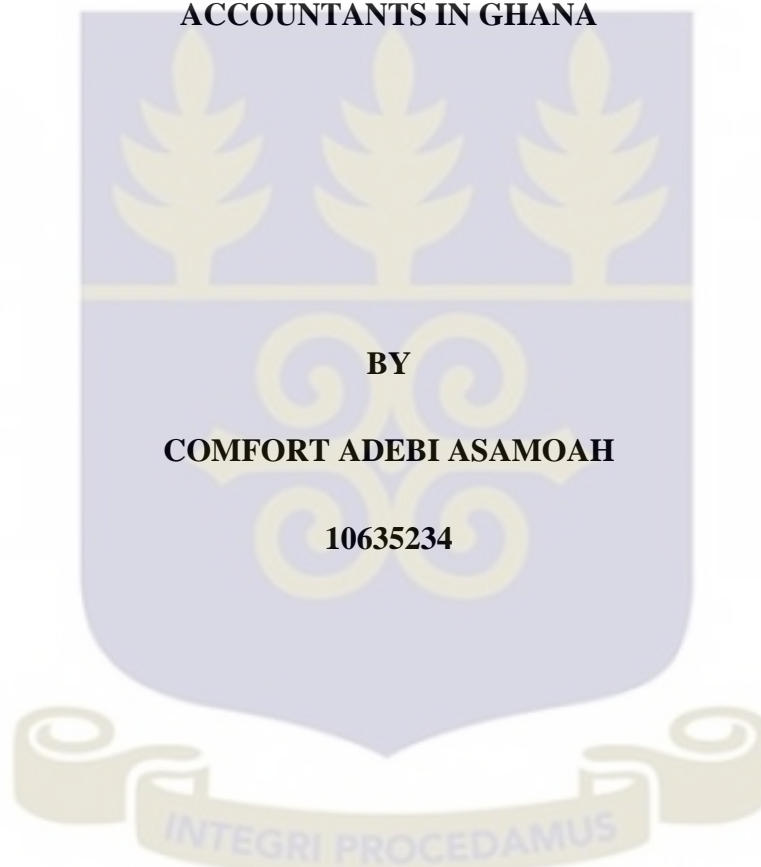


UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

**PERSONAL CHARACTERISTICS AND WHISTLEBLOWING INTENTION OF
ACCOUNTANTS IN GHANA**



**THIS THESIS IS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING,
UNIVERSITY OF GHANA BUSINESS SCHOOL IN PARTIAL FULFILMENT OF
THE REQUIREMENT FOR THE AWARD OF DEGREE IN MASTER OF
PHILOSOPHY IN ACCOUNTING**

MAY 2019

DECLARATION

I, Comfort Adebisi Asamoah, do hereby declare that this work is the results of my research and has not been presented by anyone for an academic award in this or any University. All the references used in work have been fully acknowledged. I bear sole responsibility for any shortcomings. This work was conducted under the supervision of Dr Teddy Ossei Kwakye and Mr James K Otieku of the University of Ghana Business School.

.....
COMFORT ADEBI ASAMOAH
(10635234)

.....
DATE

.....
DR TEDDY OSSEI KWAKYE
(Principal Supervisor)

.....
DATE

.....
MR JAMES K. OTIEKU
(Co-Supervisor)

.....
DATE

ABSTRACT

The business world has witnessed numerous corporate scandals and wrongdoings for which stakeholders are questioning the accountability and stewardship roles of management, especially professional accountants and auditors, in organisations. The issue of whistleblowing activities in organisations, which existing literature documents to be an important mechanism of reducing such financial irregularities, has become a topical issue in recent times. Existing literature has advanced several determinants and consequences of whistleblowing intentions and actual whistleblowing activities. However, studies on the interactive role of personal characteristics and motivation on whistleblowing intentions are limited.

This study evaluates the influence of personal characteristics (personality traits and professional scepticism) on whistleblowing intentions of accountants in Ghana. By relying on Self-Determination Theory (SDT) and Organisational Support Theory (OST), the study further examines the role of motivation (perceived organisational support and intrinsic motivation) in the influence of personal characteristics on the whistleblowing intentions of the accountants. A survey design of the research is adopted, and a set of questionnaires are developed and administered to professional accountants in public practice - accounting and auditing firms - in Ghana, and the partial least square-SEM (PLS-SEM) technique is used to analyse the data obtained.

The results from analysing the data from 304 accountants reveal that conscientiousness and professional scepticism are significant predictors of the whistleblowing intentions of accountants in Ghana. While extraversion, openness to experience and agreeableness have a positive relationship with whistleblowing intentions, neuroticism had a negative influence on whistleblowing intentions, although these effects are statistically insignificant. The results further suggest that perceived organisational support and intrinsic motivation are mediating factors through which conscientiousness and professional scepticism can influence the

whistleblowing intentions of accountants. By implication, the personal characteristics of an accountant will affect his/her intention to engage in whistleblowing. Also, the extent to engage in whistleblowing is predominantly determined by spontaneous satisfaction derived from the activity itself and the organisation values for their competence, well-being and effectiveness.

DEDICATION

I dedicate this study to the Sarpong's family – Yaw Manu Sarpong, Kwame Boadi Sarpong, Kofi Aboagye Sarpong, Kwadwo Owusu Sarpong, Yaw Nsafoah Sarpong, Abena Gyamfuaa Sarpong and Akua Ampomah Sarpong for their immense support to my life and education.

ACKNOWLEDGEMENT

To God be the glory, great things He has done. I acknowledge the Almighty God for the gift of life and strength He has bestowed upon me throughout this project.

My sincere appreciation goes to my supervisor, Dr Teddy Ossei Kwakye. Through patience, he tolerated my weakness, builds my confidence and believed in me till today. I thank him for his guidance and expert advice in completing this research project. Similarly, I thank Mr James K. Otieku, my co-supervisor, for his thoughtful and insightful suggestions. Their assistance and contributions to this work have been immeasurably expedient.

I am grateful to Dr. Samuel N. Y. Simpson, my Head of Department, who regularly listened to my challenges, shared insightful experiences and guided me throughout the entire process. To my well-experienced seminar coordinators – Dr Godfred M. Y. Owusu, Prof Ofosu Mensah, Dr Joseph M. Onumah and Dr Francis A. Otchere – and faculty members of University of Ghana Business School, I appreciate all your pieces of advice, comments, suggestions and your contributions towards the refinement of this study.

Finally, I appreciate my senior colleagues Raymond Owodo and Enusah Abdulai and my dedicated colleagues through whom my obstructions and concerns were resolved. Through it all, the success we were looking forward to is possible. I am sincerely grateful.

TABLE OF CONTENTS

DECLARATION	i
ABSTRACT.....	ii
DEDICATION.....	i
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS.....	iii
LIST OF FIGURES	vii
LIST OF TABLES.....	viii
LIST OF ABBREVIATIONS.....	ix
CHAPTER ONE - INTRODUCTORY CHAPTER.....	1
1.1 Introduction	1
1.2 Background of the Study.....	1
1.3 Problem Statement	6
1.4 Research Objectives	9
1.5 Research Questions	9
1.6 Significance of the Study	9
1.7 The organisation of the study	10
1.8 Chapter summary	11
CHAPTER TWO - LITERATURE REVIEW.....	12
2.1 Introduction	12
2.2 The Concept of Whistleblowing Intention.....	12
2.2.1 Mediums of Whistleblowing Intentions.....	15
2.2.2 Factors influencing Whistleblowing Intention.....	17
2.3 Personal Characteristics	21
2.3.1 The Big Five Personality Traits Dimensions	22

2.3.2	Professional Scepticism	22
2.4	Motivation	24
2.5	Theoretical Review	27
2.5.1	Self-Determination Theory (SDT).....	27
2.5.2	Organisational Support Theory (OST).....	29
2.6	Conceptual framework and Hypotheses Development	31
2.6.1	Conceptual Framework	31
2.6.2	Hypotheses Development	31
2.6.2.1	Personal Traits and Whistleblowing Intention	31
2.6.2.2	Professional Scepticism and Whistleblowing Intentions.....	35
2.6.2.3	Motivation and Whistleblowing Intention.....	36
2.6.2.4	Personal Characteristics and Motivation	38
2.7	Chapter summary	42
CHAPTER THREE - METHODOLOGY		44
3.1	Introduction	44
3.2	Research Philosophy and Paradigm	44
3.3	Research Approach and Design	45
3.4	Study population, Sampling technique and Sample Size.....	46
3.5	Data source and Data Collection procedure	48
3.6	Research Instrument and Measurement Scale.....	50
3.7	Data Analysis Procedure	52
3.7.1	Model Evaluation.....	53
3.7.1.1	Measurement Theory	54
3.7.1.2	Measurement Model	56
3.7.1.3	Structural Model	58

3.7.1.4	Model Specification.....	60
3.8	Ethical Issues.....	61
3.9	Chapter Summary.....	64
CHAPTER FOUR - ANALYSIS AND DISCUSSION OF FINDINGS.....		65
4.1	Introduction	65
4.2	Descriptive Statistics	65
4.2.1	Characteristics of Participants.....	65
4.2.2	Descriptive statistics of study construct.....	67
4.3	Exploratory Factor Analysis	70
4.4	Common Method Bias	71
4.5	Model Evaluation	72
4.5.1	Measurement Model	72
4.5.1.1	Internal Consistency Reliability	72
4.5.1.2	Indicator Reliability	73
4.5.1.3	Convergent validity	74
4.5.1.4	Discriminant Validity	75
4.5.2	Structural Model Assessment	79
4.5.2.1	Collinearity Assessment	79
4.5.2.2	Assessment of Path Significance.....	80
4.5.2.3	Coefficient of determination (R^2).....	81
4.5.2.4	Effect Size Assessment (F^2)	82
4.5.2.5	Predictive relevance (Q^2).....	83
4.6	Analysis and Discussion of Findings	83
4.6.1	Personal Characteristics and Whistleblowing Intention	83
4.6.2	Motivation and Whistleblowing Intentions	86

4.6.3	Personal Characteristics and Motivation	87
4.6.4	Personal Characteristics, Motivation and Whistleblowing Intentions	89
4.7	Chapter summary	91
CHAPTER FIVE - SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....		93
5.1	Introduction	93
5.2	Research Summary.....	93
5.3	Summary of Research Findings	93
5.3.1	Personal characteristics and whistleblowing intentions.....	93
5.3.2	Motivation and whistleblowing intention	94
5.3.3	Personal Characteristics, Motivation and Whistleblowing Intentions	94
5.4	Conclusions of the Study.....	95
5.4.1	Personal Characteristics and Whistleblowing Intentions.....	95
5.4.2	Motivation and Whistleblowing Intention	95
5.4.3	Personal Characteristics, Motivation and Whistleblowing Intentions	95
5.5	Implications of the Study	96
5.6	Recommendations of the Study.....	98
5.7	Limitations and Directions for Future Studies	100
5.8	Chapter Summary.....	101
REFERENCES.....		102
APPENDIX.....		124
7.1	Appendix A: Questionnaire.....	124
7.2	Appendix B: KMO and Bartlett's Test	130
7.3	Appendix C: Direct relationships between constructs	131

LIST OF FIGURES

Figure 2.1: Conceptual framework of Personal Characteristics, Whistleblowing Intention and Motivation Nexus.....33

Figure 3.1: Formative Measurement.....54

Figure 3.2: Reflective Measurement.....55

Figure 3.3: Measurement Model Assessment.....57

Figure 3.4: Structural model Assessment (Source: Adapted from Hair et al. (2014)).....59

Figure 3.5: Model Specification63

LIST OF TABLES

Table 2. 1: Summary of Hypotheses.....	42
Table 3. 1: Distribution schedule of Questionnaire	48
Table 3.2: Description of Constructs	51
Table 4. 1: Descriptive Statistics of Participants	66
Table 4. 2: Construct and measurement Items Means	68
Table 4. 3: Assessment of Common method Biased	72
Table 4. 4: Item Loadings, Average Variance Extracted and Composite reliability	73
Table 4. 5: Assessment of Discriminant Validity	76
Table 4. 6: Constructs and Variance Inflation Factors	79
Table 4. 7: Structural model Assessment.....	80
Table 4. 8: R- Square, R-Square Adjusted and Q- Square of Constructs	81
Table 4. 9: F – Squares of the study construct.....	82
Table 4. 10: Mediation Analysis Assessment.....	89
Table 4. 11: Variance accounted for and Strength of Mediation Effect for the Path	90

LIST OF ABBREVIATIONS

ACCA – Association of Certified Chartered Accountants

ACFE - Association of Certified Fraud Examiner

AU – Autonomy

FBI – Federal Bureau of Investigation

GACC – Ghana Anti-Corruption Coalition

GoG – Government of Ghana

IMI – Intrinsic Motivation

IPIP – International Personality Inventory Pool

IU – Interpersonal Understanding

PA – Agreeableness

PC - Conscientiousness

PE – Extraversion

PN - Neuroticism

PO - Openness to Experience

PLS-SEM – Partial Least Square – Structural Equation Model

POS – Perceived Organisational Support

PS – Professional Scepticism

PT – Personality traits

PwC – PricewaterhouseCoopers

QM – Questioning Mindset

SE – Self Esteem

SK – Search for Knowledge

SJ – Suspension of Judgment

SOX – Sarbanes – Oxley Act

UGBS – University of Ghana Business School

WBI – Whistleblowing Intention

CHAPTER ONE

INTRODUCTORY CHAPTER

1.1 Introduction

This chapter gives a general overview of the research. The chapter begins with a brief background to the study, followed by the statement of the research problem. Next, the research objectives and the research questions are outlined. The chapter concludes with the significance of the study and how the research report is organised.

1.2 Background of the Study

A corporate scandal, which has led to the collapse of many organisations, has been on the rise over the past decades (Verschoor, 2010). These corporate collapses have resulted in the loss of jobs, investments, clientele, revenue, among others (Maree & Radloff, 2007).¹ One of the reasons identified in the literature to contribute to the growing phenomena is the inability of individuals to report wrongful acts in organisations (Lavena, 2016). Calls for key stakeholders in organisations – accountants, auditors, employees and management – who are privy to illegal conducts have intensified the need to encourage employee whistleblowing in recent times (Verschoor, 2010).

Whistleblowing is explained as “the disclosure to a person or public body, outside normal channels and management structures, of information concerning unsafe, unethical or illegal practices” (Mannion & Davies, 2015, pp. 503). Existing literature provides that effective whistleblowing activities in organisations reduce corporate corruption (Association of

¹ For instance, Fredin (2012) citing a PricewaterhouseCoopers (PwC) report in 2011, reports that 35 per cent US organisations encountered substantial economic wrongdoing for which 8 per cent of these organisations lost more than \$5 million as a result.

Certified Fraud Examiner (ACFE), 2014; Eaton & Akers, 2007), ensures effective internal control systems (Kennett, Downs, & Durler, 2011) and enhances good corporate governance (Eaton & Akers, 2007) in organisations. Whistleblowing also makes organisations more transparent and accountable (Apaza & Chang, 2011; Keil, Tiwana, Sainsbury, & Sneha, 2010; Chiu, 2003). For this reason, it is suggested that the most efficient way of fighting fraudulent acts, misconduct, and unethical behaviour in organisations is whistleblowing (Suyatno, 2018). Although whistleblowing is considered as a positive deviant behaviour intended to benefit both organisations and society (Harrison & Freeman, 2004; Curtis, 2010), it may sometimes be viewed as being disloyal or an act of betrayal depending on the existing relationship between the offender and the whistle-blower (Rustiarini & Sunarsih, 2017; Waytz, James, & Young, 2013). For this reason and due to the fear of being stereotyped or loss of employment, employees desist from reporting wrong conduct. Most developed countries have therefore enacted laws and other legal frameworks to incorporate whistleblowing process, protect individual whistle-blowers and encourage the reporting of wrongful acts in organisations (Pope & Lee, 2013; Miceli & Near, 2002, Hoffman & McNulty, 2009).²

In Ghana, the reporting of wrongdoings and fraudulent activities in organisations has become a great concern to various stakeholders following the recent collapse of major banks in the country. In August 2017, the central bank of Ghana withdrew the license of two major banks and merged five other banks for various reasons, including engaging in fraudulent practices

² Whistleblowing legislations include: Sarbanes-Oxley Act of 2002 (SOX), Whistleblowing Act 2006 (Act, 720), Dodd-Frank Wall Street Reform and Consumer Protection Act 2010

and inability to meet capital adequacy requirements (Bank of Ghana, 2018).³ This happened a few months after some of these banks have been adjudged to be profitable and among the fastest-growing banks in the country. Concerns have therefore been raised about the role of employees, especially accountants, who as part of their fiduciary duties are expected to report any wrongdoings and fraudulent activities in organisations. The issue of why employees in these banks, other collapsed organisations and their regulatory bodies in Ghana did not report these wrongful actions remain an empirical question.

Ferrell, Fraedrich, and Ferrell (2015) indicate that professional accountants⁴ are responsible for preparing and providing financial and other corporate information to the public. The nature of the work of the accountant makes them privy to critically sensitive information (Di Fabrizio, 2016). This sensitive information has both positive and negative implications for the organisations. These may relate to exposures, threats, uncertainties, fraud, waste and mismanagement, illegal activities, abuse of power, misconduct that endangers organisation's reputation, image, competitiveness, success, viability, market values, investments and intangible assets or earnings. Because of the ethical and legal framework of the accounting profession, it is expected that professional accountants make known all wrongdoings and any information that have negative consequences on the organisation. Professional accountants are, thus, expected to whistleblow on corporate wrongdoings to help curtail growing corporate scandals and collapse, often characterised by massive financial frauds.

³ The banks include Unique Trust Bank and Capital Bank, whose license were withdrawn, and the merged banks are Sovereign Bank, UniBank, The Royal Bank, Beige Capital and Construction Bank

⁴ Professional accountants are two kinds – those working in organisations and those in public practice. Professional accountants in public practice are accountants that have been employed in accounting and audit firms and those working in organisations are the accountants employed within organisations other than accounting and audit firms.

However, whistleblowing raises several ethical, legal and managerial issues, which may encourage or restrict the professional accountant to expose wrongdoings in the organisation or not. For instance, although the code of ethics of the accounting profession supports whistleblowing actions from its members (Di Fabrizio, 2016), the codes do not specify the procedure for accountants to whistleblow. Hence, accountants may blow the whistle depending on their conviction, organisational support such as the treatment of the whistleblowers and the ability of management to resolve the illegal or unethical act to reflect the protection of the interest of stakeholders (Di Fabrizio, 2016). Under the profession's rules of conduct, both internal and external accountants are mandated to report any unlawful activity they perceive or witness to their immediate supervisors, senior management and this constitute internal whistleblowing (Mintz, 2015). However, if concerns are overridden, external whistleblowing then takes place where the issue is reported to a regulator or other authority or by public disclosure (Mintz, 2015). While professional accountants in public practice are included in whistleblowing, they (employees of accounting firms) can only become whistleblowers when the client firm fails to comply with its obligations under the securities laws to report unlawful conduct such as financial statement fraud – (See Rule 102 of the AICPA Code, Interpretation 102-4). Basically, the accountant's whistleblowing is limited to the materiality of the fraud or illegal acts which will affect the financial statement (Mintz, 2015; PCAOB, 2010). Accountants are also required to report the illegal act or fraud to the audit committee or full board of directors (AICPA, 2013: AU section 317; SAS 54, "Illegal Acts by Clients"). Securities and Exchange Act of 1934 (section 10A) presents details on the reporting requirement for fraud (SEC, 2010). The Whistleblower Act 2006 (Act 720) of Ghana also suggests that professional accountants (both in public practice and those hired in organisations) are required to blow the whistle on any negative sensitive information that will affect the general public substantially. However,

the reporting should be made to the employer of the accountant – indicating internal whistleblowing – or through a third party⁵ which suggest external whistleblowing.

Effectively encouraging whistleblowing among employees is considered very important because the information from within the organisation is viewed as the best approach of discovering wrongdoing (Kennett, Downs, & Durler, 2011; Kaplan, Pope, & Samuels, 2011).⁶ However, a widely held view is that the choice of individuals to either report or keep silent over wrongdoings is complicated such that it necessitates the need to understand the decision-making techniques and forecast the probability that a person will engage in whistleblowing (Kennett et al., 2011). Near and Miceli (1995) argue that increasing whistleblowing activities in organisations requires an understanding and awareness of the factors that increase the likelihood of persons to report wrongdoing. This has prompted research into the determinants of whistleblowing intentions of individuals.

Existing literature on the determinants of whistleblowing intentions of individuals has advanced several factors that influence persons' intentions to report organisational wrongdoings. Near and Miceli (1995) identify five elements that determine the whistleblowing intentions of individuals - the whistle-blowers' character, the report recipient's character, the offender's character, the magnitude of the wrongdoing and the organisation's characteristics. Previous studies further advance individuals' moral judgment – judging of persons' conduct as

⁵ Police officer, Attorney-General, Auditor-General, a staff of the Intelligence Agencies, a member of Parliament, the Serious Fraud Office, the Commission on Human Rights and Administrative Justice, the National Media Commission, the Narcotic Control Board, a chief, the head or an elder of the family of the whistleblower, a head of recognised religious body, a member of a District Assembly, a Minister of State, the office of the President, the Revenue Agencies Governing Board, or a District Chief Executive.

⁶ In large and complicated organisations, it is assumed that employees are aware of the fraudulent practices because they execute the control systems of the organisation (Dyck, Morse & Zingales, 2010; Zyglidopolulos & Fleming, 2008).

proper or improper (Li, Zhu, & Gummerum, 2014) – and demographic characteristics (such as working experience, age, race, sex) as other factors that can influence the whistleblowing intentions of individuals (Miceli, Near, & Dworkin, 2008; Gao & Brink, 2017; Chiu, 2003; Patel, 2003).

It is asserted that for whistleblowing to be an effective tool to control corporate misconduct, fraudulent acts, illegal activities, the whistle-blower must be willing to report the wrongdoing to the appropriate authority or party and the latter must handle the issue carefully (Young, 2017; Near & Miceli, 1995). Thus, whistleblowing intentions from the individual's viewpoint are mostly based on the individuals' decision-making processes and willpower. A person's decision-making process is suggested to be dependent on the individual's ethical values, personality traits, religiosity, among others (Rustiarini & Sunarsih, 2017). For instance, it is expected that individuals who uphold organisational progress and values will report wrongful conduct, hence likely to have a positive attitude towards whistleblowing (Rustiarini & Sunarsih, 2017). Nayir and Herzig (2012) and Park, Regh and Lee (2005) highlights the significant role of individuals' characteristics in their whistleblowing intentions. However, Gao and Brink (2017) note that few studies have examined the influence of personal characteristics on individual's whistleblowing intentions.

1.3 Problem Statement

Accounting professionals are faced with several ethical decisions in their working environment (Gao & Brink, 2017), and they have an ethical obligation to report corporate wrongdoings, misconducts and fraudulent activities in organisations (McDevitt & Van Hise, 2002; Shawver & Clements, 2007). Zainol, Qayyum, Naim, and Munirah (2018) opine that the accounting profession is closely associated with whistleblowing to suggest that accountants, in their professional duties, are expected to engage in whistleblowing activities and act as whistle-blowers for their clients (Elias, 2008).

It is widely acknowledged that whistleblowing is an important mechanism to curb corruption and misconducts in organisations (Alleyne, Hudaib, & Hanifa, 2015). However, the complexities and globalisation of the operations of accounting firms challenge the accountants' ability to ensure adequate whistleblowing practices (Dehn & Borrie, 2001). Moreover, the perceived repercussions and negative stigma, such as the view that whistle-blowers are corporate deviants (Lavena, 2016), appear to stifle the accountant's intentions to report wrongdoings in organisations.

With the wrongful conducts of corporate executives (which include accountants) and auditing firms (comprising mostly of accountants) being at the centre of most corporate scandals and collapses, the accountant's whistleblowing duties have been under great scrutiny in recent times. Previous studies have mostly focused on the internal and external controls and mechanisms that affect whistleblowing activities (O'Sullivan & Ngau, 2014; Shawyers & Clements, 2008). As a result, situational characteristics, rules and processes, demographic variables, influence of probable retaliation, moral reasoning levels, cultural effects and the impacts of compensation structures are documented in existing literature as the factors that influence the accountants' whistleblowing intentions (Seifert, Sweeney, Joireman, & Thornton, 2010; Shawyers & Clements, 2008).

The personal characteristics, moral character and ethical values upheld by individuals can influence their decisions to report organisational misconducts or not (Elias, 2008). It is also argued that individuals are less likely to report wrongful acts in organisations if they perceive those acts would not have a significant impact on the organisation (McDevitt & Van Hise, 2002). Thus, accountants' personality can influence his or her whistleblowing intentions irrespective of the embedded ethical and fiduciary duty in their profession. Empirical studies into how individuals' (including accountants) personal characteristics - personality traits and professional scepticism - affect their intentions to report wrongful and fraudulent acts are

limited (Gao & Brink, 2017). This study seeks to fill this gap by examining the influence of accountants' personal characteristics on their whistleblowing intentions.

A considerable number of studies demonstrate that because whistleblowing activities are associated with negative consequences and reprisals (Ugaddan & Park, 2019), it is important that organisations consciously encourage the voluntary reportage of wrongdoings and fraudulent activities by employees (Kaptein, 2011; Berry, 2004). How organisations value the contributions of employees, organisational acceptance of whistleblowing activities, willingness to protect whistle-blowers among others, is identified as one way of motivating and encouraging whistleblowing activities in organisations (Alleyne et al., 2015). Therefore, the corporate support regarding whistleblowing activities can alter the intentions of individuals to voluntarily report misconducts irrespective of their perception about that act emanating from their personality. However, the empirical literature on the role of organisational support in the relationship between personality traits and whistleblowing intentions is lacking (Alleyne et al., 2015). It is for this reason that this study seeks to examine the role of motivation (intrinsic motivation and perceived organisational support) on the influence of personal characteristics on whistleblowing intentions of accountants.

Although many studies have been conducted to examine factors that may influence individual's intentions to whistleblowing, due to the difference in values, cultures, and norms of each country, scholars agree that there is still a research gap in understanding variables and whistleblowing intentions (Suyatno, 2018). Most of the whistleblowing research is concentrated in developed countries (de Maria, 2005; Miceli, Near, & Dworkin, 2009). Application of the theories and practices established in these countries may not be appropriate in a developing country, like Ghana, which often lacks robust administrative and legal systems. Park et al., (2005) call for whistleblowing studies in emerging economies and Robinson (2011) highlights the implication of considering contextual influences on behaviour. It is for these

reasons that this study seeks to investigate the whistleblowing practices in Ghana, a developing country.

1.4 Research Objectives

The general aim of this study is to examine the relationship between personal characteristics and whistleblowing of accountants in Ghana. This study has three specific objectives:

1. explore the relationship between personal characteristics and whistleblowing intentions among accountants.
2. examine the influence of motivation on whistleblowing intentions of accountants.
3. examine the role of motivation in the relationship between personal characteristics and whistleblowing intentions of accountants.

1.5 Research Questions

The following are the questions that the study seeks to answer;

1. How do personal characteristics of accountants influence their whistleblowing intentions?
2. Does motivation influences the whistleblowing intentions of accountants?
3. Does motivation changes how or serve as a means through which personal characteristics affect whistleblowing intentions of accountants?

1.6 Significance of the Study

This study contributes to the existing literature on the determinants of whistleblowing intentions of individuals in an organisation by examining how personal characteristics of individuals influence their likelihood of voluntarily report wrongdoings. The findings of this study highlight the role that the innate characteristics (personality traits) and expected characteristics (professional scepticism) of individuals, in this case, accountants, affects the execution of their professional duties of whistleblowing.

