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**Intention Towards Whistle-Blowing Among Internal  
Auditors in the U.K.**

**Zakiyah Sharif**

**A Thesis Submitted to the University of Huddersfield in Partial  
Fulfilment of the Requirements for the Degree of Doctor of  
Philosophy**

**The University of Huddersfield**

**Business School**

October 2015

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## Abstract

Whistle-blowing has garnered widespread attention in many countries, including the U.K. Whistle-blowing has been seen as one of the most effective ways to cater with illegal and unethical practices in organisations. Whistle-blowing describes the action of a worker disclosing (internally or externally) questionable practices, from within an organisation, to the parties that can take remedial actions. Nevertheless, whistle-blowing is a risky action where the worker might lose his/her job for making the disclosure. In the early years of whistle-blowing practice, not much whistle-blowing protection legislation has been introduced. In the U.K. whistle-blowing protection legislation, known as the Public Interest Disclosure Act, was only enacted in 1998. Since then, various amendments to the Act have been made to give better protection to whistle-blowers. Many other policies have been introduced by policy makers in an effort to encourage whistle-blowing practice. Nevertheless, it is still an action that an individual might be disinclined to undertake.

The purpose of this study is to identify factors that influence internal auditors in the U.K. to blow the whistle. Seven individual-level, independent variables (attitude, injunctive norm, descriptive norm, perceived behavioural control, self-efficacy, organisational professional conflict and awareness of the whistle-blowing protection legislation) are examined for their relationship with the dependent variable (intention to blow the whistle). Moral intensity is examined for its moderating effect on the relationships that exist between the seven independent variables and the dependent variable.

Multiple regression analysis found positive and significant relationships involving six independent variables and the dependent variable. The six independent variables are attitude, injunctive norm, perceived behavioural control, self-efficacy, organisational-professional conflict and awareness of whistle-blowing protection legislation. The moderated multiple regressions found significant moderating effects of moral intensity in a relationship between injunctive norm and whistle-blowing intention, and descriptive norm and whistle-blowing intention.

Overall, the findings suggest that, individual-level variables also play significant role in determining internal auditors' intention to blow the whistle. Relative to individual-level variables, organizational-level and situational level variables have received much attention among researchers in the past. Therefore, the findings suggest that future researches should also put emphasis and consideration on individual-level variables along with organizational and situational level variables in their future work. Also, intention to whistle-blow among internal auditors in the U.K. is high especially in a scenario involving a wrongdoing that may harm public safety than in scenario involving falsified invoices and collusion and tiers of hierarchy. The spirit of whistle-blowing can be infused if more efforts were taken by government, media and many other parties. The efforts include promoting the encouragement for whistle-blowing and institutionalise effective whistle-blowing policies and procedures in organizations.

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## **List of Abbreviations**

BIDR	Balanced Inventory of Desirable Responding
CIIA	Chartered Institute of Internal Auditors
CMV	Common Method Variance
ERA	Employment Rights Act
ICAEW	Institute of Chartered Accountants in England and Wales
IIA	Institute of Internal Auditors
NHS	National Health Service
PCaW	Public Concern at Work
PIDA	Public Interest Disclosure Act
SDRB	Social Desirability Response Bias
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour
UNIAC	Universities Internal Audit Consortium

# **Chapter One**

## **Introduction and Background**

### **1.0 Introduction**

Organisational wrongdoings are frequently reported across the world in the media and have caught public attention. The reported organisational wrongdoings involve severe and serious cases such as; financial reporting fraud (Enron and WorldCom); negligence in performing tasks that may affect the safety of the public (Liverpool's Alder Hey Hospital and Bristol Royal Infirmary); fraudulent trading and money laundering (HBOS); producing hazardous products (Food and Drug Administration, AstraZeneca, GlaxoSmithKline), among others, that could affect public interest. In the abovementioned cases, the wrongdoings were detected through whistle-blowing.

Whistle-blowing has been identified as a source of information on wrongdoings or questionable practices that have occurred in the organisation. Through whistle-blowing it is hoped that management teams or any parties who have power and authority can take remedial action. According to Hooks, Kaplan, and Schultz (1994) whistle-blowing is generally known as a management tool to deter and detect any wrongdoings in organisations. In the U.K., the Chartered Institute of Auditors describes whistle-blowing as a situation when an employee, contractor or supplier goes outside the normal management channels to report suspected wrongdoing at work (Chartered Institute of Auditors, 2014). Whistle-blowing reporting can be done via internal processes, set up by an organisation (internal whistle-blowing), or to an external party such as a regulator (external whistle-blowing).

From the above whistle-blowing cases, there are two lessons that can be learnt. First, despite the heroic action of whistle-blowers to stop organisational wrongdoings, the whistle-blowing action may bring harm to whistle-blowers. For example, they may face reprisals from their peers and superiors. Second, it needs the whistle-blower to make a critical decision for blowing the whistle. This has attracted the interest of researchers to examine factors that may influence organisational staff members to blow the whistle.

The objective of this study is to examine factors (individual level) that may influence whistle-blowing intentions among internal auditors in the U.K. This study tests a conceptual model of factors that are likely to influence whistle-blowing intentions using a quantitative approach.

