to perpetrate a fraud of that nature, there is the need to have an opportunity to do so. This is in the form of the level of responsibility or trust that has been given to the person with the intent to create fraud. This is where the individual can have the prospect to engage in acts of fraud with respect to the pressure that he or she feels (Dittenhofer, 1995).

Rationalizations, to conclude, are what perpetrators of fraud resort to, in justifying their actions that it was needful that it be committed (Bryan & Smith, 2005). In the cases of fraud that involves an unauthorized removal of an asset, be it cash or any kind, perpetrators rationalize it by promising future restitution of the asset. It is, therefore, these personal enablers that coerce persons to be able to conduct acts of fraud.

2.5.2.2 Unexplained Behavioural Changes

Most persons who engage in fraud do have certain behavioural changes that cannot be explained. Several studies of criminology and other social science studies cite these signs as characteristic of persons engaged in fraud. The paramount among the signs are extreme stress and anxiety (Dittenhofer, 1995; Peterson & Zikmund, 2004). Perpetrators of fraud are seen to be under severe stress and it is noticeable by members of his or her close friends or family. It is also important to note that this is the case in the beginning stage in the path of perpetrating the fraud as the perpetrator faces apprehension. This apprehension eases up when the fraud continues and it becomes obvious that, for a while, people do not seem to notice that fraud has occurred (Baker

& Faulkner, 2003). The apprehension, however, returns when there are conducts of control checks by the organization as the perpetrator is anxious about he or she being discovered.

Social Scientists also point out that perpetrators of fraud display disconnected interpersonal interaction with other persons, especially from the same work area. This is where perpetrators avoid looking people in the eye in their face-to-face interaction. Perpetrators of fraud also become defensive in their interactions and seem to take offence for minor infractions on their characters. Other studies suggest that perpetrators are belligerent, nervous and opinionated as well (Mansor, 2015; Ruankaew, 2016).

Lifestyle changes are also common with perpetrators of fraud. A sudden enhancement in the tastes and preferences of goods and services patronized is a noticeable attribute of perpetrators of fraud. These enhancements are often than not, justified by fraud perpetrators by the mention of a recent receipt of an inheritance. And it is therefore important that professional auditors are aware of these fraud symptoms and can be able to pursue this line of the doubt to satisfactory conclusions (Buchanan & Grant, 2001; Kramer, 2015; Peterson & Zikmund, 2004).

2.5.2 Specific Demographic Profile

Perpetrators of white-collar fraud have been noticed in the literature to be of a particular demographic profile and it is important for professional auditors to be aware of. White-collar criminals are past their youthfulness, have better education and occupy positions with important responsibility and trust. And interestingly, white-collar criminals do not have a criminal history (Peterson & Zikmund, 2004).

It is therefore important to note that perpetrators are most often trusted employees, it takes a sceptical auditor to widen his or her examination of interpersonal information to include this crop

of trusted employees (Fullerton & Durtschi, 2005; Ramamoorti & Olsen, 2007). Sceptical auditors look beyond the appearance of trustworthiness to detect a possible perpetrator.

2.5.3 Symptoms related to financial resources & accounting practice.

Fraud symptoms are also inherent in accounting & financial reporting undertaken in an organization. The awareness of these symptoms is important to the auditor's ability to detect fraud (Chui & Pike, 2013). Missing records, transactions executed and/or recorded in a sub-standard manner as well as duplicate payments, and relaxed internal controls are some of the key symptoms of fraud that auditors are to look out for, in the conduct of their examination (Carpenter *et al.*, 2002).

Also, unexplained changes in figures and trends in the financial statements are also important cues to the detection of fraud. Write-offs of large accounts, unexpected spike in expenses and fluctuations in the financial ratios cannot be ignored in the symptoms that are indicative of fraud being perpetrated in an organization (Hopwood, Leiner, Young, & Zhang, 2008; Singleton *et al.*, 2006).

2.5.4 Measurement of fraud detection skills

The fundamental rationale for elaborating on fraud symptoms is to point those areas that will inform the auditor to focus examination in order to detect fraud. The ability to identify these symptoms is key to fraud detection skills of auditors. It is, however, important to note that auditors who are likely to increase information search are likely to identify these fraud symptoms (Fullerton & Durtschi, 2005). It is for this reason that the fraud detection skills of auditors are

measured by the decision to increase information search in the face of certain cues that are characteristic of fraud.

2.6 Affective mood

Although it is significant to note in prior affective studies that emotions toward specific targets which could be clients or work tasks can influence judgments (Robertson, 2010), there are studies which suggests that moods also has significant impact on auditor performance (Bhattacharjee & Moreno, 2013; Chung, Cohen, & Monroe, 2009).

A mood is a state of mind or a feeling (Bhattacharjee & Moreno, 2013). A study of variant moods was found to influence decisions on inventory valuation by professional auditors (Chung *et al.*, 2009). It is important to note that auditors can experience a variety of moods at any point in time during the conduct of an audit, being prompted by several circumstances relevant to and others irrelevant to the audit. There is evidence that auditing studies have been conducted examining moods in relation to the task assigned in the conduct of an audit (Clore, Schwarz, & Conway, 1994).

Authors' arguments in prior psychology research are that individual in a negative mood is likely to pay more attention to negative information retrieved concerning an activity when having to make a judgement using such information (Clore *et al.*, 1994) In a negative mood, individuals have been observed to undertake fewer efforts in overcoming the negative mood and would be willing to use that state to access negative information by confronting others in charge of that information (Wegener & Petty, 1994).

On the other hand, positive moods are likely to influence an individual to pay more attention to positive information, when having to make judgments using the information. It also has been

observed that individuals with positive moods value their positive moods and as such avoid confrontations as much as possible (Bhattacharjee & Moreno, 2013).

In an experiment conducted, the researchers predicted that auditors in a negative mood would provide more wrong inventory estimates in contrast to auditors in a positive mood. Participants for the experiment were practising auditors and it employed a manipulative design in an effort to evoke various moods. (Cianci & Bierstaker, 2009).

The experiment was conducted by asking the auditor's judgements how fair the representation of inventory values made on the client balance sheet. It emerged that persons with positive moods perceived the value of the inventory nearly as accurate as of the independent appraisers in contrast to those with neutral and negative moods.

The type of audit task has been seen to be impactful on the moods auditors are in, when making audit judgements (Cianci & Bierstaker, 2009). The research was conducted on the backdrop that positive or negative moods have a significant effect on performance and to an extent improve it (Bless, 2000; Forgas, 1995). With this in mind, the researchers examined the impact of mood on separate tasks on an audit namely ascribing reasons for instabilities in financial ratios and judgements on ethics. The authors had expectations of negative moods improving the cognitive activity of auditors as well as the effort expended by the auditor in information processing and recall (Forgas, 1995). The study finds that activities that required higher levels of cognitive ability were performed well when the person was in a positive mood. Persons in a negative mood performed less when it came to activities that required higher levels of cognitive activity.

In conclusion, the study suggests that the nature of the task is critical to understanding the impact of moods on audit judgment. In other words, positive moods contributed positively to the performance of activities that require higher levels of cognitive ability, than negative mood.

2.6.1 Measurement of Mood

There are scales to measure mood and they feature in a number of studies in psychology. Many of these scales are voluminous and also the reliability of these are received with mixed acceptance amongst researchers. It is this gap that Watson *et al.*,(1988) developed a short but reliable and validated scale to measure mood. Many other studies characterize mood into Positive Affect and Negative Affect. Positive Affect is related to pleasant feelings, excitement, alertness and activeness. Negative Affect, on the other hand, is related to anger, contempt, disgust, guilt and nervousness. The understanding of these main characterizations of mood informs the measurements of positive and negative moods by different scales.

Findings that emerge from the use of these scales are inconsistent by far. Studies report that the Positive Affect and Negative Affect have no correlation with each other, whilst others report a significant correlation (Clark & Watson, 1986; Moriwaki, 1974). This can be attributed to a number of reasons, but one that stands out as important is the scales utilized. It has been found that some scales are better and purer than others. It is in the sense that some scales are better predictors of the underlying factors of mood than others.

The resolution to these issues is in the form of robust validation procedures to produce short but reliable measures of mood. The Positive Affect & Negative Affect Schedule (PANAS) is a 10-item scale that was developed by Watson *et al.*(1988). It has proved to be internally consistent and has acceptable convergent and discriminant correlations with lengthier measures of the

underlying mood. It also exhibited longer-term stability and such as has trait-like characteristics which endures over time.

2.7 Motivation

Motivation is the effort one is willing to expend on certain activities and events to achieve objectives that are considered important (Amabile, 1985). It can be characterized in two forms; intrinsic motivation and extrinsic motivation. Intrinsic motivation describes the willingness to undertake activities because the achievement of these activities brings about inner satisfaction. On the other hand, extrinsic motivation describes the willingness to undertake certain activities because of the realization of external gains or benefits or the avoidance of external demerits (Butler, 2000; Covington & Müeller, 2001; Everaert, Opdecam, & Maussen, 2017; Vallerand, 2007). These external gains include compensation, positive evaluation, and promotion. Also, external demerits one may be motivated to avoid include penalties, suspension and dismissal (Butler, 2000; Corpus & Wormington, 2014; Hayenga & Corpus, 2010).

Intrinsic Motivation and its relationship with accounting task objectives have been studied comparatively lesser than that extrinsic motivation. Intrinsic motivation has been found to be stable in people's personality and also can be triggered by situational circumstances (Ryan & Deci, 2000; Wulf & Lewthwaite, 2016). Intrinsic motivation, when triggered by situational contexts, have been seen to improve task performance. The importance of intrinsic motivation in the conduct of audit has been emphasized by Kadous *et al.*(2016).

2.6.1 Intrinsic Motivation

Intrinsic motivation has been found to be essentially important in the performance of complex tasks and activities which most often than not require cognitive dexterity and conceptual abstraction (Ryan & Deci, 2000; Wulf & Lewthwaite, 2016). This is because the willingness to perform these tasks is primarily to satisfy the urge of achievement of the task, improving their competence, satisfying their curiosity and not necessarily for external gain. Contrariwise, intrinsic motivation has not been found to augur well with mechanical and repetitive tasks (Condry & Chambers, 1978).

It is also noteworthy that persons who do not concern themselves with intrinsic motivation tend to conduct the audit process in a “completion mode”. Completion mode is seen as undertaking activity with the keenness to end without having to undergo the rigour necessary to ensure the adequacy and/or appropriateness of the output of the activity (Deci, Nezlek, & Sheinman, 1981; Fitch, 2013; SurrIDGE, 2009). Shortcuts are very common when undertaking an activity in a completion mode and this has been seen not to augur well with the scepticism necessary for auditors to exhibit or display during an audit (Kadous *et al.*, 2016).

There has been evidence garnered that intrinsic motivation is impactful when there is a requirement for deep reasoning and critical analysis of information. It was found that those with salient intrinsic motivation are relatively competent in the critical assessment of information as compared to those who were found to have the extrinsic motivation (Hackenbrack & Nelson, 1996).

Persons who are intrinsically motivated have been found to be willing to collect more information before the assessment of any decision criteria that is relevant to the information at

hand (Kadous *et al.*, 2016; Nolder & Kadous, 2018). Collection of information has been seen to be integral to the conduct of the audit. It is essentially vital to collect important information concerning a decision criterion in the conduct of the audit.

2.6.2 Extrinsic motivation

Studies show that auditors respond to punitive and non-punitive incentives that exist in their line of work. Thus, punitive incentives such as the potential for litigation, censure and reputation loss is influential in the judgement making process for auditors. It is important to note that studies have shown that some punitive incentives have more concern for auditors than others. It found out that formal sanctions by professional bodies of accounting were considered of less concern as compared to the risk of potential litigation (Kadous *et al.*,2016). The firm, however, is concerned with such a risk and will, in turn, enhance quality control activities which may include incentivizing auditors, which directly becomes a motivation targeted at auditors.

It is noteworthy that certain incentives eventually reduce professional scepticism. Clients and their retention have been found to place considerable pressure on auditors to expend less on audit effort which in effect reduce Professional Skepticism. The eventual loss of fees can affect auditor judgments, and disagreements with clients can jeopardize client relationships and result in loss of fees.

The effective use of financial incentives for motivation would require that regulators or firms to closely tie the incentives to particular audit outcomes or audit actions (Pritchard, Campbell, & Campbell, 1977). This is difficult for complex audit tasks because it requires specifying the scope of audit work for those tasks in advance for instance, how much evidence auditors should collect or what analyses auditors should perform (Mohd-Sanusi & Mohd-Iskandar, 2007).

Consistent with this concern, financial incentives prove ineffective at motivating persons conducting less straightforward tasks, and may at times affect the performance on these tasks (Nolder & Kadous, 2018)

2.6.3 Measurement of Motivation

In an effort to measure motivation, there have been scales to do that, however, has received mixed acceptance for researchers. However, there is the Working Preference Inventory (WPI) which has received research-wide acceptance amongst the motivation literature.

Before the WPI received research wide acceptance, it is important to understand other measures of motivation that have been utilized. Harter (1981) designed for classroom students, a scale for intrinsic and extrinsic motivation. The scale was sectioned into five components namely Preference for Challenges vs Preference for Easy Work, Curiosity/Interest vs Pleasing the Teacher/Getting Good Grades, Independent Mastery vs Dependence on the Teacher, Independent Judgment vs Reliance on Teacher's Judgment and Internal Criteria for Evaluation vs External Criteria for Evaluation.

Even though the scales were designed for individuals, it was found not to be valid for long-term reliability and stability. Therefore, motivational orientation as measured by this scale does not have trait-like characteristics because tests showed it did not for more than three months. This does not present motivation as an enduring trait for at least more than three months.

DeCharms (1976) also attempted to measure motivation where he described extrinsically motivated persons felt like pawns in authority structures or towards stated rewards; whilst intrinsically motivated persons behave originally out of freedom and self- investment. The Origin Climate Scale, which emerged from his study showed whether persons are pawns or

origins in certain situations. It has been found that this scale also does not possess trait-like characteristics.

Furthermore, the Cognitive Evolution Theory developed by Deci and Ryan (1981) informed their motivation scale construction. The name of the scale is the General Causality Orientation Scale which consists of three subscales that are scored independently. These subscales are Autonomy Orientation; Control Orientation and Impersonal Orientation. Persons who score high on Autonomy Orientation exhibits freedom of choice in the initiation and/or regulation of their behaviour. Contrariwise, those who score high on Control Orientation perceive that there are controls in their behaviour and would have to confirm or react to circumstances accordingly. Persons who score high on Impersonal Orientation view themselves and behaviour as outside their intentional control.

Although the scale was not presented as a scale for motivation, the author drew concrete links of causality between the subscales and intrinsic-extrinsic motivation. They posit that autonomy-oriented persons will be intrinsically motivated whilst control-oriented persons are extrinsically motivated.

Returning to the Work Preference Inventory, the measures that emerge classifies a person into four types; intrinsically motivated; extrinsically motivated; dually motivated and unmotivated. The interesting concept about dually motivated persons is that tasks that require the salience of both intrinsic and extrinsic individuals are best performed by these persons. The WPI has proved to be predictive of a wide range of attitudes of behaviours (Amabile, Hill, Hennessey, & Tighe, 1994).

2.7 Trust

Trust is an underlying quality for many relationships, formal and informal. Its present to an extent ensures the proper functioning of the relationship in question (Lewis & Weigert, 1985). In an audit context, for example, the absence of trust will require that all transactions of the organizations are reperformed or verified to ascertain its forthrightness. Work relations of various nature and magnitude are based on the various level of trust. In an audit context, it need not include only the representations of management. It is also including the forthrightness of the questions posed to them (Aschauer, Fink, Moro, van Bakel-Auer, & Warming-Rasmussen, 2017; Harding *et al.*, 2016; Kramer, 2015).