By further exploring the role of motivation in the personal characteristics and whistleblowing intention relationship, the findings of the study enhance the understanding of how both intrinsic individual characteristics and external factors interact to affect voluntary behaviour of individuals in executing their professional duties. Specifically, it provides a conceptual framework for understanding how an accountants' whistleblowing intentions are influenced by their personal characteristics and how well they are motivated to engage in the practice. Moreover, the investigation of the determinants of accountants' whistleblowing intentions in Ghana provides a different contextual perspective of whistleblowing, considering that existing research is dominated by developed country settings. To the best of the researcher's knowledge, this is the first research on whistleblowing intentions of accountants in Ghana in response to De Maria (2005) call for more research in the area in developing countries.

The findings of this study also provide evidence that employees' perception of the levels of organisational support for a practice influences how they engage in the activity. For this reason, the results of this study provide organisations, especially accounting and auditing firms, with evidence on the need to understand and consider the individual personality traits of their employees, their professional scepticism level and the role of motivation in encouraging whistleblowing activities in their firms. Based on these, the organisation will be able to establish an organisational culture (training programs or incentives) that are more effective to encourage individuals to report wrongdoing and promote ethical conducts and impedes unethical behaviour in the working environment. Similarly, the findings of the study will aid organisations to establish corporate procedures and guidelines on how to report and investigate perceived fraudulent acts, to encourage the practice.

1.7 The Organisation of the Study

The research is structured into five chapters. The first chapter highlights the study motivation, the objectives, the questions and the hypotheses guiding the study. Chapter two details the

theoretical and empirical review of the literature relevant to the study. The third chapter provides the procedures and approaches that were employed in carrying out the research. Chapter four presents the analysis and discussion of the study findings from the data gathered. The final chapter presents a summary of the key findings, conclusions, implications, limitations, and recommendations.

1.8 Chapter summary

This chapter provided an overview of the study. It presented the study background and highlighted the objectives. The section finally discusses the significance of the study and the organisation of the research work.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter presents a literature review on whistleblowing intention. It includes an empirical and theoretical review. The empirical review section is organised along with the following broad themes - the concept of whistleblowing, accounting profession and whistleblowing issues, and factors influencing whistleblowing intentions.

2.2 The Concept of Whistleblowing Intention

Whistleblowing is a positive deviant behaviour intended to benefit both organisations and society. The act is on purpose and may differ from the culture of the organisations. Whistleblowers encounter problems since the act of whistleblowing are seen as disloyal (Rustiarini & Sunarsih, 2017) rather than enhancing organisational justice and fairness. However, Johnson (2003) suggests that whistle-blowers act in the service of organisational justice and integrity. It is an act of betrayal⁷ (Waytz, James & Young, 2013). These suggestions point to why whistleblowers suffer repercussion from both the community and the organisation (Dyck, Morse & Zingales, 2010).

The eruption of several large-scale accounting frauds during the last decade in the United States, including Enron and WorldCom, brought to light financial statement frauds. The accounting fraud also reveals the role of whistle-blowers as crucial detecting and preventing mechanism (Foley, Halper & Mathews, 2014). Accordingly, Lacayo, Ripley, and Sieger (2002) suggest whistleblowing became an increasingly popular phenomenon after three female

⁷ It constitutes revealing an individual's wrongful conduct to a third party

whistle-blowers were nominated by Time Magazine as “Persons of the Year”⁸ in the year 2002. More recently, whistleblowing has been on the increase since the 2007-08 financial crises sparked a crackdown on corporate corruption and collusion (Anonymous, 2015, p. 65).

Near and Miceli (1985) defined whistleblowing as “the disclosure by organisation members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organisations that may be able to effect action” (p. 4). However, Miceli and Near (1992) added that the disclosure could be made to persons or organisations within or outside the organisation. According to Mudrack and Mason (2013), “whistleblowing occurs when one or more individuals inform the public or someone in authority about apparent dishonest, illegal, or inappropriate activities.” LePine and Van Dyne (1998) defined whistleblowing as a “prohibitive voice”⁹ (p. 854). However, Harrison and Freeman (2004) established that it is a “promotive tool”¹⁰. Miceli and Near (1994) provide the support that whistleblowing is a promotive tool because employees reveal information that provides management or leaders of organisations the chance to prepare and put a stop to potential harm. In Ghana, whistleblowing is defined by the Whistle-blower Act (Act 720) 2006 as “the act of revealing or disclosing information about another person’s impropriety to one or more persons or institutions to fight corruption, ensure the rule of law, promote good public ethics and preserve the public interest (GACC, 2010, p. 10)”.

⁸ Sherron Watkins – vice president, Enron; Cynthia Cooper – Vice President – Internal Audit, Worldcom; and Coleen Rowley – an employee, FBI.

⁹ Prohibitive voice because it is observed as critical, aimed at terminating wrongful act and improves essential organisational democracy (Rank, 2009).

¹⁰ Serving to collectively increase employees’ involvement and satisfaction, higher levels of innovation, increase stakeholder commitment, and ultimately increase organisational performance.

The study focuses on measuring the whistleblowing intention of professional accountants in public practice. From the perspective of the theory of reasoned action, most human behaviours are predictable based on intention because such behaviours are volitional and under the control of intention (Ajzen & Fishbein, 1980). Central to the theory of reasoned action is the concept of intention, described as an individual's motivation in his/her conscious decision to exert any effort in performing a specific behaviour (Ajzen, 1985). The theory of planned behaviour postulates that an individual's future behaviour can be predicted by intention to perform the behaviour. The intention is conceptualised through one's attitude towards the behaviour, subjective norm and perceived behavioural control over engaging in the behaviour (Ajzen, 2011). Whistleblowing intention is, therefore, an individual's subjective probability assigned to the likelihood of actually engaging in whistleblowing behaviour (Hunt & Vitell, 1986; Ajzen, 1991; Chiu, 2003). Intentions play an important role in determining behaviour (Ajzen, 1991). Accordingly, the stronger the intentions, the more likely that individual will engage in the behaviour (Sheppard, Hartwick, & Warshaw, 1988). Further, although studying actual cases of whistleblowing actions and behaviours would be preferred, researchers studying whistleblowing are often limited to examining reporting intention because whistleblowing is an infrequent behaviour that is seldom observed (Patel, 2003; Mesmer-Magnus & Viswesvaran 2005; Trongmateerut & Sweeney 2013). As a result, professional accountants' whistleblowing intention is used as a proxy for whistleblowing behaviour in this study.

It is suggested that whistleblowing is a vital tool for improving quality control in auditing organisations (Taylor & Curtis, 2013). The intention to engage in deeds that benefit organisations is a noble determined effort of employees. From the perspectives of Mesmer-Magnus and Viswesvaran (2005), the new insight of whistleblowing is perceived by numerous ethical scholars as new commitment where employees direct their allegiances toward the organisation. Robbins and Judge (2004) indicate that the attitude developed by individuals

toward whistleblowing intentions is the aggregate of their cognitive and practical assessment of the organisation's ability to favour or disfavour whistleblowing. It seems instilled values, norms, cultural traits, emotions, and individual experiences direct that individual to judge whether the action is right or not. Whistleblowing is not accepted by many individuals and organisations (Bowen, Call & Rajgopal, 2010) - it ruins the reputation organisations have built and the trust of its customers. To rectify the adverse action, especially when the probability that the informer will be subjected to retaliation is high; it takes higher commitment towards the organisation, the general public and individuals to engage in the act. However, the degree of repercussions the informer is likely to face, self-perception may be directing one's intention to act.

2.2.1 Mediums of Whistleblowing Intentions

Whistleblowing mechanisms could be internal or external¹¹ to a designated body. Usually, internal reporting is encouraged (Brennan & Kelly, 2007; Kaplan & Schultz, 2007), but if internal mechanisms are ineffective, it is expected that external reporting channels are used. While some countries are silent about the use of either internal or external reporting channel, the Whistle-blowers Act 2000, Act 720 of Ghana requires individuals to utilise both channels. Park, Blenkinsopp, Oktem and Omurgonulsen (2008) identify four channels that aid reporting of wrongdoing - anonymous and identified, and formal and informal. Identified whistleblowing occurs when individuals report wrongdoing utilising their official name whereas anonymous whistleblowing is when an employee report organisational misconduct by concealing

¹¹ Reporting wrongdoing individuals within the organisation who are capable of correcting the questionable act and external refers to the reporting of fraudulent activities to designated body or individual outside the organisation (Toker Gökçe, 2013).

information about themselves as well as by using assumed or fictitious name (Park et al., 2008). It is suggested that anonymity is a fundamental way to safeguard confidentiality and to support whistleblowing practices in a society; organisations must guarantee employees' secrecy (Hearn, 1999). Lublin (2002) highlights that organisations can ensure anonymity using suggestion boxes and ethic hotlines. Zhang, Pany and Reckers (2013) note that external hotline substantially supports employees reporting intention, aiding employees to evade the negative effect of whistleblowing. Although some countries have endorsed anonymous whistleblowing, the Whistleblowing Act of Ghana does not support it. Hence, any person willing to report wrongdoing in Ghana should be ready to reveal his or her identity (GACC, 2010; GoG, 2006). According to Park et al. (2008), formal whistleblowing constitutes the use of standard lines of communication or reporting through a formal organisational protocol. On the contrary, informal whistleblowing occurs when an employee discloses wrongdoing to his or her co-workers or anyone whom he or she trusts. The whistle-blower Act 2006 (Act 720) endorses both formal and informal whistleblowing (GoG, 2006).

To uphold the high ethical standards of the accounting profession, laws have been designed to govern the ethical decision making of accountants. These laws provide the procedures accountants can follow when they witness any unlawful act. Accountants have the option of blowing the whistle using internal channels to higher rank individuals in the organisation¹² or through anonymous reporting channels. The use of external whistleblowing channels such as regulatory bodies or the media is also an option. However, the accounting profession encourages its members to adhere to the use of internal whistleblowing mechanism before

¹² These individuals include board of directors, audit committee, managers, supervisors etc.

considering external whistleblowing (ACCA, 2012). Although it is expected of accountants in public practice to be confidential in divulging information, they are also encouraged to report wrongdoings that they are privy to. This ethical dilemma appears to be a challenge for accountants in public practice. Considering that whistleblowing has become a prominent monitoring tool among corporate scandals which have mostly been attributed to non-reporting of wrongdoing by professional accountants (Alleyne, Hudaib, & Pike, 2013), there are calls by the accounting profession and its regulatory bodies for organisations to promote whistleblowing (Rustiarini & Sunarsih, 2017).

2.2.2 Factors influencing Whistleblowing Intention

Existing literature documents numerous factors that influence whistleblowing intentions. While some of the factors negatively relate to whistleblowing intentions, others have a positive impact on wrongdoing reporting. Individual factors, contextual factors and situational factors are the broad categories of the factors connected with the intentions of whistleblowing from prior studies (Alleyne et al., 2013; Mesmer-Magnus & Viswesvaran, 2005).

The personal cost¹³ of wrongdoing reporting is the most influential factor influencing whistleblowing intentions (Alleyne & Weekes-Marshall, 2013). Alleyne and Weekes-Marshall (2013) suggest that the higher the perceived personal cost of blowing the whistle, the lower the level of whistleblowing. Prior research in accounting indicates that the fear of retaliation, an aspect of personal cost is an essential limitation to whistleblowing (Alleyne & Weekes-Marshall, 2013; Alleyne, 2010). The type of wrongdoing is also found to influence the

¹³ It is the perceived harm or discomfort that results from blowing the whistle (Dalton & Radtke, 2013). For instance, reduction of salary, close monitoring by superiors, loss of employment, threats of revenge, social isolation at work, changes in job responsibilities, harassment etc.

probability of whistleblowing (Near, Rehg, Van Scotter & Miceli, 2004). The implication of the type of wrongdoing for whistleblowing is based on whether the act can be rectified or not. For instance, Near et al. (2004) found that reporting of wrongdoing increases, when the type of wrongdoing can be corrected, while whistleblowing intention decreases when the act cannot be remedied. Robinson, Robertson, & Curtis (2012) further provide evidence that the magnitude of the type of wrongdoing impact whistleblowing intention. As pointed out by Miceli and Near (1992), the higher the severity of the wrongdoing reported, the higher the retaliation and the lower the severity of the wrongdoing, the lower the retaliation against the whistle-blower. Ostracism is one of the most significant personal costs to whistleblowing (Glazer & Glazer, 1989). Glazer and Glazer (1989) suggest that whistle-blowers experience difficulties in getting employment after reporting the wrongdoing. These factors deny employees of their essential social support and personal well-being; hence, their unwillingness to engage in wrongdoing reporting (Alleyne & Weekes-Marshall, 2013). However, Lowry et al. (2013) suggested whistleblowing intention increases when potential reporters are offered motivation to confide in the obscurity of the reporting mechanism. Robinson et al. (2012) suggest anonymous reporting improves whistleblowing – reducing perceived personal cost. The results of Johansson and Carey (2015) also demonstrate a positive relationship between an anonymous reporting channel and wrongdoing reporting.

Prior literature indicates that institutional pressures; ethical climate at the top; support from peers and supervisors; quality and reliability of the evidence of wrongdoing positively influence whistleblowing intentions (Cho & Song, 2015; Kennett, et al., 2011; Park & Blenkinsipp, 2009). Similarly, Liyanarachchi and Newdick (2009) and Mesmer-Magnus and Viswesvaran (2005) suggest perception of the wrongdoer; intended purpose of wrongdoing; remaining anonymous; the individual's moral reasoning; materiality of the act; effectiveness of the reporting channel; employee's status; employee's tenure with the organisation; age or

gender have positive association with reporting intentions. Perceived behavioural control; social pressure; attitude toward whistleblowing; reward; protection from retaliation are found to influence individuals' whistleblowing intention positively (Zyglidopoulos & Fleming 2008; Chiu 2003; Gundlach, Douglas, & Martinko, 2003; Treviño & Weaver, 2001).

Accountants are unlikely to blow the whistle on wrongful act committed by their partners, or colleagues (Alleyne, Charles-Soverall, Broome, & Pierce, 2017; Alleyne & Weekes-Marshall, 2013). The failure of accountants to actively involved in whistleblowing is attributed to organisations' unwillingness to welcome reports of misconduct that questions their organisational hierarchy (Mesmer-Magnus & Viswesvaran, 2005). The fear of retaliation through nullification; isolation; defamation; or eviction is the factors that prohibit accountants from reporting wrongdoing.

In a study conducted by Liyanarachchi and Newdick (2009), the results show that the gender of students has a significant impact on moral reasoning and the likelihood of whistleblowing. However, the participants were unwilling to report the wrongdoing, fearing that protection will not be afforded to them if their actions are made public. Reluctance to whistleblowing rises when the fear of reliance on whistleblowing processes by employees is misguided. Recognition of the problem and intention to report was found to be present in the participants, but there was limited action on their part. It was concluded that increased protection for whistle-blowers against the threat of retaliation would increase the probability of employee's whistleblowing intention.

Pope and Lee (2013) conducted a study to explore whether the availability of financial rewards and anonymous reporting channels influence individuals' reporting intentions and whether the availability of financial bonuses will prompt people to disclose their identities. The results show that financial incentives have the possibility of increasing respondents' tendency to report wrongful act and their readiness to expose their identities. However, the availability of an

anonymous reporting channel did not affect respondents' willingness to report questionable actions. In the quest to determine whistleblowing intention within government agencies, Cho and Song (2015) embarked on a study and the results revealed that perceived personal cost reduces whistleblowing intention, while public service motivation and education on whistleblowing increases it. It was also reported that organisational support and protection decrease the perceived personal losses, which existing literature finds to increase whistleblowing intention.

Alleyne, et al. (2015) study on the moderating role of perceived organisational support in breaking the silence of public accountants indicate that accountants do not blow the whistle when personal cost is high, but in the presence of perceived organisational support, there was a substantial likelihood of accountants' whistleblowing. Alleyne and Weekes-Marshall (2013), seeking to explore the factors that influence whistleblowing intentions among accountants in Barbados conducted a study. The results show that fear of retaliation and victimisation discourage accountants from blowing the whistle. However, it is indicated that organisational commitment and corporate ethical values are the critical determinants of whistleblowing intentions among the accountants. The results of a research conducted by Kaplan, Pany, Samuels and Zhang (2012) discovered that reporting through anonymous channel increases whistleblowing than reporting using the non-anonymous channel. However, the case is true when previous whistleblowing outcome is negative. That is, employees are less likely to report wrongdoing when they are exposed to retaliation rather than they been protected and supported. In determining proactive behaviour in the form of whistleblowing, a study was conducted by Bjørkelo, Eisernan, and Matthiesen (2010). It was reported that high conscientiousness, high extraversion, low neuroticism, and low agreeableness is related to whistleblowing. Further, the results show that the trait openness to experience is unrelated to whistleblowing.

The discourse above show that various aspects of the determinants of whistleblowing have been assessed, yet existing literature on how accountants' personal characteristics influence their intentions to report wrongdoing and fraudulent acts are few (Gao & Brink, 2017). Probably, it is for this reason why this study sought to examine the influence of personal characteristics on whistleblowing intentions of accountants.

2.3 Personal Characteristics

The personal characteristics considered in this study are personality traits and professional scepticism (trait and state). An individual's personality is a combination of two factors: genetic factors (hereditary) and environmental factors. The first is the basic factors that shape one's personality, and later, are the factors that affect a person's personality based on where a person grew up (Suryandari & Yuesti, 2017). As opposed to the generally stable and enduring personality traits are the states, which are the temporary conditions which are affected by situational or contextual circumstances. Steyer, Schmitt, and Eid (1999), drawing on latent state-trait theory (LST) suggest that traits, situational characteristics and the interaction between individuals and conditions form an individual's behaviour. Accordingly, their study presents instrumental methodological tools for testing the existence of the interrelationship among traits, states and behaviour. Notably, the study of Robinson (2011) highlights the importance of considering contextual influences on behaviour. In support of this, Veroff (1983, pg. 332) indicates that "behaviour represents an interaction of individuals' personality and the situation/ state they are in, such that it is impossible to isolate a unitary stable personality factor outside of its various contexts". Veroff (1983) further posits that strong situational influences may even alter core personality characters. This provides a piece of evidence on the differences between personality traits and professional scepticism. While the former is innate, the latter is a combination of both innate and learned behaviour.

2.3.1 The Big Five Personality Traits Dimensions

Personality trait comprises of cognitive and behaviour patterns that stabilise over time and differs across situations (McCrae & Costa, 2003; Ortony, Norman, & Revelle, 2005; Revelle, 2008). McCrae and Costa (2003) suggest that personality trait describes humans in relation to their style of conduct, mind, and feelings. It is a mental trait that critically predicts people's behaviour (Parks-Leduc, Feldman, & Bardi, 2015; Xu & Potenza, 2012). Personality literature emphasises five main personality traits known as the Big Five. The traits are Neuroticism or emotional instability; Extraversion; Openness to Experience or intellect; agreeableness; and conscientiousness¹⁴. The Big Five personality trait is not a substitute for other personality structures, but a framework for interpreting other personality constructs (McCrae & Costa, 1989).

2.3.2 Professional Scepticism

Accountants' scepticism is the foundation of stakeholders' self-assurance in financial reporting (Doty, 2011). Statement of Auditing Standards (SAS) No. 99 highlights the necessity for accountants to exhibit professional scepticism when considering and to respond to the risk of material misstatement. Professional scepticism is the ability of an accountant to have an inquiring mind and a critical evaluation of audit evidence (AICPA, 2007). Some scholars perceive professional scepticism as to the opposite of trust, independence or possible doubt

¹⁴ Neuroticism is described as the tendency to enjoy frequent and excessive terrible feelings in response to diverse resources of stress. Neurotic individuals always see the world as a dark place and hence have negative thoughts (Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2014; Costa, Terracciano, & McCrae, 2001). Openness to experience is the extent to which an individual is accustomed to broad areas of interest and creativity (Furnham, 2008). Such individuals also see opportunities others do not see. Extraversion is described as the tendency to be sociable, talkative, cheerful and optimistic. Accordingly, they welcome change and excitement (Watson & Clark, 1997). Agreeable individuals are oriented toward helping others and collaborating with them. They are selfless and sympathise with others (Graziano & Tobin, 2002). Conscientiousness is the tendency to be responsible, achievement-oriented, and persistent (Barrick, Mount, & Strauss, 1993).

(Kadous, 2000; Nelson 2009). Nelson (2009) describe a sceptic as “one whose behaviour indicates relatively more doubt about the validity of an assertion” pp. 4. Hurtt (2010) provides that professional scepticism could be a trait (a stable and enduring element of a person) or a state (a temporary situation aroused by situational variables). A widely held view is that the nature of the work of accountants requires them to be professionally sceptic.

Professional scepticism includes different behavioural components such as questioning mindset, suspension of judgement, search for knowledge, interpersonal understanding, autonomy and self-esteem (Hurtt, 2010). Sceptical individuals are more willing to scrutinise the information available to them. It is suggested that they observe beyond what seems to be the apparent solution (Popkin & Stroll, 2002). Furthermore, there is evidence that a questioning disposition is an essential feature of professional scepticism. Sceptical individuals question their judgements and decisions analytically. Highly sceptical individuals suspend their judgement until all vital information is obtained rather than making conclusions based on existing knowledge. Literature indicates that sceptical individuals are expected to be of high self-esteem (Lom, 2001). High self-esteem individuals have more in-depth insights and self-reliant in their thought process. They are likely to understand the motivations and behaviour of people under investigation. Researchers also propose that professional scepticism entails individual autonomy, thus self-direction and moral independence (Hurtt, 2010). Sceptical individuals do not readily accept the claims of others. However, they try to point out contradictions and fallacies within the evidence presented by others and undertake additional investigation until they are personally satisfied.

Studies suggest that the propensity that accountants will report wrongdoing in the presence of motivation is very high. Empirical studies also indicate that personal characteristics are determinants of motivation. However, the literature on the role of motivation on the relationship between personal characteristics and the likelihood of reporting wrongdoing is

lacking in existing literature (Alleyne et al., 2015). Hence, this study sought to examine the influence of motivation on the relationship between personal characteristics and whistleblowing intentions of accountants.

2.4 Motivation

Various definitions and explanations of motivation have been propounded. Stroke (1999) opined that motivation is a social psychological characteristic that contributes to an individual's degree of commitment. In his view, motivation must be a good thing, which influences individuals' performances and organisational success. According to Allen and Robbins (2010), motivation is the processes that give rise to an individual's intensity, direction and persistence of effort in the course of attaining a goal. Ryan and Deci (2000) describe motivation as the "orientation of concerns the underlying attitudes and goals that give rise to action". Motivation is a theoretical construct that explains an individual's behaviour and the reasons for people's actions, desires, and needs. Gagné & Deci (2005) suggest that the motivation for pursuing activities may fluctuate depending on whether motivation originates from oneself or from outside oneself. While extrinsic motivation refers to a propensity to engage in activities primarily for external consequences, intrinsic motivation is one's ability to act without external interference (Ryan & Deci, 2000).

Perceived organisational support (POS), which is extrinsic motivation, is the degree to which employees believe that their organisation values their contribution, cares for their well-being and fulfils socio-emotional needs (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Perceived organisational support increases the performance of regular job activities and actions favourable to the organisation that goes beyond assigned responsibilities. POS is valued as an assurance that help will be available from the organisation when it is needed to carry out one's job effectively and to deal with stressful situations. It is seen as a factor that enhances pro-social behaviours (Cho & Song, 2015). Rhoaders and Eisenberger (2002) related perceived

organisation support to affective commitment, organisational citizenship behaviour (OCB) and job satisfaction. Aselage and Eisenberger (2003) stated that employees would exert more effort to assist an organisation in achieving its goals if they perceive the organisation is eager and capable of giving a higher level of support. Upon this premise, organisational support may encourage pro-social behaviour¹⁵ that will stimulate accountants to uphold organisational rules and ethics.

Higher levels of perceived organisational support are expected to have a positive influence on organisational commitment and encourage employees to act in the well-being of the organisation (Rhoades & Eisenberger, 2002; Eisenberger, Armeli; Rexwinkel; Lynch, & Rhoades, 2001). Alleyne et al. (2015) opined that it is the concern of the organisation to stimulate its employees with the organisation's ethics. When organisations inculcate the right set of core values and culture, it promotes integrity, honesty and public interest among the employees. Vandekerckhove and Commers (2004) stipulate that such actions facilitate “rationalised loyalty” and motivate employees to report perceived or observed unethical behaviour. Alleyne et al. (2015) stated that when accountants strongly consider that unethical behaviour warrants reporting and the degree of perceived organisational support is high, they will be more willing to report but will choose internal reporting channel. Nevertheless, when the accountants consider that unethical behaviour warrants reporting and the extent of the perceived organisational support is low, they will be willing to report but will consider external reporting channel. Though perceived organisational support by itself may not facilitate whistleblowing intentions together with individual-level characteristics, it enhances the

¹⁵ Pro-social behaviour is the behaviour that concerns with employees seeking the well-being of organisations without the promise of reward.

propensity to blow the whistle (Alleyne et al., 2015). Therefore, it is anticipated that personal characteristics will influence whistleblowing intentions through the intervening effects of perceived organisational support.

A person who is motivated intrinsically performs out of his or her own choice and interest. It is depended on the pleasure and satisfaction derived from practising the behaviour. According to Deci and Ryan (2000), intrinsic motivation refers to the innate energy that people exhibit when they pursue a goal or an action because it is interesting. Deci and Ryan (2000) opined that intrinsic motivation is non-instrumentally focused instead of originating automatically from satisfaction inherent in the activity.

Intrinsic factors are divided into emotional and normative motives. We assume that affective and normative motives are expected to be self-directed, selfless and voluntary, and these characteristics are likely to foster affirmative organisational behaviours as whistleblowing intention. Hence, it is anticipated that intrinsically motivated accountants are more likely to have whistleblowing intention. Likewise, studies suggest that public service motivation is a form of intrinsic motivation (Cho & Song, 2015). Individuals are tuned to public service motivation based on three motives – rational, normative, and affective¹⁶ – which are internal factors. Intrinsic motivation is argued from the perspective of public service motivation. The study of Cho and Song (2015) indicate that public service motivation has a positive influence on individuals reporting intention.

¹⁶ While rational describes utility maximisation, normative refers to the need to serve the public interest and stimulate societal justice, and affective is the expression of human emotion – compassion and self-sacrifice.

2.5 Theoretical Review

From the perspective of scholars, no single theory could adequately explain whistleblowing behaviour (Miceli & Near, 1985). Previous studies have adopted models from numerous theories¹⁷ to describe whistleblowing. Accordingly, Mesmer-Magnus & Viswesvaran (2005) stated that relationships between variables are somewhat inconclusive and that will demand different theories to explain the phenomenon. Therefore, this current study adopted Organisational Support Theory (OST) (Eisenberger, Huntington, Hutchison, & Sowa, 1986) and Self-Determination Theory (SDT) to explain the relationship between the proposed variables better.

2.5.1 Self-Determination Theory (SDT)

Self-Determination Theory (Deci & Ryan, 1985) assumes that all individuals have a natural, innate, and positive tendencies to cultivate an elaborated and units' sense of self (Ryan & Deci, 2000). The theory mainly accepts that individuals have a primary tendency to forge interconnections among the aspects of their psyches as well as with other individuals and groups in their social worlds. This tendency toward integration involves both autonomy (tending toward the inner organisation and holistic self- regulation) and homonomy (tending toward integration of oneself with others). Although SDT accepts the general integrative tendency as a fundamental aspect of human life, it also suggests that the tendency cannot be taken for granted. On the contrary, SDT posits that there are clear and specifiable social – contextual factors that support this innate tendency, and that there are other specifiable factors

¹⁷ The theory of bystander intervention (Latane & Darley, 1968); theory of planned behaviour (TPB) (Ajzen, 1991); theory of reasoned action (TRA) (Fishbein & Ajzen, 1975); theory of pro-social behaviour (Brennan & Kelly, 2007; Brief & Motowildo, 1986); Justice theory (Near, Dworkin & Miceli, 1993); Expectancy theory (Frudge & Schlacter, 1999)

that thwart or hinder this fundamental process of human nature. Accordingly, SDT forecasts a wide-ranging array of developmental outcomes, ranging from a relatively active and integrated self to a highly fragmented and sometimes passive, reactive, or alienated self, as a function of social – environmental conditions.