In the first section of this chapter the background to the study is presented. In the second and third sections the motivations of the study and research objectives are put forward respectively. In the fourth section the conceptual framework for the research is explained. In the fifth section the boundaries of the present study are considered. In the sixth section, whistle-blowing practice in the U.K. context is discussed. Finally, the organisation of this thesis is presented in the last section.

## **1.1 Background to the study**

In the early 2000s the world was shocked by the U.S.A. whistle-blowing cases of Enron and WorldCom. In these two cases, the accounting scandals and fraud practices led to the collapse of both companies. The whistle-blowers in both Enron and WorldCom were positively rewarded in the media for their brave actions in revealing the dirty work of their co-workers. Although their actions have been rewarded and recognised in the media, they were not exempt from paying a price for their actions, which included receiving retaliations from their work colleagues and superiors.

In the U.K., the accounting scandal in Tesco and the financial scandal in West London Mental Health NHS Trust are among two recent whistle-blowing cases. To date, both cases are still under investigation. Although the outcomes of these cases are not readily known, the capacity of the whistle-blowers to blow the whistle is more important and attracts attention.

Whistle-blowing cases reported in the media have shown how whistle-blowers were put under stressful situations in confronting those who were against their whistle-blowing actions. In most cases, challenges are received from their own superiors and peers. For example, Mr. Jesudason and Dr. Stephen Bolsin, the whistle-blowers in Liverpool's Alder Hey Hospital and Bristol Royal Infirmary respectively, lost their jobs and have never been employed in the NHS since the scandal. Not only that, ramifications, such as being harassed and facing hostility and resentment from peers and superiors, are always the price that whistle-blowers need to pay for their actions.

At the end of the journey there is no guarantee that their life will be back to normal. The impact on the whistle-blower's life, and that of their loved ones, is huge. There is always a possibility that they will find difficulties in getting a new job and a destroyed career and financial ruin are some of the worst experiences whistle-blowers may face. The above descriptions give a wide picture on the complexity of the whistle-blowing phenomenon.

Illegal and/or unethical cases (also called wrongdoing cases) in organisations exist in various forms. Frauds, corruptions, accounting or auditing irregularities, abuse of power, waste and mismanagement and producing or selling unsafe products to the public are among the most common wrongdoings in organisations. Over the years organisation wrongdoing cases across the world have increased (Bowen, Call, & Rajgopal, 2010) and these are expected to continue to occur in the future. Therefore whistle-blowing reporting is increasingly important in many societies and encouraging whistle-blowing practice is one of the ways organisations portray good governance (Eaton & Akers, 2007).

In most situations, having information on any wrongdoings in organisations might not necessarily put individuals in a good and easy situation, especially those who have serious concern on the consequences of the wrongdoings and those who have responsibilities to report the wrongdoings, such as internal auditors. An awareness of the risks or ramifications they might encounter if they blow the whistle puts them into a dilemma of what action they should take. 'Should I keep silent or voice my

concerns?’ and ‘Which welfare or interests should I consider most?’ are among the questions that may cross their minds.

Although the basic idea of whistle-blowing has, in some ways, been accepted, the decision whether or not to blow the whistle involves a very complex decision process for the individual. Various factors may play their role in driving potential whistle-blowers to the decision whether to blow or not to blow the whistle. This provides opportunities for researchers to investigate factors that influence whistle-blowing intention.

A review of the literature shows that the subject of whistle-blowing has been progressively developed. This is partly caused by the increasing awareness, amongst scholars, of the importance of whistle-blowing, in addition to the advantages it brings to a wide range of entities such as organisations, investors, consumers and the public. Many scholars discuss various aspects of whistle-blowing such as; organisational whistle-blowing policy (Barnett, Cochran, & Taylor, 1993; Hassink, De Vries, & Bollen, 2007; Near & Dworkin, 1998; Tsahuridu & Vandekerckhove, 2008); national and international whistle-blowing protection legislation (Devine, 1999; Estlund, 1992; Gobert & Punch, 2000; Kaplan, 2001; Lewis, 2001, 2008; Lewis & Uys, 2007; Vandekerckhove & Lewis, 2012; Vandekerckhove & Tsahuridu, 2010; Vickers, 2000); and determinants of whistle-blowing intention (Chiu, 2003; Hwang, Staley, Te Chen, & Lan, 2008; Keil, Tiwana, Sainsbury, & Sneha, 2010; Mesmer-Magnus & Viswesvaran, 2005; Park & Blenkinsopp, 2009; Park, Rehg, & Lee, 2005). These

papers discussed whistle-blowing in a manner that helps put the practice of whistle-blowing at a higher place.

Past research on whistle-blowing has been conducted in various lines of professions such as; police officers (Park & Blenkinsopp, 2009; Rothwell & Baldwin, 2007); managers and executives (Keenan, 1990, 2000, 2002); nurses (Jackson et al., 2011; Mansbach & Bachner, 2010); external auditors (Kaplan & Whitecotton, 2001; Maroun & Atkins, 2014; Taylor & Curtis, 2010); accountants (Hwang et al., 2008; Liyanarachchi & Adler, 2011; Patel, 2003); and internal auditors (Arnold & Ponemon, 1991; Xu & Ziegenfuss, 2008). As reported in the literature, whistle-blowing reporting is a very risky action to be taken by any staff member, including internal auditors, due to the various possible incoming challenges and risks they may face, including reprisals (Arnold & Ponemon, 1991; Miceli, Near, & Schwenk, 1991; Xu & Ziegenfuss, 2008).