Prior studies recount that audits in the early years were based an overtly displayed trust on the representations of client management and personnel. It has however changed since the 1930s with regards to the level of trust being displayed by auditors in relation to representations by the management (Harding *et al.*, 2016). The increased procedures to ascertain the value of inventory and the confirmation of debtors' balance followed the Mickenson and Robbins fraud and the introduction of Statements of Audit Practice (Byrnes *et al.*2012). From these years, audit procedures have evolved with regards to the level of trust. Auditors are expected, by audit standards, to trust management less and be less reliant on the representations of client management and personnel.

Trust and Distrust have been traditionally perceived as polar ends of a single construct. However, studies thence have found both trust and distrust; to be two different constructs that exhibit low correlations between themselves and they independently initiate different neurological processes (Rotter 1967, 1980). Trust and Distrust have been found to activate uncorrelated responses and

importantly, can co-exist in one's disposition (Harding *et al.*, 2016; McKnight, Kacmar, & Choudhury, 2004).

Trust and Distrust are impactful on subliminal underlying behaviours that are associated with professional scepticism. Behaviours associated with trust include; reducing the dependence on controls; a willingness to be influenced; and tolerating autonomy to the object being trusted (Lewicki, McAllister, & Bies, 1998). Display of trust translates into auditors being less critical of audit evidence and less questioning concerning audit evidence. Behaviour related to distrust, however, is symbolized by the need for official contracts; assuming greater supervision and limiting the autonomy of the subject involved. Greater levels of distrust, however, involve the excessive questioning and critical assessment of the evidence.

Trust can be defined as the positive confident expectations of another's conduct (Chun & Campbell, 1974). Trust has been found to have dispositional characteristics as well as situational characteristics. In other words, dispositional trust is trait-like and are developed over the years through the reinforcements of experiences (McKnight *et al.*, 2004; Payne & Clark, 2003). Situational trust, on the other hand, is trust that is influenced by situational contexts or contemporaneous triggers that influence one to be trusting (Goto, 1996; Payne & Clark, 2003). Dispositional trust has been found to either amplify or tame situational trust. In other words, if one is naturally disposed to trust, situational triggers that will influence the low level of trust will be intervened by his or her natural disposition to trust.

Literature intimated that auditors characterized by low levels of dispositional trust, more often than not, form sceptical judgements (Quadackers *et al.*, 2014). Even though Shaub (1996) interestingly asserted that dispositional trust had less variation in the display of professional

scepticism as compared to situational trust, the essence of dispositional trust in the interpretation of situational trust cannot be ignored.

2.7.1 Dispositional trust & distrust.

Dispositional Trust can be defined as a general expectation of positive conduct from others and an inclination to accept being vulnerable towards one's behaviour. This is juxtaposed to Dispositional Distrust which is indicative of negative consequences associated with accepting vulnerability.

Individuals have been found to be inherently possessing a natural tendency to trust and distrust (Yamagishi and Yamagishi 1994). That is without the intervention of external triggers to trust or distrust. This disposition to trust or distrust is developed as and when interpersonal expectations are met and violated.

This has a strong foundation in childhood experiences. As a child when there are expectations for parents to provide. These expectations, when repeatedly met reinforces the disposition to trust that the request for provision to be met in every other case even when the parents are not involved. Through the period of growth from childhood, interpersonal expectations concerning the provision of needs would have violated a number and this in conjunction with other experiences determine, significantly, the disposition to trust of an individual. In consonance with this, Rotter (1967) asserted that past experiences influence the amount of trust one has or extends to others. If trust extended has, for a repeated number of times, been respected with no abuse, dispositional trust increases accordingly.

Studies on the relationship of dispositional trust on the process of decision-making have found that individuals with high levels of dispositional trust set up to look to evidence to disconfirm an assertion than to confirm it (Harding *et al.*, 2016).

2.7.2 Situational trust and distrust

In connection with dispositional trust, situational circumstances cause individuals to react with the level of trust to extend towards an object. Contextual settings may influence the need to display less or more trust or distrust. Situational trust and distrust, however, can fluctuate because of the influence of situational circumstances.

Lewicki *et al.*(2006) identify two forms of trust and distrust, which is Calculus-Based Trust and Distrust and Identification-Based Trust and Distrust. Calculus-Based Trust and Distrust is a function of the cost and rewards of maintaining or not maintaining trust. Trust is enhanced when one perceives circumstances that the other will be significantly punished when trust is not honoured. Calculus-Based Distrust, however, is enhanced when one realized the cost of extending trust exceeds the benefits.

Identification Based Trust, in contrast, is dependent on deeper interactions with the objects. People tend to trust others who share their goals and values or even hail from their home country or town. It is built on the extent of time that relationships have been built. Identification Based Distrust emerges from the lack of identification with mutual goals and values between the entities in question. Cultural bias and International Relations Distrust have its source here. It is as a result of the inability to identify with the goals and values of the object to which trust is being extended (Kopp, Lemon, & Rennie, 2003; Lewicki *et al.*, 1998)

Lewicki *et al.*, (1998) note that persons who display situational distrust tend to employ alternative processing techniques when encountered with information. It has also been found to positively related to cognitive flexibility (Schul, Mayo, & Burnstein, 2004)

2.7.3 Measurement of dispositional trust

In the bid to measure the natural disposition to trust, there is a scale by Rotter (1967) called the Interpersonal Trust Scale. It is widely accepted to be able to measure the inherent trust one extends in general regardless of the situations involved. It was employed by Lewicki *et al* (1998) and Bond & Lee (2005) and many other studies in the Trust area of research.

It is made of 40 items (25 questions and 15 fillers). Uncorrelated items (fillers) to trust were added to the questionnaire to disguise the purpose of the questionnaire. It was so, to accentuate whether the scale indeed measures it was designed to measure.

Kaplan, (1973) run an exploratory factor synthesis on the Interpersonal Trust Scale and succeeded in disaggregating the scale items into three factors. These were Institutional Trust, Sincerity, and Caution. Institutional Trust is the trust one has in institutions of state like the judiciary and executive. Sincerity describes the general perception of how forthright people and situations are presented. Caution is also describing the safeguards one puts in place to prevent being exploited.

Chun & Campbell, (1974) also dimensionalized the Interpersonal Trust Scale having reduced the scale items to 12 items. The dimensions deduced were Political Cynicism, Interpersonal Exploitation, Societal Hypocrisy and Reliable Role Performance.

Political Cynicism is analogous to Kaplan's Institutional Trust, where scepticism about political agents and institutions are highlighted. Interpersonal Exploitation is analogous to Kaplan's Caution where it measures how individuals put in safeguards based on the perception that others are exploitative. Societal Hypocrisy could have easily been a sub-dimension of Kaplan's explanation of Sincerity. It measures the general perception of hypocrisy and the failure of social inanimate objects (e.g. news) to meet the expectations of forthrightness. Reliable Role Person could also have been a sub-dimension of Kaplan's Sincerity. However, this is concerned about personal, and animate objects to which people extend trust and expect that they perform their roles as expected. By virtue of its convenient nature, the study will employ the reduced 12-item Interpersonal Trust Scale developed by (Chun & Campbell, 1974)

2.8 Theory of Cognitive Dissonance

The theory of cognitive dissonance and its inception has been credited to Leon Festinger. The theory asserts that cognitions which seem not to be consistent generate an uncomfortable motivating feeling which has come to be termed as the cognitive dissonance state. The theory of cognitive dissonance suggests there is a feeling of discomfort when individuals experience cognitive dissonance (Festinger, 1962). This is where one's prior belief is at variance with another belief, and or action and thus are motivated to achieve or assume an acceptable state of comfort prior to the dissonance.

The extent of existing dissonance depends on how entrenched the prior beliefs are in the cognition of the individual. If the belief is an entrenched one, the person experiences a higher level of dissonance when it is at variance with a current belief or action. The likely outcome is a

feeling of considerable pressure and motivation to reduce dissonance. (Combs, 1971; Flood & Carson, 2013; Nisbett & Wilson, 1977; Scott, 1990).

Festinger (1962) suggested three ways people conduct themselves to reduce cognitive dissonance which involves altering one or more components involved in the relationship between beliefs or opinions and actions. For instance, the first attempt will be to change an opinion to correspond to behaviour. Secondly, one will tend to introduce new elements of opinions, beliefs and actions that correspond to each other to reduce the inconsistency. For instance, adopting new opinions which correspond to a behaviour. And thirdly, one can reduce the pressure from cognitive by downplaying the importance of the beliefs, opinions and actions involved in the dissonance relationship.

There are three major considerations important in the reduction of cognitive. The commitment to reduce the dissonance, having a clear purpose to reduce and possessing the freedom to do so. Other considerations include taking into account the consequence of the behaviour in the dissonance relationship; and the self-involvement in the dissonance-reduction process. The cognitive dissonance theory has seen applications in various studies in the social sciences and accommodates experimental research designs. (Jane C. Orcullo & Hui San, 2016; Rabbie, Brehm, & Cohen, 1959).

2.9 The Conceptual Framework for the Study.

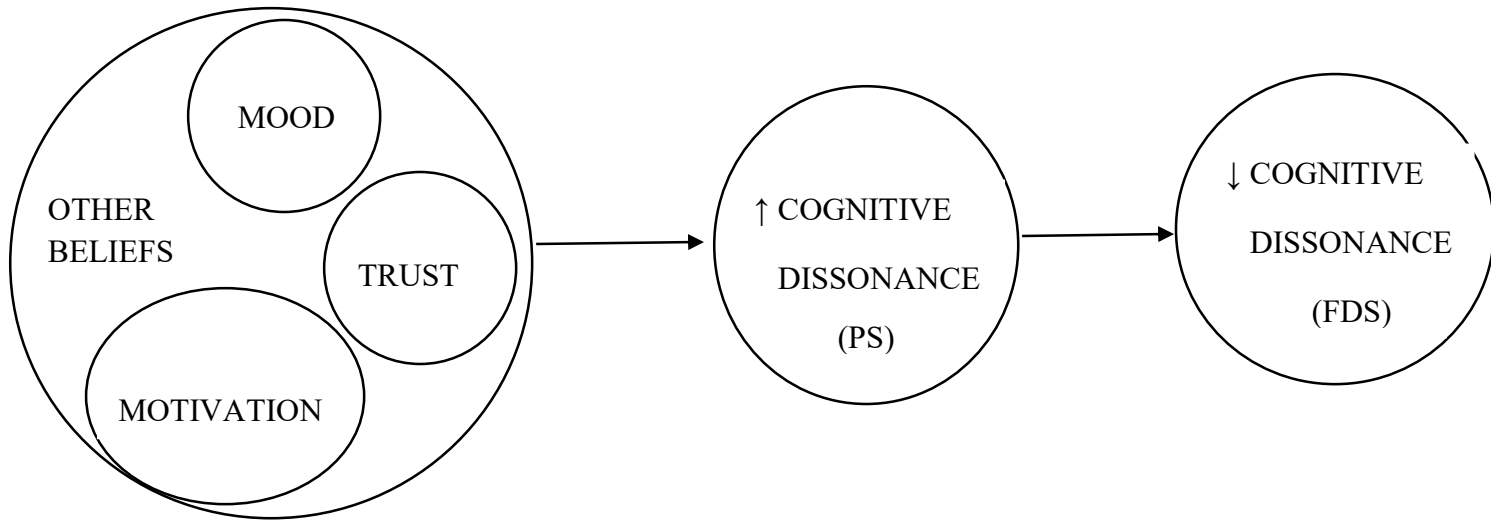
As depicted in Fig 2.1; the theory of cognitive dissonance represents the framework of the study. The current section elaborates on the compatibility of the theory and the current research. The theory adopted for the study forms a frame through which the study is understood.

As seen in Fig 2.1, the framework depicts that the characteristics (trust, mood, & motivation) of the individual influence the constitution of beliefs. The beliefs of an individual influences what is

considered as true and fair. An encounter with a conflicting evidence, therefore, increase cognitive dissonance. The increase in cognitive dissonance is exhibited by displaying professional scepticism. The urge to probe the reason for the conflicting evidence is characteristic of professional scepticism. These misgivings (evidence to the contrary) may represent fraud indicators. The auditor may employ fraud detection skills to reduce this cognitive dissonance.

In summary, there is an expectation that cognitive dissonance may increase where there is counter evidence to beliefs influenced by moods, trust & motivations. The increase in cognitive dissonance is expressed in the form of Professional Scepticism. To reduce dissonance, the auditor employs fraud detection skills.

Figure 2.1: DIAGRAMMATIC REPRESENTATION OF THE THEORETICAL FRAEWORK



KEY
PS = Professional Scepticism
FDS = Fraud Detection Skills

2.10 Hypotheses Development

Based on the framework, nine hypotheses are developed as follows:

2.10.1 Extrinsic Motivation and Professional Scepticism

Extrinsic Motivation is the willingness to expend effort upon the expectation or introduction of external incentives. External incentives can be in the form of rewards or punishments targeted at persons that are attracted to the rewards and avoiding the punishments ; whichever is applicable (Kadous *et al.*, 2016; Lin, McKeachie, & Kim, 2003). It is noteworthy that the conduct of the audit and the display of professional scepticism require rigorous cognitive processes. However, Kadous & Zhou (2019) suggests that auditors' extrinsic motivation does not improve cognitive processes. Extrinsic motivation, also, was found to narrow the attention of the decision maker (Easterbrook, 1959). Additionally, Nolen (1996) noted that external rewards coerces one to take shortcuts to desired extrinsic goal and individuals focused on external rewards and penalties tend to approach a task in a completion mode (Butler,2000). External incentives, in effect, encourage the target persons to perform tasks in completion mode. Completion mode is where tasks are conducted without the proper rigor required of them (Kadous *et al.*, 2016). Consequently, it can be expected that extrinsic motivation has a negative relationship with the display of professional scepticism.

H1: Extrinsic motivation negatively relates to professional scepticism

2.10.2 Intrinsic Motivation and Professional Scepticism

Intrinsic Motivation is the willingness to expend effort to ensure the achievement of tasks for the sake of learning and fulfilment (Kadous & Zhou,2019). The sense of adventure in learning and

the fulfilment in achieving objectives propels the target person to expend such effort. Efforts required to display professional scepticism is considered as complex. This complexity requires that one is intrinsically motivated to undergo the throes of displaying professional scepticism. Prior studies demonstrate that intrinsically motivated persons have improved task performance on activities that require deep comprehension and integration of information (Kadous & Zhou, 2019). Lepper & Henderlong (2000) opined that intrinsically motivated persons are interested in resolving dilemmas than the completion of the task. The concern is to improve competence and to satisfy curiosity. This curiosity and need for competence allow for openness of mind. This evidence is shown by Vansteenkiste *et al.* (2005), who demonstrated that intrinsically motivated adolescents showed enhanced comprehension on a journal article. There is therefore the expectation that intrinsic motivation has a positive relationship with professional scepticism and fraud detection.