SDT proposes that individuals' will be self - motivated to engage in behavioural activities when they can satisfy their three essential psychological needs. That is internal or self - regulated incentive originates from the complete internalisation of existing values and guiding processes. In such cases, there are more effective functioning and better adjustments because need satisfaction provides the necessary elements for human progress and development (Ryan, 1995). Accordingly, Ryan, Sheldon, Kasser and Deci (1996) opined that dissatisfaction of the essential desires weakens self-motivation leading to external motivation or amotivation, and results in maladaptive consequences.

Self - determination involves the capacity to act autonomously. Whereas on the individual level, it encompasses utilising one's capacity to choose how to satisfy one's need (Deci, 1980), on a collective level, people are self - determining, when they are capable of negotiating, deciding and acting together voluntarily (Dahl, 1989). The study draws on Self-Determination Theory since it encompasses a theory of motivation that allows the investigation of social and contextual conditions that accelerate or hinder self-motivation and psychological development in organisations (Deci & Ryan, 1985).

In this study, when accountants have autonomy over the activities that revolve around them, they will strive harder to effectively achieve or execute the challenging tasks knowing that their organisations value them and that help will be given when needed. Similarly, whistleblowing is seen as uninteresting behaviour due to the presence of retaliation and repercussions surrounding it. However, individuals who have had the opportunity to complete a task wholly successfully or under monitoring will have the intention of engaging in whistleblowing.

Self-Determination Theory allows the study of intrinsic motivation and the difference between autonomous motivation and controlled motivation. In this study, it is assumed that accountants' intentions to whistleblowing are dependent on how the organisation cultivates an independent and/or controlled environment that encourages pro-social behaviours of which whistleblowing is one.

2.5.2 Organisational Support Theory (OST)

Organisational support theory (Eisenberger, Huntington, Hutchison, & Sowa, 1986) postulates that employees develop universal beliefs concerning the degree to which the organisation values their contributions and cares about their well-being to determine the organisation's readiness to reward increased work effort and to satisfy socio-emotional. Accordingly, employees show a consistent pattern of agreement with various statements concerning the extent to which the organisation appreciates their contributions and how the organisation will treat them (either favourably or unfavourably) in differing circumstances (Eisenberger et al., 1986). Employees evidently believe that the organisation has a generally positive or negative orientation toward them that includes both the recognition of their contributions and the concern for their welfare.

In this study, organisational support is considered as an important factor in that it enhances employees' contributions. When employees (professional accountants in public practice) feel their contribution is valued and they are supported by their organisation, they tend to have a sense of obligation to the organisation (Eisenberger et al. 1986). With a sense of obligation, they are more likely to exhibit positive behaviours and form a positive perception of any activity that will improve the efficiency and effectiveness of their organisation. Also, studies have established that organisational support positively influences employees' personality characteristics and can stimulate more favourable employee attitudes and behaviours (Cheng 2011; Chiang & Hsieh 2012).

Studies show that when employees perceived that their organisations are willing to support them, they would engage in extra-role activities¹⁸. Organisational support is known to be a factor that enhances pro-social behaviours (Cho & Song, 2015). According to Sims and Keenan (1998), whistleblowing behaviour is pro-social or positive behaviour. Hence, organisational support will contribute to influence whistleblowing intentions (Cho & Song, 2015); it reduces perceived personal cost. Likewise, whistle-blowers are challenged with fears of reprisal such as dismissal from employment, forced resignation, demotion, or social isolation at work (Chiu, 2003; Reginald Gernaldo, 2014; Smith, 2010). For instance, when whistleblowing channels and procedures within the context of accounting and auditing firms are effective, accountants in public practise when exposed to or perceive fraud, illegal activities etc. are likely to have greater intention to engage in whistleblowing. Further, when whistleblowing policies and procedures are well documented and communicated across the firms of accountants in public practice, it may indicate the firms support for whistleblowing activities, hence, the likelihood of them having intentions to engage in whistleblowing. Therefore, when the accountants view that the organisations are prepared to protect and support them, they will have higher intentions of blowing the whistle. Likewise, accountants will have the intentions to raise concerns on wrongdoing when they recognised that the whistleblowing policies are safe. For instance, an accountant who is dominant on the neuroticism trait, which denotes fearfulness, is likely not to engage in whistleblowing if whistleblowing procedures do not prevent victimisation of whistleblowers and prescribe anonymity of the whistleblower.

¹⁸ aiding fellow employees, taking actions that protect the organisation from risk, offering constructive suggestions, and gaining knowledge and skills that are beneficial to the organisation

2.6 Conceptual framework and Hypotheses Development

2.6.1 Conceptual Framework

A conceptual framework of the study is illustrated in Figure 2.1. The framework assumes that professional scepticism is related to whistleblowing intention. It also shows that personality traits - conscientiousness, extraversion, neuroticism, agreeableness and openness to experience - influence the propensity of individual's whistleblowing practices. Motivation, both intrinsic and perceived organisational supports, is also depicted to mediate the relationship between personal characteristics and whistleblowing intentions of individuals.

2.6.2 Hypotheses Development

2.6.2.1 Personal Traits and Whistleblowing Intention

Openness to experience is the extent to which an individual is accustomed to broad areas of interest and creativity (Furnham, 2008). Individuals who are open to experience see opportunities others do not see (McCrae & Costa, 1997). They are curious, easily bored, and much less rule certain (Furnham, 2008). Other scholars suggest that individuals who are highly open to experience are expected to value stimulation and self-direction and to assign low importance to conformity, tradition, and security values (Olver & Mooradian, 2003; Roccas et al., 2002).

Bjørkelo, Ryberg, Matthiesen and Einarsen (2008) describe whistle-blowers as individuals who are less curious and more rule-bound than those individuals who are easily bored and driven by the search for novelty. Although LePine and Van Dyne (2001) indicate that openness to experience is not related to voice, Bjørkelo et al. (2010) provide that such a relationship is not testable. The latter, thus, conclude that openness to experience is unrelated to whistleblowing. Bateman and Crant (1993) assert that proactive behaviour is related to openness to experience. Whistleblowing is argued to be proactive behaviour (Bjørkelo et al., 2010). To the extent that whistleblowing is considered a proactive behaviour, the authors suggest a positive relationship

between openness to experience and whistleblowing. Based on these arguments, it is hypothesised that:

H_{1a} Openness to experience positively influences the whistleblowing intentions of accountants.

Conscientiousness is connected to an individual's conscience and self-control. Barrick, Mount, and Strauss (1993) described conscientiousness as the tendency to be responsible, achievement-oriented, and persistent. Conscientiousness at one extreme denotes "a stickler for rules" (Bjørkelo et al., 2010, pp. 375). This suggests that an individual cannot "bend" to new rules when situation, systems or times change. Besides, conscientiousness is the tendency to be an active and responsible employee who takes charge when problems arise. Whistle-blowers are individuals capable of proceeding with their intent of reporting wrongdoing. These individuals are characterized by high conscientiousness. Empirical studies have proved that conscientiousness is positively associated with employee voice (LePine & Van Dyne, 2001; Tangirala & Ramanujam, 2008). Hence, it is hypothesised that;

H_{1b} Conscientiousness positively influences the whistleblowing intentions of accountants.

Extraversion is described as the tendency to be sociable, talkative, cheerful and optimistic (Costa et al., 2001). Wilt and Revelle (2009) opine that extraverts reflect individual differences in assertive behaviour, decisive thinking, and desires for social attention. Extraverted individuals are characterised by energy, dominance, spontaneity, and sociability. It is established that such individuals welcome change and excitement (Watson & Clark, 1997).

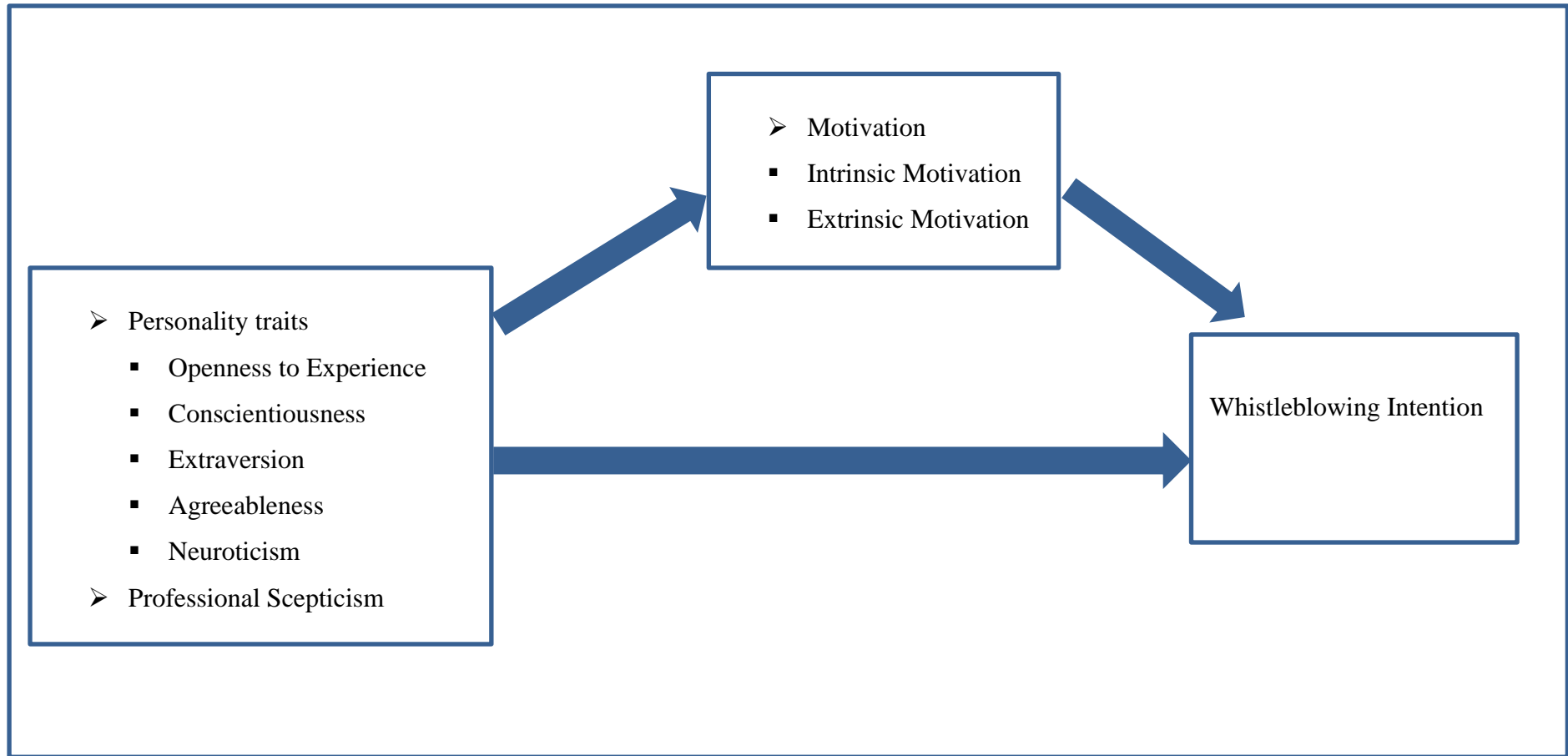


Figure 2.1: Conceptual framework of Personal Characteristics, Whistleblowing Intention and Motivation Nexus

According to Watson and Clark (1997), extraverts are confident and persuasive in social interaction. Extraversion also taps into positive emotionality (Matthews, Deary, & Whiteman, 2003). Previous studies have shown that both whistleblowing and voice are positively associated with extraversion (LePine & Van Dyne, 2001; Miceli & Near, 2005). Therefore, the study hypothesised that;

H_{1c} Extraversion has a positive relationship with the whistleblowing intentions of accountants.

Agreeable individuals are oriented toward helping others and collaborating with them (John & Srivastava, 1999). Agreeableness is connected to socially valued developments and pro-social reasons. Agreeable individuals appear to be worried about interpersonal family members (Tobin, 2002). Graziano and Tobin (2002) described agreeable persons as always trying “to look good in the eyes of others” (p. 697). As Bjørkelo et al. (2010) point out, whistle-blowers are employees who venture to risk how they look in the eyes of others for the sake of preventing wrongdoing at work. Further, agreeable individuals tend to be more cooperative, look for compromises, friendlier or empathetic and more trusting, keep peace and avoid conflict. These qualities are good to see, but in the corporate world where individuals have entrusted their resources into their care, these characters cannot contribute to the purpose of the interested parties – maximising profit – and to the going concern principle. Further, LePine and Van Dyne (2001) and Bjørkelo et al. (2010) suggest that agreeableness is negatively associated with voice and whistleblowing. Therefore, the researcher proposed a negative relationship between the trait agreeableness and whistleblowing intention. Hence, hypothesise that:

H_{1d} Agreeableness negatively influences the whistleblowing intentions of accountants.

Neuroticism is described as the tendency to enjoy frequent and excessive fearful feelings in response to diverse resources of stress. These terrible emotions are extensively construed to include anxiety, fear, irritability, anger, sadness, and others (Barlow, Sauer-Zavala, Carl,

Bullis, & Ellard, 2014; Costa, Terracciano, & McCrae, 2001), but the most considerable focus has been on the experience of anxious or depressive mood (Barlow et al., 2014). Coupled with this poor emotionality for neurotic individuals is the pervasive belief that the world is a dangerous and threatening area, and one isn't incapable of manipulating or addressing challenging activities. This suggests that individuals who portray the trait neuroticism lack positive self-concept. These beliefs are often exhibited in their focus on criticism, either self-generated or generated by others and their general sense of inadequacy and perceptions of lack of control over significant events (Clark & Watson, 2008).

Neuroticism is also documented to negatively correlated with affectivity since it concerns psychological problems (Watson and Clark, 1997). High-negative affectivity individuals may ascribe more malicious motives to an actor leading to increased negative emotions stimulation when they are challenged with stressful conditions wherein the intent to harm is open to interpretation. Conversely, individuals with low negative affectivity may give the actor the benefit of doubt and attribute the behaviour to more benign causes, enabling them to proceed without feeling the need to respond (Penney & Spector, 2005). Existing literature suggest that employees who have observed wrongdoing record high scores on negative affectivity (Miceli, Near, & Dworkin, 2008). Whistleblowing-related behaviour voice is negatively related to neuroticism (LePine & Van Dyne, 2001), and Bjørkelo et al. (2010) suggest that neuroticism is negatively associated with whistleblowing. It is, therefore, hypothesised that:

H_{1e} Neuroticism negatively influences the whistleblowing intentions of accountants.

2.6.2.2 Professional Scepticism and Whistleblowing Intentions

Several studies have tested the connection between the level of professional scepticism and the detection of accounting fraud. Studies suggest that more sceptical accounting students regarded income-earning management movements as more unethical as related to less sceptical students

(Farag & Elias, 2012). However, accountants are obligated to maintain the requirements of professional practice along with objectivity, professional due care and professional scepticism (Nelson, 2009). Arnold and Ponemon (1991) studied the likelihood of internal auditors' blowing the whistle and find that internal auditors face an ethical dilemma whenever their disclosures of fraud negatively influence the profits of organisations.

Empirically, professional scepticism is discovered to have a significant positive impact on reporting intentions (Elias and Farag, 2015). Using students as a proxy, internal auditors with a higher degree of professional scepticism were likely to blow the whistle. Agarwalla, Desai, and Tripathy (2017) suggested that self-deception permits individuals to behave unethically without feeling dissonance, but professional scepticism trait could prevent the individuals from acting unethically by making them query their actions. Hence, the researcher concluded that professional scepticism is an influential factor concerning whistleblowing intentions among accountants and therefore hypothesise that:

H_{1f} Professional scepticism has a positive relationship with the whistleblowing intentions of accountants.

2.6.2.3 Motivation and Whistleblowing Intention

Intrinsic motivation occurs when an activity is originated by its drives like curiosity, self-determination, self-confidence, competence, autonomy, self-preservation etc. Intrinsic motivation comes from within and often refers to concepts of selflessness and pro-social attitudes. Whistleblowing is considered as pro-social behaviour¹⁹ (Brief & Motowidlo, 1986).

¹⁹ Brief and Motowidlo (1986) defined pro-social behaviour as an act performed by an employee or member of an organisation which is focused on an individual, group, or organisation with whom he or she interacts while

Pro-social behaviour is developed within an open and self-directed environment. SDT proposes that the more employees accept their working environments as autonomous, open, and flexible, the more intrinsically motivated they become. The more intrinsically they become, the higher their willingness to involve in pro-social and ethical behaviours. It is therefore hypothesised that:

H_{2a} Intrinsic motivation positively influences the whistleblowing intentions of accountants.

Perceived organisational support is influenced by an external goal. Taking into consideration the bureaucratic control within our accounting profession and our business environment, it implies that motivation of the rational accountants must be related to the concept of perceived organisational support (assurance that support will be available).

From the SDT perspective, we argue that rational motivation and affective/normative motivation are not on opposite edges; however, postured at the same continuum as amotivation, external motivation, and internal motivation. Rational motivation within our accounting profession bureaucracy is operationalised as perceived organisational support, which is grounded on mutual exchange, although normative and affective motivation is considered as intrinsic motivation. Perceived organisation support is grounded on dyadic exchange relationships. This implies that employees will exert more effort to assist the organisation in achieving its goals when they are persuaded that organisations are eager and capable of giving a higher level of support (Aselage & Eisenberger, 2003). Also, considering organisational support theory, when Perceived organisational support for employee's well-being and whistleblowing are robust, personality factor may be of less meaningful than when

fulfilling his or her organisational role; and executed with the purpose of stimulating the welfare of the other individuals, group or organisation toward which it is directed.

organisational support for situational support (whistleblowing) are weak. Hence, the relationship between extrinsic motivation and whistleblowing intentions is interpreted from perceived organisational support's perspective. By implication, the higher the level of organisational support, extrinsically motivated employees are likely to engage in pro-social behaviours (Adebayo, 2005) and therefore expected to possess the intention to whistleblowing. As indicated by Berry (2004) and Cho and Song (2015), organisational support and protection, as well as education, increases the intentions of wrongdoing reporting. Conversely, ethical and democratic culture of organisations; social support for employees; norms of reciprocity are positively related to whistleblowing intention and behaviour (Mesmer - Magnus & Viswevaran, 2005; Seifert, Stammerjohan & Martin, 2013).

H_{2b} Perceived organisational support positively influences the whistleblowing intentions of accountants.

2.6.2.4 Personal Characteristics and Motivation

Teng, Huang and Tsai (2007) and Huang and Yang (2010) suggest that personality trait is a motivation. Studies demonstrate that the tendency to participate in behaviour is influenced by individuals' personality and situational factors (Ariani, 2013; Barrick, Mount, & Li, 2013). Previous studies (Judge & Illies, 2002; Hogan & Holland, 2013) have empirically illustrated the role of personality trait in predicting and explaining employee motivation and behaviour. Ariani (2013) buttressed this argument by stating that when one can determine the effect of personality traits on employee's incentives, one can then observe what influences behaviour. According to Robbins and Judge (2011), personality encompasses the entirety of ways through which people respond to and interrelates with others. Previous studies emphasise psychological individual differences factors as determinants of motivation. There remains an unclear understanding of exactly how personality influences motivation (Ariani, 2013). Forrester and

Tashchian (2010) opine that personality impacts attitude. Accordingly, attitude influences motivation which consequently fosters social and behavioural outcomes. Judge and Illies (2002) stated that personality traits (The big five personality traits) are associated with work-related attitudes and behaviours such as work motivation while Barrick, Mount, and Judge, (2001) found that it is connected to performance.

Colquitt et al. (2000) indicate that conscientiousness is the only factor out of the big five personality traits that prior studies have focused on predicting motivation to learn. Their findings suggest that neuroticism negatively impacts on motivation to learn. However, they indicate that learning may be of interest to individuals who rate higher on the dimension of openness to experience. Albeit, Watanabe and Kanazawa (2009) find that conscientiousness and openness to experience positively influence intrinsic motivation, while the trait conscientiousness and extraversion had a significant positive relationship with extrinsic motivation (Watanabe & Kanazawa, 2009). Kamaraju, Karau and Schmeck (2009) examine the effects of personality trait (Big Five Personality Trait) on learners' motivational conditions and studies performance. It was discovered that a personality trait (conscientiousness and openness to experience) positively affect intrinsic motivation. Moreover, the relationship was significant.

Other studies found personality traits facilitate motivation. Barrick et al. (2001) conducted a survey, and the results of the study proved that the trait conscientiousness and neuroticism influences motivational constructs. According to Grant (2009) and Costa and McCrae (1992), employees who score high on the trait conscientious dimensions are likely to express stronger concerns for responsibility, duty, and dependability than those who are less conscientious. It is stated that high conscientious employees will find connections with beneficiaries more motivating since these connections would call for their desires to be responsible, dutiful, and dependable. Likewise, conscientiousness is found to correlate with the establishment of goals

and dedicated to goals achievement. While conscientiousness has an impact on anticipation for success and aroused to achieve goals (Gellatly, 1996), emotional stability is found to be connected to motivation.

Previous studies assess the relationship between personality traits and intrinsic motivation. Using public service motivation as a proxy for intrinsic motivation, studies by Jang (2012) and Pandey and Stazyk (2008) demonstrate that personality traits have links with intrinsic motivation. Also, a study by Mondak (2010) and Hamidullah, Van Ryzin, & Li (2016) indicate that personality traits serve as a strong predictor of internal motivation. Most importantly, conscientiousness is found to be a significant dimension of a personality trait that explains public service motivation (Pandey & Stazyk, 2008; Mondak, 2010; Jang, 2012; Hamidullah, Van Ryzin & Li, 2016). Therefore, this hypothesis is set for the study:

H_{3a} Conscientiousness has a positive influence on intrinsic motivation.

The influence of professional scepticism on motivation has not been articulated in the literature. However, the dimensions of professional scepticism as suggested by Hurrt (2010) – autonomy, search for knowledge, suspension of judgement, interpersonal understanding, questioning mindset and self-esteem – are found influencing motivation. The influence of autonomy on motivation is well-documented in the literature, particularly with respect to students' intrinsic motivation to learn. Findings from previous studies across different samples show that children exhibit higher levels of intrinsic motivation when parents and teachers exhibit autonomy-supportive styles of interaction (Garcia & Pintrich, 1996). Relating this to the working environment of accountants, this implies that managers who demonstrate lower levels of control and inspire their employees to select and initiate activities appear to help stimulate mastery rather than a performance orientation toward the activity (Ryan & Deci, 1991; Deci, Hodges, Pierson & Tomassone, 1992). Hence, accountants who work within an autonomous environment will be intrinsically motivated to engage in ethical behaviours; and accordingly,

this will enhance the effectiveness in the activities they perform (Ryan & Deci, 2000). That is, they may feel the sense of autonomy and competence which is one of the basic psychological needs that emanates from intrinsic motivation. Garcia and Pintrich (1996) have established the positive influence of autonomy on intrinsic motivation.

Individuals with positive self-esteem are intrinsically motivated to engage in ethical behaviours because of how they have constructed their “self” (Liang, Liu, Tan, Huang, Dang, & Zheng, 2016). Self-esteem is the way one thinks about himself and value one places on himself/ herself or what he expects of himself/ herself (Meškauskienė, 2013). Self-esteem influences one’s emotional, cognitive and behavioural responses under various situations. According to Baumeister (1998), it is the aim of most employees to protect, maintain and develop their self-esteem. Individuals who possess higher levels of self-esteem have the conviction that they can thrive and improve themselves by relying on their identifiable merits hence they are less anxious about avoiding failure (Vohs & Heatherton, 2001). Hence, individuals with high self-esteem are motivated internally.

On the other hand, inferiority, unworthiness, insecurity, loneliness, and depression etc are the characteristics of individuals with low self-esteem (Brown & Marshall, 2001). They are usually anxious, quite uncertain about themselves and predominantly challenged to thrive (Donnellan et al., 2006). Crocker and Parker (2004) opined that individuals are stirred to pursue any enhancement to compensate for low self-esteem when their self-esteem is threatened. From the perspective of Sivanathan and Pettit (2010), attaining rewards and status enable self-affirmation and similarly heighten self-esteem for individuals lacking it. Hence, such individuals in order to improve their self-esteem will divert their attention from satisfying vital human needs to pursuing extrinsic outcomes (Deci & Ryan, 2000; Crocker, 2002). This implies that accountants striving for self-esteem will not be willing to engage in whistleblowing unless they realise the behaviour is supported by the organisation and likewise perceive that they will

be protected from any harm when they found themselves as whistle-blowers. A higher level of autonomy and high self-esteem indicates a higher level of professional scepticism and the lower the level of autonomy and self-esteem, the lower the level of professional scepticism.

Based on the discussion above, the following hypotheses were formulated:

H_{3b} Professional scepticism has a positive influence on intrinsic motivation.

H_{3c} Professional scepticism has a positive influence on perceived organisational support.

2.7 Chapter summary

This chapter provided the empirical and theoretical review of the study. The theoretical review highlights two main theories which comprise organisational support theory and the theory of self-determination.

Table 2. 1: Summary of Hypotheses

The relationship between personal characteristics and whistleblowing intention	
H1 _a	Openness to experience positively influences the whistleblowing intention of accountants.
H1 _b	Conscientiousness positively influences the whistleblowing intentions of accountants.
H1 _c	Extraversion has a positive relationship with whistleblowing intentions of accountants.
H1 _d	Agreeableness negatively influences the whistleblowing intentions of accountants.
H1 _e	Neuroticism has a negative relationship with the accountant's whistleblowing intentions.
H1 _f	Professional scepticism has a positive relationship with the whistleblowing intentions of accountants.
H2 _a	Intrinsic motivation has a positive influence on whistleblowing intention.
H2 _b	Perceived organisational support has a positive influence on whistleblowing intention.
H3 _a	Conscientiousness has a positive significant influence on intrinsic motivation.
H3 _b	Professional scepticism has a positive influence on intrinsic motivation.

- H3_c Professional scepticism has a positive influence on perceived organisational support.
- H4_a Intrinsic motivation mediates the relationship between conscientiousness and whistleblowing intentions.
- H4_b Intrinsic motivation mediates the relationship between professional scepticism and whistleblowing intentions.
- H4_c Perceived organisational support mediates the relationship between professional scepticism and whistleblowing intentions.
-

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the research methods that were adopted to carry out the study. It highlights the philosophical assumption, the research approach and design utilised for the study. The chapter also explains the study population, sampling techniques, sources of data and data collection techniques and data analysis procedures.

3.2 Research Philosophy and Paradigm

Philosophical assumptions influence research by informing and determining how it should be conducted, i.e., directing the entire research process and methodology (Creswell, 2007; Neuman, 2014). The research paradigm serves as a general framework guiding the research in terms of the research questions and research techniques (Creswell, 2014; Creswell and Creswell, 2017). Three main philosophical assumptions are notable in literature – positivism²⁰, interpretivism²¹ and transformative.²²

This study is premised on the positivist philosophical assumptions. The positivist paradigm employs scientific research methods, such as experimentation and observations, to investigate a phenomenon and understand human behaviour (Kivunja & Kuyini, 2017; Bunniss & Kelly, 2010). The positivist approach suggests that truth and reality is independent of the viewer and

²⁰ True knowledge is obtained through scientific method

²¹ Knowledge is socially constructed (Chalmers, Manley, & Wasserman, 2009)

²² Reality is historically bound and is constantly changing, depending on social, political, cultural, and power-based factor (Mertens, 2014)

observer (Aliyu, Bello, Kasim, & Martin, 2014); the discovery and verification of knowledge is through direct observations; whilst evidence is established by examining in parts, the components of the phenomena (Kivunja & Kuyini, 2017). The paradigm focuses on striving to provide an accurate description of reality, which is believed to be independent and exist independent of the researcher. as well as analysing and interpreting results to understand relationships that exist between constructs. Hence, they advocate for quantitative, which is based on this premise (Kivunja & Kuyini, 2017).