Unlike external auditors, internal auditors have a wider scope of work in organisations. Through their work internal auditors are faced with broader opportunities to detect organisational wrongdoings. Internal auditors play important roles in organisational governance. Their roles include examining, evaluating and monitoring the adequacy and effectiveness of an organisation's internal control structure.

In performing their audit work, internal auditors may encounter situations or information involving suspicious and serious matters. As a consequence of having that information internal auditors have a responsibility or obligation to report the

matter to the organisation's management. This responsibility, known as informing duty, is embedded in the role prescription of internal auditors (Near & Miceli, 1985). If the informing does not lead to remedial action from the person who has power and authority another option available for reporting the matter is via whistle-blowing. However, the whistle-blowing reporting is not included in the scope of responsibility of internal auditors. The decision to blow or not to blow the whistle depends greatly on the judgement of internal auditors as the whistle-blowing may impose risks. Informing and whistle-blowing should be seen as a series of reporting actions. Informing is a prescribed role of internal auditors and therefore is the first option on which internal auditors should embark in reporting suspicious matters. Whistle-blowing, on the other hand, is not a prescribed role of internal auditors and should be regarded as an alternative option that internal auditors may take if the informing failed its purposes.

Although literature regarding whistle-blowing in the past decades has started to consider internal auditors as the most qualified and reliable staff members to blow the whistle (Miceli et al., 1991), at present there are a limited number of whistle-blowing studies that have been conducted in an internal auditing context. In addition, no empirical whistle-blowing studies in the internal audit profession have been conducted in the U.K.

Previous studies on whistle-blowing, in an internal auditing context, have focused on organisational and situational level factors and the influences of individual-level factors have not been greatly investigated. The individual-level variables that are

frequently examined include the level of cognitive development (moral reasoning) and demographic characteristics. A considerable amount of the past research has used Kohlberg's and Rest's theory to investigate the association between levels of cognitive development of the individual and his/her whistle-blowing behaviour. In this study, drawing on the extended theory of planned behaviour (TPB), the influences of seven individual-level factors on the whistle-blowing intention are investigated. The seven independent variables are: attitudes towards whistle-blowing; injunctive norm; descriptive norm; perceived behavioural control; self-efficacy; organisational-professional conflict; and awareness of whistle-blowing protection legislation. In addition, the moderating effect of moral intensity is examined. TPB is used because it helps explain intentions of behaviour. The theory has been widely used in behavioural research.

### **1.1.1 Whistle-blowing in internal auditing context: a debated issue**

The relevance of internal auditors to blow the whistle has been debated by some scholars. Courtemanche (1988) denied the relevance of internal auditors to whistle-blow. His opinion was expressed in Vinten (1992a):

*internal auditors should not act as self-appointed watchdogs over the behaviour of their employers...internal auditors are not independent of management but independent because of management...[they]should bend with their management, even if the bending includes a figurative interpretation of laws, rules and regulations...(p. 8)*

The author<sup>1</sup> disagrees with the above arguments as the points contradict the functions of internal auditing. According to the IIA, internal auditing is:

*An independent and objective assurance and consulting activity that is guided by a philosophy of adding value to improve the operations of the organizations. It assists an organization in accomplishing its objective by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's risk management, control and governing process (IIA, 2013).*

The definition illustrates internal auditing as a profession that is entrusted to safeguard the interests of various parties. As a professional, internal auditors should always be independence and objective. In performing the tasks as internal auditors, all the trusts are run by ensuring that the organization are operating properly and looking for additional values for the organization. In addition, internal auditors should ensure there are no persecutions of any party to satisfy the personal needs of a person or a group of people within the organization. In other words, in performing its duties in an organization, not only the internal auditors have a responsibility towards the organization but also to the profession and other parties such as society in general. The above definition demonstrates that internal auditors have no obligations or responsibility for fulfilling the will of certain individuals, including management team members, but should bear their obligations and responsibilities to the organisation as an entity. The internal auditing function is established to help organisations to achieve objectives and sustain excellent performance. In other words, the functions of internal audit are more to adding value to organisations, such

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<sup>1</sup> Author here refers to the author of this thesis.

as identifying rooms for operational improvements, and assessing organisational risks. An internal auditing function also helps organisations to mitigate such organisational risks and maintain high performance in the long run. In addition, internal auditing is a profession that emphasizes independent, objective and professional judgment (Umar & Anandarajan, 2004). Indeed, the nature of the auditing profession requires internal auditors to perform their work on professionalism and ethical grounds (Thorne, 1998). Therefore, having information about suspicious matters occurring in their workplace, internal auditors are responsible to inform the matters to the management team. If the informing brings to no remedial actions, internal auditors may proceed with whistle-blowing.