H2: Intrinsic motivation positively relates to professional scepticism

H7: Professional scepticism mediates the relationship between motivation and fraud detection skills

2.10.3 Negative & Positive Mood and Professional Scepticism

Negative mood is a state of mind characterised by negative emotions such as anxiety, fear and depression sustained for a period of time. However, Positive mood is a state of mind characterized by positive emotions such as joy, happiness and excitement sustained for a period of time. Chung *et al.*, (2009) opines that negative mood is complementary to tasks that are associated with information processing. Such tasks are typical of the display of professional scepticism. The reason attributed to this suggestion is the observation by Forgas (1995) ; where

persons in a negative mood were found to be analytical in information processing that those in a positive mood. Chore *et al.*(1994) also suggests persons in a negative mood retrieve negative information from memory in making judgements. This is also evidenced in Chung *et al.*(2009) where auditors in a negative mood were found to be conservative about inventory valuation than auditors in a positive mood. Wegner and Petty(1994) also observed that persons in a negative mood were more confrontational than persons in a positive mood. Cianci & Bierstaker (2009) expanded on this line of research by examining if the impact of moods on judgement vary across audit tasks. The result revealed that negative mood persons were impressive in unstructured tasks (tasks that requires reasoning and spontaneous) than in structured tasks (tasks that are programmed and routine). The opposite was the case for positive mood persons. Consequently there is an expectation, therefore, that negative mood has a positive relationship with professional scepticism and positive mood has a negative relationship with professional scepticism.

H3: Negative mood has a positive relationship with professional scepticism

H4: Positive mood has a negative relationship with professional scepticism

H8: Professional scepticism mediates the relationship between mood and fraud detection skills

2.10.4 Trust and Professional Scepticism

Trust can be defined as the positive confident expectations of another's conduct. Literature intimated that auditors characterized by low levels of dispositional trust, more often than not, form sceptical judgements (Quadackers *et al.*, 2014). Shaub (1996) asserted that dispositional trust had less variation in the display of professional scepticism as compared to situational trust.

Interestingly Rose (2007) concluded that dispositional trust explains more of the variation in the attention to evidence suggestive of financial statement fraud. However, the essence of dispositional trust in the interpretation of situational trust cannot be ignored. Therefore, there is an expectation that trust is negatively related with professional scepticism

H5: Trust is negatively related to trait professional scepticism

H9: Professional scepticism mediates the relationship between trust and fraud detection skills

2.10.5 Professional Scepticism and Fraud Detection Skills

Studies suggest that professional scepticism has a relationship with fraud detection (Farag & Elias, 2016a; Hussin *et al*, 2017; Peytcheva, 2013). Peytcheva (2013) opined that suspicious mindset towards client significantly improves auditors' cognitive performance in the hypothesis-testing task. Hussin *et al*. (2017) suggested that the quest for information significantly affects the auditors' ability in assessing the risk of material misstatement pertaining to fraud. With a high level of Professional Scepticism, the auditors would tend to make extra checks of information before making judgements. Similarly, Pramana & Irianto (2013) also agreed that auditors can detect fraud when they seek for knowledge. The greater the evidence searched, the more capable the auditor in discovering fraud. Therefore, there is an expectation of a positive relationship between professional scepticism and fraud detection skills.

H6: Professional Skepticism is positively related to Fraud Detection Skills

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter elaborates on the methods with which the researcher achieves the research objectives. The following sections culminate into seven main sections. The first section discusses the researcher's paradigm; the second explains the designated research design; third describes the unit of analysis; the fourth describes the type of data and the data source used for the study; the fifth section presents the target population, the sample and sampling criteria employed; the sixth section describes the data collection instrument, and the last section explains the procedures and techniques used to analyse the data collected.

3.1 Research Philosophy

Research philosophy refers to the ideologies which determine the nature, and the manner knowledge is developed. It prescribes what is considered knowledge in a field of study and informs the researcher's assumptions and views about the world or reality (Saunders, Lewis, & Thornhill, 2009). The research philosophy guides the selection of the approach, design, strategy and other related methods appropriate for achieving the research objectives. The research questions, therefore, influence the research philosophy..

There are broadly two philosophies used in research studies. These are positivism and interpretivism (Saunders, Lewis, & Thornhill, 2009). Positivism holds the view that there is a single perspective to reality; hence reality is objective, independent of social values and interests, as well as the researcher's own biases. It considers science as the only valid approach by which knowledge is developed and it aims at explaining and predicting phenomena. It, therefore,

employs a deductive approach and quantitative design and methods to the study of phenomena (Crossan, 2003).

Interpretivism, on the other hand, believes that reality is socially constructed and that there are multiple perspectives to reality. With interpretivism, the researcher cannot be separated from the process of knowledge development, hence the knowledge developed is partly influenced by the biases of the researcher. Interpretivism aims at providing an in-depth understanding of phenomena and the development of theories. It, therefore, employs an inductive approach and qualitative design and methods to the study of phenomena (Goldkuhl, 2012).

The purpose of this study is to explain the factors that influence professional scepticism through the testing of hypotheses developed based on existing theories and findings from extant studies. The researcher also assumes an independent and objective position and develops knowledge using quantitative methods. Given these premises, the choice of the positivist philosophy is appropriate.

3.2 Research Design

The research design refers to the overall strategy used by the researcher in addressing the research objectives. The design influences the choice of techniques for collection and analysis. Scientific researches professes three types of designs, namely quantitative research design, qualitative research design and mixed research design (Creswell,2009). The selection of design flows from the researcher's philosophy, which is dependent on the research objectives.

Drawing from the positivist philosophy, the current study adopts a quantitative design. This design employs a deductive approach and test hypotheses based on existing knowledge and theories. The researcher employs objective data collection procedures and emphasizes on validity

and reliability of measurements. Statistical techniques in data analysis and the drawing of generalized conclusions about hypothesized relationships is possible from a quantitative research design. (Saunders *et al.*, 2009).

3.3 Unit of Analysis

This unit of analysis refers to the researcher's subject of focus - the entity about whom the researcher seeks to study a phenomenon. The researcher, therefore, collects data about this entity to draw conclusions about the phenomenon being studied (Peersman, 2014). This study explores individual attributes and how it influences the display of doubt towards uncertain adequacy of evidence and the actions they take thereafter. The current objective clarifies the focus of the study to be at the individual level; hence a micro-unit of analysis (Hollweck, 2016).

3.4 Population and Sampling

The population of a study denotes all units of significance to the study (Hanlon & Larget, 2011). The study population constitutes auditors in Ghanaian Audit Practice and they add up to 317 audit firms. These firms are categorised by the national regulator, the Institute of Chartered Accountants Ghana (ICAG). The categorisation takes into account the revenue stream of the firm, the size in term of employees and the number of partners or directors; which has the following designations : A1; A; B1; B; C; and D.

Sampling is surveying a section of population to represent similar characteristics as the population. Sampling is important because of the practical challenges in accessing the entire population (Lowhorn, 2001). Sampling techniques are categorised into probability sampling techniques and non-probability sampling techniques. Additionally, the choice of sampling technique is dependent on the research objectives.

The choice of snowball sampling technique is appropriate because of the inability to determine members of the population - auditors. There is no reference with the total number of auditors accurately determined. Auditors are trained by their respective firms and may possess a qualification. Only qualified accountants are referenced in the ICAG's list of members in good standing. The ICAG also had by the end of May 2018, 4248 members in good standing. These members are in various forms of accounting roles including audit. The audit practice draws members from all backgrounds with respect to, age, marital status, and working experience. These members may also assume non-audit roles. This mix of challenges justifies the choice of snowball sampling technique for auditors to identify their colleagues to achieve the research objectives. It is also noteworthy that such sample may have significant biases and referrals may be similar to first contacts; thus making the sample homogeneous.

This diversity has the potential to enrich the data required for the study. To ensure diversity of responses, the study sample constituted auditors from fifty (50) audit firms. The respondents were selected through referrals. A total of five hundred (500) constituted the sample.

3.5 Survey Instrument

The final questionnaire contained two sections. The first section was on respondents' demographics. The second section measured trust, professional scepticism, fraud detection skills, mood, and motivation. The questionnaire contained one hundred and forty-four questions in all; sub-questions inclusive. The first section comprises demographic details. All other questions in the second section are rated on a seven-point scale. Measurement scales used for constructs were adapted from previous studies.

3.6 Definition and Measurement of Constructs

The conceptual framework of the study consists of seven constructs; trust, motivation, mood, professional scepticism and fraud detection skills. Fraud Detection Skills, which is denoted by the level of information search demanded by an individual on encountering clues indicating fraud, is the main dependent variable. It is measured with indicators reflecting three dimensions namely Corporate Red Flags, Accounting Red Flags, and Personal Red Flags (Fullerton & Durtschi, 2005). Each question is rated on a seven-point scale, having considered its contextual relevance and suitability in this study. Questions on the mediator construct, professional scepticism reflects six dimensions namely ;Questioning Mind, Suspension of Judgement, Search for Knowledge, Interpersonal Understanding, Autonomy and Self Esteem (Hurt,2010).

3.7 Data Collection

The study design required that data be collected at the source and it was achieved by a survey using structured questionnaires. The survey was conducted between October 2018 and January 2019. The questionnaires were administered to auditors in some audit firms visited and through personal referrals. Participation in the survey was voluntary and respondents received no incentives for participation. On average, it took thirty minutes for a respondent to complete the survey. In all, five hundred and five (505) questionnaires were administered however three hundred and twenty-eight (328) were returned, representing a response rate of sixty-five (65%). Meanwhile, some of the questionnaires were not fully completed. The exclusion criterion was to exclude all observations for which most questions on the main constructs of the study were not answered. After the exclusions, three hundred and five-nine (305) observations were used for analysis, representing ninety-three (93%) of the total responses.

Table 3. 1 Definition and Measurement of Variables

#	Variable	Definition	Measurement	Source
1	Fraud Detection Skills	The ability to identify clues of the perpetration of fraud	Measures of Fraud Detection Skills	Fullerton, R., & Durtschi, C. (2005)
2	Professional Skepticism	An attitude of a questioning mind and a critical assessment of evidence.	Hurtt Professional Scepticism Scale	Hurtt, R. K. (2010).
3	Motivation	The effort one is willing to expend on certain activities and events to achieve objectives that are considered important	Work Preference Inventory	Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994).
4	Trust	Positive confident expectation one has of an entity	Interpersonal Trust Scale	Chun & Campbell (1974)
5	Mood	State of mind or a feeling	Positive and Negative Affect Schedule (PANAS)	Watson, D., Clark, L. A., & Tellegen, A. (1988)

3.8 Structural Equation Modelling

To test for the main hypothesis of the study the Structural Equation Modelling (SEM) technique was employed (Glanz, Barbara, & Viswanath, 2008; Mindra, Moya, Zuze, & Kodongo, 2017). SEM provides a platform to effectively evaluate overall fit of a model and structural paths involving multiple dependent variables with multi-item indicator variables (Hair, Sarstedt, Ringle, & Mena, 2012; Wong, 2013).

Due to the nature of the study's constructs (all variables of interest are latent) and the complex nature of the study's framework (involving multiple dependent constructs), a strict assumption of multivariate regression was not possible or practical. Latent constructs are variables that are not directly observable variables. The technique integrates a number of different multivariate techniques namely measurement theory, factor analysis, path analysis, multiple regression and simultaneous equations. It is found to be useful in formulating theories and performing confirmatory analyses of these theories (Sarstedt, Ringle, & Hair, 2017).

The advantage of employing SEM is that there is an acknowledgement of measurement errors, accounts for them in the model and reduces the errors involved (Hair, Hult, Ringle, & Sarstedt, 2014). The graphical interface employed in path modelling makes it also attractive to social scientists. Some have considered SEM to be path analysis using latent variables (Hair, Ringle, & Sarstedt, 2011; Ravand, 2016; Sarstedt *et al.*, 2017). There has come to be two approaches to fitting SEMs namely the covariance-based SEM (CB-SEM) and the partial least squares SEM (PLS-SEM). The choice regarding which of the two to use very much depends on the objective of the research. The authors spearheading the use of the statistical technique have prescribed some rules when it comes to the usage of the two approaches to SEM.

PLS-SEM has been recommended to be employed when the objective of the project is to predict a phenomenon, action or event. On the other hand, CB-SEM is recommended when the goal is to test theories, confirm them or to compare alternatives to theories (Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). Also, PLS-SEM is recommended when the model contains formative constructs and complex, having many constructs and indicators. PLS-SEM, as compared to CB-SEM is receptive of smaller sample size and data that is not normally distributed. CB-SEM is

employed on the assumption of normality of data and requires comparatively significant larger sample sizes (Henseler, Hubona, & Ray, 2016; Sarstedt *et al.*, 2017).

The partial least squares (PLS-SEM) technique was employed in this study because of the model complexity and the non-normal distribution of data. PLS-SEM corrects measurement errors and allows for the complexity of the model being tested.

Two models comprise PLS-SEM, namely the measurement model and the structural model. The measurement model is also known as the outer model. The outer model describes the link between latent constructs and their indicators. The second is the structural model, also known as the inner model, which examines the relationships between the latent constructs. These relationships are based on the hypotheses that make up the study.

Two types of latent constructs are identified on the basis of their relationship with their indicators. These types of constructs are called Formative Constructs and Reflective Constructs. With formative constructs, the variation in the indicator predicts the variation in the construct. In other words, the changes in the indicators result in changes in the latent construct. Thus, the indicators cause the formation of the construct. The indicators do not necessarily need to be strongly correlated as may be the case for Reflective Constructs. They may be different indicators that make up the latent construct in question. In modelling a structural equation model with formative constructs, the arrows point away from the indicators to the construct. This is juxtaposed with the case of reflective constructs where the arrows point from the latent construct to the indicators. This gives away the idea of what reflective constructs are. Reflective constructs in essence mirror the variation in the latent constructs. The variation in reflective constructs predicts the variation in the indicators. Every indicator is perceived to be a true measure of the

construct hence the need for stronger correlation between indicators, hence internal consistency is achieved thereof. The constructs in this construct are all reflective.

Analysis of data with SEM involves six main steps according to Sarstedt, Ringle, & Hair, (2017). The first of the six steps are to define the constructs and the second is to define the measurement model. The third is to design the framework of the study which represents prior empirical studies and the fourth step has the measurement model assessed for validity. The structural model has to be specified in step five and then in the sixth step and final step, the structural model has its validity assessed.

In the assessment of the conceptual model, the measurement model is evaluated for its reliability and validity before the structural model is validated. The structural model is only assessed when the measurement model has met all conditions for validity and reliability.

3.8.1 Covariance Based Structural Equation Modelling (CB-SEM)

CB-SEM employs the maximum likelihood function to reduce the differences between the sample covariance and that which is predicted by the theoretical model. The estimated parameters in CB-SEM tries to reproduce the covariance matrix of the observed values. In applying the maximum likelihood function, two conditions have to be met. These are, first, the variables must follow a normal distribution and secondly, the observations should be independent of one another (Chin, 1998; Hair, Ringle, & Sarstedt, 2011; Urbach & Ahlemann, 2010). CB-SEM is basically used to confirm or reject a theory. This is done by finding how well an established theoretical model can estimate the covariance matrix of a sampled data (Hair, Hult, Ringle, & Sarstedt, 2014; Sarstedt *et al.*, 2014).

3.8.2 Partial Least Square Structural Equation Modelling (PLS-SEM)

On another hand, PLS-SEM is basically used in developing new theories in exploratory research. In this approach, this is done by focusing on explaining the dependent variables' variances when examining the model. PLS has as its main objective to optimise the covariance between the predictor latent variables and the dependent latent variables (Sarstedt *et al.*, 2014b). PLS-SEM employs least square estimations for single and multi-component models and for canonical correlations (Chin, 1998). A notable characteristic of the PLS-SEM approach is that it eliminates the numerous restrictive assumptions that underlie the maximum likelihood techniques. It also ensures that improper solutions and factor indeterminacy are eliminated or reduced (Fornell & Bookstein, 1982). Basically, PLS-SEM is “a non-parametric, multivariate approach based on iterative Ordinary Least Square (OLS) regression to estimate models with latent variables and their directed relationships” (Avkiran, 2018).