The positivist paradigm was chosen for this study because the study seeks to interpret observations based on evidence and measurable units. Thus, the constructs of interest are objective entities that exist and observable. Moreover, the study examines cause and effect relationships and identifies relationships among constructs, which is typical of positivist research (Kivunja & Kuyini, 2017; O'Sullivan & Irby; 2011). It also aims at providing justifications and making estimations based on measurable outcomes, which are the focus of this study.

3.3 Research Approach and Design

The choice of a research approach and design is informed by the objectives of the research, the standards of practice and the philosophical assumptions underpinning the study (Yin, 2015; Kivunja & Kuyini, 2017). Existing literature outline three main research approaches - the quantitative; qualitative; and mixed-methods (Collis & Hussey, 2013). This study uses a quantitative research approach. The positivist paradigm influences the choice of this approach. The survey, experiments, case studies and archival analysis are some of the procedures for collecting data for quantitative research. The survey research design is adopted in this study and questionnaires are used to collect data. Saunders, Lewis and Thornhill (2009) opine that survey research design is reliable when it comes to the verification of hypotheses, which is directed to aid generalisation. The survey research design also assists researchers to understand

the relationships that exist between constructs and new concepts concerning the research problem (Kothari, 2004). Considering this study's objective of establishing relationships between personal characteristics and whistleblowing intentions, survey design is appropriate.

3.4 Study population, Sampling technique and Sample Size

The population of research constitute the total group of respondents whose information needs to be ascertained (Banerjee & Chaudhury, 2010), and this is often determined based on research objectives (Asiamah, Mensah, & Oteng-Abayie, 2017). A study's population usually possess similar characteristics of interest and relevant to answering the research questions (Creswell, 2014, Asiamah et al., 2017). Accountants in Ghana, who are registered, licensed and accredited by the Institute of Chartered Accountants (Ghana) and are in good standing to practice, constituted the population of this study.²³

A limitation of most research is the inability to obtain data from the entire population. Nonetheless this limitation, studies demonstrate that research can provide accurate information about their population when they utilise high-quality data collection procedures and suitable means of selecting a sample (De Vos, 2002; Cressie, 2015). To determine the appropriate sample size for a study, a sampling technique should be adopted to select the specified number from the general population (Bernard, 2002). Two broad sampling techniques advanced in the literature, with each technique having its variations, are the probability and non-probability sampling techniques.²⁴

²³ Professional accountants in good standing to practice as at 2018, provided institute of Chartered Accountants Ghana, were 4,248.

²⁴ By probability sampling, respondents in the population has an equal chance of being selected in the study while non-probability samples, the selection of respondent based on non-systematic process that does not guarantee equal chance for each subject in the study population (Elfil & Negida, 2017). Probability sampling constitutes simple random, stratified, systematic, cluster as well as multi-stage sampling (Teddlie & Yu, 2007). Purposive,

The simple random sampling technique, a variant of the probability sampling technique, is utilised in this study because it allows an equal chance for each member of the population to be part of the sample (Walliman, 2017; Teddlie & Yu, 2007; Kothari, 2004). Moreover, this sampling method is not affected by selection biases (Adwok, 2015), gives the most reliable representation of the population (Mertens, 2014; Walliman, 2017), thereby increasing the external validity (Teddlie & Yu, 2007).

Applying the sampling technique and using the Krejcie and Morgan's (1970) table for Determining Sample Size, 698 professional accountants in public practice are sampled for the study. According to Krejcie and Morgan (1970), it is appropriate to sample 354 from a population of 4,248, which is a required representation of the opinions of respondents. However, to ensure a reasonable distribution of accountants across the different categories of accounting firm and possible the high rate of non-response, invalid questionnaire and withdrawal of respondents due to the time of data collection, 698 respondents were sampled. The 698 respondents were randomly selected from the 313 accounting and auditing firms in Ghana that have the license to operate in the year 2018. Krejcie and Morgan (1970) pointed out that only the table has to be considered, hence, no need for calculation. The distribution of the sampled professional accountants across the different accounting and auditing firms are

quota, snowballing, haphazard and convenience are most commonly used non-probability sampling technique (Acharya, Prakash, Saxena, & Nigam, 2013).

shown in Table 3.1. The sample size for the study is also consistent with existing quantitative studies on whistleblowing as provided by Gao and Brink (2017).²⁵

Table 3. 1: Distribution schedule of Questionnaire

Category of Firm ²⁶	Number of firms in Category	Number of questionnaires distributed per firm	Total number of Expected Respondents
A1	5	10	50
A	23	6	138
B1	29	4	116
B	41	3	123
C	54	2	108
D	163	1	163
TOTAL	313		698

3.5 Data source and Data Collection procedure

Structured close-ended questionnaires are used to obtain data from participants to address the research hypotheses of this study. In social science research, questionnaires have emerged to be a well-established tool in getting data (Bird, 2009). Questionnaires also help to acquire data on the respondents' current and historical behaviour, attitude, social characteristics, the standard of conduct, values, and the reasons behind their actions (Bulmer, 2004). Additionally, this research instrument provides wider coverage and completion can be done at the

²⁵ In a review paper by Gao and Brink (2017), they find the sample size of most whistleblowing research which adopted the quantitative approach ranges from 54 to 500.

²⁶ The criteria for the category are basically on revenue levels, number of partners and number of staffs. The categories range from A1 to D, with A1 being firms with the highest revenue levels and in that order.

participant's convenience. Since the study seeks to understand the role of personal characteristics on behavioural intentions, this research data collection is deemed appropriate.

The study adopts a cross-sectional form of data collection. Cross-sectional study aids researchers to examine two or more variables at one point in time and is useful for describing a relationship between two or more variables. The cross-sectional research allows all measurements for sampled members to be obtained at a single point in time, even though the distribution and collection of data take place within a more extended period (Hemed & Tanzania, 2015; Sedgwick, 2013). It is mostly applicable for estimating the predominance of behaviour within-population. Hence, it was adopted as the study is about behavioural intention.

In collecting the data, the contacts of the accounting and audit firms were acquired from the Institute of Chartered Accountants, Ghana website. Partners of these firms were called on to partake in this study, and an introduction letter was given to each firm for them to confirm willingness to participate in the survey before the questionnaires were administered. Detailed information about the study was explained to respondents who requested for further explanation.

Face-to-face administering of the questionnaires was the primary mode of delivery to warrant higher response and collection rate and to ensure confidentiality and anonymity. The questionnaires were administered and collected over three months, between December 2018 and February 2019. A total of 530 questionnaires were distributed because some of the firms withdrew from taking part in the study. Three hundred and seventeen questionnaires, representing 59.81 per cent of the total questionnaires administered, were received at the end of the data collection process. However, 13 of the questionnaires were invalid due to the incomplete response. Consequently, 304 valid questionnaires are used and analysed to test the hypothesis of the study.

3.6 Research Instrument and Measurement Scale

The research instrument used for the study is adapted from existing literature, and it contains a set of closed-ended questions which prior literature employ as a measurement scale for the constructs or variables of this study (see Table 3.2 for the sources of the measuring scales of the constructs). The questionnaire is structured into five sections (See Appendix 1). While the first section contains the participant's demographic information, the other four sections consist of questions that measure each of the variables – personality traits, professional scepticism, motivation and whistleblowing intentions.

The questionnaire consisted of 87 items: five measuring demographic variables and the rest measuring four constructs, as shown in Table 3.2. All questions for the constructs for the study are measured using a 7-point Likert type optimal scale, and this is to enable the respondents to indicate how true a particular statement is about them or the degree to which they approve or disapprove of a question (Nemoto & Beglar, 2014). The 7-point Likert scale is preferred to the 5-point Likert scale because it makes available a relatively more accurate measure of the exact estimation of the respondents and such scale is also suitable for unsupervised usability questionnaire (Finstad, 2010).

The demographic details section of the questionnaire collected data regarding the gender, age, working experience and professional qualification of participants, as well as the category of the participants' firm. The whistleblowing intention construct is measured using instruments developed by Hay (2013) and Park et al. (2008). The items of this measure inquired about the participant's readiness to report fraudulent accounting activity to the appropriate authorities either within or outside their organisation. The Mini-IPIP scale of Donnellan, Oswald, Baird, and Lucas (2006) for measuring the components of personality traits is adapted. The scale consists of 20 items for measuring the Big five personality traits identified in the existing literature – extraversion, conscientiousness, neuroticism, agreeableness and openness to

experience (4 questions each for each personality attribute). Included in the questions were reverse scored.

Professional scepticism is measured with Hurtt Professional Scepticism Scale (HPSS). The scale has questions on each of the six dimensions of professional scepticism identified by Hurtt (2010) – questioning mindset (3 items), suspension of judgement (6 items), autonomy (6 items), search for knowledge (5 items), interpersonal understanding (5 items) and self-esteem (5 items). Extrinsic motivation is measured using the 16-item indicator scale of Perceived Organisational Support developed by Eisenberger et al., (1986) since the study wanted data on the participants’ expectations from their organisation. Intrinsic motivation is measured using the Work Preference Inventory – a 7-item scale developed by Amabile et al., 1994.

Table 3.2: Description of Constructs

Constructs	Number of items	Sources
Whistleblowing Intention	9	Hays, 2013; Park et al. 2008
Personality Trait: Agreeableness (4) Conscientiousness (4) Openness to experience (4) Extraversion (4) Neuroticism (4)	20	Donnellan, Oswald, Baird, & Lucas, 2006
Professional scepticism	30	Hurtt Professional Scepticism Scale (Hurtt, 2010)
Motivation Perceived Organisational Support (16) Intrinsic motivation (7)	23	Eisenberger et al. (1986) Work Preference Inventory (Amabile et al., 1994)
Total	82	

3.7 Data Analysis Procedure

Descriptive statistics and Partial Least Square - Structural Equation Modelling (PLS-SEM) is employed to analyse the data collected. The descriptive statistics provide a vivid summary of the demographic data (frequencies and percentages) and the constructs (averages and standard deviation). The study adopted Hair et al. (2017) model evaluation analysis procedure for PLS-SEM to assess the proposed relationships between the constructs of the study.

Structural equation modelling (SEM) is used due to its ability to analyse multiple interrelationships among several constructs and greater flexibility to test theories and models empirically (Hair et al., 2014). SEM helps in analysing complex regression models by comparing hypothesised relationships with latent variables and data obtained (Lei & Wu, 2007) to aid identification of causal relationships among the variables (Hair et al., 2014). It provides a general and useful framework for investigation relationships by combining some conventional multivariate techniques (regression analysis, factor analysis, discriminant analysis and canonical correlation, etc.). The covariance-based SEM (CB-SEM) and the partial least square SEM (PLS-SEM) are the two main types of SEM advanced in the literature (Jöreskog, 1978, 1993; Wold, 1982, 1985).²⁷

PLS-SEM is employed to test the conceptual model and the hypotheses developed for this study. PLS-SEM is best suitable for non-parametric measuring causality (Hair, Hult, Ringe, & Sarstedt, 2017) and it can be implemented as a regression model to predict one or more endogenous variables from a set of more exogenous variables (Garson, 2016). PLS can also be

²⁷ Covariance-based SEM is known to be the aspect of SEM that is widely known and used by researchers (Hair et al, 2017). Partial Least Squares (PLS) analysis is a substitute to OLS regression, canonical correlation, or covariance-based structural equation modelling (SEM) of systems of independent and dependent variables (Garson, 2016).

used to estimate a path model - handling causative paths by linking independent variables as well as paths connecting the independent variable to the dependent variables (Hair et al., 2017). PLS is considered as the best technique which is suitable for exploratory studies, unlike the covariance-based SEM, which best suits confirmatory studies (Hair, Hult, Ringe, & Sarstedt, 2017). It is argued that relative to CB-SEM, PLS-SEM is most appropriate for smaller samples, it reduces estimation errors that may arise, provides higher statistical powers and can handle multicollinearity issues among independent constructs (Hair et al., 2011; Garson, 2016; Ringle et al., 2015). This study is exploratory, utilises a relatively small sample size, analyses one or more independent and dependent constructs and evaluate both formative and reflective constructs. Hence PLS-SEM is deemed an appropriate technique for the study.

To ensure a robust and accurate statistical test of the hypothesis of this study, the bootstrapping test of the statistical significance of the PLS-SEM outputs is used — this aid in setting approximate confidence intervals and an assessment of the standard errors. Consistent with Hair et al., (2017) and Astrachan et al., (2014), the complete bootstrapping method is used, the subsamples are set at 5,000, parallel processing is done, and the sign changes are set at no sign changes. Moreover, bias-correlated and accelerated bootstrap confidence interval method is used, and the two-tailed tests are the selected test type with the significance levels set at 5 per cent.

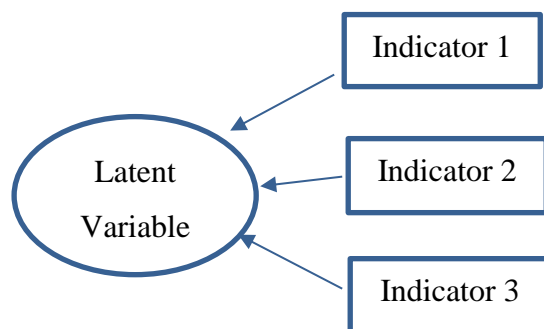
3.7.1 Model Evaluation

Analysing data using SEM requires an evaluation of the model which involves the presentation of experiential measures of the relationships that connect indicators and constructs (an assessment of the measurement model) and showing the relationship that exists between the constructs – an evaluation of the structural model (Hair et al., 2017).

3.7.1.1 *Measurement Theory*

In PLS-SEM, the measurement theory specifies how latent constructs are measured. Formative and reflective measurement theories are the two main measurement theories in conducting SEM analysis. The formative measurement theory assumes that a latent variable is formed by its measures or indicators. It presupposes that each indicator uniquely measures a certain aspect of the latent variable without error and for that matter, only a census of the indicators can be representative of an underlying latent variable (Hair et al., 2014; Chin, 1998). The reflective measurement theory, on the other hand, operates on the assumption that the measurement variables or indicators are rather a consequence of an underlying latent construct. Deciding on the most appropriate measurement theory to adopt in social science studies remains debatable. However, scholars encompassing Chin (1998), Jarvis, MacKenzie and Podsakoff (2003), and Hair et al. (2014) offer some guidelines in deciding on how best to measure research constructs. See Figure 3.1 and Fig 3.2 below for a pictorial representation of the formative and reflective measurement theories respectively.

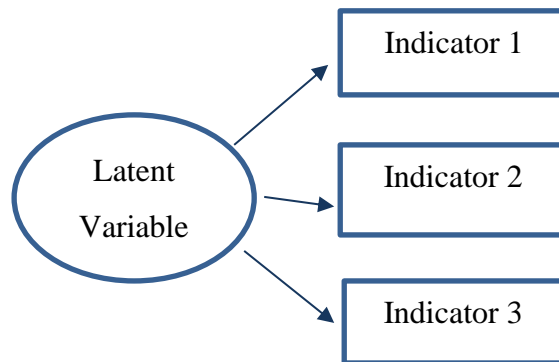
Figure 3.1: Formative Measurement



From figure 3.1, it is observed that the arrows point from the indicators to the latent variable, implying that the indicators form the latent variable. It also indicates that a change in the indicators will cause the latent variable to change. Each indicator represents a unique portion of the latent variable hence multicollinearity is not tolerated in formative measurements.

From Fig 3.2 it is observed that the arrows point from the latent variables to the indicator variables, implying that the latent variable causes the indicators. This also means that since all the indicators are coming from the same latent variable, they will share some common attributes which makes them interchangeable. It also means that collinearity is expected among the indicator variables when the reflective measurement theory is applied.

Figure 3.2: Reflective Measurement



The study adopts the reflective measurement theory for the reasons discussed below:

First, Chin (1998) suggests that researchers assess whether a change in the latent construct will necessarily lead to a change in its underlying indicators, if this is found to be true, then it implies that the latent variable causes the indicators hence should be measured reflectively. For this study, a change in a latent construct like whistleblowing intention will necessarily mean that all indicators used to measure it must also change (since the indicators primarily derive their nature from the latent variable), hence the reflective measurement theory is suitable based on this criterion. Secondly, Jarvis et al. (2003) propose that the reflective measurement model is more suitable where indicators measuring an underlying construct are interchangeable. In this study, the indicators derive their nature from the same underlying latent construct and since their nature is derived from a single source, they share similar traits (Hair et al., 2014) that

make them interchangeable. Regarding this, the reflective measurement model is more appropriate for this study and has been adopted herein.

3.7.1.2 Measurement Model

The measurement (outer) model provides the basis for construing the structural model, hence the need to ensure that all reliability and validity assumptions are met within an acceptable range. Cooper and Schindler (2008) explain reliability as the credibility, stability and consistency of research findings such that the results can be reproduced - the Cronbach alpha and composite reliability determine it. However, validity is the appropriateness of an instrument to measure or assess the variable being measured (Cooper & Schindler, 2008). Convergent validity and discriminant validity tests are used to validate the research instrument for this study.

Consistent with Hair, Black, Babin, and Anderson (2014), a four-step approach to measurement model assessment (as illustrated in figure 3.1) is used. Internal consistency as a reliability measure assesses the correlations between the various measurement items based on the idea that the several items that purport to measure a single underlying construct should produce similar results (Hair et al., 2014). The composite reliability score is used to assess the internal consistency of the measurement model in this study since Hair et al. (2014) suggest that this technique is more robust relative to the alternate, the Cronbach alpha. The rule of thumb is that items are internally consistent for a construct and must be retained if the composite reliability is 0.70 or higher (Hair et al., 2014).

An assessment of the indicator reliability is the next step of the outer model measurement, and it is measured using the outer loadings of the indicators. Although existing literature recommends a loading of at least 0.708 for an indicator to be included in the measurement model, social science researchers often observed to have weaker indicator loadings below the

0.708 thresholds (Hair et al., 2014). For this reason, it is suggested that an indicator may still be retained based on the relevance of its content even if its loadings are less 0.708 (Hair et al., 2014; Henseler, Ringle, & Sinkovic, 2009).²⁸

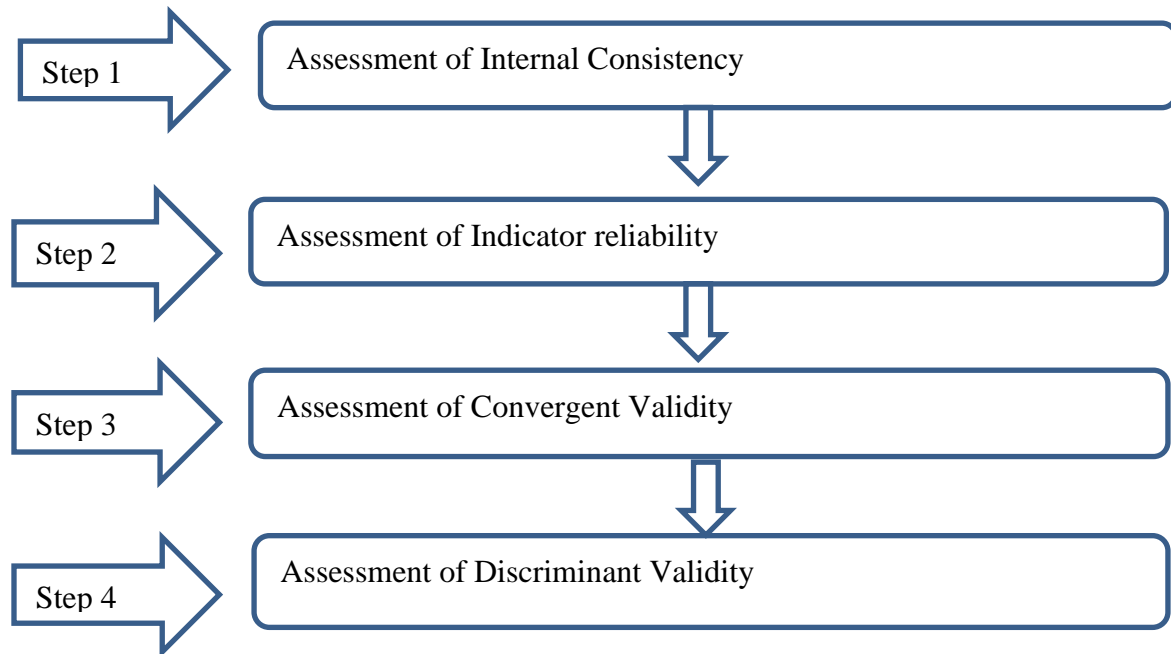


Figure 3.3: Measurement Model Assessment

Convergent validity measures the extents to which indicators that purport to measure an underlying construct are positively related (Hair et al., 2014). The argument is that since indicators of a reflective construct are treated as different ways of measuring the same construct, it is expected that all the indicators that measure a construct should be related or share a high proportion of variance. To establish convergent validity of the construct, Fornell and Larcker (1981) recommend the use of the average variance extracted (AVE) as a criterion

²⁸ Hair et al. (2014) suggest that instead of repeatedly eliminating indicators when their outer loadings are below 0.708, researchers should consider if elimination of the indicator will improve the composite reliability (CR) and average variance extracted (AVE). In this case, a weak indicator can be retained if its removal improves CR and AVE values.

for convergent validity assessment.²⁹ As a rule of thumb, an AVE value of at least 0.5 (which implies that the construct explains at least 50 per cent of the variations in its underlying indicators) establishes a good convergent validity of the measure.

The final step of the measurement model assessment is the discriminant validity test, which assesses whether the concepts or measurements that ought not to be related are not related.

Following Hair et al. (2014), the Fornell-Larcker test of discriminant validity and the cross-loadings criterion is used in assessing discriminant validity of the research constructs.

The Fornell-Larcker criterion requires that a construct shares more variance with its underlying variables than with any other construct in the research model. Statistically, the square root of each construct's AVE must be higher than its correlation with the other constructs in the research model. Regarding the cross-loading criterion, the loading of each indicator on the associated construct is expected to be greater than all its cross-loadings with the other indicators to establish discriminant validity.

3.7.1.3 Structural Model

In assessing the structural (inner) model, a six-step approach is used (see figure 3.2). This approach is consistent with Hair *et al.* (2014), which suggest that after validity and reliability assumptions are met for the outer model, the inner model must also be assessed.

Although theoretically, it is expected that no collinearity exists within the structural model, rarely is this the case in practice (Hair *et al.*, 2014). For this reason, researchers are to assess the level of multicollinearity in their model and reduce it to the minimum level. The Variance Inflation Factor (VIF) is used to evaluate the severity of multicollinearity (Hair et al., 2017)

²⁹ An AVE is simply the proportion of variance that the latent construct shares with its underlying indicators.

and a VIF value of 5 or greater is assumed to indicate the likelihood of a collinearity problem (Hair, Ringle & Sarstedt, 2011). Next, the path relationships are interpreted to establish the level of significance between hypothesised relationships. In this study, the path relationships are estimated in a two-tailed test at 5 per cent significance level. An independent construct is evaluated to have established a significant relationship with the dependent construct if its associated test-statistics (t-statistics) value is equal to or greater than 1.96 or the p-value is at most 0.05.

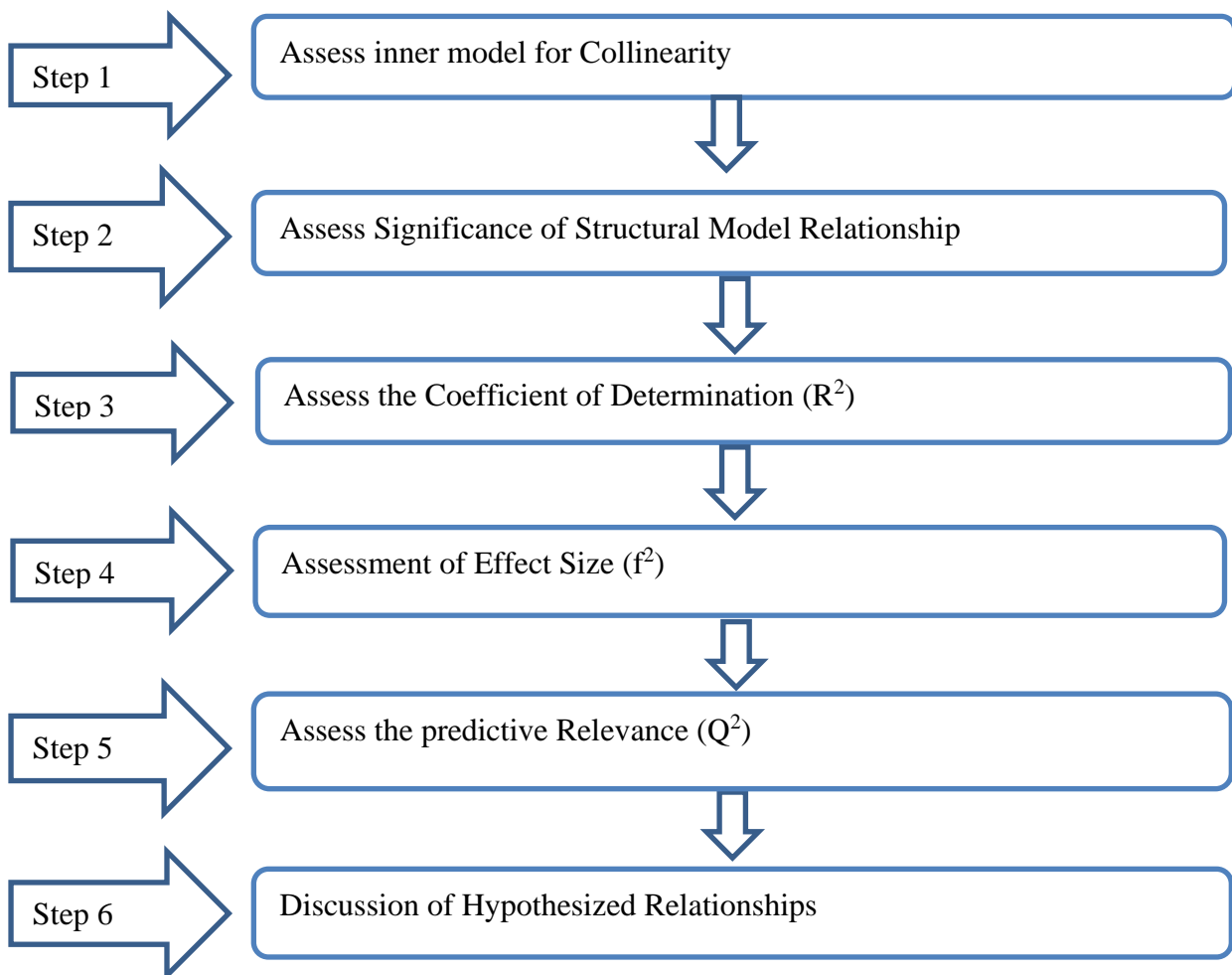


Figure 3.4: Structural model Assessment (Source: Adapted from Hair et al. (2014))

Also, inner model evaluation is assumed by assessing the predictive ability of the structural model using the coefficient of determination, R-squared (R^2). The R^2 shows to what extent the

exogenous construct(s) are explaining the endogenous constructs. The R^2 value ranges between 0 and 1, and the closer it is to 1, the better since the exogenous variables explain a higher proportion of the variations in the endogenous variable. However, an acceptable predictive value of a model is dependent on the complexity of the model (Hair et al., 2017). Hence a rule of thumb for an acceptable R^2 value appears to be elusive (Hair et al., 2017).³⁰ Following Hair et al. (2011) and Henseler et al. (2009), this study assumes R^2 value of at least 0.75 as substantial, up to 0.50 as moderate, less than 0.25 as weak for the endogenous variables.