The relevance of internal auditors to whistle-blow is also argued by Jubb (1999). Jubb insists that the duty to report matters which internal auditors encounter during their audit works is already within the role-prescription of internal auditors and is also within the internal auditors' profession territory (Jubb, 1999). The duty to report, as claimed by Jubb in his article, refers to the 'informing' duty of internal auditors. The informing role basically involves reporting any suspicious matters found during their audit work to those in the normal chain of command in the organisation. The party in the chain of command here refers to those in the management team who can take appropriate action on the suspicious matters. If the informing results in no action, internal auditors may consider further communication of the information to persons outside the normal chain of command, and this action is referred to as "whistle-blowing". Whistle-blowing normally occurs if the suspicious matters are generally serious, for example, matters involving illegal and/or unethical practices.

Furthermore, being in a group of honourable professions<sup>2</sup> requires internal auditors to execute their duties with independence and objectivity. Their roles as internal auditors require them to take care of a group of stakeholders' interests.

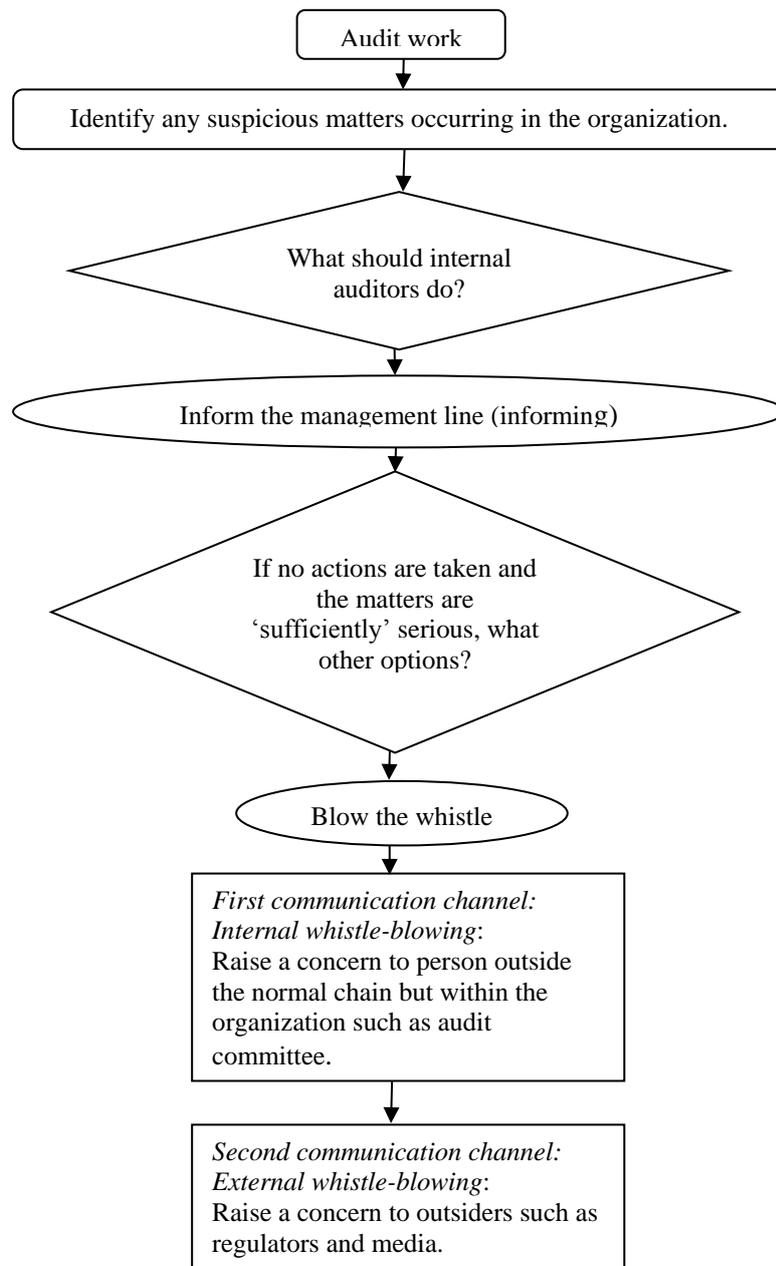
There are two channels for whistle-blowing: internal and external. Regardless of which channel(s) is being used, the main reason to blow the whistle is to inform those with authority to remedy the illegal and/or unethical behaviour in their workplace. Internal whistle-blowing occurs when internal auditors report to the parties outside the normal chain of command within the organisations, for example, to the audit committee of the board. Alternatively, internal auditors can disclose the information to parties outside of the organisation and this is called external whistle-blowing. As reported in the literature, potential whistle-blowers who trust their organisations' whistle-blowing policies and investigation mechanism will first opt for internal channels of whistle-blowing (Barnett, 1992). Additionally, blowing the whistle externally might be viewed as a violation of business etiquette, employee loyalty, code of conduct and professional standards. The IIA requires internal auditors to avoid, if possible, disclosing sensitive information to the individuals outside of their organisation. As such, internal auditors should consider external whistle-blowing as their last resort. The above explanation is briefly illustrated in

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<sup>2</sup> Internal auditing is recognized as an honourable profession due to the high entry qualification requirements; both academic and professional qualifications. They are also bounded with Professional Standards which summon them with Independence and Objectivity obligation. Independence guides them with 'freedom' which is vital for their unbiased judgement while Objectivity is to assist them not to be in any situation which may expose them with conflict of interest. Thirdly, they are required to continuously update their skills, knowledge and other competencies which may help them with their competence and due professional care. Lastly, the profession makes it compulsory for internal auditors to undergo continuing professional development (IIA, 2009).