Despite the unique benefits and use of PLS-SEM, it has received a number of criticisms as being less rigorous and hence low acceptance and application in examining relationships between constructs in the past. However, in recent times, we have seen an increased application of PLS-SEM in many business and non-business disciplines (Henseler, Ringle, & Sarstedt, 2015). Some researchers perceive PLS-SEM method as a better estimation method for structural models (Henseler *et al.*, 2015). It is also an accommodating alternative method for CB-SEM when the data assumptions of CB-SEM cannot be practically adhered to (Hair *et al.*, 2014).

3.8.3 Choosing between CB-SEM and PLS-SEM

To be able to select which of the two approaches to adopt, the researcher must focus on the objectives and characteristics of the two methods. According to Hair *et al.*(2014), four main lines

of guidance are suggested. These characteristics (research goal, data, model properties, and model evaluation) are discussed hereafter. Firstly, the goal or aim and objective of the research is a very important element in determining the approach to use. CB-SEM is primarily designed to be used in confirming theories. In testing theory, it requires showing how well the model fits the data. This involves hard modelling with the aim of minimizing the covariance matrix. The above points are said to be the strengths of CB-SEM. On the other hand, PLS-SEM is deemed to be more appropriate for theory development. Theory prediction and development involves soft modelling, which focuses on maximizing the level of covariance between constructs or latent variables so as to improve on the model prediction. This feature is a strong characteristic of PLS-SEM.

Secondly, the data characteristics regarding the size, distribution, scale and missing values are also key elements to consider when selecting which approach to use. Studies that employ smaller sample sizes and non-normally distributed data will be best analysed using PLS-SEM. This is because, PLS-SEM does not require data to be normally distributed since it employs a more robust approach, using calibration mechanisms that transforms the non-normal data. On the contrary, CB-SEM requires data to be normally distributed and also of a large sample size. If these requirements are not met, the results will be very inaccurate (Hair *et al.*, 2014). It is noteworthy that PLS-SEM is not immune to adequate or large sample sizes (Marcoulides & Saunders, 2006; Sarstedt *et al.*, 2014).

Another key factor to be considered is the model properties. According to Hair *et al* (2014), PLS-SEM is able to handle complex models, that involves several constructs (above five) and also several indicators measuring a construct (normally, greater than six indicators). Also, it is designed to manage constructs with a single measurement item as well, in order to generate a

comparatively higher measure of statistical power and attain convergence. In addition, PLS-SEM easily incorporates formative (indicators cause the construct) and reflective (indicators are caused by the construct) measurement models. On the other hand, CB-SEM is known to work better with non-complex and non-recursive relationships. Also, it well accommodates models that use reflective models.

Lastly, to select between the SEM approaches, researchers have to be aware of the model evaluation as well. For PLS-SEM, it assesses the model using the latent variable scores in subsequent analysis. CB-SEM, on the other hand, requires global model goodness of fit criterion and also need to test for measurement model invariance (Sosik, Kahai, & Piovoso, 2009).

Considering the nature and aim of this study, the researcher deemed it most appropriate to employ PLS-SEM rather than CB-SEM. The purpose of the study to explore auditor characteristics as determinants of professional scepticism justifies the PLS-SEM approach. Also, the model employed is complex in nature with some of the constructs having as many as ten indicators. In view of the points raised, the researcher, employs PLS-SEM approach in data analysis.

3.9 Assessing the Measurement Model

Exploratory studies require that measures and constructs employed in the study are reliable and valid. Reliability denotes the robustness of the questionnaire and more particularly, whether or not it will produce the same or consistent outcome when employed at different times and under different conditions.

There are three approaches to assessing reliability, in addition to the manual comparison of data collected with other data from a number of sources (Mohamed, Mad Shah, & Jusoh, 2016).

These test & re-test, internal consistency and alternative form. Even though these analyses approaches can only be done after data collection, the researcher needs to consider them as early as the questionnaire development stage.

Assessment of the measurement model is dependent on whether the measurement model is a reflective or formative measurement model. Some quality criteria would have to be met to satisfy validity and reliability requirements. The four tests that reflective measurement models would have to satisfy are the internal consistency, indicator reliability, convergent validity and discriminant validity.

3.9.1 Internal Consistency

Internal consistency is to ascertain the level the indicators mapped onto a latent construct measure the same latent construct by testing the correlations amongst the indicators. The popular measure of Internal Consistency is Cronbach's Alpha. However, there is an acceptable measure of Internal Consistency in the PLS-SEM space, in the name of Composite Reliability (CR). To assert adequate internal consistency, the value of CR should be above 0.7. Measures between 0.6 and 0.7 can be acceptable in some cases; however, CR Values of 0.6 and below shows a lack of adequate internal consistency. Hence it is said that the measurement lacks reliability. This study also had the Composite Reliability judge Internal Consistency.

3.9.2 Indicator Reliability

This measures the relative relevance of each indicator in the measurement of the construct. It is measured by the value of the indicator loadings and their statistical significance. The indicator loadings are calculated by the basic PLS algorithm. A good standardised loading estimate should

be equal to or greater than 0.70 (Hair *et al.*, 2009). Hair *et al.* (2009) however recommend a minimum value of 0.5; loading below 0.5 are candidates for deletion especially when constructs are reflective.

3.9.3 Convergent Validity

This is a measure of the extent to which variance in a set of indicators is explained by a single construct, or extent to which a set of indicators share a proportion of variance (Hair *et al.*, 2009). It is measured by the average variance extracted (AVE), whose sufficient value must be equal to or greater than 0.5.

3.9.4 Discriminant Validity

This shows how different a construct is from other constructs in the model. It ensures that indicators do not measure another construct aside what they are intended to measure (Urbach & Ahlemann, 2010). High discriminant validity is an indication that a construct captures some phenomena that other constructs in the model do not (Hair *et al.*, 2009). It is evaluated by the cross-loadings (Chin, 1998) and Fornell-Larcker (Fornell & Larcker, 1981a). With the cross-loadings, an indicator should load better on its construct better than any other construct in the model. With Fornell-Larcker, the AVE of two constructs must be greater than the squared correlation between those constructs (Sarstedt *et al.*, 2017); in other words, the square root of the AVE must be greater than the correlation between the constructs.

3.10 Assessment of Structural Model

After verifying the validity and reliability of the measurement model, the structural model was also tested. The first test was for multicollinearity. This test was to ensure that the constructs in

the model are not correlated, as this would increase the error in estimating the effects of each construct. Multicollinearity is evaluated by the variance inflation factor (VIF) which has an upper limit of 5 (Hair *et al.*, 2014).

Next, the coefficients of determination (R^2) of the endogenous constructs were assessed. R^2 measures the total variance explained in relation to the total variance of the construct, an indication of the predictive power of the constructs (Sarstedt *et al.*, 2014). An R^2 about 0.67 is considered substantial; 0.333 is average; 0.19 and below is weak.

3.11 Predictive Value

Further, the predictive relevance of the endogenous constructs was examined by the Q^2 (construct cross-validated redundancy) which must be greater than zero (Hair *et al.*, 2014). The value of the Q^2 was obtained by blindfolding.

Finally, the dependence relationships hypothesised by the model were empirically tested (Urbach & Ahlemann, 2010). This was done by examining the statistical significance of the path coefficients at $\alpha = 0.05$ and their directions. The statistical significances of the coefficients were obtained by bootstrapping. A path coefficient with a value 0.1 was considered nontrivial at a level of $\alpha = 0.05$. The results of the hypotheses testing are presented and discussed in chapter 4.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF RESULTS

4.0 Introduction

This chapter presents the results of the empirical analysis and discusses the findings with reference to existing studies. Descriptive statistics are first presented to help better appreciate the characteristics of the data. Chinn(1998) prescribed that it is appropriate to present PLS SEM results with the assessment of the structural model, following that of the measurement model. The assessment of the measurement model was achieved by meeting the literature-prescribed benchmarks and have been discussed extensively in the previous chapter. This assessment is based on the reflective models' Indicator reliability, Internal consistency reliability, Convergent validity and Discriminant validity. Next, the results from the testing of study's hypotheses are presented and discussed. The discussions are made with reference to extant literature.

4.1 Profile of Respondents

Table 4.1 highlights the demographic profile of the respondents in question. The sample was slightly male-dominated as we had 56.7% males as compared 43.3% females. This is in consonance with many studies that highlight a patriarchal pattern of inclusion in the audit sector, where women are represented less. This is the case even though circumstances seem to be altering to ensure diversity (Abidin *et al.*, 2009; Dambrin & Lambert, 2012; Acker, 2009)

Also, in the analysis of the age groups involved in the study, one may characterize the sample as youthful. This is because the majority of the respondents were up to 35 years of age. Having to

look at every individual age category, persons between 21-25 years made up of 26.9% of the sample. Also, persons between 26-30 years made up 28.2% of the sample whereas 20.3% were between the ages 36-40 years. 9.5% of the sample made up persons above 40 years of age. This is very characteristic of a pyramidal age structure of an organization where persons with advanced ages are few compared persons with youthful ages (Grund & Westergard-Nielsen,2005).

Furthermore, the majority of the sample were single. This can be attributed to their youthful ages as found earlier. This is because certain social-cultural factors where, and especially in recent times, young persons want to be established in their careers before accepting the responsibility that comes with marriage (Willoughby *et al*,2015; Willoughby *et al*,2015) .

More so, majority of responses were received from the A1 category of firms than the others. These firms are fewer than firms in other categories, however, in collective, they do have a staff strength larger than the other categories when taken individually. The large nature of their firms and the amount of work involved, it requires that they employ a sizable staff. This is pointing to the sample to be representative of the staff strength of the firms available in these firm categories (Grund & Westergard-Nielsen,2005).

Also, most of the respondents had up to ten years of experience in the capacity of an audit. This could be attributed to their youthful nature and also the well-known spate of turnover in most audit firms (Scandura&Viator,1994;Tnay *et al*,2013; Barsoun,2015). These two could share the reasons for most of our respondents having up to 10 years of experience.

In summary, the sample is male-dominated, youthful, single, is from the A1 category of firms and have up to 10 years of experience

Table 4. 1 Demographics

Demographic Characteristics of Respondents			
Demographics	Frequency		Percentages
	(n=305)		(%)
Gender	Female	132	43.3
	Male	173	56.7
Age	21-25	82	26.9
	26-30	86	28.2
	31-35	62	20.3
	36-40	46	15.1
	40 and above	29	9.5
Marital status	Single	205	67.2
	Married	100	32.8
Firm Category	A1	189	62
	A	35	11.5
	B1	18	5.9

	B	48	15.7
	C	8	2.6
	D	7	2.3
Years of Experience	Less than 3 years	95	31.3
	3 – 5	96	31.5
	6 – 10	108	35.4
	Above 10 years	6	1.9

4.2 Descriptive Statistics of Constructs

Table 4.2 presents the means and standard deviations of respondents' assessment of the various indicators of the constructs. Respondents reported to be less trusting. The orientation of low trust came more from their distrust in the interpersonal relationships with others which is termed as Interpersonal Exploitation (Mean=2.19; SD = 1.12). Respondents were comparatively, more confident in responsible parties to execute their responsibilities towards them (Mean=3.16 SD=1.53).

Additionally, analysis from respondents suggested that they were intrinsically motivated (Mean=5.53; SD=1.11) than extrinsically motivated (Mean=2.94; SD=1.40). Intrinsic motivation

includes items such as “I feel good when I solve complex audit tasks” (Mean=6.09; SD=0.81) and “I enjoy learning about a client’s business” (Mean=6.11; SD=0.90). It is noteworthy that there are other responses that follow suit; indicating the intrinsic orientation of our respondents’ motivation. This is juxtaposed with responses that indicated a relatively lower extrinsic motivation. For instance, “I’m motivated by the monetary rewards my job provides me” (Mean=3.17; SD=1.31) and “I’m motivated by the promotion goals I have for myself” (Mean=3.01; SD=1.38). These result explains respondents’ motivation for performing their roles is not primarily to obtain external rewards.

More so, the construct positive mood had an overall mean of 5.59 (SD=1.08). Positive mood was measured by the extent of positive emotions felt by respondents in the past year. As such respondents indicated that they were Interested (Mean=5.95; SD=0.79); Excited (Mean=5.96; SD=0.84); Strong (Mean=5.98; SD=0.89); Enthusiastic (Mean=5.95; SD=0.86); just to mention a few. On the other hand, respondents reported significantly low experience of negative feelings during the past year (Negative Mood : Mean=2.11; SD=0.97). Thus, respondents reported that they were less Distressed (Mean=2.43; SD=1.19); Upset (Mean=2.20; SD=0.94); Guilty (Mean=2.11; SD=0.99); Scared (Mean=2.09; SD=0.94); etc..

The level of professional scepticism displayed by our respondents was also ascertained. It was found that respondents reported a fairly high level of professional scepticism (Mean=5.83; SD=1.05). According to the Hurtt Professional Skepticism Scale (HPSS), if one is professional sceptic, one will have a Questioning Mind (Mean=5.61; SD=1.16); Suspend his Judgment (Mean=5.99; SD=0.83); etc..

There was also a demonstration of the fraud detection skills of the respondents. According to Fullerton and Durtschi (2005), the ability of the auditor to detect fraud is manifested in his ability to identify fraud clues that relate to the company (Corporate Red Flags), individuals (Personal Red Flags) and in the books of accounts (Accounting Red Flags). Our respondents reported having enhanced Fraud Detection Skills (Mean=5.85; SD=0.88). They were most adept at identifying corporate red flags (Mean=5.92; SD=0.75); and least adept at identifying personal red flags (Mean=5.74; SD=0.99). The ability to identify accounting red flags (Mean=5.89; SD=0.89) fell between the two earlier described, however, it is substantial.

In summary, respondents were less trusting, intrinsically motivated than not, were of a positive mood and demonstrated an enhanced level of professional scepticism and fraud detection skills.