Also, the effect of each predictor variable is assessed using Cohen's effect size (f^2). The effect size measures the relative importance of independent variables(s) in explaining the dependent variables. Effect sizes of 0.02, 0.15, and 0.35 are considered as small, moderate, and substantial (Cohen, 1988). After effect size is estimated, the overall predictive relevance of the inner model, also referred to as Stone-Geisser's Q^2 is evaluated. According to Geisser (1974) and Stone (1974), a Q^2 value greater than zero (0) signifies that the structural model has predictive relevance.

3.7.1.4 Model Specification

Figure 3.3 shows the structural equation model specified in this study. Figure 3.3 suggests that the dependent variable for the model is whistleblowing intentions, which measures individual accountant's readiness to report any fraudulent witnessed or perceived. See Figure 3.3 for a description of indicators. The independent variables of the model, on the other hand, are the personal characteristics (professional scepticism, conscientiousness, openness to experience,

³⁰ For instance, while some scholars perceive an R^2 value of 0.20 to be higher and acceptable, others consider any value below 0.70 as lower and unacceptable.

extraversion, neuroticism, and agreeableness) and motivation (extrinsic motivation and intrinsic motivation). However, because the study also seeks to explore the mediating role of motivation on the personal characteristics-whistleblowing intentions relationship, the figure further demonstrates a path relationship between conscientiousness and whistleblowing intention through intrinsic motivation. Similarly, professional scepticism is shown in the model to influencing whistleblowing intention through intrinsic and extrinsic motivation.

In assessing the mediating role of motivation, the bootstrapping method of mediation analysis advanced by Preacher and Hayes (2008)³¹ is used as it enables the detection of the mediation effects with certainty (Hadi, Abdullah & Sentosa, 2016). When using the bootstrap approach in testing for mediation effect, three conditions must be satisfied. First, the direct path relationship (without the presence of mediation) among the exogenous variable and the endogenous variable must be significant. Second, the indirect path relationship after the introduction of the mediator variable must also be significant (Hair et al., 2014; Wong, 2015). If these conditions are not met, then the mediation analysis is not probable and justifiable. Once a mediation relationship established, the variance that the mediator variable accounts for (VAF) is computed to suggest the type of mediation that exist.³²

3.8 Ethical Issues

Teddlie and Yu (2007) identify that relevant and pertinent ethical issues exist in conducting research. According to them, issues about participant consent to take part in the study,

³¹ Three approaches to mediating analysis are identified in existing literature - the bootstrap approach (Preacher and Hayes, 2008), the Baron and Kenny's (1986) Mediation Analysis and the Sobel test (1982).

³² When the VAF is lesser than 20 per cent, it is assumed that no mediation exists. However, for VAF ranging from 20-80 per cent signifies a partial mediation, while VAF greater than 80 percent is assumes the existence of a full mediating effect (Preacher & Hayes, 2008)

assurance of confidentiality and anonymity as well as granting respondents the liberty to withdraw from participation as and when they so desired are essential ethical issues that need consideration. To address these ethical issues, appropriate permission and consent of participants were obtained. Questionnaires were carried out in places and in a manner that ensured the privacy of the respondents. Anonymity and confidentiality of respondents were assured by keeping administered questionnaires at safe places to prevent the ability of any third party to trace respondents comment to the individual. Finally, respondents were allowed the liberty to draw back from the study when so desired. This approach is consistent with Creswell (2007), who suggest that such measures lessen and addresses reservations and issues of ethical concern that may arise.

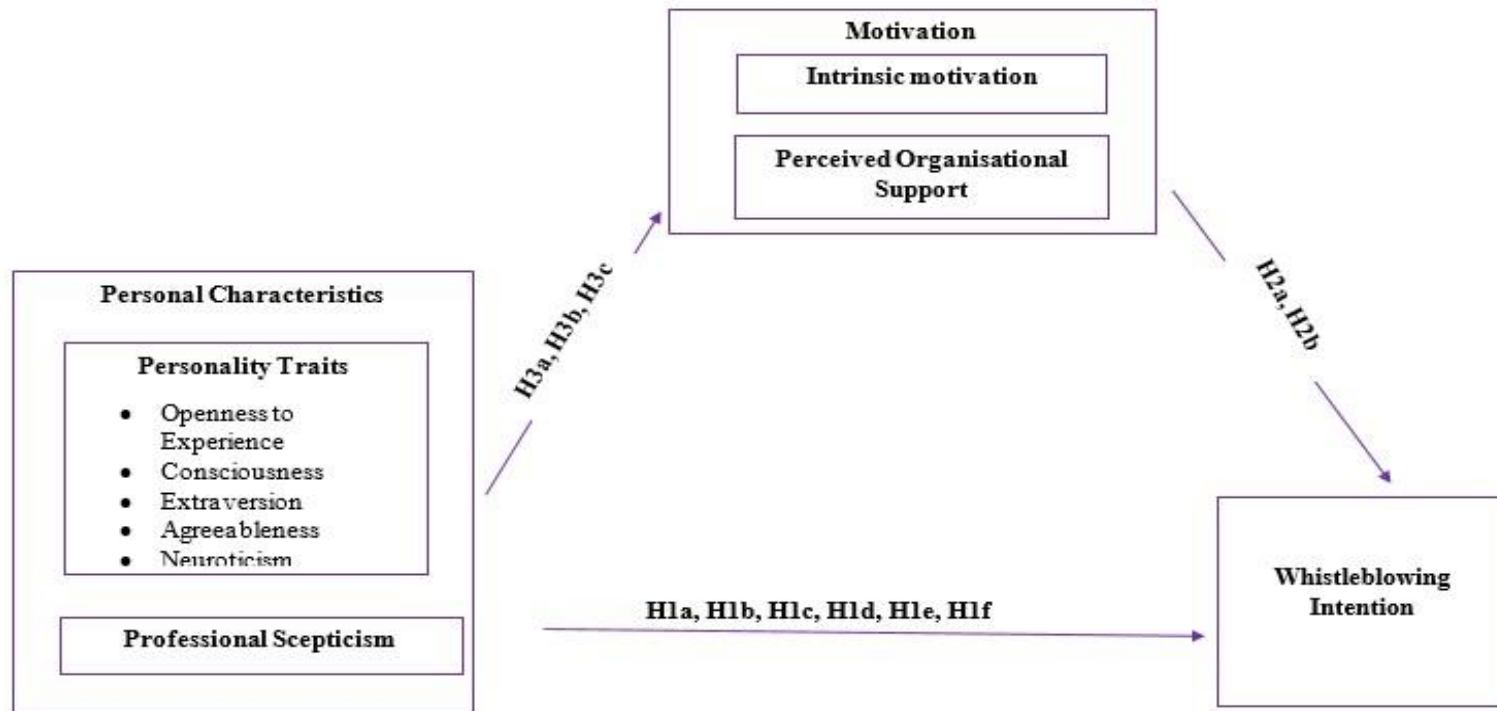


Figure 3.5: Model Specification

3.9 Chapter Summary

This section detailed the methodology and approach adopted in carrying out the research. It highlighted that the positivist research paradigm using quantitative and survey research design is employed in this study. It further advanced Questionnaires as the main research instrument for collecting data on accountants in accounting and auditing firms in Ghana, and PLS-SEM as the primary data analysis technique utilised. The next chapter discusses the analysis of the data collected.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the study. The next section presents the descriptive statistics of the demographic characteristics of the participants and the constructs. This is followed by a section on the reliability and validity tests on the research variables. Next, the structural model assessment and tests of the hypotheses are presented. The chapter concludes with the discussions of the major findings.

4.2 Descriptive Statistics

This section provides a descriptive analysis of the characteristics of the respondents, including their gender; age; working experience; professional qualification and category of the participants' firm. It also presents descriptive statistics of the constructs on the research variables.

4.2.1 Characteristics of Participants

Table 4.1 shows the frequency and percentages of the demographic statistics of the respondents. Table 4.1 demonstrates that 71.4 per cent of the respondents are males to suggest that men dominate the accounting profession in Ghana. This finding could be attributed to the fact that generally the accounting profession is assumed to be reserved for men (Broadbent & Kirkham, 2008) and societal factors often curtail the progression of women in accountancy career (Twomey, Linehan & Walsh, 2002).

Regarding age, the result shows that the majority (about 82.6 per cent) of the respondents were less than 35 years old. This suggests that the accountants in Ghana are mostly youthful. Also, 183 out of the 304 participants had a working experience for less than five years. The results also show that 67.8 per cent and 25.3 per cent of the respondents had their qualification with

the Institute of Chartered Accountants, Ghana (ICAG) and Association of Certified Chartered Accountants respectively. This may be because for an accountant to sign any audited financial report in Ghana, he or she must be a member of ICAG member.

Finally, Table 4.1 demonstrates a relatively fair distribution of participants across the categories of accounting and auditing firms in Ghana. Since the firms are categorised based on revenue levels, the number of partners and number of employees, it is expected that the number of respondents will increase in ascending order of the categories as demonstrated by these results.

Table 4. 1: Descriptive Statistics of Participants

Demographic variable	Frequency (304)	Percentage (100)
Gender		
Male	217	71.4
Female	87	28.6
Age (in years)		
≤ 25	68	22.4
26 – 35	183	60.2
36 – 45	31	10.2
46 – 55	13	4.3
Above 55	9	3.0
Working Experience		
Less than 5	183	60.2
5 – 10	77	25.3
11 – 15	19	6.3
16 – 20	13	4.3
Above 20	12	3.9
Professional qualification		
ICAG	206	67.8
ACCA	77	25.3
CIMA	8	2.6
CIT	1	.3
ICAG & ACCA	5	1.6
ICAG & CIMA	2	.7
ICAG & CIT	3	1.0
ACCA & CIT	1	.3
3 and above	1	.3

Category of Firm

A1	35	11.5
A	119	39.1
B1	90	29.6
B	41	13.5
C	12	3.9
D	7	2.3

Source: Field Data (2019)

4.2.2 Descriptive statistics of study construct

Table 4.2 presents the mean scores and the standard deviation on personal characteristics and whistleblowing intention constructs. The whistleblowing construct has an overall mean of 5.68 to suggest that accountants in Ghana have more intention to report wrongful conduct. The result suggests that this greater intention of accountants to report unlawful acts is because of their belief that it is their sole responsibility (as this item of the construct has Mean = 6.09; SD = 1.21). Nonetheless, their willingness to blow the whistle, the result suggests that they are moderately willing to reveal information about themselves in the process of reporting wrongful acts. This finding is not surprising as prior studies provide that whistleblowing behaviour is improved by an anonymous reporting channel (Kaplan & Schultz, 2007; Robinson et al., 2012; Lowry et al., 2013).

The mean values obtained for the different personality traits constructs indicate that accountants in Ghana possess moderate to higher levels of inherent characteristics of each of the personality traits. While accountants in Ghana are high on the trait of extraversion (Mean = 4.57; SD = 1.52), they have mild traits of agreeableness (Mean = 4.10; SD = 1.57); conscientiousness (Mean = 3.98; SD = 1.50); openness to experience (Mean = 3.75; SD = 1.69); and neuroticism (Mean = 3.64; SD = 1.75).

Concerning professional scepticism, the accountants surveyed perceived themselves as been more professionally sceptic, with the professional scepticism construct having an overall mean of 5.08. This higher level of professional scepticism exhibited by accountants in Ghana is

driven by four out of six dimensions of professional scepticism utilised in this study – search for knowledge (mean = 5.86), sound judgement (mean = 5.80), questioning mindset (mean =5.46) and self-esteem (mean = 5.32).

Table 4.2 also demonstrates that the accountants’ surveyed are highly self-motivated (overall mean = 5.53) and moderately motivated by the organisation (Mean = 4.35). Whereas most of the accountants on the average enjoy learning about ethical issues, they perceived their organisations to have a mild consideration for their goals, values and their well-being.

Table 4. 2: Construct and measurement Items Means

	Mean	Min	Max	SD
Whistleblowing intention	5.68			1.42
I will report fraudulent activity to the appropriate persons within my organisation.	6.11	1	7	1.33
I will report the wrongful conduct to the appropriate authorities outside of the organisation.	5.04	1	7	1.77
I will report the wrongdoing, and I would give any information about myself.	4.64	1	7	1.80
I intend to report fraudulent accounting activity.	5.94	1	7	1.25
I will report the fraudulent accounting activity.	5.98	1	7	1.19
I am willing to report fraudulent accounting activity.	6.03	1	7	1.18
I plan to report fraudulent accounting activity.	5.83	1	7	1.31
My reporting fraudulent accounting activity will make me a better professional accountant.	5.47	1	7	1.73
As a professional accountant, I think it is my responsibility to report fraudulent accounting activity.	6.09	1	7	1.21
Extraversion	4.57			1.52
I bring liveliness to every gathering.	5.06	1	7	1.36
I don’t talk a lot.	4.77	1	7	1.53
I talk to a lot of different people at parties.	4.12	1	7	1.62
I keep in the background.	4.34	1	7	1.59
Conscientiousness	3.98			1.50
I get chores done right away.	5.40	1	7	1.34
I often forget to put things back in their proper place.	2.81	1	7	1.74
I like order.	5.61	1	7	1.57
I make a mess of things.	2.09	1	7	1.35
Neuroticism	3.64			1.75
I have frequent mood swings.	3.29	1	7	1.71
I am relaxed most of the times	4.59	1	7	1.69
I get upset easily	2.89	1	7	1.67
I seldom feel depressed	3.78	1	7	1.91

Agreeableness	4.10	1	7	1.57
I sympathise with others' feelings.	5.34	1	7	1.48
I am not interested in other people's problems.	3.02	1	7	1.71
I feel the emotions of others	5.16	1	7	1.42
I am not interested in others.	2.87	1	7	1.68
Openness to Experience	3.75	1	7	1.69
I have a vivid imagination.	5.04	1	7	1.47
I am not interested in abstract ideas	3.88	1	7	1.72
I have difficulty understanding abstract ideas	3.40	1	7	1.75
Do not have a good imagination	2.70	1	7	1.83
Professional Scepticism	5.08			1.34
Questioning Mindset	5.46			1.37
My friends tell me that I usually question things I see or hear.	5.35	1	7	1.53
I frequently question the things I see or hear.	5.54	1	7	1.25
I often reject statements unless I have proof that they are true.	5.50	1	7	1.33
Sound Judgment	5.80			1.15
I take my time when making decisions.	6.01	1	7	1.01
I do not like to decide until I've looked at all the ready information available.	5.86	2	7	1.09
I dislike having to make decisions quickly.	5.58	1	7	1.36
I like to ensure that I've considered the most available information before deciding.	5.92	1	7	1.07
I wait to decide on issues until I can get more information.	5.62	1	7	1.22
Search for Knowledge	5.86			1.17
I relish learning.	5.54	1	7	1.43
I think that learning is exciting.	5.83	1	7	1.11
Discovering new information is fun.	5.98	1	7	1.12
I like searching for knowledge.	6.12	1	7	1.03
The prospect of learning excites me.	6.00	1	7	1.14
I enjoy trying to determine if what I read or hear is true.	5.71	1	7	1.17
Interpersonal Understanding	4.80			1.42
I like to understand the reason for other people's behaviour.	5.72	1	7	1.13
I am interested in what causes people to behave the way that they do.	5.57	1	7	1.25
The actions people take and the reasons for those actions are fascinating.	5.24	1	7	1.25
I seldom consider why people behave in a certain way.	4.21	1	7	1.77
Other people's behaviour does not interest me.	3.26	1	7	1.71
Autonomy	3.23			1.67
I tend to accept what other people tell me immediately.	2.82	1	7	1.72
I usually accept things I see, read, or hear at face value.	3.08	1	7	1.76
I often accept other people's explanations without further thought	2.57	1	7	1.54
It is easy to for other people to convince me.	2.68	1	7	1.64
Most often, I agree with what others in my group think.	3.35	1	7	1.64
I usually notice inconsistencies in explanations.	4.85	1	7	1.71

Self-Esteem	5.32			1.26
I have confidence in myself.	5.95	1	7	1.24
I do not feel sure of myself.	2.60	1	7	1.84
I am self-assured.	5.81	1	7	1.20
I am confident in my abilities.	6.09	1	7	1.01
I feel good about myself.	6.17	1	7	1.01
Perceived Organisational Support	4.35			1.53
My organisation values my contribution to its well-being.	5.66	1	7	1.24
If my organisation could hire someone to replace me at a lower salary, it would do so.	3.36		7	1.89
My organisation fails to appreciate any extra effort from me.	3.18	1	7	1.76
My organisation strongly considers my goals and values.	5.37	1	7	1.36
My organisation would ignore any complaint from me.	2.99	1	7	1.70
My organisation disregards my best interests when it makes decisions that affect me.	3.06		7	1.67
Help is available from my organisation when I have a problem.	5.34	1	7	1.32
My organisation is willing to extend itself to help me perform my job to the best of my ability.	5.45		7	1.38
Even if I did the best job possible, my organisation would fail to notice.	3.01	1	7	1.78
My organisation is willing to help me when I need a special favour.	4.91	1	7	1.40
My organisation cares about my general satisfaction at work.	4.98	1	7	1.48
If given the opportunity, my organisation would take advantage of me.	3.73	1	7	1.75
My organisation shows very little concern for me.	3.21	1	7	1.74
My organisation cares about my opinions.	5.09	1	7	1.35
My organisation takes pride in my accomplishments at work.	5.40	1	7	1.25
My organisation tries to make my job as attractive as possible	4.90	1	7	1.46
Intrinsic Motivation	5.53			1.25
I enjoy learning about ethical issues.	6.03	1	7	0.99
I feel good when I solve complex ethical issues.	6.02	1	7	1.01
Whistleblowing will provide me with opportunities for increasing my analytical skills.	5.11		7	1.48
Curiosity is the driving force behind much of what I do.	5.36	1	7	1.41
I want to find out how good I really can be when I encounter an ethical situation.	5.65		7	1.13
I will enjoy the challenges that whistleblowing will provide me.	5.14	1	7	1.38
No matter the outcome of blowing the whistle, I will be satisfied if I feel I gained a new experience.	5.39		7	1.34

Source: Field Data (2019)

4.3 Exploratory Factor Analysis

To assess the factorability of the data under analysis, Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity was carried out. The KMO measure of sampling indicates whether a correlation matrix is appropriate for factor analysis and Bartlett's Test of Sphericity checks

whether a correlation matrix is significantly different than an identity matrix (Kaiser & Rice, 1974). Kaiser (1970) advocates for any KMO value above 0.60 to be appropriate for factor analysis since that will indicate a higher level of common variance in the correlation matrix. The KMO value for the constructs of this study is 0.86 to suggest that the data is appropriate for factor analysis. Similarly, Bartlett's Test of Sphericity (Bartlett, 1954) is statistically significant at the 1 per cent significance level (see appendix B).

4.4 Common Method Bias

Common Method Bias (CMB) refers to the common variance shared between constructs due to the use of survey research instrument or using the same respondents (MacKenzie & Podsakoff, 2012). CMB occurs when deviations in responses are initiated by the research instrument instead of the actual dispositions of the participants on the subject matter. For this reason, the results may be biased to affect the validity and reliability of the research instrument and the co-variation between constructs (MacKenzie & Podsakoff, 2012).

The effect of CMB can be controlled for statistically either before data collection process through careful design of research instrument and after the data collection process (MacKenzie & Podsakoff, 2012; Podsakoff et al., 2012). In testing for CMB, Harman's one-factor test (Podsakoff & Organ, 1986) was performed. According to Podsakoff and Organ (1986) for CMB not to exist, the total variance for the single factor should not exceed 50 per cent. Table 4.3 suggests that our data do not suffer from CMB since the highest total variance accounted for by a single factor is 16.19 per cent.

Table 4. 3: Assessment of Common method Biased

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.377	16.186	16.186	15.377	16.186	16.186
2	10.698	11.261	27.447			
3	6.960	7.326	34.774			
4	3.528	3.714	38.488			
5	2.642	2.781	41.269			
6	2.347	2.470	43.739			
7	2.230	2.347	46.086			
8	2.071	2.180	48.266			
9	1.891	1.991	50.257			
10	1.780	1.873	52.131			

Extraction Method: Principal Component Analysis.

Source: Field Data (2019)

4.5 Model Evaluation

Partial Least Square – Structural Equation Modelling (PLS-SEM) involves the evaluation of the measurement model and the structural model (Hair et al., 2017). This section discusses the evaluation of these models.

4.5.1 Measurement Model

The model was evaluated for validity and reliability based on four main steps discussed in section 3.6.1.1 of chapter 3.

4.5.1.1 Internal Consistency Reliability

The internal consistency of the constructs was estimated by the composite reliability measure, and the results are shown in Table 4.4. As demonstrated in Table 4.4, all the variables show good internal consistency with the composite reliability values ranging from 0.706 to 0.919. Prior studies show that composite reliability greater than or equal to 0.70 indicate higher levels of reliability (Aibinu & Al-Lawati, 2010; Hair et al., 2014).

4.5.1.2 Indicator Reliability

Avkiran (2018) and Hair et al. (2014) proposed that an indicator is reliable if the standardised outer loading estimated is 0.700 and above. Except for the factor loading with asterisks in Table 4.4, all other indicators had loadings above the indicator reliability threshold of 0.700. It is therefore expected that indicators with loadings less than the threshold be deleted from the analysis.

However, existing literature suggests that items whose loadings did not meet the threshold but had loadings between 0.400 and 0.700 should be maintained if its removal will lead to a reduction in the composite reliability and the average variance extracted (AVE) of the corresponding construct (Aibinu & Al-Lawati, 2010; Avkiran, 2018; Hair et al., 2014; Sarstedt, Ringle, Henseler, & Hair, 2014). After subjecting items with less loadings to this test, items with the following coding (as indicated on the questionnaire in the appendix) PA1, PA4, PN2, PC2, PC4, PO3, PO4, POS2, POS3, POS5, POS6, POS9, POS10, POS12, POS13, POS15 and POS16 were removed from the analysis.

Table 4. 4: Item Loadings, Average Variance Extracted and Composite reliability

Construct	Item	Loadings	CR	AVE
Whistleblowing Intention	WBI1	0.740	0.919	0.566
	WBI2	*0.585		
	WBI3	*0.527		
	WBI4	0.859		
	WBI5	0.889		
	WBI6	0.890		
	WBI7	0.812		
	WBI8	0.633		
	WBI9	0.740		
Agreeableness	PA1	0.882	0.848	0.736
	PA3	0.833		
Neuroticism	PN1	*0.645	0.756	0.513
	PN3	*0.629		
	PN4	0.852		
Conscientiousness	PC1	0.802	0.776	0.634
	PC3	0.790		
Extraversion	PE1	0.897	0.781	0.644
	PE3	*0.696		
Openness to Experience	PO1	0.824	0.706	0.549
	PO2	*0.648		
Professional Scepticism			0.922	0.655

Interpersonal understanding	IU1	0.905	0.898	0.747
	IU2	0.914		
	IU3	0.766		
Autonomy	AU1R	0.810	0.905	0.706
	AU2R	0.787		
	AU3R	0.904		
	AU4R	0.855		
Questioning Mindset	QM1	0.801	0.823	0.611
	QM2	0.860		
	QM3	*0.671		
Self-Esteem	SE1	0.787	0.914	0.727
	SE3	0.844		
	SE4	0.881		
	SE5	0.894		
Suspension of Judgement	SJ1	0.796	0.885	0.609
	SJ2	0.717		
	SJ3	*0.638		
	SJ4	0.872		
	SJ5	0.700		
Search for Knowledge	SK1	*0.580	0.894	0.588
	SK2	0.823		
	SK3	0.811		
	SK4	0.875		
	SK5	0.821		
	SK6	*0.648		
Extrinsic Motivation	POS1	0.752	0.906	0.616
	POS4	0.814		
	POS7	0.818		
	POS8	0.808		
	POS11	0.761		
	POS14	0.752		
Intrinsic Motivation	IMI1	0.841	0.894	0.629
	IMI2	0.849		
	IMI3	0.728		
	IMI5	0.831		
	IMI7	0.703		

* Below the threshold of 0.70 but maintained because its elimination negatively affects the composite reliability

Source: Field data (2019)

4.5.1.3 Convergent validity

Convergent validity was measured using the AVE of the construct. AVE is expected to be more than 0.50 (Hair et al., 2017) since the construct should be able to explain more than 50 per cent of the variations in the indicators. Table 4.4 indicates that all the constructs met the threshold with AVE values ranging from 0.549 to 0.747 to suggest that the constructs for this study explain more than half of the variance in the measurement items.

4.5.1.4 Discriminant Validity

In assessing the discriminant validity of the constructs, the Fornell-Larcker criterion and cross-loadings analysis were employed, and the results are shown in Table 4.5. While the Fornell-Larcker criterion ensures the square root of the AVE value of each construct is compared to the construct's correlation with other constructs, the cross-loadings identifies the correlation between the individual items and the latent variables they are supposed to measure. For the constructs to be valid, the Fornell-Larcker suggests the square root of the AVE should be greater than the greatest of the correlations (Hair et al., 2017; Fornell & Larcker, 1981) and the individual items should demonstrate higher correlations with the latent variables they are supposed to measure than any other latent variable in the model under review (Sarstedt et al., 2014).

Panel A of Table 4.5 illustrates the square root of the AVEs of the constructs (shown in bold and diagonal) is higher than all off-diagonal AVEs of the other constructs. This suggests that the constructs share more variance with its underlying indicator than they share with any other construct in the model. Similarly, it is suggested for the cross-loadings analysis that the load of the individual items should demonstrate higher correlations with their latent variables than with any other latent variable in the model. The results presented in panel B of Table 4.5 confirms that all measurement items loaded effectively on their corresponding latent variables. Also, the correlation coefficient of the constructs was higher than the correlation between the variables and any other constructs. The results, based on the Fornell-Larcker and the cross-loadings, demonstrates that the discriminant validity of the constructs is achieved.