Figure 1.1. There is a debate of whether or not internal channel should be included in whistle-blowing reporting. In this study, whistle-blowing reporting includes both internal and external channels and discussion on this matter is discussed in section 2.1.

**Figure 1.1: Reporting channel options**



Source: Author

### **1.1.2 Whistle-blowers and the loyalty issue**

According to Near and Miceli (1985), whistle-blowers are members of organisations. This has subsequently raised the issue of loyalty between whistle-blowers and organisations. The loyalty issue has been discussed by various scholars (see Jubb, 1999; Lewis, 2011). For the purpose of this study, considering there are two main employment positions of internal auditor, in-house and outsourced, the term 'organisational members' is used rather than 'employees'.

According to Larmer, Duska asserts that loyalty arises in a reciprocal relationship where there is a mutual surrendering of self-interest (Larmer, 1992). Duska also argued that organisational members have no prima facie duty to be loyal to the organisation where they are working (Larmer, 1992). This is based on his justification that an organisation is only an object and its primary aim is profit maximisation (this applies to private sector). This implies that, from the organisation's side, it is quite impossible for organisations to surrender their self-interests for the benefit of their members. Duska then concludes that there is no loyalty involvement in the relationship between organisational members and their organisations, thus whistle-blowing behaviour by organisational members does not have any moral justification on which to be argued (Larmer, 1992; Vandekerckhove & Commers, 2004).

In his counter argument to Duska's view, Larmer (1992) claimed that loyalty does not necessarily involve reciprocal relationship. According to Larmer (1992), organisations deserve loyalty from their organisational members. In his paper,

Larmer points out three key points to explain the context in which loyalty applies. First, loyalty to organisations does not necessarily mean organisational members are refrained from reporting any immoral actions that took place in their workplace. Larmer added that organisational members who blow the whistle are not disloyal to the organisation. In fact, the action is regarded as more loyal. This is because by blowing the whistle, the organisational members prevent their employers from engaging in self-destructive behaviour. The second point is that loyal organisational members should try to resolve the problem internally without interventions from outsiders. In other words, staff should whistle internally first before bringing the matters to external parties. By this way, opportunities are given to the organisation to resolve the problem. Lastly, loyalty is more than a consideration of justice. In his paper, Larmer put forward his opinion that punishment is not the right way to punish disloyalty. Larmer (1992) also added that the loyalty spirit should supposedly encourage staff to continuously ensure the organisation is free from any problems. Continuous efforts should also be taken by organisational members to ensure problems in organisations do not escalate. In a situation when whistle-blowing becomes necessary, the action should be regarded as a positive action. The whistle-blowing action is taken with an aim to help the organisation (Larmer, 1992).

In their article, Vandekerckhove and Commers (2004) introduce the concept of 'rational loyalty' in the whistle-blowing context. This refers to the loyalty to the organisation's explicit set of mission statements, goals, value statement and code of conduct, which are judged as legitimate, which organisational members advocate (Lewis, 2011; Vandekerckhove & Commers, 2004). In this sense, loyalty does not

apply to the physical aspects of the organisation, such as the executives, board of directors and colleagues (Lewis, 2011; Vandekerckhove & Commers, 2004). According to Lewis (2011), a loyal person is a person who is 'true to obligations' (p. 77) and in a situation when an organisation departs from its explicit mission, goals and values, the 'rational loyalty' would justify the necessities of whistle-blowing and organisational members do not have any loyalty concerns towards their organisation that involve any questionable practices or wrongdoings.

### **1.1.3 The relevance of internal auditors to blow the whistle**

The literature in this field reveals that there has been an increase in attention on the internal auditing function (Subramaniam, Carey, Soh, & Martinov-Bennie, 2011). This is also the current scenario in the U.K. (Allegrini, D'Onza, Paape, Melville, & Sarens, 2006). The internal auditing function has been given a new recognition and the internal auditor is one of the four pillars of an organisation's good governance (Karagiorgos, Drogalas, Gotzamanis, & Tampakoudis, 2010) alongside non-executive directors, executive management and external auditor. Davies (2009) asserts that an effective internal auditing function is one of the elements that enables organisations to survive. Overall, internal auditors are in a position that may affect others' decisions and it is essential that internal auditors blow the whistle in a situation that requires them to do so.

Internal auditing is a profession that comes with prestige and trustworthiness. The profession requires auditors to pursue their responsibilities as stated in the professional standards and codes of ethics. The IIA's Code of Ethics requires its

members to keep up to date with law and regulations and make disclosures as guided by the law and the profession. They are also required to disclose all material facts which, if not disclosed, may distort their report (IIA, 2009) and may consequently tarnish the image and credibility of the professional. On the website of the IIA, whistle-blowing is described as an event that occurs when:

*an employee, contractor or supplier goes outside the normal management channels to report suspected wrongdoing at work, i.e. speaking out in a confidential manner. This can be done via internal processes set up by the organization (internal whistle-blowing) or to an external body such as a regulator (external whistle-blowing). Public disclosure to the media is also perceived by some as whistle-blowing and is of interest to internal audit as a possible indicator on the control environment and in the context of an internal auditor needing to go outside his/her organization to get concerns dealt with (IIA's website).*

This statement should be seen as a form of encouragement given by the professional body to internal auditors to blow the whistle in situations that require them to do so. Internal auditors are obligated to act in accordance with the IIA's Standards and Code of Ethics which requires them to use the internal channels (internally whistle) before opting for external channels. The support given by the IIA adds another point on the relevance of internal auditors to blow the whistle.