Table 4. 2 Descriptive of Constructs

CODE	CONSTRUCTS	MEAN	STD. DEV.
	TRUST – POLITICAL CYNICISM (PC)	2.49	1.11
PC1	Unless we can attract better people into politics this country has a dark future	1.99	0.92
PC2	The judiciary is the place where we can really get unbiased treatment	3.29	1.44
PC3	If we really knew what was going on in international politics, the public would have reason to be frightened than they now	2.20	0.96

seem to be

	TRUST – INTERPERSONAL EXPLOITATION(IE)	2.19	1.12
IE1	In dealing with strangers one is better off to be cautious until they have provided evidence that they are trustworthy.	2.12	1.01
IE2	It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.	2.16	1.03
IE3	In these competitive times, one has to be alert or someone is likely to take advantage of you.	2.28	1.32
	TRUST- SOCIETAL HYPOCRISY (SH)	2.22	1.11
SH1	Hypocrisy is on the increase in our society.	2.03	0.96
SH2	Even though we have reports in newspapers, radio and television, it is hard to get objective accounts of public events	2.14	0.96
SH3	Many major national sports contests are fixed in one way or another.	2.48	1.4
	TRUST – RELIABLE ROLE PERFORMANCE	3.16	1.53
RRP1	Parents usually can be relied upon to keep their promises	3.70	1.79
RRP2	Most salesmen are honest in describing their products.	2.97	1.39

RRP3	Most repairmen will not overcharge even if they think you are ignorant of their speciality	2.82	1.42
QUESTIONING MIND (QM)		5.61	1.16
QM1	My friends tell me that I usually question things that I see or hear	4.82	1.81
QM2	I frequently question things that I see or hear	6.00	0.79
QM3	I often reject statements unless I have proof that they are true.	6.02	0.87
SUSPENSION OF JUDGEMENT (SJ1)		5.99	0.83
SJ1	I take my time when making decisions	6.02	0.81
SJ2	I do not like to decide until I've looked at all of the readily available information.	6.04	0.77
SJ3	I dislike having to make decisions quickly.	5.99	0.89
SJ4	I like to ensure that I've considered most available information before making a decision	5.95	0.86
SJ5	I wait to decide on issues until I can get more information	5.95	0.84
SEARCH FOR KNOWLEDGE (SK)		5.99	0.84
SK1	I relish learning.	6.05	0.80
SK2	I think that learning is exciting.	5.96	0.81
SK3	Discovering new information is fun.	6.00	0.91

SK4	I like searching for knowledge	5.98	0.83
SK5	I am just managing my expenses with my current income	5.97	0.90
SK6	I enjoy trying to determine if what I read or hear is true	5.95	0.81
INTERPERSONAL UNDERSTANDING (IU)		5.51	1.28
IU1	I like to understand the reason for other people's behavior.	5.91	0.93
IU2	I am interested in what causes people to behave the way that they do.	5.93	0.93
IU3	The actions people take and the reasons for those actions are fascinating.	5.91	0.97
IU4	I seldom consider why people behave in a certain way.	4.21	2.20
IU5	Other people's behavior does not interest me.	5.59	1.38
AUTONOMY (AU)		5.81	1.13
AU1	I tend to immediately accept what other people tell me.	5.74	1.2
AU2	I usually accept things I see, read, or hear at face value.	5.75	1.14
AU3	I often accept other people's explanations without further thought	5.75	1.18
AU4	It is easy for other people to convince me.	5.80	1.10

AU5	Most often I agree with what the others in my group think.	5.73	1.17
AU6	I usually notice inconsistencies in explanations.	6.07	0.97
SELF-ESTEEM (SE)		6.05	1.06
SE1	I have confidence in myself.	6.15	0.97
SE2	I do not feel sure of myself.	5.92	1.38
SE3	I am self-assured.	6.06	1.02
SE4	I am confident of my abilities.	6.00	0.97
SE5	I feel good about myself.	6.11	0.98
CORPORATE RED FLAGS (CRF)		5.92	0.75
CRF1	A department that has a lot of infighting for power positions	5.91	0.78
CRF2	An executive who is lavish and vain	5.93	0.83
CRF3	An employee who complains about discrimination	6.00	0.77
CRF4	An executive that has an autocratic management style	5.90	0.82
CRF5	Frequent changes in legal firms	5.93	0.85
CRF6	Top management is often shopping around for different legal opinions	5.89	0.83
CRF7	An unexpected change in the firm's external auditors	5.91	0.87
PERSONAL RED FLAGS (PRF)		5.74	0.99

PRF1	An employee who says he is afraid that his job will be discontinued the new changes	5.92	0.81
PRF2	An employee who complains that he can never satisfy his boss	5.97	0.83
PRF3	An employee who is working at another job for spare money	5.94	0.86
PRF4	A manager who is afraid he won't get his bonus next month if sales drop	5.89	0.79
PRF5	An employee who says he can never get his work done on time	5.93	0.82
PRF6	An employee who refuses to take any vacation	5.91	0.84
PRF7	A manager who indicates that getting approval signatures for all purchases is too much of a bother	5.93	0.84
PRF8	A manager who trusts his bookkeeper to do all of the posting, deposits, and reconciliations, because she has been doing it for 10 years	5.97	0.88
PRF9	An employee who becomes unusually suspicious	5.91	0.85
PRF10	An employee that has increased his smoking considerably	5.84	0.84
PRF11	An employee who is suddenly irritable and irrational	5.89	0.81
PRF12	An administrative assistant said she is taking Valium to calm her nerves	5.93	0.86
PRF13	An employee who is highly critical of the company	5.88	0.86
PRF14	A manager that complains a lot about her low pay	5.93	0.85

PRF15	An employee who complains that her boss is way overpaid	5.89	0.88
PRF16	A manager who was heard saying that he gives a lot more to the company than it gives to him	5.81	0.83
PRF17	A manager that feels cheated because she was not promoted	5.86	0.86
PRF18	An employee who complains that company policy on raises is inequitable	5.83	0.86
PRF19	An employee who feels his work is always undervalued	5.79	0.97
PRF20	A manager recently started attending your church	5.17	1.55
PRF21	A top executive recently completed his MBA	4.95	1.64
PRF22	A manager who is your son's baseball coach	4.90	1.77
PRF23	A manager who adopted three minority children	4.98	1.65
	ACCOUNTING RED FLAGS (ARF)	5.89	0.89
ARF1	The controller was making a lot of adjusting entries the week before the external auditors arrived	5.85	0.97
ARF2	A manager comments about how often the petty cash is replenished	5.94	0.87
ARF3	The auditors could not locate several invoices for purchases under GHC500	5.82	0.81
ARF4	There was a large adjustment to correct the inventory account after the year-end physical count	5.85	0.87

ARF5	There was an unusual number of receivables that were written off	5.92	0.93
ARF6	Miscellaneous administrative expenses increased about 40 percent for the year, with a corresponding drop in sales	5.93	0.83
ARF7	The marketing director has a weak explanation for why advertising costs have almost doubled in the past year	5.86	0.89
ARF8	The gross margin in the last quarter dropped about 20 percent	5.93	0.92
	POSITIVE MOOD	5.59	1.08
P1	Interested	5.95	0.79
P2	Excited	5.96	0.84
P3	Strong	5.98	0.89
P4	Enthusiastic	5.95	0.86
P5	Proud	5.97	0.81
P6	Alert	5.94	0.81
P7	Inspired	5.92	0.83
P8	Determined	5.99	0.79
P9	Attentive	3.63	2.10

P10	Active	3.60	2.11
	NEGATIVE MOOD	2.11	0.97
N1	Distressed	2.43	1.19
N2	Upset	2.20	0.94
N3	Guilty	2.11	0.99
N4	Scared	2.09	0.94
N5	Hostile	2.02	0.95
N6	Irritable	2.11	0.91
N7	Ashamed	2.08	0.94
N8	Nervous	2.06	0.88
N9	Jittery	2.08	0.91
N10	Afraid	1.89	1.00
	INTRINSIC MOTIVATION	5.53	1.11
I1	I enjoy learning about a client's business.	6.11	0.90
I2	I feel good when I solve complex audit tasks.	6.09	0.81
I3	My job provides me with opportunities for increasing my analytical skills.	6.22	0.80

I4	Curiosity is the driving force behind much of what I do.	6.10	0.79
I5	I want to find out how good I really can be at my work.	6.03	0.87
I6	I enjoy the challenges that my job provides me on a daily basis.	4.09	1.78
I7	No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.	4.12	1.82
EXTRINSIC MOTIVATION		2.94	1.40
E1	I'm motivated by the monetary rewards my job provides me.	3.17	1.31
E2	I'm motivated by the promotion goals I have for myself.	3.01	1.38
E3	My friends and family have encouraged me to go into auditing.	2.87	1.41
E4	I'm motivated by the recognition I can earn from other people.	2.99	1.40
E5	I prefer working on audit tasks with clearly-specified procedures.	2.92	1.46
E6	I'm motivated by future career opportunities outside audit firms.	2.77	1.41
E7	I want my audit team members to be impressed with my work.	2.83	1.41

4.4 Conceptual Framework

Presented in Fig 4.1, is the conceptual framework of the study. It indicates the interrelationships that comprises the research objectives. First, it shows the predictors of professional scepticism

which is conceptualized to be personal characteristics (i.e. mood, trust, motivation). Second, the framework conceptualizes the mediating role of professional scepticism in the relationship between personal characteristics and FDS.

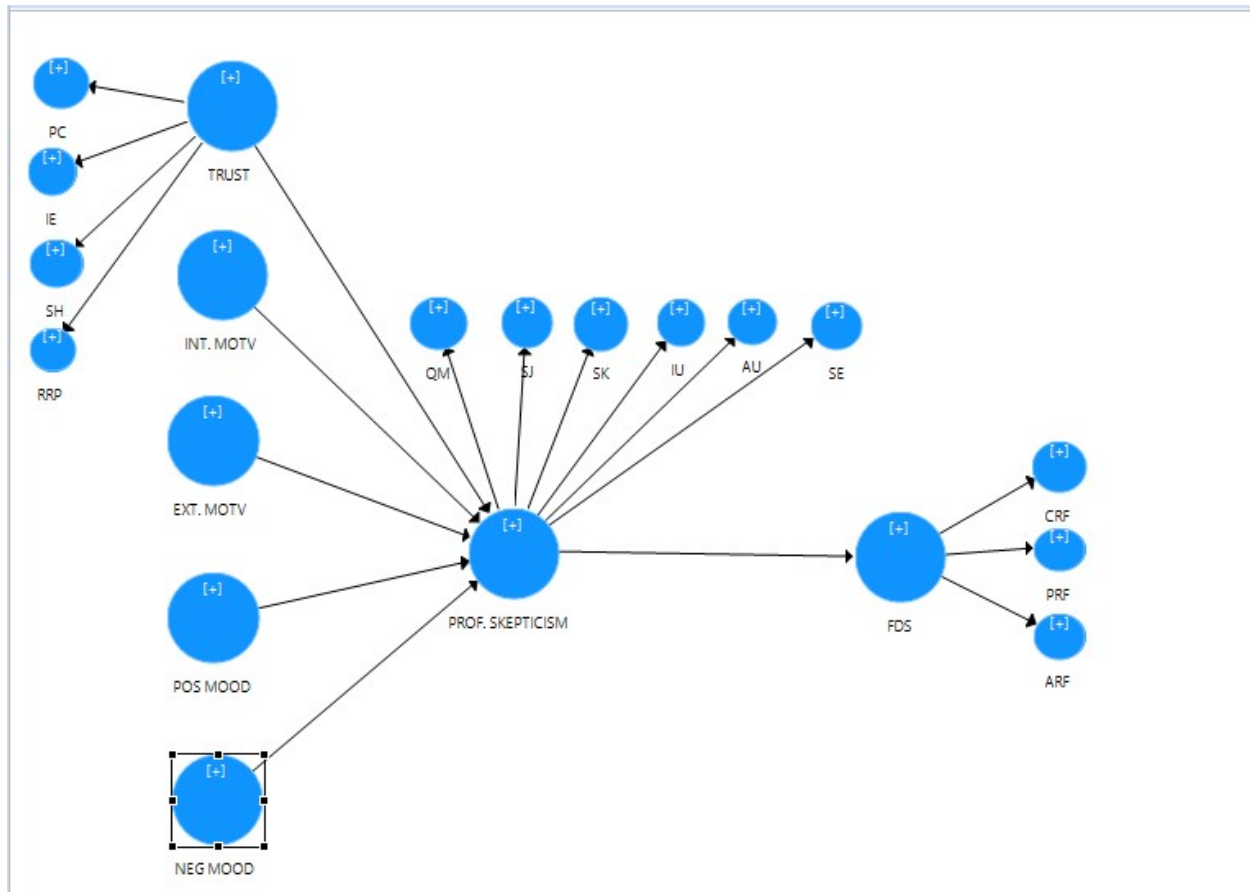


Figure 4.1 Conceptual Framework

From the conceptual framework, some of the constructs are multidimensional in nature. It is, therefore, necessary to derive unidimensional measures to achieve the research objectives. Such is the reason that Hierarchical Component Models (HCMs) were constructed. The constructs that are multi-dimensional are Trust, Professional Scepticism and Fraud Detection Skills. All these constructs are Reflective-Reflective HCMs and thus, the repeated indicator approach was used in

modelling them. The proponents of constructing HCMs have made the argument of model parsimony for the utility of HCMs. HCMs are constructed having considered theoretical implications, especially whether the sub-constructs are reflective or formative in nature (Hair *et al*,2014).

For instance, the HCM for Trust reflects Political Cynicism, Interpersonal Exploitation, Societal Hypocrisy and Reliable Role Performance (Chun & Campbell, 1974). Also, Professional Skepticism is manifested by Questioning Mind, Suspension of Judgement, Search for Knowledge, Interpersonal Understanding, Autonomy, and Self-Esteem. More so, Fraud Detection Skills is manifested by the ability to identify Corporate Red Flags, Personal Red Flags and Accounting Red Flags.

As suggested by Wetzels *et al.*, (2019), the first approach is to estimate the first and second-order constructs in the model. It is after this, that the latent variable scores are saved and used as one-item indicators of the constructs in the model. The SmartPLS version 3.0 was used to estimate the empirical model Figure 4.2. According to the guidelines by Hair *et al.*(2014), the quality of the measurement model of the constructs was assessed. The first of it is to investigate the indicator loadings that the indicator loadings to make sure they were 0.40 and above. Afterwards,convergent validity and discriminant validity was assessed and reported in Tables 4.4 and Table 4.5.

4.5 Empirical Results from PLS-SEM

Hair *et al*(2014) opined that PLS-SEM allows for assessing complex relationship models using latent variables. PLS-SEM assesses the measurement model quality and estimates the parameters

of the structural model. The following paragraphs present the findings on the quality of the measurement model. The assessment of the relationships in the structural model follows.

Indicator Loadings

Table 4.3 shows the indicator loadings of the various constructs. It should be of note that the loadings shown are at the statistical significance of at most 5%, especially of reflective constructs. Having utilized the PLS-algorithm, loadings of less than 0.4 were omitted. From the table, all the loadings are above the threshold of 0.4 and significant. Results of the values of indicator loadings range from a lower bound of 0.42 to an upper bound of 0.92. According to Hair *et al.* (2014), the constructs can be considered to have passed the indicator reliability test.

Table 4. 3 INDICATOR LOADINGS

TRUST					
POLITICAL CYNICISM		INTERPERSONAL EXPLOITATION		SOCIETAL HYPOCRISY	
PC1	0.93	IE1	0.83	SH1	0.70
PC3	0.52	IE2	0.79	SH2	0.79
		IE3	0.77	SH3	0.72
RELIABLE ROLE PERF		POSITIVE MOOD		NEG. MOOD	
RRP2	0.73	POS1	0.72	NEG6	0.72
RRP3	0.83	POS2	0.83	NEG7	0.78
				NEG8	0.73

MOTIVATION

**INTRINSIC
MOTIVATION**

EXTRINSIC MOTIVATION

I1	0.73	ExtM4	0.53
I2	0.75	ExtM5	0.79
I4	0.72	ExtM6	0.76
I5	0.70		

**PROFESSIONAL
SCEPTICISM**

**QUESTIONING
MIND**

**SUSPENSION
JUDGEMENT**

OF

**SEARCH FOR
KNOWLEDGE**

QM2	0.66	SJ3	0.81	SK3	0.72
QM3	0.83	SJ4	0.86	SK5	0.86

**INTERPERSONAL
UNDERSTANDING**

AUTONOMY

**SELF-
ESTEEM**

IU1	0.76	AU1	0.76	SE1	0.73
IU2	0.78	AU2	0.73	SE4	0.79
IU3	0.80	AU3	0.73	SE5	0.78
		AU4	0.76		
		AU5	0.78		

FRAUD DETECTION SKILLS					
CORPORATE FLAGS	RED	PERSONAL FLAGS	RED	ACC. RED FLAGS	
CRF4	0.77	PRF15	0.43	ARF1	0.80
CRF6	0.81	PRF18	0.42	ARF2	0.68
		PRF20	0.84	ARF3	0.71
		PRF21	0.86		
		PRF22	0.90		
		PRF23	0.88		

4.6 Internal Consistency Reliability

The results of the indicator reliability test provide a base for the assessment of internal consistency. Table 4.4 provides results of adequate internal consistency with the Composite Reliability (CR) Values ranging from 0.71 to 0.88. This is founded on the basis of prior research (Sarstedt *et al.*, 2017) where it recommends a CR of 0.7 and above. The Composite Reliability has been cited to be of preference especially for PLS analysis (Chinn, 1998). The results demonstrate the constructs employed in the study were internally consistent.