Table 4. 5: Assessment of Discriminant Validity

Panel A: Fornell – Larcker Criterion														
	PA	AU	PC	PE	E-MOT	IU	I-MOT	PN	PO	QM	SK	SE	SJ	WBI
PA	0.858													
AU	-0.005	0.840												
PC	0.193	0.118	0.796											
PE	0.080	-0.014	0.246	0.802										
E-MOT	0.079	-0.011	0.243	0.298	0.785									
IU	0.123	0.120	0.336	0.318	0.257	0.864								
I-MOT	0.091	0.009	0.422	0.339	0.387	0.476	0.793							
PN	0.096	-0.346	0.036	-0.118	-0.119	-0.026	-0.027	0.716						
PO	0.374	-0.182	0.170	0.071	-0.062	0.114	0.197	0.240	0.741					
QM	0.042	0.135	0.314	0.288	0.205	0.330	0.410	0.037	0.023	0.782				
SK	0.226	0.229	0.404	0.326	0.305	0.570	0.564	-0.113	0.196	0.448	0.767			
SE	0.221	0.174	0.331	0.359	0.358	0.394	0.542	-0.076	0.202	0.404	0.623	0.853		
SJ	0.194	0.144	0.366	0.272	0.257	0.407	0.513	-0.067	0.218	0.494	0.648	0.547	0.781	
WBI	0.151	0.076	0.365	0.287	0.330	0.404	0.493	-0.119	0.155	0.293	0.457	0.402	0.348	0.752

Source: Field Data (2019)

Panel B: Cross – Loadings

	PA	AU	PC	PE	E-MOT	IU	I-MOT	PN	PO	PS	QM	SK	SE	SJ	WBI
AU1R	-0.019	0.810	0.054	-0.038	-0.061	0.067	-0.026	-0.292	-0.129	0.204	0.114	0.175	0.125	0.128	0.018
AU2R	0.008	0.787	0.076	-0.039	-0.065	0.077	-0.015	-0.185	-0.138	0.166	0.124	0.153	0.100	0.037	0.062
AU3R	0.037	0.904	0.135	-0.028	0.016	0.144	0.046	-0.328	-0.160	0.259	0.073	0.212	0.193	0.145	0.112
AU4R	-0.043	0.855	0.116	0.044	0.045	0.102	0.010	-0.328	-0.179	0.248	0.150	0.216	0.150	0.149	0.054
IMI1	0.149	0.073	0.402	0.244	0.327	0.466	0.841	-0.052	0.187	0.628	0.372	0.547	0.506	0.524	0.394
IMI2	0.108	0.058	0.355	0.261	0.301	0.430	0.849	-0.093	0.133	0.622	0.398	0.530	0.551	0.489	0.399
IMI3	-0.011	-0.063	0.262	0.323	0.343	0.268	0.728	0.046	0.179	0.408	0.284	0.371	0.389	0.283	0.424
IMI5	0.037	0.041	0.367	0.250	0.257	0.437	0.831	-0.027	0.110	0.507	0.347	0.431	0.373	0.408	0.394
IMI7	0.052	-0.133	0.261	0.295	0.326	0.235	0.703	0.062	0.184	0.328	0.178	0.309	0.277	0.271	0.352
IU1	0.061	0.154	0.323	0.296	0.265	0.905	0.476	-0.044	0.119	0.638	0.332	0.524	0.400	0.404	0.366
IU2	0.118	0.182	0.323	0.267	0.242	0.914	0.400	-0.063	0.058	0.614	0.305	0.538	0.364	0.340	0.384
IU3	0.155	-0.066	0.210	0.264	0.143	0.766	0.348	0.061	0.126	0.465	0.203	0.403	0.238	0.303	0.289
PA1	0.882	0.024	0.187	0.089	0.048	0.102	0.110	0.114	0.325	0.218	0.070	0.205	0.219	0.188	0.139
PA3	0.833	-0.038	0.141	0.045	0.092	0.110	0.042	0.045	0.317	0.168	-0.004	0.182	0.156	0.142	0.118
PC1	0.166	0.103	0.802	0.252	0.210	0.267	0.358	-0.008	0.199	0.373	0.196	0.303	0.295	0.349	0.274
PC3	0.140	0.084	0.790	0.138	0.176	0.268	0.313	0.067	0.070	0.349	0.305	0.341	0.232	0.232	0.308
PE1	0.096	0.028	0.242	0.897	0.302	0.336	0.378	-0.168	0.028	0.425	0.300	0.361	0.367	0.303	0.275
PE3	0.017	-0.076	0.135	0.696	0.152	0.138	0.116	0.019	0.106	0.157	0.132	0.115	0.177	0.094	0.170
PN1	0.029	-0.305	-0.014	-0.138	-0.077	0.026	0.036	0.645	0.148	-0.042	0.057	-0.090	-0.033	0.018	-0.065
PN3	0.062	-0.333	-0.040	-0.206	-0.094	-0.052	-0.036	0.629	0.256	-0.122	-0.039	-0.120	-0.070	-0.087	-0.039
PN4	0.099	-0.213	0.071	-0.024	-0.095	-0.033	-0.046	0.852	0.175	-0.080	0.033	-0.072	-0.067	-0.076	-0.120
PO1	0.362	0.027	0.221	0.118	-0.010	0.114	0.196	0.088	0.824	0.275	0.074	0.274	0.244	0.266	0.130
PO2	0.170	-0.355	0.002	-0.034	-0.096	0.046	0.082	0.304	0.648	-0.012	-0.058	-0.024	0.027	0.025	0.097
POS1	-0.019	0.072	0.206	0.245	0.752	0.241	0.304	-0.144	-0.110	0.317	0.187	0.249	0.310	0.229	0.211
POS10	0.134	-0.045	0.221	0.281	0.808	0.208	0.244	-0.097	0.005	0.281	0.128	0.252	0.269	0.214	0.336
POS21	0.061	-0.074	0.157	0.228	0.761	0.228	0.334	-0.069	-0.059	0.278	0.175	0.228	0.286	0.185	0.193
POS25	0.067	-0.037	0.189	0.196	0.752	0.135	0.278	-0.017	-0.040	0.229	0.154	0.206	0.245	0.150	0.218
POS4	0.047	0.009	0.181	0.246	0.814	0.211	0.288	-0.128	-0.104	0.281	0.185	0.211	0.287	0.210	0.271

POS8	0.073	0.014	0.184	0.202	0.818	0.181	0.380	-0.091	0.003	0.298	0.144	0.282	0.287	0.212	0.299
QM1	0.008	0.140	0.188	0.189	0.112	0.248	0.257	0.045	-0.013	0.447	0.801	0.327	0.282	0.333	0.148
QM2	0.082	0.121	0.321	0.284	0.213	0.336	0.345	-0.016	0.026	0.518	0.860	0.380	0.321	0.388	0.282
QM3	0.002	0.054	0.214	0.192	0.146	0.180	0.351	0.063	0.040	0.466	0.671	0.337	0.341	0.432	0.247
SE1	0.153	0.160	0.211	0.262	0.255	0.275	0.352	-0.059	0.159	0.587	0.308	0.442	0.787	0.377	0.309
SE3	0.151	0.087	0.293	0.287	0.237	0.308	0.469	-0.041	0.201	0.645	0.309	0.493	0.844	0.449	0.313
SE4	0.215	0.190	0.313	0.336	0.333	0.426	0.520	-0.105	0.148	0.750	0.351	0.613	0.881	0.507	0.382
SE5	0.226	0.153	0.302	0.332	0.381	0.322	0.490	-0.050	0.185	0.720	0.404	0.557	0.894	0.518	0.360
SJ1	0.161	0.189	0.322	0.189	0.251	0.311	0.404	-0.174	0.131	0.702	0.372	0.572	0.546	0.796	0.347
SJ2	0.138	0.140	0.334	0.206	0.243	0.279	0.445	-0.088	0.156	0.717	0.490	0.555	0.528	0.869	0.309
SJ3	0.118	-0.063	0.138	0.140	0.148	0.316	0.265	0.096	0.213	0.423	0.258	0.297	0.172	0.638	0.119
SJ4	0.184	0.198	0.333	0.275	0.213	0.389	0.490	-0.088	0.202	0.757	0.444	0.633	0.502	0.872	0.297
SJ5	0.151	-0.004	0.250	0.245	0.118	0.308	0.355	0.091	0.180	0.509	0.315	0.383	0.266	0.700	0.234
SK1	0.117	0.121	0.170	0.066	0.108	0.263	0.336	0.004	0.180	0.508	0.250	0.580	0.315	0.429	0.247
SK2	0.191	0.241	0.291	0.203	0.179	0.351	0.380	-0.070	0.131	0.698	0.390	0.823	0.453	0.508	0.318
SK3	0.268	0.206	0.346	0.216	0.208	0.437	0.397	-0.093	0.197	0.731	0.342	0.811	0.533	0.534	0.356
SK4	0.174	0.182	0.368	0.329	0.312	0.511	0.515	-0.143	0.150	0.791	0.341	0.875	0.574	0.569	0.446
SK5	0.138	0.167	0.351	0.328	0.327	0.407	0.496	-0.138	0.142	0.714	0.355	0.821	0.482	0.520	0.356
SK6	0.138	0.124	0.299	0.310	0.234	0.627	0.456	-0.048	0.114	0.656	0.373	0.648	0.467	0.406	0.351
WBI1	0.190	0.152	0.269	0.276	0.259	0.341	0.362	-0.071	0.181	0.441	0.229	0.405	0.365	0.316	0.740
WBI2	0.109	-0.041	0.117	0.282	0.179	0.221	0.237	-0.081	0.083	0.227	0.189	0.202	0.207	0.115	0.585
WBI3	0.001	-0.064	0.234	0.272	0.267	0.175	0.243	-0.076	-0.017	0.217	0.146	0.228	0.173	0.130	0.527
WBI4	0.099	0.077	0.301	0.207	0.265	0.293	0.361	-0.132	0.124	0.371	0.233	0.342	0.295	0.261	0.859
WBI5	0.142	0.058	0.338	0.200	0.330	0.369	0.454	-0.139	0.119	0.444	0.241	0.397	0.331	0.363	0.889
WBI6	0.136	0.088	0.354	0.194	0.272	0.365	0.438	-0.133	0.117	0.439	0.251	0.382	0.361	0.326	0.890
WBI7	0.056	0.091	0.251	0.178	0.230	0.328	0.398	-0.086	0.151	0.413	0.295	0.353	0.334	0.303	0.812
WBI8	0.114	-0.002	0.248	0.235	0.157	0.284	0.370	-0.006	0.148	0.333	0.162	0.342	0.316	0.162	0.633
WBI9	0.138	0.069	0.298	0.173	0.258	0.300	0.407	-0.063	0.105	0.385	0.216	0.377	0.290	0.274	0.740

* Figures in bold represent the highest Pearson Correlation Coefficients
Source: Field Data (2019)

4.5.2 Structural Model Assessment

The assessment of the structural model involves an evaluation of the predictive capacity and the relationships between the constructs of the model. As discussed in section 3.5.1.2 of chapter three, the assessment of the structural model followed the procedure by Hair et al., (2014), i.e. an assessment of collinearity and path significance, coefficient of determination, effect size, predictive relevance and discussion of hypothesised results.

4.5.2.1 Collinearity Assessment

The assessment of collinearity checks and prevents path coefficient biases, which may result from including in the estimations and predictors that exhibit collinearity. To test for collinearity in the structural equation model, the variance inflation factor (VIF) was employed (Hair et al., 2014). Hair et al. (2011) argue for an acceptable VIF of a measurement item to be less than or equal to five ($x \leq 5$) since a VIF value above 5 indicates a potential collinearity problem (Hair et al., 2011). The results in Table 4.6 indicate that all the predictors have VIF less than 3.0 to that the issue of multicollinearity among the predictor constructs may not exist.

Table 4. 6: Constructs and Variance Inflation Factors

	E-MOT	I-MOT	PS	WBI
Agreeableness				1.231
Autonomy			1.059	
Conscientiousness		1.260		1.343
Extraversion				1.246
Perceived organisational support				1.291
Interpersonal Understanding			1.502	
Intrinsic Motivation				1.929
Neuroticism				1.109
Openness				1.312
Professional Scepticism	1.000	1.260		2.057
Questioning Mindset			1.404	
Search for Knowledge			2.540	
Self-Esteem			1.762	
Suspension of Judgement			1.973	

Source: Field Data (2019)

4.5.2.2 Assessment of Path Significance

The p-value approach is utilised in assessing the significance of hypothesised relationships. Although most existing literature estimate relationships at 5 per cent level, Hair et al. (2017) argues that for exploratory research, a significant level of 0.10 (10 per cent). However, the results of this study are estimated at 5 per cent significance level. Therefore, the hypothesis is not rejected if its p-value is less than or equal to 0.05 or its corresponding t-value is above 1.96. Table 4.7 shows the results of the assessment of the path significance of the hypothesised relationship using a two-tailed test at 5 per cent significance level.

Table 4. 7: Structural model Assessment

	Path	Path Coefficient	P-value	T-Statistics	Decision
H1 _a :	PO -> WBI	0.062	0.316	0.999	Not Supported
H1 _b :	PC -> WBI	0.123	0.022**	2.270	Supported
H1 _c :	PE -> WBI	0.046	0.401	0.854	Not Supported
H1 _d :	PA -> WBI	0.034	0.514	0.637	Not Supported
H1 _e :	PN -> WBI	-0.097	0.151	1.540	Not Supported
H1 _f :	PS -> WBI	0.199	0.010*	2.750	Supported
H2 _a :	I-MOT -> WBI	0.235	0.000*	3.291	Supported
H2 _b :	E-MOT -> WBI	0.114	0.022**	2.264	Supported
H3 _a :	PC -> I- MOT	0.162	0.001*	3.286	Supported
H3 _b :	PS -> I-MOT	0.572	0.000*	11.035	Supported
H3 _c :	PS -> E-MOT	0.359	0.000*	4.892	Supported

* Significant at 1 per cent level

** Significant at 5 per cent

PO = Openness to experience; WBI = Whistleblowing intention; PC = Conscientiousness

PE = Extraversion; PA = Agreeableness; PN = Neuroticism; PS = Professional Scepticism

I-MOT = Intrinsic motivation; E-MOT = Perceived organisational support

Source: Field Data (2019)

Table 4.7 demonstrates that except for the path relationship hypothesised for personal characteristics regarding conscientiousness and whistleblowing intention which show a significant positive relationship at 5 per cent, all the other personal characteristics (Agreeable, Extraversion, Neuroticism, Openness to Experience) exhibited an insignificant relationship with whistleblowing intention. This indicates that while H1_b was supported, H1_a, H1_c, H1_d and H1_e were not supported. Similarly, the findings show a significant positive relationship between professional scepticism and whistleblowing intention in support of H1_f. Regarding the path relationship between motivation and whistleblowing intention. The results suggest a positive relationship between both extrinsic and intrinsic motivation and whistleblowing intention. This supports H2_a and H2_b

4.5.2.3 Coefficient of determination (R^2)

Coefficient of determination (R^2) was used to measure the model’s predictive accuracy by aggregating the effect of all the independent variables on the dependent variable (endogenous construct) Hair et al. (2017) and the result is presented in Table 4.8.

Table 4. 8: R- Square, R-Square Adjusted and Q- Square of Constructs

CONSTRUCTS	R^2	Adjusted R^2	Q^2
Whistleblowing Intention	0.337	0.319	0.171

Source: Field Data (2019)

The results demonstrate that the R^2 value of the model is 0.337. Following Hair et al.’s (2011) and Henseler et al.’s (2009) rule of thumb, the results suggest that the personal characteristics of accountants in Ghana (conscientiousness, openness to experience, extraversion, neuroticism, agreeableness, and professional scepticism) and organisational support (intrinsic motivation and perceived organisational support) weakly explain the total variations in whistleblowing

intentions. Moreover, the adjusted R^2 which prior literature assumes to correct the biases in R^2 (Hair et al., 2014) corroborates the weak variation from the independent variables and the dependent (adjusted $R^2 = 31.9$ per cent).

4.5.2.4 Effect Size Assessment (F^2)

Effect size denotes the variation in the R^2 which occurs when a variable is removed from the model by assessing how strong one exogenous construct contributes to explaining a specific endogenous construct in terms of the R^2 . It is estimated by computing the Cohen's f^2 , which provides that f^2 value below 0.02 indicates that its omission from the model will have no effect (Hair et al., 2017).³³

Table 4. 9: F – Squares of the study construct

CONSTRUCTS	F^2
Conscientiousness	0.017
Openness to Experience	0.005
Extraversion	0.003
Agreeableness	0.001
Neuroticism	0.012
Professional Scepticism	0.028
Extrinsic motivation	0.015
Intrinsic motivation	0.046

Source: Field Data (2019)

The results from Table 4.9 reveal that except for professional scepticism and intrinsic motivation, the omission of any of the exogenous variables will not have any effect on the

³³ f^2 values of 0.35, 0.15 and 0.02 are considered to be strong effect, moderate effect and weak effect respectively.

model. The f^2 values of professional scepticism and intrinsic motivation construct suggest that their removal will have a weak effect on the model.

4.5.2.5 Predictive relevance (Q^2)

Stone-Geisser's Q^2 value is employed in assessing the predictive relevance of the constructs (Geisser, 1974; Stone, 1974, 1977). Stone-Geisser's Q^2 value measures how the PLS-SEM model predicts the data points of indicators in a reflectively measured model. According to Hair et al. (2014), Q^2 values greater than zero for a construct proves that the construct has predictive relevance. The results show a Q^2 value of 0.171 for the model to indicate that the predictive relevance of the constructs is acceptable.

4.6 Analysis and Discussion of Findings

This section discusses the findings of the results of the path analysis in line with existing literature, the hypothesis and objectives of the study.

4.6.1 Personal Characteristics and Whistleblowing Intention

Arguing from existing literature, this study hypothesised that openness to experience has a positive relationship with accountants' intention to blow the whistle ($H1_a$). The results demonstrate that openness to experience has a positive but insignificant relationship with whistleblowing (path coefficient = 0.062, p-value = 0.316). This finding indicates that accountants who are open to experience have higher intentions to blow the whistle usually.

Though statistically insignificant, the findings corroborate the assertions of Bjørkelo *et al.* (2010) and Brink et al. (2015) who find that proactive behaviour emanating from openness to experience has a positive relationship with whistleblowing intention. It, however, deviates from the findings of LePine & Van Dyne (2001) and Bjørkelo et al. (2010) who find no relationship between openness to experience and intentions to report wrongdoings. The differences in findings with existing literature can be attributed to the different cultural and religious settings

of the studies. Culture³⁴, religion and spirituality are identified in previous studies as influencing the development of individuals' personality traits (McAdams & Pals, 2006; McCrae, 2000; Mastor, Jin and Cooper, 2000; Henningsgaard and Arnau, 2008). Mastor et al. (2000) established that lifestyles, values, socialisation practices are some aspects of culture which differs across countries. Hence, differences in these variables may have influenced the personality traits of the accountants in Ghana. However, statistically, we conclude that the hypothesised relationship between openness to experience and whistleblowing intentions is not supported.

This study hypothesised that conscientiousness has a positive relationship with accountants' whistleblowing intentions (H1_b). The results show that conscientiousness has a significant positive relationship with whistleblowing intention (p-value = 0.022, path coefficient = 0.123). The finding is consistent with the findings previous studies which found that individuals who rate higher on the trait conscientiousness are most likely to blow the whistle (LePine and Van Dyne, 2001; Bjørkelo et al., 2010; Tangirala & Ramanujam, 2008; Brink et al., 2015). To the extent that the key constituents of conscientiousness are self-determination and achievement, the findings suggest that the more activeness, self-conscious, and results-oriented accountants are, the more likely they will have the intention to report wrongful conducts and fraudulent practices they are privy to in organisations. Similarly, accountants, who are principled and orderly, are more likely to engage in whistleblowing activities. Hence, the study concludes that

³⁴ Culture influences how people perceive stimuli, explain influencing events, and behave under various circumstances. Ghana is classified as collectivist and a hierarchical society (Anquandah, 2013) while United State of America is known to be an individualist and egalitarian society (Liao & Bond, 2011). Individualistic cultural systems socialise members to value independence and personal achievement; collectivistic cultural systems socialise members to value interdependence and in-group harmony. This may have caused the differences in the results of this study and prior studies.

the positive relationship between conscientiousness and whistleblowing intentions is supported.

Also, it was hypothesised that extraversion has a positive relationship with the accountants' whistleblowing intentions (H1_c). With a path coefficient of 0.046 and a p-value of 0.401, extraversion shows an insignificant positive relationship with whistleblowing intention. This result corresponds to the findings of Brink et al. (2015) in the USA, Bjørkelo et al. (2010, 2015) in Norway and LePine and Van Dyne (2001) in the USA. The positive relationship observed between extraversion and whistleblowing intention can be attributed to random chance based on statistics. Hence, it is concluded that the hypothesis H1_c is not supported.

Following the argument of prior studies, this study proposed a negative relationship between the trait agreeableness and whistleblowing intentions (H1_d). The result reveals an insignificant positive relationship between agreeableness and whistleblowing intentions (path coefficient = 0.034, p-value = 0.519). Although statistically insignificant, this result contradicts some previous studies which suggest that agreeableness negatively and significantly affects whistleblowing behaviour (Bjørkelo et al., 2010 and LePine & Van Dyne, 2001).

The findings, however, corroborate that of Brink et al. (2015) and Bjørkelo et al. (2010). These studies liken agreeableness to altruistic behaviour which prior studies (see Bartuli, Mir Djawadi & Fahr, 2016; Haas, Brook, Remillard, Ishak, Anderson & Filkowski, 2015; Graziano & Tobin, 2013) suggest that altruistic employees are likely to refrain from supporting fraud, hence willing to report wrongdoing. Based on the results, hypothesis H1_d is unsupported.

A negative relationship between neuroticism and accountants' whistleblowing intentions is posited (H1_e). From the results, neuroticism has a negative relationship with whistleblowing intentions. However, the relationship was not statistically significant (path coefficient = -0.097; p-value = 0.151). The finding suggests that accountants who are neurotic are less willing to engage in whistleblowing, which is consistent with the findings of Bjørkelo et al. (2015), Brink

et al. (2015) and LePine and Van Dyne (2001). The results, however, contradicts the Bjørkelo et al. (2010) study. It is therefore concluded that the hypothesised relationship between neuroticism trait and whistleblowing intentions is not supported.

Existing literature has argued a positive relationship between professional scepticism and intentions to report wrongdoings. Hence, this study hypothesised that there is a positive relationship between professional scepticism and whistleblowing intentions (H1_f). As predicted, the construct “professional scepticism” is significantly and positively associated with whistleblowing intention (path coefficient of 0.199, a p-value of 0.010). This means that a professionally sceptic accountant is more likely to engage in whistleblowing activities. This result supports the findings of Elias and Farag (2015). Thus, the study concludes that the hypothesised relationship between professional scepticism and whistleblowing intentions is supported.

4.6.2 Motivation and Whistleblowing Intentions

Based on existing literature, this study hypothesised that intrinsic motivation has a positive relationship with accountants’ intention to blow the whistle (H2_a). The result shows that intrinsic motivation has a positive and significant relationship with whistleblowing (path coefficient = 0.235, p-value = 0.000). This means that an accountant whose motivation is grounded in curiosity and continually gaining knowledge about ethical issues has higher intentions of blowing the whistle on wrongdoings. Primarily, the desire to report wrongful acts is motivated by the satisfaction derived from fulfilling a physiological need – autonomy, relatedness and competence (Deci & Ryan, 2000). Cho and Song (2015) provide similar results to assert that intrinsic motivation, originating from public service motivation, has a positive relationship with whistleblowing intention. The hypothesised relationship between intrinsic motivation and whistleblowing intentions is, thus, supported.

The study proposed that perceived organisational support, a proxy for external motivation has a positive influence on whistleblowing intention (H2_b). With a path coefficient of 0.114 and a p-value of 0.022, it is observed that perceived organisational support has a significant positive relationship with whistleblowing intention. The results indicate that for every unit increase in perceived organisational support, whistleblowing intentions of accountants increase by 11.4 per cent. This means that accountants are likely to engage in whistleblowing based on the perceived values and motivation from their organisations.

This is consistent with the results of Cho and Song (2015), who find that when organisations support, protect, and educate employees on communication channels, for whistleblowing, the practice of reporting wrongdoings improves. Also, the result corroborates the assertions of Seifert et al. (2014), Mesmer - Magnus and Viswevaran (2005) and Berry (2004) that social support for employees and norms of reciprocity increase whistleblowing intention among individuals. For this reason, H2_b is supported.

4.6.3 Personal Characteristics and Motivation

As a criterion for mediation analysis, the independent variable must have a significant relationship with the independent variable. Therefore, mediation analysis was possible for only conscientiousness and professional scepticism. Openness to experience, extraversion, agreeableness and neuroticism established an insignificant relationship with whistleblowing intention.

Personality traits are found to be a vital factor which impacts all the aspects of human life (Huang & Yang, 2010). It is therefore proposed that conscientiousness has a significant positive influence on intrinsic motivation (H3_a). From Table 4.7, the result demonstrates a positive and significant relationship (path coefficient = 0.162, p-value = 0.001) between conscientiousness and intrinsic motivation. Thus, for every unit increase in conscientiousness among accountants, their intrinsic motivation increases by approximately 16 per cent. Empirically, this is consistent

with existing literature which reveals that conscientiousness is a key predictor of intrinsic motivation to engage in a behaviour (Hamidullah et al., 2016; Jang, 2012; Mondak, 2010; Schmeck, 2009; Watanabe & Kanazawa, 2009; Pandey & Stazyk, 2008). Based on the results, the hypothesised relationship between conscientiousness and intrinsic motivation is supported. The study also hypothesised that professional scepticism has a significant positive influence on intrinsic motivation (H3_b). With a path coefficient of 0.572 and a p-value of 0.000, professional scepticism is found to be significant and positively associated with intrinsic motivation. This means that accountants who are professionally sceptic are more intrinsically motivated, relative.

Extant literature argues that autonomous working environment and positive self-esteem, which are different dimensions of professional scepticism, compel individuals to be intrinsically motivated to engage in an activity (Liang et al., 2016; Deci and Ryan, 2000). Likewise, individuals who have a questioning mindset have higher intentions of reporting wrongdoing than individuals blinded by self-deception (Agarwalla et al., 2017). The results corroborate existing literature, and thus, the hypothesised relationship between professional scepticism and intrinsic motivation is supported.

Arguing from existing literature, this study hypothesised that professional scepticism positively influences perceived organisational support (H3_c). The result in Table 4.7 indicates that professional scepticism has a positive and significant relationship with whistleblowing (path coefficient = 0.359, p-value = 0.000). The results suggest that less autonomous working environment, which is indicative of how professionally sceptic an individual is, promote external influences in the performance of task or engagement in other activities. This result is consistent with the findings of Sivanathan and Pettit (2010). The hypothesised relationship between professional scepticism and perceived organisational support is, thus, supported.

4.6.4 Personal Characteristics, Motivation and Whistleblowing Intentions

Table 4.10 presents the results of the test of the mediating role of motivation in the personal characteristics and whistleblowing intentions relationship. Following Preacher and Hayes (2008) bootstrapping approach to mediation analysis, we present an analysis of the three conditions required for mediation analysis.

Table 4.10: Mediation Analysis Assessment

	Path	Path Coefficient	P-value	T-Stats
Direct without mediator	PC -> WBI	0.175	**0.002	3.219
	PS -> WBI	0.351	*0.000	4.987
Indirect with mediator	PC -> WBI	0.123	**0.022	2.270
	PC -> I- MOT	0.162	*0.001	3.286
	I-MOT -> WBI	0.235	*0.000	3.291
	PS -> WBI	0.199	*0.010	2.750
	PS -> I-MOT	0.572	*0.000	11.035
	PS -> E-MOT	0.359	*0.000	4.892
	E-MOT -> WBI	0.114	**0.022	2.264
	I-MOT -> WBI	0.235	*0.000	3.291

* Significant at 0.01 ** Significant at 0.05

Source: Field Data (2019)

The first condition for mediation necessitates a significant direct influence between personal characteristics and whistleblowing intentions. The results from Table 4.10 suggest that the direct path from conscientiousness → whistleblowing intention and professional scepticism → whistleblowing intention are statistically significant (p-value = 0.002 and p-value = 0.000 respectively). Similarly, the findings reveal a significant indirect relationship between personal characteristics and whistleblowing intentions through motivation, to satisfy the second

condition of mediation analysis. Finally, the variance accounted for (VAF)³⁵ of the mediating variable is determined to measure the strength of the mediation effect (the results are presented in Table 4.11).

Table 4.11: Variance accounted for and Strength of Mediation Effect for the Path

Path	Variance Accounted For	Strength of Mediation effect
PC -> I- MOT -> WBI	24%	Partial
PS -> I- MOT -> WBI	40.3%	Partial
PS -> E- MOT -> WBI	30.3%	Partial

Source: Field Data (2019)

To examine the mediating role of motivation in the association between personal characteristics and whistleblowing intentions, two personal characteristics of accountants (conscientiousness and professional scepticism) are used in the mediation analysis. Accordingly, it is hypothesised that intrinsic motivation mediates the relationship between conscientiousness and whistleblowing intentions (H4_a), intrinsic motivation mediates the relationship between professional scepticism and whistleblowing intentions (H4_b), and perceived organisational support mediates the relationship between professional scepticism and whistleblowing intentions (H4_c).