According to Schmidt (2005), Kaplan, Pope, and Samuels (2010) and Trevino and Victor (1992), staff members are usually the first to know any wrongdoings or questionable practices in their organisations. Chadwick (2000) and Hillison, Pacini, and Sinason (1999) assert that no other staff members, either from within or outside the organisation, understand the organisation's policies and procedures as well as internal auditors. Vinten (2003) asserts that internal auditors are in the key position

to have a sound knowledge of the internal activities in their workplaces. The relevance of internal auditors to blow the whistle can also be seen from their unique position in an organisation. The position and the job specifications of internal auditors provide them with wide access to their organisation's documents and files. Moreover, the internal auditor role permits rigorous involvement and subsequently makes the internal auditor a person who clearly understands the internal matters in the workplace. The privileged access is one of the important criteria for whistleblowing as highlighted by Tsahuridu and Vandekerckhove (2008). Therefore, internal auditors are the utmost reliable members to identify any illegal and unethical practices occurring in their workplace and should make a report accordingly. Having such significant and sensitive information on the organisation they audit, on one hand, and denying their responsibility to blow the whistle, on the other hand, is not in line with the objective of establishing internal auditing functions in organisations in the first place.

The above explanation sufficiently highlights the relevance of internal auditors as one of the most eligible organisational members to blow the whistle.

## **1.2 Motivations of the study**

The first motivation for conducting this research concerns the unique position of internal auditors in organisations. The unique position here refers to the dual allegiance which internal auditors hold: first, to the internal audit profession and second, to the organisation. On one hand, internal auditors are paid for their work by the organisation, i.e. they are paid to do what the management teams ask them to do,

on the other hand, internal auditors are obligated to uphold standards of professional practice which include independence and objectivity. Conflicts arise when internal auditors are asked to keep the interest of management teams, or those who are in power, over the interests of the organisation itself or other stakeholders. These conflicts place their independence and objectivity values at risk. The possible tension between management demands and professional responsibilities, which the literature refers to as organisational-professional conflict, creates a critical point for internal auditors in deciding either to blow the whistle or not to blow and encouraged the researcher to conduct this research.

The second motivation for conducting this research concerns the limited number of whistle-blowing cases researched in an internal auditing context. Slovin (2006) states that internal audit is the second most common method of fraud detection, which shows that research on whistle-blowing in the internal auditing context should not be underemphasised. Read and Rama (2003) suggest that the role of internal auditors in whistle-blowing needs to be further reviewed. Within the literature there has been considerable discussion of the significance of the role of internal auditors. However, there is limited research that investigates internal auditors in the whistle-blowing context. As shown in Table 2.2 (see Chapter Two), whistle-blowing research in an internal auditing context is limited; limited variables have been investigated. Previous research has mainly focused on organisational-level factors, for instance codes of conduct in organisation (Read & Rama, 2003), organisational justice (Seifert, Sweeney, Joireman, & Thornton, 2010), situational-level factors, for instance, rewards (Xu & Ziegenfuss, 2008), and value congruence, perceived

victimization and retaliation (Miceli & Near, 1994). Many other variables, discussed in whistle-blowing literature and in ethical decision making literature more generally, have not been thoroughly studied and consequently create a wide and significant knowledge gap. Therefore a need for this study is to examine factors that influence internal auditors to blow the whistle. Arnold and Ponemon (1991) claim that there is limited information on the internal auditors' whistle-blowing decisions, as evidenced by the limited number of studies on internal auditing whistle-blowing since then.

As demonstrated in Table 2.2, from the limited number of whistle-blowing studies in an internal auditing context, most of the research has been conducted in the U.S.A. The research on whistle-blowing involving internal auditors is not even extensive in the U.S.A. In the U.K., whistle-blowing research is still modest (Vinten & Gavin, 2005). The findings from the U.S.A. whistle-blowing literature might not be generalized to the U.K. context for various reasons; for example, both countries differ in their whistle-blowing protection legislation, culture and society norms. Further discussion on the differences in whistle-blowing practice between the U.S.A. and the U.K. is provided in Section 1.6. Vogel (1992) claims culture differences among countries leads to a variation in perception of ethics, morals, justice, loyalty, right and wrong. These, in turn, influence their acceptance or rejection towards the whistle-blowing practices. The U.K. whistle-blowing literature is generally discussion and conceptual papers (e.g. Chambers, 1995; Lewis, 2006, 2008; Saha, 2008; Vandekerckhove & Lewis, 2012; Vinten, 2003, 2004; Vinten & Gavin, 2005). From these limited whistle-blowing papers, few of the research papers discuss the

whistle-blowing issue in an internal auditing context, for instance papers written by Chambers (1995) and Vinten (2003).