4.7 Convergent Validity

The Average Variance Extracted (AVE) criterion was used in the assessment of convergent validity, as recommended by Fornell & Lacker (1988). The result shows that the indicators underpinning the construct are related to one another, explaining that at least half of the variance in the indicators can be explained by the variance in the construct. It can, therefore, be seen that

the measurement model in this study, showed satisfactory values for the AVEs, hence convergent validity satisfied (Hair *et al.*, 2011).

Table 4. 4 Internal Consistency And Convergent Validity

		Composite Reliability CR	Average Variance Explained AVE
TRUST			
	POLITICAL CYNICISM	0.71	0.57
	INTERPERSONAL EXPLOITATION	0.84	0.63
	SOCIETAL HYPOCRISY	0.78	0.55
	ROLE RELIABLE PERF	0.76	0.61
MOTIVATION			
	INTRINSIC MOTIVATION	0.82	0.53
	EXTRINSIC MOTIVATION	0.74	0.50
MOOD			
	POSITIVE MOOD	0.76	0.61
	NEGATIVE MOOD	0.79	0.55
PROF.SCEPTICISM			
	QUESTIONING MIND	0.72	0.56
	SUSPENSION OF JUDGEMENT	0.82	0.69
	SEARCH FOR KNOWLEDGE	0.78	0.63
	INTERPERSONAL UNDERSTANDING	0.82	0.61
	AUTONOMY	0.87	0.56
	SELF ESTEEM	0.81	0.59
FRAUD DETECTION SKILLS			
	CORPORATE RED FLAGS	0.77	0.62
	PERSONAL RED FLAGS	0.88	0.56
	ACCOUNTING RED FLAGS	0.78	0.54

4.8 Discriminant Validity

Discriminant validity was examined after the reliability and convergent validity assessments. For the assessment of discriminant validity, the study relied on the Fornell-Larcker criterion .

In Table 4.5, the square roots of the AVEs are boldly shown on the diagonals; the figures below the diagonals are the correlations between the constructs. From Table 4.5, all highlighted figures on the diagonals are higher than off-diagonal figures beneath them, implying that the square root of a construct's AVE was higher than the correlation among the other constructs. Thus, the results met the recommendation by Fornell & Larcker (1981) and present evidence of discriminant validity.

Generally, before proceeding with the structural model analysis, the measurement characteristics of the construct and their indicators must first meet specific recommendations by existing studies.

Based on the results presented, the measurement model for this study was valid and fit.

Table 4. 5 Fornell-Lacker Criterion

	ARF	AU	CRF	EXT. MOTV	FDS	IE	INT. MOTV	IU	NEG MOOD_
TRUST									
SK									
SI									
SH									
SE									
RRP									
QM									
PS									
PRF									
POS MOOD									
PC									
NEG MOOD_									0.74
IU								0.78	-0.13
INT. MOTV							0.73	0.36	-0.29
IE						0.8	-0.26	-0.3	0.07
FDS					0.57	-0.08	0.52	0.3	-0.26
EXT. MOTV				0.71	-0.02	0.13	-0.21	-0.16	0.17
CRF			0.79	-0.12	0.48	-0.16	0.36	0.27	-0.26
AU		0.75	0.26	-0.18	0.26	-0.28	0.39	0.32	-0.26
ARF	0.73	0.23	0.32	-0.15	0.65	-0.24	0.38	0.31	-0.21

4.10 Analysis of the Structural Model Results

This section elaborates on the results of the Structural Equation Modelling technique employed in analysing relationships among the constructs which represents the conceptual framework of the study. It is needful, and suggested in the literature, that the appropriateness of the structural model requires collinearity diagnostic checks by estimating the Variance Inflation Factors for the various constructs. Additionally, the coefficient of determination (R^2) and the Predictive Value (Q^2) of the model of the study is assessed. It is after which, the bootstrapping procedure is conducted to understand the magnitude and strength of the paths in the model. In addition, the mediation relationships as hypothesized in the study is examined using the guidelines as recommended by Zhao, Lynch, & Chen, (2010).

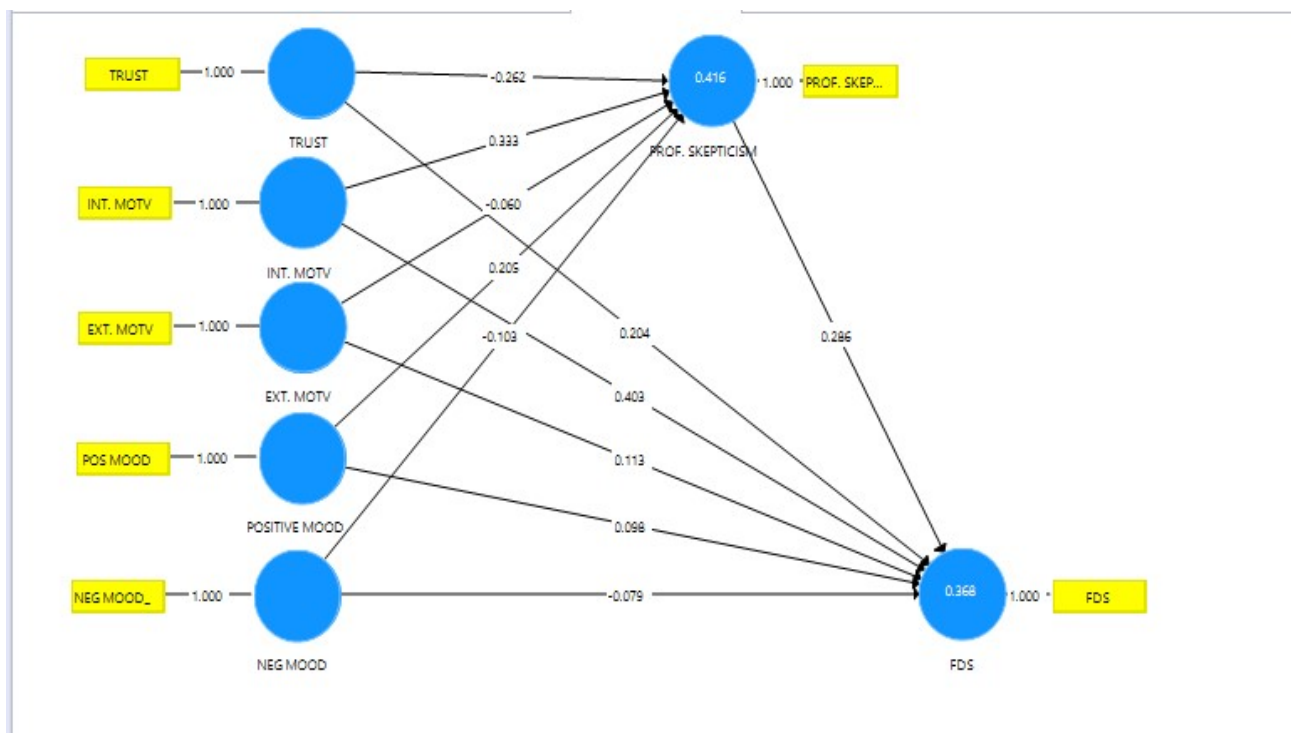


Figure 4. 2 Structural Model of the Study

4.11 Variance Inflation Factor (VIF) Results

In the bid not to increase the error in estimating the effects of each construct, it is expected that the constructs in the model are not correlated. To estimate multi-collinearity, the Variance Inflation Factor is the key indicator. There is contention in the literature concerning the acceptable threshold for Variance Inflation Factor. O'brien(2007) intimated that few studies suggest an upper limit of 5. From Table 4.6, the VIF values are below 5. There is assurance, therefore that there is not a problem of multicollinearity.

Table 4. 6 Inner VIF Values

	FDS	Professional Scepticism
Ext. Motv	1.10	1.09
Int. Motv	1.44	1.25
Neg mood	1.15	1.14
Positive mood	1.25	1.17
Professional scepticism	1.71	
Trust	1.29	1.18

4.12 Co-efficient of Determination

The predictiveness orientation of the PLS-SEM can be estimated using the Co-efficient of Determination. The R^2 indicated how fitting the model is, to the data it has been subjected to. Generally speaking, literature has set in place some benchmarks which help in the interpretation of the R^2 . There is the suggestion that an R^2 value of 0.67 and above is substantial, from 0.33 to

0.66, can be described as moderate, and values of 0.19 and below can be described as weak. (Chin,1998). In reference to Table 4.7, trust, intrinsic and extrinsic motivation, positive and negative mood explained 42% of the variance in professional scepticism. Whereas, 37% of the variation in fraud detection skills is explained by trust, motivation, mood, and professional scepticism. The understanding therefore from these, suggests that the conceptual model is moderately fit.

Table 4. 7 Co-efficient of Determination

	R Square	R Square Adjusted
Fraud Detection Skills	0.37	0.36
Professional Skepticism	0.42	0.41

4.13 Blindfolding

The predictive relevance of the structural model can be ascertained by employing the blindfolding procedure. It is measured as Q^2 . In its estimation, the procedure involves deleting a small sample of the data matrix and estimating the deleted sample using the model estimates. In literature, there have been considerations on what it is the acceptable Q^2 that makes for predictive relevance. There are scholars that suggest that Q^2 values of .02, .15, .35 (small, medium, and large respectively), and also others suggest that predictive relevance can be assured should the Q^2 be above 0. As shown in Table 4.8, the Q^2 values for all the endogenous constructs are above zero.

Table 4. 8 Blindfolding

Construct	Q² (=1-SSE/SSO)
Fraud Detection Skills	0.054
Professional Skepticism	0.225

4.14 Evaluation of Path Coefficients

The standardized Beta coefficients of the Ordinary Least Square regression is analogous to the path coefficients. Prior studies suggest that the size of a path coefficient has to be considered meaningful for it to be of relevance to the conceptual model (Sarstedt *et al.*, 2014). A path coefficient of at least 0.1 is postulated to be a significant relationship (Hair *et al.*, 2011). Having employed the SmartPLS Bootstrapping procedure, it enabled the assessment of the study's relationships. It is well understood that within the structural model, each path relationship between two constructs represents a hypothesis. In the interpretation of the paths, those paths classified as "accepted" are those that showed statistical significance in the hypothesized direction. However, those classified as "not accepted" showed the direction however relationship is not statistically significant. The results as presented allows the researcher to accept or not accept each proposed hypothesis and also understand the relationship especially of the direction it took. The following sections elaborate on the results and the discussions of the main hypotheses of the study.

4.13.1 Hypothesis Testing

The result of each proposed hypothesis is discussed in this section. The initial results that test the existence of the direct relationships among the study constructs are presented in Table 4.9.

Table 4. 9 Path Co-efficients , Direct Effect (P-Value), Significant Level for All Hypothesised Paths

Hypothesis	Path	Standard Coefficient	Direct Effect (P-value)	Result
H1a	Extrinsic Motivation -> Fraud Detection Skills	0.11	0.08*	Accepted
H1b	Extrinsic Motivation -> Professional Scepticism	-0.06	0.20	Not Accepted
H2a	Intrinsic Motivation -> Fraud Detection Skills	0.40	0.00***	Accepted
H2b	Intrinsic Motivation -> Professional Scepticism	0.33	0.00***	Accepted
H3a	Negative Mood -> Fraud Detection Skills	-0.08	0.29	Not Accepted
H3b	Negative Mood -> Professional Scepticism	-0.10	0.22	Not Accepted
H4a	Positive Mood -> Fraud Detection Skills	0.10	0.24	Not Accepted
H4b	Positive Mood -> Professional Scepticism	0.21	0.00***	Accepted
H5a	Trust -> Fraud Detection Skills	0.20	0.01**	Accepted
H5b	Trust -> Professional Scepticism	-0.26	0.01**	Accepted
H6	Professional Scepticism -> Fraud Detection Skills	0.29	0.00***	Accepted

Significance level: ***1%; **5%; *10%. The Table shows the path coefficients of the various relationships and P-value.

4.13.2 Discussion of Results.

From Table 4.9, seven out of eleven hypotheses were statistically significant. This indicates the individual characteristics are good predictors of the display of professional scepticism. In addition, the display of professional scepticism is a predictor of fraud detection skills.

Extrinsic Motivation and Professional Scepticism (H1)

The results from Table 4.9 suggest that there is a negative relationship between extrinsic motivation ($\beta=-0.06$, $p\text{-value}<0.20$) and professional scepticism. This is not suggestive that when extrinsic incentives are introduced, auditors tend to display less professional scepticism. It shows that extrinsic incentives do not propel one to display professional scepticism. This is because the display of professional scepticism, a cognitive process, does not have physical substance. Thus, it is difficult for supervisors to attach physical rewards to the display of professional scepticism. Incentives are known to be attached to the completion of audit tasks regardless of whether professional scepticism was displayed or not (Sansone&Harackiewicz,2000). This denotes that extrinsically motivated persons are not keen on displaying professional scepticism because it is not extrinsically rewarding. This is in tandem with a prior study which suggested that extrinsic motivation has a positive effect when a task is straightforward and requires less cognitive ability, and as such a drawback when it comes to cognitively complex tasks such as displaying professional scepticism (Kadous *et al.*, 2016).

Extrinsic Motivation and Fraud Detection (H α)

A positive relationship was found between extrinsic motivation ($\beta=0.11$, $p\text{-value}<0.08$) and fraud detection. This is because detecting fraud is directly observable and the extrinsic rewards attached to them are very much attractive to achieve. In the conduct of an audit, one may look

out for fraud clues. This is because in the event fraud is detected, especially extrinsically motivated persons are allured by the satisfaction of others which most often may be his or her colleagues witnessing his or her capability. This explains the positive relationship between extrinsic motivation and fraud detection. This is corroborated in studies where extrinsic motivation has been found to be instrumental in the achievement of activities that especially attracts the admiration of others (Kadous *et al.*,2016; Vansteenkiste *et al.*,2004 ;Vansteenkiste *et al.*,2005).

Intrinsic Motivation and Professional Scepticism (H2).

The relationship between intrinsic motivation ($\beta=0.33$, $p\text{-value}<0.00$) and professional scepticism were found to be positive according to Table 4.9. Intrinsically motivated persons are found to be enthused about the rigor involved in conducting audit and as such would display behaviours which facilitates the achievement of work objectives(Vansteenkiste *et al.*,2004). This would include the display of professional scepticism in the case of auditors. In the exercise of their duty in the conduct of the audit, intrinsically motivated persons are not enticed by external rewards. The absence of external rewards for the display of professional scepticism, provides no drawback for intrinsically motivated persons in the performance of their work (Vansteenkiste *et al.*,2005) .

This finding is corroborated by a previous study by Kadous *et. al* (2016) that found that intrinsic motivation has a positive effect on professional scepticism. A few studies in psychology also suggest that intrinsic motivation enhances cognitive processes(e.g Vansteenkiste *et al.*,2004 ;Vansteenkiste *et al.*,2005; Sansone & Harackiewicz, 2000) This is because in the

exercise of complex cognitive processes which characteristic of professional scepticism, intrinsic motivation is often required in its successful completion of such activities.

Intrinsic Motivation and Fraud Detection Skills (H β)

Intrinsic Motivation, more so, was found to be positively related to Fraud Detection Skills ($\beta=0.40$, $p\text{-value}<0.00$). This relationship demonstrates that intrinsically motivated persons are inwardly motivated to achieve objectives whether or not there are external rewards attached to them. It keeps with the idea that intrinsically motivated persons derive satisfaction from completing tasks and achieving objectives.