The results show that an accountant who possesses the trait of conscientiousness is intrinsically motivated and have higher whistleblowing intentions, with intrinsic motivation representing a mechanism through which conscientiousness affects the accountants' whistleblowing intentions. The finding indicates that conscientiousness affects the intrinsic motivation of

³⁵ VAF is calculated as the quotient of the co-efficient of the indirect path and the total effect.

accountants to, in turn, influence their whistleblowing intentions. The VAF of 24 per cent suggests that intrinsic motivation partially mediates the relationship between conscientiousness and whistleblowing intentions. H4_a that intrinsic motivation mediates the relationship between conscientiousness and whistleblowing intentions is thus supported.

Similarly, the finding indicates that whistleblowing intentions of accountants increase by 40.3 per cent depending on the extent that intrinsic motivation is significantly influenced by the accountants' professional scepticism. An analysis of the mediating variable also suggests that intrinsic motivation is a partial mediator (VAF = 40.3 per cent) of the professional scepticism-whistleblowing intentions relationship. The hypothesis that intrinsic motivation mediates the relationship between professional scepticism and whistleblowing intention is supported.

Also, the results demonstrate that perceived organisational support is a channel through which professional scepticism influence whistleblowing intentions, with a VAF of 30.3 per cent indicating that perceived organisational support is a partial mediator in support of H4_c. Overall, the results in Table 4.11 motivation (both intrinsic and perceived organisational support) is a partial mediator of the relationship between personal characteristics (conscientiousness and professional scepticism) and whistleblowing intentions of accountants.

4.7 Chapter summary

This chapter discussed the analysis of the data collected by initially assessing the measurement model and the structural model. The discussion of the hypothesised relationships between personality traits, motivation and whistleblowing intentions were also executed in this chapter. Overall, the analysis suggested that conscientious and professional scepticism have a significant relationship with whistleblowing intention while the existing association between the other personality traits (openness to experience, extraversion, agreeableness and neuroticism) were statistically insignificant. It was also established that motivation (intrinsic motivation and perceived organisational support) partially mediates the existing relationship

between personality traits and whistleblowing intentions. The next chapter provides a summary of the findings and the conclusions made based on the findings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter concludes the study. Included in the chapter is the summary of the major findings of the study, the conclusions made based on the findings, and the recommendations advanced due to the scope and limitations of the study.

5.2 Research Summary

The study explored the effect of personal characteristics on the whistleblowing intentions of accountants in Ghana. It further investigated the role that motivation plays in the association between personal characteristics and whistleblowing intentions of the accountants. The quantitative research approach and the survey research design were utilised. The Partial Least Square Structural Equation Modelling technique (PLS-SEM) was employed in analysing the hypothesised relationships.

5.3 Summary of Research Findings

Generally, the results indicate that accountants have higher intentions of blowing the whistle on fraudulent activities, and the decision to whistleblowing is primarily because the accountants believe that it is their sole responsibility. The results further demonstrate that accountants utilise internal whistleblowing channel in reporting, although mostly they prefer to use the anonymous reporting channel.

5.3.1 Personal characteristics and whistleblowing intentions

The findings on personal characteristics and whistleblowing intentions relate to study objective one. The results suggest that openness to experience, extraversion and agreeableness has a positive and non-significant influence on whistleblowing intention. Again, the results indicate a negative and insignificant relationship between neuroticism and whistleblowing intention of

accountants. Conscientiousness and professional scepticism, on the other hand, are positively and significantly related to whistleblowing intentions (at 5 per cent significance level).

5.3.2 Motivation and whistleblowing intention

The research findings on the influence of motivation (perceived organisational support and intrinsic motivation) on whistleblowing intentions among accountants relate to study objective two. The study finds that accountants whose organisations care for their well-being and value their contributions, measures for extrinsic motivation, have positive intentions to blow the whistle. This is mainly because the accountants become more committed to the organisation because of norm reciprocity or social exchange. Also, the result indicates that intrinsic motivation significantly and positively influences whistleblowing intentions. Notably, enjoying learning about ethical issues, the good feeling attached to solving complex ethical issues as well as curiosity is found to drive the whistleblowing intentions among accountants.

5.3.3 Personal Characteristics, Motivation and Whistleblowing Intentions

Objective three of the study was to establish the mediating role of motivation on the relationship between personal characteristics and whistleblowing intention. Entrenched, in this objective, was the examination of the influence of personal characteristics on motivation. The study finds that conscientiousness has a positive and significant relationship with intrinsic motivation. The underlying factors of conscientiousness are self-disciplined; goal-oriented and a sense of social responsibility, which is found to affect the intrinsic motivation of individuals. Furthermore, perceived organisational support and intrinsic motivation are found to be influenced by the level of professional scepticism of accountants. The level of self-esteem and working within an autonomous environment are the main professional scepticism dimension that drives intrinsic motivation. Likewise, individuals working within a controlled environment and lack self-esteem attention are diverted from satisfying essential vital human needs to pursuing extrinsic outcomes.

The study also finds that conscientiousness and professional scepticism have an indirect influence on whistleblowing intention through motivation. Thus, intrinsic motivation mediates the relationship between conscientiousness and whistleblowing intention while perceived organisational support and intrinsic motivation mediate the relationship between professional scepticism and whistleblowing intention.

5.4 Conclusions of the Study

5.4.1 Personal Characteristics and Whistleblowing Intentions

The study concludes that the trait conscientiousness and professional scepticism are the key predictors of whistleblowing intentions among accountants in Ghana. While accountants who are extravert have higher whistleblowing intentions, neurotic accountants have minimum intentions to blow the whistle on wrongdoings. The study further concludes that accountants who are open to experience have positive intentions to report wrongdoing. Conversely, agreeable accountants have positive intentions toward whistleblowing.

5.4.2 Motivation and Whistleblowing Intention

The study concludes that perceived organisational support aimed at enhancing the well-being of employees and intrinsic motivation influences the intentions of accountants to positively blow the whistle on fraudulent acts.

5.4.3 Personal Characteristics, Motivation and Whistleblowing Intentions

The study concludes that conscientiousness has a significant positive influence on intrinsic motivation. Also, perceived organisational support and intrinsic motivation are influenced positively by the level of professional scepticism of accountants. Perceived organisational support, including consideration of employee goals and values, caring about employee's general satisfaction, and making the employee's job interesting, is a mechanism through which the whistleblowing intentions of accountants are influenced by the professional scepticism.

Also, accountants who possess the trait of conscientiousness have greater intentions to whistleblow due to how intrinsically motivated they are as a result of their personality.

5.5 Implications of the Study

The findings of this study contribute to policy, practitioners and accounting research. Firstly, the findings of the study could be used in designing whistleblowing training programs or incentives that are more effective in encouraging individuals to report wrongdoing. From the perspective of organisational support theory, valuing the contributions and well-being of employees stimulate them to practically get attached to their organisations as they have the feeling of being part of the organisations. Hence, such employees will be willing to defend and protect their organisations. The results suggest that educating the employees on the procedures of disclosing fraudulent acts, providing them with the appropriate disclosing channel and rewarding individuals who report wrongdoing will arouse other potential whistle blower's interest. This could inform organisational policies regarding whistleblowing.

Also, by providing an understanding of the characteristics of individuals that encourage intentions to whistleblowing, organisations will be able to encourage the development of traits such as conscientiousness and professional scepticism among accountants and other employees to improve the practice of voluntarily reporting wrongdoings. Managers, directors, complaints-recipients and other parties within the organisations are also able to appreciate the different personalities of individuals in handling issues on whistleblowing and make the process effective.

Further, an organisation aiming at detecting, deterring and reducing fraud in their workplaces should actively search for individuals that possess personality traits connected with whistleblowing. Concerning this, the results from this study may be useful to develop screening procedures for identifying employees that portray individual characteristics associated with conscientiousness and a higher level of professional scepticism.

Accordingly, studies indicate that employees obtain psychological fulfilment that intrinsically stimulates them to increase their work performance when they are assigned to duties that enable them to work towards their higher-order goals – autonomy, relatedness and competence. This implies that organisations should first understand the significant goals that matter to their employees and ensure that they assign those goals to the characteristics of their jobs to make the work more meaningful and intrinsically motivating to those employees.

Also, the findings reveal that the trait conscientiousness and professional scepticism have a significant effect on motivation and organisational behaviour. This information is relevant to management teams as they continuously try to provide guidance in contemporary organisations in managing crucial organisational aspects regarding motivation. By knowing and understanding how personality trait and professional scepticism affect the motivation of workers, management can take a different approach to align the interests of personnel and the organisation together.

Also, accounting and audit firms should be conscious of the significant impact that the firm's organisational support will have on the relationship between employees' professional scepticism and whistleblowing intentions. This implies that accountants' professional scepticism may lead to the detection of fraud. However, their intention to engage in whistleblowing would be determined by the belief that corrective action would take place and support of management and co-workers which are expressed in organisational support.

Regarding implications for accounting research, the study serves as a bridge between the literature on the influence of personality traits and professional scepticism on whistleblowing intention in the context of developing countries. Studies suggest that evaluating whistleblowing intentions from the individuals' viewpoint is important, hitherto, few studies have considered it. This answers the call of several authors who have demanded an understanding of personal

characteristics, motivation and whistleblowing intentions from a variety of contexts (Gao & Blinks, 2017; Alleyne et al., 2017; Alleyne et al., 2015).

The study again corroborates the linkage between personal characteristics and whistleblowing intention (Elias & Farag, 2015; Brink et al., 2015; Bjørkelo et al., 2015; Bjørkelo et al., 2010) and motivation and whistleblowing intention (Cho & Song, 2015). Although there is considerable literature in this area, the findings of this study complement existing literature, especially providing insights on accountants in developing countries regarding the subject matter.

Furthermore, the study contributes to the existing literature by providing initial evidence on the mediating role of motivation on the relationship between conscientiousness and whistleblowing intention, and between professional scepticism and whistleblowing intentions. To the best of knowledge, this is the first study to do so in the whistleblowing literature. Advancing that personal characteristic can affect whistleblowing intentions through their influence on motivation is noble evidence.

5.6 Recommendations of the Study

The study makes recommendations to inform practitioners, policy and academia as follows:

Relevant bodies in organisations should adopt pertinent approaches that view personnel as being of different attributes, and tailor motivation strategies that induce positive organisational behaviour. Also, different motivation approaches and policies should be adopted by the organisations to enable the marching of different motivation policies to different trait to improve the effectiveness of these policies. With this approach in practice, there is a high likelihood that there will be a success in human resources strategies and related policies implemented by these organisations.

Encouraging whistleblowing is beside the point until individuals are aware of almost the factors that increase the probability that whistleblowing can be effective. Therefore, government

interventions targeted at enhancing whistleblowing among individuals should place more emphasis on education, training, and creating and sponsoring awareness programs among the main decision-makers of the accounting profession. Education and training will increase the knowledge about the potential benefits of whistleblowing, hence leading to successive intentions among individuals. The creating and sponsoring awareness programs will sensitise employees and various individuals about the importance of whistleblowing, thereby enabling them to have any other choice than become potential whistle-blowers.

The findings of the study demonstrate that accountants will have higher intentions to report wrongdoings. However, they are unwilling to use the identified reporting channel. It is recommended that policy makers consider and endorse an anonymous reporting channel. There is evidence of increased whistleblowing when a potential reporter has been offered motivation to confide in the obscurity of the reporting mechanism (see Lowry et al., 2013), and anonymity has the capacity to enhance the effectiveness of wrongdoing reporting (see Kaplan & Schultz, 2007; Robinson et al., 2012; Johansson & Carey, 2016; da Silva & de Sousa, 2017). Once individuals recognise that these options are available and they are feasible, that knowledge will aid them to choose between reporting fraudulent acts.

This study, if not the first, is among the few studies to have explored the role of perceived organisational support and intrinsic motivation in mediating the relationship between professional scepticism and whistleblowing intentions as well as conscientiousness and whistleblowing intention. It is therefore recommended that future studies build on the conceptual framework of this study by examining the interrelationships among constructs of different theoretical frameworks, to establish the determinants of whistleblowing intention.

5.7 Limitations and Directions for Future Studies

The researcher acknowledges the limitation of this study. The questionnaire data were collected at the same time as the busy period of the accountants, hence the relatively low rate of the return of the questionnaires. This could affect the generalisation of the study.

Despite the contributions of this study to existing literature, there are still some research gaps which require future studies. The evidence for corporate misconducts is now almost indisputable, and hence, whistleblowing is inevitable. Vast research remains, however, in whether whistleblowing exists in service industries (banking, insurance and telecommunication), manufacturing industries, agro-processing industries etc. that abounds in contexts like Africa and other developing economies. Again, what other factors explain the whistleblowing phenomenon? What mediators may be found to deepen our understanding of the construct? Is it possible for whistleblowing to be structured into processes? For instance, is there a progression from whistleblowing intention to actual whistleblowing in our context as previous studies have indicated, and what are the differences between the intention and actual whistleblowing? Finally, what does whistleblowing begin to look like in the long-term? These questions remain unexplored which answers are required to enhance the understanding of whistleblowing in organisations.

Also, this study employed a quantitative design and as such, could not gather in-depth knowledge as to why respondents provided specific responses about whistleblowing intentions, motivation, and professional scepticism and personality traits. Future studies may consider using a qualitative design, such as in-depth interview and case studies, to explore the whistleblowing phenomena under consideration.

Furthermore, the study was cross-sectional, and as such, a longitudinal study concerning this study area can help establish the determinants of whistleblowing intentions over several periods. The sample for the study is drawn from private accountants, and that may have

accounted for the results that were obtained. Further studies could replicate the study using public accountants or make comparison studies by sampling both public and private accountants to gain a full understanding of accountants regarding whistleblowing practices.

5.8 Chapter Summary

This chapter concludes the study. It gives a summary of the findings and results of the study. Also, there is a general conclusion drawn on the findings and discussions. Several valuable implications and recommendations are also proposed for policy, practice and future researchers.

REFERENCES

- Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties*, 4(2), 330-333.
- Adwok, J. (2015). Probability Sampling-A Guideline for Quantitative Health Care Research. *Annals of African Surgery*, 12(2).
- Agarwalla, S. K., Desai, N., & Tripathy, A. (2017). The impact of self-deception and professional scepticism on perceptions of ethicality. *Advances in Accounting*, 37(December 2016), 85–93. <https://doi.org/10.1016/j.adiac.2017.04.002>
- Aibinu, A. A., & Al-Lawati, A. M. (2010). Using PLS-SEM technique to model construction organisations' willingness to participate in e-bidding. *Automation in construction*, 19(6), 714-724.
- Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behavior and Human Decision Processes*, 50, 179–211.
- Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology and Health*, 26(9), 1113-1127.
- Aliyu, A. A., Bello, M. U., Kasim, R., & Martin, D. (2014). Positivist and non-positivist paradigm in social science research: Conflicting paradigms or perfect partners. *J. Mgmt. & Sustainability*, 4, 79.
- Alleyne, P., Charles-Soverall, W., Broome, T., & Pierce, A. (2017). Perceptions, predictors and consequences of whistleblowing among accounting employees in Barbados. *Meditari Accountancy Research*, 25(2), 241–267. <https://doi.org/10.1108/MEDAR-09-2016-0080>
- Alleyne, P., Hudaib, M., & Haniffa, R. (2015). The Moderating Role of Perceived Organisational Support in Breaking the Silence of Public Accountants. *Journal of Business Ethics*, 147(3), 509–527. <https://doi.org/10.1007/s10551-015-2946-0>

- Alleyne, P., Hudaib, M., & Pike, R. (2013). Towards a conceptual model of whistle-blowing intentions among external auditors. *British Accounting Review*, 45(1), 10–23. <https://doi.org/10.1016/j.bar.2012.12.003>
- Alleyne, P., & Weekes-Marshall, D. A. (2013). Exploring Factors Influencing Whistle-blowing Intentions among Accountants in Barbados. *Journal of Eastern Caribbean Studies*, 38(1/2), 35–62. Retrieved from
- Alleyne, P., Weekes-Marshall, D., Estwick, S., & Chaderton, R. (2014). Factors Influencing Ethical Intentions Among Future Accounting Professionals in the Caribbean. *Journal of Academic Ethics*, 12(2), 129–144. <https://doi.org/10.1007/s10805-014-9203-5>
- Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The Work Preference Inventory: assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology* 66 (5): 950-967.
- Anonymous (2015). The age of the whistleblower. *The Economist*, 417(December 5), 65-67.
- Anquandah, J. (2013). The people of Ghana: their origins and cultures. *Transactions of the Historical Society of Ghana*, (15), 1-25.
- Apaza, C. R., & Chang, Y. (2011). What makes whistleblowing effective: Whistleblowing in Peru and South Korea. *Public Integrity*, 13, 113-130.
- Ariani, D. W. (2013). Personality and learning motivation. *Theory. Research*, 5(10).
- Arnold, D. F., & Ponemon, L. A. (1991). Internal auditors' perceptions of whistle-blowing and the influence of moral reasoning: an experiment. *Auditing*, 10(2), 1-15.
- Aselage, J., & Eisenberger, R. (2003). Perceived organisational support and psychological contracts: A theoretical integration. *Journal of Organizational Behaviour*, 24(5), 491–509.
- Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. F. (2017). General, target, and accessible population: Demystifying the concepts for effective sampling. *The Qualitative Report*, 22(6), 1607-1621.

- Astrachan, C. B., Patel, V. K., & Wanzenried, G. (2014). A comparative study of CB-SEM and PLS-SEM for theory development in family firm research. *Journal of Family Business Strategy*, 5(1), 116–128. <https://doi.org/10.1016/j.jfbs.2013.12.002>
- Association of Certified Fraud Examiner (ACFE) (2010). *Report to the Nation on occupational fraud and abuse*. Association of Certified Fraud Examiners, Austin, TX, pp. 1-79.
- Ayers, S., & Kaplan, S. E. (2005). Wrongdoing by consultants: An examination of employees' reporting intentions. *Journal of Business Ethics*, 57(2), 121-137.
- Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 19(1), 60-65.
- Barlow, D. H., Sauer-Zavala, S., Carl, J. R., Bullis, J. R., & Ellard, K. K. (2014). The nature, diagnosis, and treatment of neuroticism: Back to the future. *Clinical Psychological Science*, 2(3), 344–365. <https://doi.org/10.1177/2167702613505532>
- Barrick, M. R., Mount, M. K., & Li, N. (2013). The theory of purposeful work behaviour: The role of personality, higher-order goals, and job characteristics. *Academy of management review*, 38(1), 132-153.
- Baron, R. M., & Kenny, D. a. (1986). The Moderator-Mediator Variable Distinction in Social Psychology: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality*, 54(2), 1173–1182. <https://doi.org/10.1037/0022-3514.54.2.1173>
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organisational behaviour: A measure and correlates. *Journal of Organizational Behaviour*, 14(2), 103–118.
- Bartuli, J., Mir Djawadi, B., & Fahr, R. (2016). Business ethics in organisations: an experimental examination of whistleblowing and personality.
- Baumeister, R. & Leary, R. M. (1997). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497– 529.

- Bernard, H. R. (2002). *Research Methods in Anthropology: Qualitative and quantitative methods*. 3rd edition. AltaMira Press, Walnut Creek, California.
- Berry, B. (2004). Organisational culture: A framework and strategies for facilitating employee whistleblowing. *Employee Responsibilities and Rights Journal*, 16(1), 1–11.
- Bird, D. K. (2009). The use of questionnaires for acquiring information on public perception of natural hazards and risk mitigation—a review of current knowledge and practice. *Natural Hazards and Earth System Sciences*, 9(4), 1307-1325.
- Bjørkelo, B. (2013). Workplace bullying after whistleblowing: Future research and implications. *Journal of Managerial Psychology*, 28(3), 306-323.
- Bjørkelo, B., Einarsen, S., & Matthiesen, S. B. (2010). Predicting proactive behaviour at work: Exploring the role of personality as an antecedent of whistleblowing behaviour. *Journal of Occupational and Organizational Psychology*, 83(2), 371–394.
- Bjørkelo, B., Ryberg, W., Matthiesen, S. B., & Einarsen, S. (2008). When you talk and talk, and nobody listens”: A mixed-method case study of whistleblowing and its consequences. *International Journal of Organisational Behaviour*, 13(2), 18-40.
- Bowen, R. M., Call, A. C., & Rajgopal, S. (2010). Whistle-blowing: target firm characteristics and economic consequences. *The Accounting Review*, vol. 85, no. 4, pp. 1239-1271.
- Brennan, N., & Kelly, J. (2007). A study of whistleblowing among trainee auditors. *The British Accounting Review*, 39(1), 61-87.
- Brief, A. P. & Motowidlo, S. J. (1986). Pro-social organisational behaviours. *The Academy of Management Review*, 11(4), 710-725.
- Brink, A. G., Cereola, S., & Menk, K. B. (2015). The effects of fraudulent reporting, materiality level, personality traits, and ethical position on entry-level employee whistleblowing decisions. *Journal of Forensic and Investigative Accounting*, 7(1), 180–211.

- Broadbent, J., & Kirkham, L. (2008). Glass ceilings, glass cliffs or new worlds? Revisiting gender and accounting. *Accounting, Auditing & Accountability Journal*, 21(4), 465-473.
- Bulmer, M. (2004). Questionnaires, Sage benchmarks in social science research methods.
- Bunniss, S., & Kelly, D. R. (2010). Research paradigms in medical education research. *Medical education*, 44(4), 358-366
- Chalmers, D., Manley, D., & Wasserman, R. (2009). *Metametaphysics: New essays on the foundations of ontology*. Oxford University Press.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Chiu, R. K. (2003). Ethical judgment and whistleblowing intention: Examining the moderating role of locus of control. *Journal of Business Ethics*, 43(1-2), 65-74.
- Cho, Y. J. & Song, H. J. (2015). Determinants of whistleblowing within government agencies. *Public Personnel Management*, 44(4), 450-472.
- Clark, L. A., & Watson, D. (2008). Temperament: An organising paradigm for trait psychology. In O. P. John, R. R. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed.). New York, NY: Guilford Press.
- Collis, J., & Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students*. Palgrave MacMillan
- Cooper, D. R., & Schindler, P. S. (2008). *Business research methods* (12th ed). New York: McGraw-Hill Irwin.
- Costa Jr., P. T. & McCrae, R. R. (1992). *NEO PI-R Professional Manual*. Psychological Assessment Resources, Odessa, FL.
- Costa, P. T., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology*, 81(2), 322-331.

- Cressie, N. (2015). *Statistics for spatial data*. New York: John Wiley & Sons.
- Creswell, J. W., & Plano Clark, V. L. (2003). Thousand Oaks. *Research Design, Qualitative, Quantitative, and Mixed Methods Approaches*.
- Creswell, J. W. (2007). *Choosing among five approaches. Qualitative inquiry and research design*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage publications.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. Sage Publications.
- Curtis, M. B., & Taylor, E. Z. (2009). Whistleblowing in public accounting: Influence of identity disclosure, situational context, and personal characteristics. *Accounting and the Public Interest*, 9(1), 191–220.
- Curtis, M. B. (2006). Are Audit-Related Ethical Decisions Dependent Upon Mood? *Journal of Business Ethics*, 68(2), 191–209.
- Da Silva, G. R., & de Sousa, R. G. (2017). The influence of the anonymous whistleblowing channel on accounting fraud detection in organisations. *Journal of accounting and Organisations*, 11(30), 46-56.
- Dahl, R. (1989). *Democracy and its critics*. New Haven: Yale University Press.
- Dalton, D., & Radtke, R. R. (2013). The joint effects of Machiavellianism and ethical environment on whistle-blowing. *Journal of Business Ethics*, 117(1), 153–172.
- Dehn, G., & Borrie, G. (2001). Whistleblowing: A new perspective. *Public concern at work*.
- Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The mini-IPIP scales: tiny-yet-effective measures of the Big Five factors of personality. *Psychological assessment*, 18(2), 192.
- Dyck, A., Morse, A., & Zingales, I. (2010). Who blows the whistle on corporate fraud? *The Journal of Finance*, 65(6), 2213-2253

- Eaton, T. V., & Akers, M. D. (2007). Whistleblowing and Good Governance. *The CPA Journal*, 77(6), 4–9.
- Elfil, M., & Negida, A. (2017). Sampling methods in clinical research; an educational review. *Emergency*, 5(1).
- Elias, R. (2008). Auditing students' professional commitment and anticipatory socialisation and their relationship to whistleblowing. *Managerial Auditing Journal*, 23(3), 283-294.
- Elias, R. Z., & Farag, M. S. (2015). The relationship between Professional Scepticism and Whistleblowing : Evidence of a retaliation effect. *Franklin Business & Law Journal*, 2015(3), 1–28.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organisational support. *Journal of Applied Psychology*, 86(1), 42–51.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organisational support. *Journal of Applied Psychology*, 71, 500-507
- Farag, M. S. & Elias, R. Z. (2012), "The impact of accounting students' professional scepticism on their ethical perception of earnings management", *Research on Professional Responsibility and Ethics in Accounting*, Vol. 16, pp. 185-200.
- Finstad, K. (2010). Response interpolation and scale sensitivity: Evidence against 5-point scales. *Journal of Usability Studies*, 5(3), 104-110.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behaviour: An introduction to theory and research.
- Ajzen, I., & Fishbein, M., (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.
- Fisher, C. D. (1978). The effects of personal control, competence, and extrinsic reward systems on intrinsic motivation. *Organizational Behavior and Human Performance*, 21, 273–288.

- Foley, W. J., Halper, J. M., & Mathews, L. (2014). Before the whistle blows: Understanding and addressing the expanding scope of whistleblower protections under Sarbanes-Oxley and Dodd-Frank.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Forrester, W. R., & Tashchian, A. (2010). Effects of Personality on Attitudes toward Academic Group Work. *American Journal of Business Education*, 3(3), 39-46.
- Fredin, A. (2012). The unexpected cost of staying silent. *Strategic Finance*, Vol. 93 No. 10, pp. 53-59.
- Frudge, R. S., & Schlacter, J. L. (1999). Motivating employees to act ethically: An expectancy theory approach. *Journal of Business Ethics*, 18(3), 295-304.
- Furnham, A. (2008). Personality and intelligence at work: Exploring and explaining individual differences at work. Routledge.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362.
- Gao, L., & Brink, A. G. (2017). Whistleblowing studies in accounting research: A review of experimental studies on the determinants of whistleblowing. *Journal of Accounting Literature*, 38, 1-13.
- Garcia, T., & Pintrich, P. R. (1996). The Effects of Autonomy on Motivation and Performance in the College Classroom. *Contemporary educational psychology*, 21(4), 477-486.
- Garson, G. D. (2016). Partial least squares: Regression and structural equation models. *Asheboro, NC: Statistical Associates Publishers*.
- Ghana Anti-Corruption Coalition (GACC) (2010). A Guide to Whistleblowing in Ghana Revised Edition Anti-Corruption, 23.