Discussions and arguments raised in their papers have motivated the author to conduct this present study empirically.<sup>3</sup> This point leads to the third motivational factor for conducting this research.

Finally, previous whistle-blowing studies put much attention on organisational and situational level factors (see Table 2.1 and Table 2.2 in Chapter Two). Several factors, from organisational and situational-level, have been examined, for example; job position; retaliation; rewards; codes of conduct; and job performance. However, antecedents or factors of whistle-blowing intention from individual-level have not received equal interest among previous researchers. MacNab and Worthley (2008) claim that there is little whistle-blowing research that examines individual level factors available in the literature (e.g. Sims & Keenan, 1998), and more empirical research on the influence of individual-level factors, on whistle-blowing reporting action, is needed (MacNab & Worthley, 2008; Sims & Keenan, 1998). Moral reasoning and demographic characteristics are the most frequent individual level factors which have been examined so far. The calls for more studies on individual-level factors have motivated this research to investigate other individual-level factors that may influence whistle-blowing intention.

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<sup>3</sup> Empirical papers refer to articles which report research based on actual observations or experiments where the research applies certain methods – qualitatively or quantitatively – which seek to establish causal relationship or critically analyse behaviour, values or beliefs from the data gained in the observations or experiments.

In bringing together these four motivational factors, this research identified that a wide and significant knowledge gap exists. Thus, this present study was conducted to examine factors that influence an internal auditor's intention to blow the whistle. Specifically, this study was conducted in the U.K., a context which has previously been under-researched. This study is specifically related to the UK social democratic and based on the Public Interest Disclosure Act (1998). PIDA is the whistle-blowing protection legislation in the U.K. that provides protection to whistle-blowers.

### **1.3 Research objectives**

The principal aim of this research is to identify factors that influence an internal auditor's intention to blow the whistle. Several individual-level factors were investigated. The objectives of the research are listed below:

- 1) To determine whether there are significant differences between respondents from various demographic backgrounds (gender, age, work experience, client categories and employment position) in all independent variables examined in this study.
- 2) To investigate the individual-level factors (attitudes towards whistle-blowing, injunctive norm, descriptive norm, perceived behavioural control, self-efficacy, organisational-professional conflict and awareness of the whistle-blowing protection legislation) that influence an internal auditor's intention to blow the whistle upon discovering unethical and/or illegal behaviour.

- 3) To identify the moderating effect of moral intensity on the relationship between the individual-level factors and whistle-blowing intention.

#### **1.4 A brief review of proposed research conceptual framework**

The research conceptual framework of this study is based on the extended<sup>4</sup> version of the TPB. The original TPB was introduced by Ajzen in 1985 (Ajzen, 1991). The TPB is a social-psychological model which was developed to investigate intention and behaviour of a person under a specified situation where the person might have lack of control on his/her own behaviour. The original TPB model has three core variables: attitudes towards (specific) behaviour, social norms and perceived behavioural control.

Previous literature on TPB reveals that there are inconsistent empirical findings on the contribution of the social norm and perceived behavioural control in predicting intention. Based on those findings, and the suggestions by previous research in this study, the social norm is decomposed into multidimensional belief variables. The decomposition allows researchers to investigate the influence of norm beliefs variables in greater detail. As suggested in the literature, the social norm variable is decomposed into injunctive norm and descriptive norm. This is purposely to investigate the influence of injunctive norm and descriptive norm, rather than general social norm influence. The decomposition TPB has been proved to have better

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<sup>4</sup> Extended version here means additional variables are added to the original model of the TPB.

explanatory power than the original TPB model (Hsu & Chiu, 2004; Lin, 2008; Taylor & Todd, 1995a).

This study also investigates the influence of the perceived behavioural control and self-efficacy on the intention to blow the whistle. These two variables have been argued as similar, by some scholars; however, empirical findings have proved that these two variables are measuring two different things (Tavousi et al., 2009; Terry & O'Leary, 1995; Trafimow, Sheeran, Conner, & Finlay, 2002).

In addition to the three core variables of the TPB, several other variables that have been discussed in ethical decision making literature are also included in the research framework. The variables are organisational-professional conflict and awareness of the whistle-blowing legislation. A few demographic variables were also included in the framework as control variables. Moral intensity was tested for its moderating effect on each of the individual relationships between the independent variables (seven individual-level variables) and the dependent variable (intention to blow the whistle). Details of these variables are explained in greater detail in Chapter Two. Figure 2.5 illustrates the research conceptual framework.

## **1.5 Boundaries of the research**

There are boundaries to this research. First, this study was only interested in examining the internal auditors' intention to blow the whistle. Internal auditors are chosen as subjects because they have privilege in relation to any other staff members. They are given greater access to the organisation's documents and files. The position

as internal auditors presents them with opportunities to encounter any illegal and unethical practices in the organisation.

Second, data was collected in the U.K. Thus, the findings of this study may not be suitable for generalization to other countries.