This finding is in consonance with that of a previous study, which indicated that intrinsic motivation is desirable in work completion and employing fraud detection skills ,if required, can be exercised in achieving that (Kadous *et al*,2016). Also Sansone&Harackweiz (2000) also indicates that the intrinsic motivation is a possible influence on achievement of tasks that may require the use of cognition. This suggests that intrinsic motivation is an important predictor of fraud detection skills considering the sample of respondents.

Negative Mood and Professional Scepticism(H3)

Negative mood was found to be negatively related to Professional Scepticism ($\beta=-0.10$, $p\text{-value}<0.29$). This is because negative moods have been found to be associated with an unconstructive cognitive activity which is not characteristic of professional Scepticism (Bhattacharjee and Moreno,2013). However a few studies suggest sometimes negative mood enhances probity (Forgas, 1995; Wegener ,1994). Having that understanding it seems to explain

why they are negatively related. Additionally, it must be understood that moods do have a displacing effect. It means that, unlike motivation where intrinsic motivation and extrinsic motivation can co-exist, positive mood and negative mood may displace each other depending on the feelings on the individual. And so, since the respondents indicated that, on the average, they are in a positive mood, the effect of negative mood may be subsumed. This is confirmed by the negative relationship that exists here.

Negative Mood and Fraud Detection Skills (H_7)

More so, there is a negative relationship between negative mood ($\beta = -0.08$, $p\text{-value} < 0.29$) and fraud detection skills. There is however evidence that negative mood is unsupportive of cognitive processes required of in information search skills - key to fraud detection skills (Bhattacharjee & Moreno, 2013). Although some studies suggest that there is some utility in negative mood in confrontational situations (Cianci & Bierstaker, 2009; Chung *et al.*, 2009), the inability to make constructive judgements in negative mood is recognised (Yeun & Lee, 2003). This may explain the reason for the negative relationship between negative mood and fraud detection skills.

Positive Mood and Professional Scepticism (H_4)

A positive relationship was found between Positive Mood and Professional Scepticism ($\beta = 0.21$, $p\text{-value} < 0.00$). This points to the suggestion that persons in a positive mood demonstrated enhanced levels of professional scepticism. This is the case because positive moods have been found to aid constructive cognitive ability which characterizes the cognitive process involved in professional scepticism.

This finding is demonstrated in the study by Bhattacharjee & Moreno (2013) where they found that positive mood was positively related to professional judgement. However this finding is at

variance with a few studies that suggest that positive mood may inhibit professional judgement (Wegener&Petty,1994; Forgas,1995). It indicated that persons in a positive mood had the right frame of mind to make quality decisions concerning information presented to them. This cognitive process is similar to when evidence is presented to an auditor in an audit context.

Positive Mood and Fraud Detection Skills (H δ)

Positive mood was found to be positively related to fraud detection skills ($\beta=0.10$, p-value<0.24), however not statistically significant. Such a result suggests that persons in a positive mood are predicted to demonstrate an enhanced level of fraud detection skills. The positive mood has also been associated with constructive cognitive ability; characteristic of such is information search. Probing is essential to fraud detection skills according to Fullerton and Durtschi (2005) and it is the metric with which fraud detection skills is determined. It serves as a good justification for the reason for the positive relationship between positive mood and fraud detection skills

Trust and Professional Scepticism (H5)

Trust was found to have a statistically significant negative relationship with professional Scepticism ($\beta=-0.26$, p-value<0.01). This is expected because persons who are less trusting are expected to be sceptical in many respects (Quadackers *et al.*,2011). It is worth understanding that trust is fundamental to the expression of scepticism (Harding&Jidin,2016). Similar to the presumptive doubt perspective of professional scepticism, auditors are expected to be less trusting of management or evidence provided by them until it is undeniably free of misstatement whatsoever. Audit Standards setters have reiterated that assertion that some auditors, in some cases allowed their trust in management to cloud their judgement upon encountering evidence presented to them by management.

Trust and Fraud Detection Skills (Hε)

Trust was found to be positively related ($\beta=0.20$, $p\text{-value}<0.01$) to Fraud Detection Skills. This suggests that trust predicts that auditors may have enhanced the level of fraud detection skills. This may be incongruent with practical understanding. Although this may be so, it provides a unique opportunity to witness where practical circumstances do not follow research expectations. This is because there is an expectation that trust should be negatively related to fraud detection skills (Quadackers *et al.*,2009). The result show otherwise and it requires further analysis.

We must note that there is a possibility that auditors working with clients may build some level of trust in the client management (Aschaeur *et al.*,2017). This level of trust built may be in place in the conduct of the audit. It is, however, stated in Auditing Standards that auditors should conduct the engagement with a mindset that recognizes the possibility that a material misstatement due to fraud could be present, regardless of any past experience with the entity and regardless of the auditors' belief about management's honesty and integrity (IFAC,2007,ISA 240.23-25). This means that in spite of the trust built concerning management honesty and integrity as a result of past experience, auditors are required to conduct the audit with a mindset of a possibility that there exists misstatement due to fraud. And so, the result of a positive relationship between trust and fraud detection skills here demonstrate that in spite of, and not because of, trust, that fraud detection skills are enhanced.

Professional Scepticism and Fraud Detection Skills (H6)

Professional Scepticism was found to be positively related to Fraud Detection Skills ($\beta=0.29$, $p\text{-value}<0.00$). This explains persons who are professionally sceptic indeed have enhanced levels of fraud detection skills. This is consonance with Idawati & Gunawan, (2015) that suggested that

a mindset of scepticism helps in the assessment of risks and in decision making. Also, Griffith *et al.*, (2015) having studied senior-level auditors' assessment of goodwill, came to the assertion that a sceptical mindset helped the auditors to identify unreasonable estimates. Also, Royae, Nezhad, & Azinfar (2013) identified that sceptical persons are ready to increase their information search to clarify complex situations. It serves as a good justification that there is a significant negative relationship between professional scepticism and fraud detection. Furthermore, the need for closure to satisfy auditor scepticism in fraud risk assessment is in consonance with the deployment of fraud detection skills. And so, the suspension of judgement which is characteristic of professionally sceptic auditors inures to the reason that there is enhanced fraud detection skills when auditors are professionally sceptic (Quadackers *et al.*, 2009). In other studies, there was a positive relationship between interpersonal understanding, a characteristic of professional scepticism, and fraud risk brainstorming (McAllister, Blay, & Kadous, 2016). And this further reiterates the positive relationship between professional scepticism and fraud detection skills.

4.13.3 Discussion of Mediation Analysis

The conceptual framework hypothesized the mediating role of professional scepticism between the personal characteristics of auditors (i.e. motivation, mood and trust). The following paragraphs elaborate on the assertion and reasons are ascribed to them. In understanding the mediating role of professional scepticism, it is important to understand the direct effect and indirect effect of the relationships involved. (Zhao *et al.*, 2010)

Table 4. 10 Path Coefficients, Specific Indirect Effect (P-value), Significant Level for All Hypothesized Paths

Hypothesis	Path	Standard Coefficient	(P-value)	Results
H1c	ExtMotv->Prof.Scepticim->Fraud Detection Skills	-0.02	0.25	N/A
H2c	IntMotv->Prof.Scepticim->Fraud Detection Skills	0.10	0.01***	Accepted
H3c	NegMood->Prof.Scepticim->Fraud Detection Skills	-0.03	0.27	N/A
H4c	PosMood->Prof.Scepticim->Fraud Detection Skills	0.06	0.06*	Accepted
H5c	Trust->Prof.Scepticim->Fraud Detection Skills	-0.08	0.02**	Accepted

Significance level: ***1%; **5%; *10%. The Table shows the path coefficients of the various relationships and P-value. [N/A=Not Accepted]

Motivation and Fraud Detection (H1a & H2a)

The mediating role of professional scepticism in the relationship between Extrinsic Motivation and Fraud Detection Skills will be assessed first. According the Table 4.9, the direct effect of the relationship was found to be significant at 10% significance level [$\beta=0.11, p\text{-value} < 0.10$], whilst the specific indirect effect was found not to be statistically significant [$\beta=-0.02, p\text{-value} < 0.25$]. The import of the result suggest that professional scepticism does not mediate the relationship between extrinsic motivation and fraud detection skills. And this is not far-fetched as it was earlier indicated that extrinsically motivated persons are interested in external rewards; whether tangible (incentives) or intangible (recognition or praise) and so are not involved in the cognitively tenuous activity which characterizes professional scepticism, in their fraud detection

activity. Also, according to Kadous *et al.*, (2016), extrinsically motivated persons are found to perform activities in a completion mode, where persons cut corners and do not involve themselves in the rigour associated with the activity. This serves as the reason for the inability of professional scepticism to mediate the relationship between extrinsic motivation and fraud detection skills.

Second, the mediating role of professional scepticism is examined in the relationship between intrinsic motivation and fraud detection skills. The direct effect of the relationship between intrinsic motivation and fraud detection skills was found to be significant [$\beta=0.40$; $p\text{-value}<0.00$], and the indirect effect was found to be significant as well [$\beta=0.10$, $p\text{-value}<0.01$]. The import of the result above is that professional scepticism mediates the relationship between intrinsic motivation and fraud detection skills. This is because of intrinsically motivated persons in the course of the work are mindful of achieving objectives, and not shying away from the rigour that is associated with work because they are enthused by it as well (Sansone & Harackiewicz, 2000). Intrinsically motivated persons are open to the rigour that may be involved in the activity at hand, which in the audit context, describes the characteristics of professional scepticism. Therefore, it is possible the reason intrinsically motivated persons are predicted to have enhanced fraud detection skills is partly explained by their exercise of professional scepticism.

Mood and Fraud Detection Skills (H3a & H4a)

In this section, the mediating role of professional scepticism is examined - in the relationship between mood and fraud detection skills. First, we have a look at the relationship between negative mood and fraud detection skills and the mediating role of professional scepticism. The relationship between negative mood and fraud detection skills was found to be insignificant [$\beta = -0.08$; $p\text{-value} < 0.29$]. Also, the specific indirect effect was also found to be insignificant [$\beta = -0.10$; $p\text{-value} < 0.22$]. This denotes that there is no mediating role of professional scepticism by the reason that the negative mood does not significantly predict the level of fraud detection skills. Also, the specific indirect effect is also insignificant. Since there is no significant relationship, whether direct and indirect effect, no mediation analysis can be conducted in this case. This only means that the underlying structure of the negative relationship between negative mood and fraud detection skills cannot be attributed, in part, to the exercise or otherwise of professional scepticism.

Secondly, the mediating role of professional scepticism in the relationship between positive mood and professional scepticism is examined. From Table 4.9, it can be observed that the direct relationship between positive mood and fraud detection skills was statistically insignificant [$\beta = 0.10$; $p\text{-value} < 0.24$]. However, the indirect effect was found to be statistically significant [$\beta = 0.06$; $p\text{-value} < 0.06$]. This result signifies that the relationship between positive mood and fraud detection skills is so because of the display of professional scepticism. This may be the case as a result of stringent measures stipulated by Audit Standards, thus regardless of the elated mood of the auditor, professional scepticism is displayed (Quadackers *et al.*, 2014). Therefore the result suggest that underlying structure of the relationship between positive mood and fraud detection skills is governed by the exercise of professional scepticism.

Trust and Fraud Detection Skills (H5a)

In the examination of the mediating role of professional scepticism, it is imperative to ascertain the significance of the direct effect and indirect effect. The direct effect between trust and fraud detection skills was found to be positive and significant [$\beta=0.20$; $p\text{-value}<0.01$]. Also, the indirect effect was found to be significant [$\beta=-0.08$; $p\text{-value}<0.02$], however it is noteworthy that in the opposite direction. It is important to note also that the expected empirical result of the relationship between trust and fraud being negative, is found in the indirect effect. This is because of the professional requirements of auditors in fraud risk situations, even in the presence of trust elements (Quadackers *et al.*,2011). In other words, the expected negative relationship between Trust and Fraud Detection Skills is revealed in the presence of professional scepticism. This explains that professional scepticism partly explains the relationship between trust and fraud detection skills.

CHAPTER FIVE

SUMMARY, RECOMMENDATION AND CONCLUSION

5.0 Introduction

This chapter provides a summary of all the key issues discussed in this study. The section summarizes the key findings of the study, the major implications of the findings and the main conclusion that can be drawn from the study results. In addition, the relevant contributions to literature and recommendations for future research are also discussed. The chapter is organised as follows. The first section begins by summarizing the entire study followed by a discussion of the implications and the conclusions drawn from the study's findings. The major contributions of the study are subsequently outlined followed by the limitations and recommendations of the study. The chapter ends by highlighting some of the avenues for future studies in the area of professional scepticism

5.1 Summary of Findings

Professional scepticism has increasingly caught the attention of researchers in the audit context. There have been studies on the predictors of professional scepticism concerning evidential characteristics, client characteristics and external party relationships. This has echoed calls for the study of personal characteristics as predictors of scepticism. The study contributes to the existing literature by investigating the mediating role of professional scepticism in the relationship between auditor characteristics and fraud detection skills.

Additionally, it is unclear the effect mood has on professional scepticism even though it has been found to be impactful when it comes to inventory valuation judgements (Chung *et al.*, 2009). Likewise, prior literature encourages future research to examine motivation as a predictor of

professional scepticism (Hurt et al., 2013). Fullerton & Durtschi (2005) also suggested that researchers examine the relationship between professional scepticism and fraud detection skills of external auditors.

Also, it is worthy of note that issues of professional scepticism have been examined in prior studies mostly in developed countries. Therefore, existing literature on professional scepticism from a developing country's perspective is scarce despite the interest to researchers in behavioural accounting. This places countries with developing economies on the backside of the academic and practical contributions that have been made on professional scepticism in developed countries.

Based on the gaps identified, the study investigated the relationship among auditor personal characteristics namely mood, motivation and trust; professional scepticism and fraud detection skills. The study hypothesized that an individual's positive mood can impact positively on the level of professional scepticism displayed, and the other way around for negative mood. Also, the study hypothesized that intrinsically motivated persons are bound to display professional scepticism and contrariwise, extrinsically motivated persons are not so keen about displaying professional scepticism. More so, the study hypothesized that trust is negatively related to professional scepticism. The study also hypothesized that professional scepticism mediated the relationship between auditor personal characteristics and fraud detection skills.

The PLS-SEM technique was employed to analyse data collected from 305 respondents. The choice of PLS-SEM was appropriate to estimate path coefficients in the structural model. Additionally, the utility of PLS-SEM to analyse data of non-normal distribution and of varied sample sizes increased its appeal. The complexity of the structural model and its

interrelationships provide the researcher the opportunity to use PLS-SEM to simultaneously test hypothesized relationships. Hair *et al.*(2011) suggests that PLS-SEM maximises the predictive power of path relationships whilst ensuring validity of construct measurements.

By virtue of the hypotheses elaborated, the summary of the results follows. There was a negative relationship found between extrinsic motivation and professional scepticism. However, there was a positive relationship between intrinsic motivation and professional scepticism. This clearly demonstrates that intrinsically motivated persons are enthusiastic about the cognitive rigour associated with professional scepticism and external incentives do not have the same effect. Additionally, when professional scepticism mediated the relationship between extrinsic motivation and fraud detection skills; it showed that professional scepticism did not explain the underlying structure of that negative relationship. This means that another mediator could explain the reason for the relationship. Also, when professional scepticism mediated the relationship between intrinsic motivation and fraud detection skills, it was found that professional scepticism indeed partly explains the reasons why intrinsically motivated persons are predicted to have a higher level of fraud detection skills.