- Glazer, M. & Glazer, P. (1989). *The Whistleblowers: Exposing Corruption in Government and Industry*. New York: Basic Books.
- Graziano, W. G., & Tobin, R. M. (2002). Agreeableness: Dimension of personality or social desirability artefact? *Journal of Personality*, 70(5), 695–727.
- Graziano, W. G., & Tobin, R. M. (2013). The cognitive and motivational foundations underlying agreeableness. *Handbook of cognition and emotion*, 347-364.
- Gundlach, M. J., Douglas, S. C., & Martinko, M. J. (2003). The decision to blow the whistle: A social information processing framework. *The Academy of Management Review*, 28(1), 107–123.
- Haas, B. W., Brook, M., Remillard, L., Ishak, A., Anderson, I. W., & Filkowski, M. M. (2015). I know how you feel: The warm-altruistic personality profile and the empathic brain. *PloS one*, 10(3), e0120639.
- Hadi, N. U., Abdullah, N., & Sentosa, I. (2016). Making sense of mediating analysis: A marketing perspective. *Review of Integrative Business & Economics Research*, 5(2), 62-76.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis. Pearson custom library* (7th ed.). Edinburgh Gate: Pearson Education. <https://doi.org/10.1038/259433b0>
- Hair, J. F., Hult, G. T. M., Ringe, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). Thousand Oaks: SAGE. <https://doi.org/10.1017/CBO9781107415324.004>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>

- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modelling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The Use of Partial Least Squares Structural Equation Modeling in Strategic Management Research: A Review of Past Practices and Recommendations for Future Applications. *Long Range Planning*, 45(5–6), 320–340. <https://doi.org/10.1016/j.lrp.2012.09.008>
- Hamidullah, M. F., Van Ryzin, G. G., & Li, H. (2016). The agreeable bureaucrat: personality and PSM. *International Journal of Public Sector Management*, 29(6), 582-595.
- Harrison, J. S., & Freeman, E. R. (2004). Democracy In and Around Organizations: Is organizational Democracy Worth the Effort. *Academy of Management Executive*, 18(3), 6. <https://doi.org/10.5465/AME.2004.14776168>
- Hays, J. B. (2013). An investigation of the motivation of management accountants to report fraudulent accounting activity: Applying the theory of planned behaviour. Nova Southeastern University.
- Hearn, S. (1999). Whistleblowing: Implementing an Employee Hotline. *Management Accounting*, 77(2), 35-36.
- Hemed, M., & Tanzania, G. (2015). Cross-sectional studies. *Training Course in Sexual and Reproductive Health Research Geneva*, 12. <https://doi.org/10.1016/j.ajodo.2014.05.005>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Hoffman, W. M. & McNulty, R. E. (2009). A Business Ethics Theory of Whistleblowing: Responding to the \$1 Trillion Question. In M. Arszulowicz & W.W. Gasparski (eds.). *Whistleblowing: In Defense of Proper Action*. New Brunswick, NJ: Transaction. 115-132.

- Hunt, S. D., & Vitell, S. (1986). A general theory of marketing ethics. *Journal of macro marketing*, 6(1), 5-16.
- Hurtt, R. K. (2010). Development of a scale to measure professional scepticism. *Auditing: A Journal of Practice & Theory*, 29 (1): 149–171.
- Jang, C. L. (2012). The effect of personality traits on public service motivation: evidence from Taiwan. *Social Behavior and Personality: an international journal*, 40(5), 725-733.
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of consumer research*, 30(2), 199-218.
- Johansson, E., & Carey, P. (2016). Detecting fraud: The role of the anonymous reporting channel. *Journal of business ethics*, 139(2), 391-409.
- Johnson, R. A. (2003). *Whistleblowing: When it Works--and why*. Lynne Rienner Publishers.
- Jöreskog, K. G. (1978). Structural analysis of covariance and correlation matrices. *Psychometrika*, 43(4), 443-477.
- Jöreskog, K. G. (1993). Testing structural equation models. *Sage focus editions*, 154, 294-294.
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of applied psychology*, 87(4), 797.
- Kadous, K., & Zhou, Y. D. (2016). How does intrinsic motivation improve auditor scepticism in complex audit tasks? *Contemporary Accounting Research*.
- Kaiser, H. F., & Rice, J. (1974). Little jiffy, mark IV. *Educational and psychological measurement*, 34(1), 111-117.
- Kaplan, S. E., & Schultz, J. J. (2007). Intentions to report questionable acts: An examination of the influence of anonymous reporting channel, internal audit quality, and setting. *Journal of Business Ethics*, 71(2), 109–124. <https://doi.org/10.1007/s10551-006-0021-6>

- Kaplan, S. E., Pany, K., Samuels, J., & Zhang, J. (2012). An examination of anonymous and non-anonymous fraud reporting channels. *Advances in Accounting*, 28(1), 88–95.
- Kaptein, M. (2011). From inaction to external whistleblowing: The influence of the ethical culture of organizations on employee responses to observed wrongdoing. *Journal of Business Ethics*, 98(3), 513-530.
- Keil, M., Tiwana, A., Sainsbury, R., & Sneha, S. (2010). Toward a theory of whistleblowing intentions: A benefit-to-cost differential perspective. *Decision Sciences*, 41(4), 787-812.
- Kennett, D., Downs, A., & Durler, M. G. (2011). Accounting Students' Intent to Blow the Whistle on Corporate Fraudulent Financial Reporting : An Experiment. *International Journal of Business and Social Science*, 2(14), 14–23.
- Kivunja, C., & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6(5), 26. <https://doi.org/10.5430/ijhe.v6n5p26>
- Kothari, C. (2004). *Research methodology: methods and techniques*. Vasa. <https://doi.org/http://196.29.172.66:8080/jspui/bitstream/123456789/2574/1/Research%20Methodology.pdf>
- Krauss, S. E., & Putra, U. (2005). Research Paradigms and Meaning Making : A Primer. *The Qualitative Report*, 10(4), 758–770. <https://doi.org/10.1176/appi.ajp.162.10.1985>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Lacayo, R., Ripley, A. & Sieger, M. (2002). The whistleblowers - persons of the year. *Time*, 30 December, 38-53.
- Latane, B., & Darley, J. M. (1968). Group inhibition of bystander intervention. *Journal of Personality and Social Psychology* 10(3), 215-221.

- Lavena, C. F. (2014). Whistle-blowing individual and organizational determinants of the decision to report wrongdoing in the federal government. *The American Review of Public Administration*. doi:10.1177/0275074014535241.
- LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behaviour as contrasting forms of contextual performance: Evidence of differential relationships with Big Five personality characteristics and cognitive ability. *Journal of Applied Psychology*, 86(2), 326–336.
- Liang, Y., Liu, L., Tan, X., Huang, Z., Dang, J., & Zheng, W. (2016). The effect of self-esteem on corrupt intention: The mediating role of materialism. *Frontiers in psychology*, 7, 1063.
- Liyanarachchi, G., & Newdick, C. (2009). The impact of moral reasoning and retaliation on whistle-blowing: New Zealand evidence. *Journal of Business Ethics*, 89(1), 37-57.
- Lom, P. (2001). *The limits of doubt: The moral and political implications of scepticism*. Albany, NY: State University of New York Press.
- Lowry, P. B., Moody, G. D., Galletta, D. F., & Vance, A. (2013). The drivers in the use of online whistle-blowing reporting systems. *Journal of Management Information Systems*, 30(1), 153-190.
- Lucas, N., & Koerwer, V. S. (2004). Featured interview Sherron Watkins, former Vice President for Corporate Development of Enron. *Journal of Leadership & Organizational Studies*, 11(1), 38-47.
- MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: causes, mechanisms, and procedural remedies. *Journal of Retailing*, 88(4), 542-555.
- Mannion, R., & Davies, H. T. (2015). Cultures of silence and cultures of voice: the role of whistleblowing in healthcare organisations. *International journal of health policy and management*, 4(8), 503-505.
- Maree, K. W., & Radloff, S. (2007). Factors affecting the ethical judgement of South African chartered accountants. *Meditari Accountancy Research*, 15(1), 1-18.

- Mastor, K. A., Jin, P., & Cooper, M. (2000). Malay culture and personality: A Big Five perspective. *American Behavioral Scientist*, 44(1), 95-111.
- Matthews, G., Deary, I. J., & Whiteman, M. C. (2003). *Personality traits* (2nd ed.). Cambridge: Cambridge University Press.
- D. P. (1995). What do we know when we know a person? *Journal of Personality*, 63, 365-396.
- McAdams, D. P., & Pals, J. L. (2006). A new big five: Fundamental principles for an integrative science of personality. *American Psychologist*, 61(3), 204.
- McCrae, R. R. (2000). Trait psychology and the revival of personality and culture studies. *American Behavioral Scientist*, 44(1), 10-31.
- McCrae, R. R. & Costa, P. T. (1987). Validation of the Five-Factor Model of Personality across Instruments and Observers. *Journal of Personality and Social Psychology*. 52(1). 81-90.
- McCrae, R. R., & Costa Jr, P. T. (1989). More reasons to adopt the five-factor model.
- McCrae, R. R., & Costa, P. T., Jr. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509-516.
- McCrae, R. R., & Costa, P. T., Jr. (2003). *Personality in adulthood: A Five-Factor Theory perspective*. New York, NY: Guilford Press.
- McDevitt, R. and Van Hise, J. (2002). Influences in ethical dilemmas of increasing intensity. *Journal of Business Ethics*, 40(3), 261-274.
- Mertens, D. M. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. Sage publications.
- Meškauskienė, A. (2013). School child's self-esteem as a factor influencing motivation to learn. *Procedia-Social and Behavioral Sciences*, 83, 900-904.
- Mesmer-Magnus, J. R., & Viswesvaran, C. (2005). Whistleblowing in organisations: An examination of correlates of whistleblowing intentions, actions, and retaliation. *Journal of business ethics*, 62(3), 277-297.

- Miceli, M. P. (2004). Whistle-blowing research and the insider: Lessons learned and yet to be learned. *Journal of Management Inquiry*, 13(4), 364–366.
- Miceli, M. P., & Near, J. P. (1985). Characteristics of organisational climate and perceived wrongdoing associated with whistle-blowing decisions. *Personnel Psychology*, 38(3), 525-544.
- Miceli, M. P., & Near, J. P. (1988). Individual and situational correlates of whistle-blowing. *Personnel Psychology*, 41(2), 267-281.
- Miceli, M. P. & Near, J. P. (1992). *Blowing the Whistle*. Lexington Books, New York.
- Miceli, M. P., & Near, J. P. (2005a). How can one person make a difference? Understanding whistle-blower effectiveness. In M. Epstein & K. Hanson (Eds.), *The accountable corporation*. Westport, CT: Praeger Publishers.
- Miceli, M. P., Near, J. P., & Dworkin, T. M. (2008). Whistle-blowing in organisations. New York: Routledge, Taylor & Francis Group.
- Miceli, M. P., Near, J. P., & Dworkin, T. M. (2009). A word to the wise: How managers and policy-makers can encourage employees to report wrongdoing. *Journal of business ethics*, 86(3), 379-396.
- Mintz, S. (2015). Whistleblowing considerations for external auditors under Dodd-Frank: A blueprint for future research. *Research on professional responsibility and ethics in accounting* (pp. 99-128). Emerald Group Publishing Limited.
- Mondak, J. J. (2010). *Personality and the Foundations of Political Behavior*, Cambridge University Press, New York, NY.
- Mudrack, P. E. & Mason, E. S. (2013). Dilemmas, conspiracies, and Sophie's choice: Vignette themes and ethical judgments. *Journal of Business Ethics*, 118 (3), 639-653.
- Nayir, D. Z., & Herzig, C. (2012). Value orientations as determinants of preference for external and anonymous whistleblowing. *Journal of Business Ethics*, 107(2), 197-213.

- Near, J. P., Dworkin, T. M., & Miceli, M.P. (1993). Explaining the whistle-blowing process: Suggestions from power theory and justice theory. *Organization Science*, 4(3), 393-411.
- Near, J. P., & Miceli, M. P. (1985). Organisational dissidence: The case of whistle-blowing. *Journal of Business Ethics*, 4(1), 1-16.
- Near, J. P. & Miceli, M. P. (1987). Whistleblowers in Organizations: Dissidents or Reformers?' in B. M. Staw and L. L. Cummings (eds.), *Research in Organizational Behavior*, 9, 321–368 (JAI Press, Greenwich, CT).
- Near, J. P., & Miceli, M. P. (1995). Effective whistle-blowing. *Academy of Management Review*, 20(3), 679–708.
- Near, J. P., Miceli, M. P., & Jensen, T. C. (1983). *Variables associated with the whistle-blowing process*. College of Administrative Science, Ohio State University.
- Near, J. P., & Jensen, T. C. (1983). The whistleblowing process: Retaliation and perceived effectiveness. *Work and Occupations*, 10(1), 3-28.
- Near, J. P., Rehg, M. T., Van Scotter, J. R., & Miceli, M. P. (2004). Does the type of wrongdoing affect the whistle-blowing process? *Business Ethics Quarterly*, 14(2), 219.
- Nelson, M. (2009). A model and literature review of professional scepticism in auditing. *Auditing: A Journal of Practice & Theory*, 28 (2): 1–34.
- Nemoto, T., & Beglar, D. (2014). Developing Likert-scale questionnaires. In N. Sonda & A. Krause (Eds.), *JALT2013 Conference Proceedings* (pp. 1–8). Tokyo: JALT.
- Neuman, D. (2014). Qualitative research in educational communications and technology: A brief introduction to principles and procedures. *Journal of Computing in Higher Education*, 26(1), 69-86.
- O'Sullivan, P. & Ngau, O. (2014). Whistleblowing: A critical philosophical analysis of the component moral decisions of the act and some new perspectives on its moral significance. *Business Ethics*, 23(4), 401-415. <https://doi.org/10.1111/beer.12058>

- Pandey, S. K. & Stazyk, E. (2008). Antecedents and correlates of public service motivation. In Perry, J. L. and Hondeghem, A. (Eds), *Motivation in Public Management: The Call of Public Service*, Oxford University Press, pp. 101-117.
- Park, H., Blenkinsopp, J., Oktem, M. K., & Omurgonulsen, U. (2008). Cultural orientation and attitudes toward different forms of whistleblowing: A comparison of South Korea, Turkey, and the UK. *Journal of Business Ethics*, 82(4), 929-939.
- Park, H., Rehg, M. T., & Lee, D. (2005). The influence of Confucian ethics and collectivism on whistleblowing intentions: A study of South Korean public employees. *Journal of Business Ethics*, 58(4), 387-403.
- Parks-Leduc, L., Feldman, G., & Bardi, A. (2015). Personality Traits and Personal Values: A Meta-Analysis. *Personality and Social Psychology Review*, 19(1), 3–29. <https://doi.org/10.1177/1088868314538548>
- Patel, C. (2003). Some cross-cultural evidence on whistle-blowing as an internal control mechanism. *Journal of International Accounting Research*, 2(1), 69-96.
- Penney, L. M., & Spector, P. E. (2005). Job stress, incivility, and counterproductive work behaviour (CWB): the moderating role of negative affectivity. *Journal of Organizational Behavior J. Organiz. Behav*, 26(May), 777–796. <https://doi.org/10.1002/job.336>
- MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: causes, mechanisms, and procedural remedies. *Journal of Retailing*, 88(4), 542-555.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organisational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.
- Pope, K. R., & Lee, C. C. (2013). Could the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 help reform Corporate America? An Investigation on Financial

- Bounties and Whistle-Blowing Behaviors in the Private Sector. *Journal of Business Ethics*, 112(4), 597–607. <https://doi.org/10.1007/s10551-012-1560-7>
- Popkin, R., & Stroll, A. (2002). *Sceptical philosophy for everyone*. New York, NY: Prometheus Books.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behaviour research methods*, 40(3), 879-891.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185–227. <https://doi.org/10.1080/00273170701341316>
- Reginald Gernaldo, U. (2014). *Breaking the culture of silence: Leadership, motivation, and whistle-blowing in the public sector* (Master's thesis). Graduate School of Governance, Sungkyunkwan University.
- Rhoaders & Eisenberger (2002). Perceived organisational support: A review of the literature. *Journal of Applied Psychology*, 87(4), 698–714
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). *SmartPLS 3. Boenningstedt: SmartPLS GmbH, <http://www.Smartpls.Com>*.
- Robbins, S. P., & Judge, T. A. (2004). *Organisational Behaviour*, 12th ed. Upper Saddle River, New Jersey: Prentice-Hall.
- Robinson, S. N. (2011). *An experimental examination of the effects of goal framing and time pressure on auditors' professional scepticism*. The University of North Texas.
- Robinson, S. N., Robertson, J. C., & Curtis, M. B. (2012). The effects of contextual and wrongdoing attribute on organizational employees' whistleblowing intentions following the fraud. *Journal of business ethics*, 106(2), 213-227.

- Rustiarini, N. W., & Sunarsih, N. M. (2017). Factors Influencing the Whistleblowing Behaviour : A Perspective from the Theory of Planned Behaviour, *10*(2), 187–214.
- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, *63*, 397 - 427.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, *25*(1), 54-67.
- Ryan, R. M., Sheldon, K. M., Kasser, T. & Deci, E. L. (1996). All goals are not created equal: An organismic perspective on the nature of goals and their regulation. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behaviour* (pp. 7 - 26). New York: Guilford.
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2014). PLS-SEM: Looking Back and Moving Forward. *Long Range Planning*, *47*(3), 132–137. <https://doi.org/10.1016/j.lrp.2014.02.008>
- Saunders, M., Lewis, P., & Thornhill, A. (2009). Understanding research philosophies and approaches. *Research methods for business students*, *4*, 106-135.
- Sedgwick, P. (2013). Convenience sampling. *BMJ*, *347*(oct25 2), f6304–f6304. <https://doi.org/10.1136/bmj.f6304>
- Seifert, D. L., Stammerjohan, W. W., & Martin, R. B. (2013). Trust, organisational justice, and whistleblowing: A research note. *Behavioral Research in Accounting*, *26*(1), 157-168.
- Seifert, D. L., Sweeney, J. T., Joireman, J., & Thornton, J. M. (2010). The influence of organisational justice on accountant whistleblowing. *Accounting, Organizations and Society*, *35*(7), 707–717. <https://doi.org/10.1016/j.aos.2010.09.002>
- Shawver, T. J. & Clements, L. H. (2007). The intention of accounting students to whistleblow in situations of questionable ethical dilemmas. *Research on Professional Responsibility and Ethics in Accounting*, *11*, 177-191.

- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of consumer research*, *15*(3), 325-343.
- Sims, R. L., & Keenan, J. P. (1998). Predictors and of External Whistleblowing: Intrapersonal Organizational Variables. *Journal of Business Ethics*, *17*(4), 411–421.
- Smith, R. (2010). The role of whistle-blowing in governing well: Evidence from the Australian public sector. *The American Review of Public Administration*, *40*, 704-721.
- Sobel, M. E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. *Sociological Methodology*, *16*, 159-186.
- Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 56-77.
- Steyer, R., Schmitt, M., & Eid, M. (1999). Latent state-trait theory and research in personality and individual differences. *European Journal of Personality*, *13*(5), 389-408.
- Suryandar, N. N. A., & Yuesti, A. (2017). Professional scepticism and auditor's ability to detect fraud based on workload and characteristics of auditors. *Scientific Research Journal*, *5*(6), 109-115.
- Suyatno, B. (2018). *Predictors of Employees' Intention to Whistleblow Using Theory of Planned Behaviour: A Case Study of an Indonesian Government Department* (Doctoral dissertation, Victoria University).
- Tangirala, S., & Ramanujam, R. (2008). Exploring nonlinearity in employee voice: The effects of personal control and organisational identification. *Academy of Management Journal*, *51*(6), 1189–1203.
- Taylor, E. Z., & Curtis, M. B. (2013). Whistleblowing in audit firms: Organizational response and power distance. *Behavioural Research in Accounting*, *25*(2), 21–43.

- Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of mixed methods research, 1*(1), 77-100.
- Tobin, R. M. (2002). Agreeableness: Dimension of Personality or Social Desirability Artifact? *Journal of Personality, 70*(5), 695–728. <https://doi.org/10.1111/1467-6494.05021>
- Trongmateerut, P., & Sweeney, J. T. (2013). The influence of subjective norms on whistleblowing: A cross-cultural investigation. *Journal of business ethics, 112*(3), 437-451.
- Twomey, A. M., Linehan, M., & Walsh, J. S. (2002). Career progression of young female accountants: evidence from the accountancy profession in Ireland. *Journal of European Industrial Training, 26*(2/3/4), 117-124.
- Ugaddan, R. G., & Park, S. M. (2019). Do Trustful Leadership, Organizational Justice, and Motivation Influence Whistle-Blowing Intention? Evidence From Federal Employees. *Public Personnel Management, 48*(1), 56-81.
- Vandekerckhove, W. & Commers, R. (2004). Whistle Blowing and Rational Loyalty. *Journal of Business Ethics, 53*, 225-233.
- Verschoor, C. C. (2010). Increased motivation for whistleblowing. *Strategic Finance, 92*(5), 16.
- Walliman, N. (2017). *Research methods: The basics*. Routledge.
- Watanabe, S., & Kanazawa, Y. (2009). A test of a personality-based view of intrinsic motivation. *Japanese Journal of Administrative Science, 22*(2), 117-130.
- Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In R. Hogan, J. Johnson, & S. R. Briggs (Eds.), *Handbook of personality psychology* (pp. 767–793). San Diego, CA: Academic Press.
- Waytz, A., James, D., & Young, L. (2013). The whistleblower’s dilemma and the fairness-loyalty trade-off. *Journal of Experimental Social Psychology, 49*(6), 1027-1033. doi: 10.1016/j.jesp.2013.07.002

- Wold, H. (1982). Soft modelling: the basic design and some extensions. *Systems under indirect observation*, 2, 343.
- Wold, H. (1985). Partial least squares. *Encyclopedia of Statistical Sciences*, 9, 1-10.
- Veroff, J. (1983). Contextual determinants of personality. *Personality and Social Psychology Bulletin*, 9(3), 331-343.
- Xu, J., & Potenza, M. N. (2012). White matter integrity and five-factor personality measures in healthy adults. *NeuroImage*, 59(1), 800–807.
<https://doi.org/10.1016/j.neuroimage.2011.07.040>
- Yin, R. K. (2015). *Qualitative research from start to finish*. Guilford Publications.
- Young, R. F. (2017). Blowing the whistle: Individual persuasion under the perceived threat of retaliation. *Behavioural Research in Accounting*, 29(2), 97-111.
- Zhang, J., Chiu, R., & Wei, L. (2009). Decision-making process of internal whistleblowing behaviour in China: Empirical evidence and implications. *Journal of Business Ethics*, 88(1), 25-41. doi: 10.1007/s10551-008-9831-z
- Zhang, J., Pany, K., & Reckers, P. M. (2013). Under which conditions are whistleblowing best practices best? *Auditing: A Journal of Practice & Theory*, 32(3), 171–181.

APPENDIX

7.1 Appendix A: Questionnaire

QUESTIONNAIRE

This research is being conducted in partial fulfilment for an award of a Master of Philosophy in Accounting. The purpose of this study is to examine the effect the personal characteristics of professional accountants in Ghana have on their whistleblowing behaviour, and whether motivation can change their intentions to whistle blow. This research is conducted for purely academic purposes. All information provided will be treated confidential and anonymous and will only be used for the intended purpose of this study. Your sincere opinion is very much valued.

The questionnaire comprises of five sections. Section A requests for your demographic information and Section B seek to measure your whistleblowing intentions. Section C is for information on your personality traits, Section D is to assess your professional scepticism level, and Section E is to determine your motivation for your intent to whistle blow.

SECTION A- Demographic Information

Please Tick [] the appropriate box.

1. What is your gender?

Male Female

2. What is your age?

< 25 26-35 36-45 46-55 > 55

3. How many years of working experience do you have?

< 5 5-10 10-15 15-20 > 20

4. Kindly specify your professional qualification (tick all that applies)

ICAG ACCA CIMA

Others

5. What is the category of your firm according to the Institute of Chartered Accountants Ghana (ICAG) classification for the year 2018?

A1 A B1 B C D

SECTION B – Whistle Blowing Intention

Whistleblowing blowing intention constitutes the propensity of you deciding to reveal wrongdoing under certain conditions. Kindly indicate your level of agreement or disagreement to the statement below on the scale 1-7 (*1= Strongly Disagree; 7= Strongly Agree*).

Strongly Disagree Disagree Somewhat Neutral Somewhat Agree Strongly Agree
 1 2 3 4 5 6 7

	Whistleblowing Intention	1	2	3	4	5	6	7
WBI1	I will report fraudulent activity to the appropriate persons within my organisation.							
WBI2	I will report the wrongful conduct to the appropriate authorities outside of the organisation.							
WBI3	I will report the wrongdoing, and I would give any information about myself.							
WBI4*	I intend to report fraudulent accounting activity.							
WBI5*	I will report the fraudulent accounting activity.							
WBI6	I am willing to report fraudulent accounting activity.							
WBI7*	I plan to report fraudulent accounting activity.							
WBI8	My reporting fraudulent accounting activity will make me a better professional accountant.							
WBI9	As a professional accountant, I think it is my responsibility to report fraudulent accounting activity.							

SECTION C - Personality Traits

Personality is a set of dominant characteristics that influence reactions to various behaviours. The following are phrases describing person characteristics. Please use the rating scale 1-7 (*1=Very Inaccurate -7=Very Accurate*) below to illustrate how accurately each statement describes you.

Very Inaccurate Inaccurate Somewhat Inaccurate Neutral Somewhat Accurate Accurate Very Accurate

1 2 3 4 5 6 7

		1	2	3	4	5	6	7
PE1	I bring liveliness to every gathering.							
PE2*	I do not talk a lot.							
PE3	I talk to a lot of different people at parties.							
PE4*	I keep in the background.							
PC1	I get chores done right away.							
PC2*	I often forget to put things back in their proper place.							
PC3	I like order.							
PC4*	I make a mess of things.							
PN1	I have frequent mood swings.							
PN2*	I am relaxed most of the times							
PN3	I get upset easily							
PN4*	I seldom feel depressed							
PA1	I sympathise with others' feelings.							
PA2*	I am not interested in other people's problems.							
PA3	I feel the emotions of others							
PA4*	I am not interested in others.							
PO1	I have a vivid imagination.							
PO2*	I am not interested in abstract ideas							
PO3*	I have difficulty understanding abstract ideas							
PO4*	Do not have a good imagination							

SECTION D - Professional Scepticism

Professional Scepticism is an attitude of a questioning mind and the critical assessment of information. Please indicate the degree of your agreement or disagreement with each statement by filling in the box on your answer sheet on a scale 1 – 7 (1 = *Strongly Disagree*, 7 = *Strongly Agree*)

AU4*	It is easy to for other people to convince me.								
AU5*	Most often I agree with what 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 in my abilities.								
SE5	I feel good about myself.								

SECTION E - Motivation

Motivation refers to the motives that will cause you as an individual to blow the whistle. Please indicate the degree of your agreement or disagreement with each statement by filling in the box on your answer sheet that best represents your point of view about your organisation using the scale 1-7 (*1= Strongly Disagree; 7= Strongly Agree*).

Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

1 2 3 4 5 6 7

	Perceived Organisational Support	1	2	3	4	5	6	7
POS1	My organisation values my contribution to its well-being.							
POS2	If my organisation could hire someone to replace me at a lower salary, it would do so.							
POS3*	My organisation fails to appreciate any extra effort from me.							
POS4	My organisation strongly considers my goals and values.							
POS5*	My organisation would ignore any complaint from me.							
POS6*	My organisation disregards my best interests when it makes decisions that affect me.							
POS7	Help is available from my organisation when I have a problem.							
POS8	My organisation is willing to extend itself in order to help me perform my job to the best of my ability.							

POS9*	Even if I did the best job possible, my organisation would fail to notice.							
POS10	My organisation is willing to help me when I need a special favour.							
POS11	My organisation cares about my general satisfaction at work.							
POS12*	If given the opportunity, my organisation would take advantage of me.							
POS13*	My organisation shows very little concern for me.							
POS14	My organisation cares about my opinions.							
POS15	My organisation takes pride in my accomplishments at work.							
POS16	My organisation tries to make my job as interesting as possible.							
	Intrinsic Motivation	1	2	3	4	5	6	7
IMI1	I enjoy learning about ethical issues.							
IMI2	I feel good when I solve complex ethical issues.							
IMI3	Whistleblowing will provide me with opportunities for increasing my analytical skills.							
IMI4	Curiosity is the driving force behind much of what I do.							
IMI5	I want to find out how good I really can be when I encounter ethical situations.							
IMI6	I will enjoy the challenges that whistleblowing will provide me.							
IMI7	No matter what the outcome of blowing the whistle, I am satisfied if I feel I gained a new experience.							

Thank you for your co-operation

7.2 Appendix B: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.86
	Approx. Chi-Square	9363.64
Bartlett's Test of Sphericity	Df	1711
	Sig.	.000

Source: Field Data (2019)

7.3 Appendix C: Direct relationships between constructs