Second, findings from the study suggest that there is a negative relationship between negative mood and professional scepticism. However, there is a positive relationship between positive mood and professional scepticism. This demonstrates persons in a positive mood are able to display constructive judgments in their decision making which characterizes professional scepticism. And as such, it is expected that positive mood positively influences professional scepticism. The negative mood does not have the same effect because it is associated with unconstructive judgments and so negatively influences the level of professional scepticism displayed. On mediating the relationship between mood and fraud detection skills; it was realized

that professional scepticism could wholly explain the reason persons in a positive mood possess enhanced fraud detection skills. However, there was no mediating role of professional scepticism in the relationship between negative mood and fraud detection skills.

Third, the results of this study confirmed the existence of a negative relationship between trust and professional scepticism(Quadaekers *et al.*,2014) . This demonstrates that persons who are generally less trusting of others and entities are bound to display professional scepticism more than those who are not. It is also worth noting that the relationship between trust and fraud detection skills was positive. This indicated that trust influences fraud detection skills positively. This case was special where practical circumstances conflicted with research expectations. The reasons for such relationship was that even though elements of trust may exist in the conduct of audit, audit standards prescribe that auditors should be alert to fraud symptoms albeit working with the client for a considerable amount of time and building a level of trust. It is when professional scepticism mediated the relationship between trust and fraud detection skills that the expected negative relationship between trust and fraud detection skills can be observed.

5.3 Conclusions

The evidence from this study suggests the following.

First, the study suggests that auditors display enhanced professional scepticism and fraud detection skills. Also, the display of PS & FDS is influenced by auditor's motivation, mood , and trust. Consequently, the level of auditor PS influences the FDS that an auditor possesses. Last, the display of PS partly explains the relationship between auditor characteristics and their fraud detection skills.

5.4 Implications of Findings

A number of implications can be inferred from the evidence from this study. First, results from the study suggests that auditors are inherently sceptical and are readily authenticating audit evidence. This characteristic help auditors adhere to the call of audit standards to display professional scepticism in the conduct of audit.

Second, auditors motivation, mood, and trust influences their disposition to scepticism. Thus it has implications for firms in hiring, and the constitution of audit teams. The characteristics of auditors may inform their fit for audit work and the nature of evidence they are assigned to examine.

Third, the implication the influence auditor PS on FDS enhances the likelihood to detect fraud if it exists. Audit firms are to be keen to include audit staff with a disposition of scepticism in their engagement team. The aftermath of a scandal involving an audit client can be devastating to a firm.

Fourth, auditors PS explains the relationship between their characteristics and their Fraud Detection Skills. This has implications for research in examining the reasons certain characteristics posses certain levels of FDS.

5.5 Contributions

Contributions from this study can be realised in three areas; academia, practice and policy.

To academia, the findings of this study provide insight into predictors of professional scepticism which are related to the personal characteristics of the auditor. Most studies on professional scepticism examine predictors that are related to characteristics of the audit evidence, client

characteristics, and nature of relationships with third parties. The current study, however, provides an understanding that personal characteristics can influence professional scepticism displayed.

Moreover, the study also demonstrated that professional scepticism can wholly and partly explain the reasons persons with different characteristics possess different levels of fraud detection skills.

Finally, this study integrates both the antecedents and outcomes of professional scepticism within a single framework. Most existing studies have only discussed the determinants of professional scepticism without considering the consequences thereof. The current study, therefore, presents a framework to understand professional scepticism in a more comprehensive manner.

Practically, the findings of this study have important implications for firms in the audit practice. It is particularly important in their hiring process, where personal characteristics of suitable applicants will predict the level of professional scepticism being displayed, which is important in the conduct of the audit. Also, it will influence the training requirements appropriate for an individual to enhance professional scepticism and/or fraud detection skills. It also reiterates the importance of professional scepticism as it is found that it mediates personal characteristics and fraud detection skills.

5.4 Limitations of the Study

Although, the current highlights very important issues, the findings of the study are not without limitations. It is therefore prudent that the results need to be discussed in the confines of the relevant data and context.

First, the study was conducted in one country. Therefore, the findings in this study may not be entirely generalizable for all auditors across the world, but the same results can be generalized with a group in a population bearing the same characteristics.

Second, while several predictors could be responsible for the professional scepticism displayed, this study only at three namely motivation, mood and trust. Again, the study examined one outcome of professional scepticism namely fraud detection skills even though other outcomes have been proposed.

Third, the study concentrated mainly on the subjective measure for all its constructs. The strength of the subjective measure is unquestionable given the fact that definitions on all the study's construct are inherently subjective. It is therefore important to be mindful of this, in the interpretation of the results. Also experiments can be utilized in determining moods instead of a survey.

Limited studies on professional scepticism especially in the context of developing countries restrict the capability of comparison. Despite these limitations, the import of this result is not affected in any way. The limitations identified rather offer good grounds for future research.

5.4 Recommendations for Policy and Practice

The findings from the study warrants that some recommendations be made for policy and practice. As already observed in the studies, we find that personal characteristics indeed influence the level of professional scepticism displayed by auditors. This should provide good input for practising firms to go into the recruitment paying attention to the personal characteristics of their applicants.

Also, this should also serve as a guide for the appointment of audit teams, especially in high-risk entities. Persons with characteristics which are related to enhanced professional scepticism and fraud detection skills should be selected when the need arises.

More so, the training requirements of auditors could also be influenced by their personal characteristics as well. It will inform the necessary training requirements to influence a positive effect on the outcome of the audit task involved. This will also serve well for appraisal purposes.

For policy, government agencies tasked with the audit of other government can utilize the same recommendations outlined above. This is because the objective of audit in the private and public are not at a wide variance.

5.5 Recommendations for Future Research

The limitations of this study provide bases for the conduct of further research regarding the issues of professional scepticism and fraud detection. A few of these recommendations are explored in this section.

First, future research should consider investigating whether the established relationships in the study's findings hold for another homogenous group with the same or different economic characteristics and needs. It would also be worthwhile if this study can be replicated in other countries to provide some basis for comparison.

Future studies should also, consider other influencing factors of professional scepticism, which are new to the literature concerning professional scepticism such as religiosity and social status.

For instance, the relationship between religiosity and professional scepticism will be a very attractive addition to knowledge.

Furthermore, the study employed survey methods to collect data on self reported characteristics.

There is a possibility of bias in the responses given. However, future research studies should not only focus on survey methods. This study can be accomplished by employing experiments and observation; especially in the ascertainment of mood.

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APPENDIX-QUESTIONNAIRE

This questionnaire seeks to solicit, among others, your personality, moods, motivations, level of trust and level of professional scepticism. Your responses will be treated with utmost confidentiality. Your honest responses are hereby solicited.

Background Information

1. Gender i. Male ii. Female
2. Please select your age range.
i. 21 – 25yrs ii.26 – 30yrs iii. 31 – 35yrs iv.36 – 40yrs v. 40 and above
3. What is your marital status?
i. Single ii. Married
4. What is the category of your firm, according to ICAG Classification as at 31st December 2017
i.A1 ii. A iii. B1 iv. B v. C vi. D
5. How many years of working experience
i. Less than 3 years ii. 3 -5 years iii.6 – 10 years iv. Above 10 years
6. Rank (Provide answer in space below)

TRUST (1- Strongly Disagree 7-Strongly Agree)

Trust is the confident positive expectations regarding another's conduct. Indicate your level of agreement to these statements concerning Trust.

		1	2	3	4	5	6	7
PC1*	Unless we can attract better people into politics this country has a dark future							
PC2	The judiciary is the place where we can really get unbiased treatment							
PC3	If we really knew what was going on in international politics, the public would have reason to be frightened than they now seem to be							
IE1*	In dealing with strangers one is better off to be cautious until they have provided evidence that they are trustworthy.							
IE2*	It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.							
IE3*	In these competitive times, one has to be alert or someone is likely to take advantage of you.							
SH1*	Hypocrisy is on the increase in our society.							
SH2*	Even though we have reports in newspapers, radio and television, it is hard to get objective accounts of public events.							
SH3*	Many major national sports contests are fixed in one way or another.							
RRP1	Parents usually can be relied upon to keep their promises							
RRP2	Most salesmen are honest in describing their products.							
RRP3	Most repairmen will not overcharge even if they think you are ignorant of their speciality							

SKEPTICISM SCALE.

Professional Skepticism is an attitude of a questioning mind and the critical assessment of information.

On a scale 1 – 7 (1 = **Strongly Disagree**, 7 = **Strongly Agree**), kindly indicate to what extent you agree with the following statements

		Strongly Disagree						Strongly Agree
		1	2	3	4	5	6	7
QM1	My friends tell me that I usually question things that I see or hear.							
QM2	I frequently question things that I see or hear.							
QM3	I often reject statements unless I have proof that they are true.							
SJ1	I take my time when making decisions.							
SJ2	I do not like to decide until I've looked at all of the readily available information.							
SJ3	I dislike having to make decisions quickly.							
SJ4	I like to ensure that I've considered most available information before making a decision.							
SJ5	I wait to decide on issues until I can get more information.							
SK1	I relish learning.							
SK2	I think that learning is exciting.							
SK3	Discovering new information is fun.							
SK4	I like searching for knowledge.							
SK5	The prospect of learning excites me.							
SK6	I enjoy trying to determine if what I read or hear is true.							
IU1	I like to understand the reason for other people's behavior.							
IU2	I am interested in what causes people to behave the way that they do.							
IU3	The actions people take and the reasons for those actions are fascinating.							
IU4	I seldom consider why people behave in a certain way.							
IU5*	Other people's behavior does not interest me.							
AU1*	I tend to immediately accept what other people tell me.							
AU2*	I usually accept things I see, read, or hear at face value.							
AU3*	I often accept other people's explanations without further thought							
AU4*	It is easy for other people to convince me.							
AU5*	Most often I agree with what the others in my group think.							
AU6	I usually notice inconsistencies in explanations.							
SE1	I have confidence in myself.							
SE2	I do not feel sure of myself.							
SE3	I am self-assured.							
SE4	I am confident of my abilities.							
SE5	I feel good about myself.							

FRAUD DETECTION

Fraud Detection Skills are skills that help discover fraudulent elements in financial statements.

To what extent (1-not at all.....7-a great deal) would you want to expand your search for information if you observed the following?

		1	2	3	4	5	6	7
CRF1	A department that has a lot of infighting for power positions							
CRF2	An executive who is lavish and vain							
CRF3	An employee who complains about discrimination							
CRF4	An executive that has an autocratic management style							
CRF5	Frequent changes in legal firms							
CRF6	Top management is often shopping around for different legal opinions							
CRF7	An unexpected change in the firm's external auditors							
PRF1	An employee who says he is afraid that his job will be discontinued with the new changes							
PRF2	An employee who complains that he can never satisfy his boss							
PRF3	An employee who is working at another job for spare money							
PRF4	A manager who is afraid he won't get his bonus next month if sales drop							
PRF5	An employee who says he can never get his work done on time							
PRF6	An employee who refuses to take any vacation							
PRF7	A manager who indicates that getting approval signatures for all purchases is too much of a bother							
PRF8	A manager who trusts his bookkeeper to do all of the posting, deposits, and reconciliations, because she has been doing it for 10 years							
PRF9	An employee who becomes unusually suspicious							
PRF10	An employee that has increased his smoking considerably							
PRF11	An employee who is suddenly irritable and irrational							
PRF12	An administrative assistant said she is taking Valium to calm her nerves							
PRF13	An employee who is highly critical of the company							
PRF14	A manager that complains a lot about her low pay							
PRF15	An employee who complains that her boss is way overpaid							
PRF16	A manager who was heard saying that he gives a lot more to the company than it gives to him							
PRF17	A manager that feels cheated because she was not promoted							
PRF18	An employee who complains that company policy on raises is inequitable							
PRF19	An employee who feels his work is always undervalued							
PRF20	A manager recently started attending your church							
PRF21	A top executive recently completed his MBA							
PRF22	A manager who is your son's baseball coach							
PRF23	A manager who adopted three minority children							
ARF1	The controller was making a lot of adjusting entries the week before the external auditors arrived							
ARF2	A manager comments about how often the petty cash is replenished							

ARF3	The auditors could not locate several invoices for purchases under GHC500							
ARF4	There was a large adjustment to correct the inventory account after the year-end physical count							
ARF5	There was an unusual number of receivables that were written off							
ARF6	Miscellaneous administrative expenses increased about 40 percent for the year, with a corresponding drop in sales							
ARF7	The marketing director has a weak explanation for why advertising costs have almost doubled in the past year							
ARF8	The gross margin in the last quarter dropped about 20 percent							
NEU1	An employee who brags about the comfort of his workplace environment							
NEU2	An employee who likes working in teams							
NEU3	An employee who is rewarded for designing a new product							
NEU4	A department where empowerment of line workers is encouraged							

PERSONALITY

Personality is a set of predominant characteristics that influences reactions to various situations. The following are phrases describing people’s behaviors. Please use the rating scale below to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future (1 – Very Inaccurate ----- 7 – Very Accurate)

		1	2	3	4	5	6	7
EX1	I bring liveliness to every gathering.							
EX2*	I don’t talk a lot.							
EX3	I talk to a lot of different people at parties.							
EX4*	I keep in the background.							
AG1	I sympathize with others’ feelings.							
AG2*	I am not interested in other people’s problems.							
AG3	I feel the emotions of others							
AG4*	I am not really interested in others.							
CO1	I get chores done right away.							
CO2*	I often forget to put things back in their proper place.							
CO3	I like order.							
CO4*	I make a mess of things.							
OP1	I have a vivid imagination.							
OP2*	I am not interested in abstract ideas.							
OP3*	I have difficulty understanding abstract ideas.							
OP4*	Do not have a good imagination							
N1	I have frequent mood swings.							
N2*	I am relaxed most of the time.							
N3	I get upset easily.							
N4*	I seldom feel depressed.							

MOOD

Mood is a set of positive and negative feelings that are enduring over a specified period of time.

This scale consists of a number of words that describe different feelings and emotions. Read each item carefully and mark the appropriate answer in the spaces next to the word. Indicate to what extent you have generally experienced this emotion or feeling in the past year. (1=Not at all-----7=Extreme)

		1	2	3	4	5	6	7
P1	Interested							
P2	Excited							
P3	Strong							
P4	Enthusiastic							
P5	Proud							
P6	Alert							
P7	Inspired							
P8	Determined							
P9	Attentive							
P10	Active							
N1	Distressed							
N2	Upset							
N3	Guilty							
N4	Scared							
N5	Hostile							
N6	Irritable							
N7	Ashamed							
N8	Nervous							
N9	Jittery							
N10	Afraid							

MOTIVATION (1- Strongly Disagree 7-Strongly Agree)

Motivation is the level of willingness to undertake an activity to realise objectives that are considered important.

Indicate your level of agreement to these phrases concerning motivation.

		1	2	3	4	5	6	7
I1	I enjoy learning about a client's business.							
I2	I feel good when I solve complex audit tasks.							
I3	My job provides me with opportunities for increasing my analytical skills.							
I4	Curiosity is the driving force behind much of what I do.							
I5	I want to find out how good I really can be at my work.							
I6	I enjoy the challenges that my job provides me on a daily basis.							
I7	No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.							
E1	I'm motivated by the monetary rewards my job provides me.							
E2	I'm motivated by the promotion goals I have for myself.							
E3	My friends and family have encouraged me to go into auditing.							
E4	I'm motivated by the recognition I can earn from other people.							
E5	I prefer working on audit tasks with clearly-specified procedures.							
E6	I'm motivated by future career opportunities outside audit firms.							
E7	I want my audit team members to be impressed with my work.							