Third, only variables from individual-level factors were examined in this study. Although there are three general factors; organizational, situational and individual, that help explain reporting behavior among employees within organizations (Miceli, Near, & Dworkin, 2008), no variables from organizational-level and situational-level factors are examined in this study. Past research has largely focused on organizational-level factors and situational-level factors; however, there is limited research on the individual-level factors. The inconsistent findings of the influence of individual-level variables compared to the consistent findings of organizational and situational variables on whistle-blowing intention or behavior as reported by Vadera, Aguilera, and Caza (2009) suggests that more research on individual-level variables are warranted. Investigating individual-level factors has been the main focus in this study and it is anticipated that this study will contribute valuable findings to the literature. Investigating individual-level factors allows the researcher to better understand how internal auditors perceive whistle-blowing, the role of significant others in influencing their intention to blow the whistle and their self-ability to blow the whistle, among others. Individual-level factors are factors that are much closer and personal to the individual compared to the organisational and situational factors.

## **1.6 Whistle-blowing in the U.K. context**

According to David (1986), the U.K. is one of the democratic countries that practices secrecy. It has also been reported in the literature that people in the U.K. live in a culture that emphasizes secrecy which Vinten (1994) refers as “over secretive U.K” (p.14). The secrecy culture is said to have deeply inflicted the British way of life. Apart from the secrecy culture, historically, no constitutional right to freedom of speech was applied in the U.K. until the Human Rights Act 1998 which incorporated Article 10 of the European Convention on Human Rights (Lewis & Trygstad, 2009). The integration of Article 10 facilitated a new phase where each individual was given freedom of expression. However, Article 10(2) has restricted freedom of expression where the disclosure of confidential information is prohibited. This has, in fact, given little value to whistle-blowing practices (Lewis & Trygstad, 2009).

Whistle-blowing has received prominence in various developed countries. The U.S.A. and the U.K. are two developed countries that have long established their whistle-blowing protection legislation. Vinten (1994), in his book “Whistleblowing: Subversion or Corporate Citizenship”, portrayed the attitudes toward whistle-blowing practices in the U.K. as less positive and there is relatively lighter progressive movement on the whistle-blowing practices, compared to the U.S.A. This is the situation that describes the whistle-blowing practices in the U.K. prior to the establishment of the Public Interest Disclosure Act (PIDA) in 1998. PIDA is the whistle-blowing protection legislation in the U.K. that provides protection to whistle-

blowers. Today, after almost twenty years of its establishment, a more positive acceptance toward whistle-blowing practices is expected.

There are various reasons that mean the empirical findings of the U.S.A whistle-blowing literature cannot be generalized to the U.K. environment. The U.S.A and the U.K. differ in culture and social norms. The difference in culture and norms might explain the way internal auditors in these two countries accept the idea of whistle-blowing and subsequently their willingness to blow the whistle. Based on Hofstede's cultural dimension theory, the U.K. and the U.S.A. are grouped in the same cluster (Hofstede, 2011). Nonetheless, there are differences which may further discriminate the cultures, customs and whistle-blowing practices between these two countries. A study by Salter, Guffey, and McMillan (2001) found that the small differences between the U.S.A. and the U.K. on their points in *Uncertainty Avoidance* (the U.K. score 35, while the U.S.A. score 46) were able to significantly discriminate the intention to cheat between the U.S.A. students and the U.K. students. In the study, the British students were found to be more self-contained although they were in an environment where cheating was encouraged. Hofstede's cultural dimension describes the differences between countries, based on the culture of their societies which affects the values of their members and, subsequently, their behaviour in these societies, in these countries.

The U.K. whistle-blowing legislation has been exemplary to the whistle-blowing legislation acts of Ireland, Japan and South African (Transparency International, 2013). In previous years, whistle-blowing in the U.K. should be made in good faith.

However, recently, some changes in whistle-blowing legislation have been introduced by the Enterprise and Regulatory Reform Act 2013. One of the changes involves the removal of the good faith requirement which is then replaced with the public interest requirement. In another aspect, public employees in U.K. organisations receive greater protection than in private organisations (Miceli, Near, & Dworkin, 2009) which is similar to the situation in the U.S.A. and Australia. Also, to date, whistle-blowing protection legislation in the U.K. has not fully accepted the idea of rewarding whistle-blowers. The practice of rewarding whistle-blowers, however, has long been procedure in the U.S.A. Furthermore, in the U.K., whistle-blowing protection legislation is more concerned with providing protection to potential whistle-blowers (Matthewson, 2012). This is very different from the U.S.A. where legislations are enacted to encourage the reporting practice and ensure that concerns are properly investigated (Matthewson, 2012).

In the U.K., although organisations are not legally bound to have whistle-blowing policies and procedures, whistle-blowing has become one of the main aspects in organisational governance. The Committee on Standards in Public Life, in their initial attempts towards good governance and manifestation of open culture, has initiated the public sectors to establish internal whistle-blowing policies and procedures (Committee on Standards in Public Life, 2005; Public Concern at Work, 2013a). While in the private sectors, the U.K. Corporate Governance Code requires listed companies to have whistle-blowing policies in their organisation. This was discussed in the U.K. Corporate Governance Code under the internal control system and risk management matter (Financial Reporting Council, 2012). Furthermore, if

companies do not have the related policies and procedures, they are required to explain their reasons for not having the policies in their annual reports. However, no sanctions are given to those who fail to comply with the Code as the law does not make it mandatory. In addition to the U.K. Corporate Governance Code, the U.K. Bribery Act (2010) encourages organisations to have in place adequate procedures which provide guidelines to their staff members on the actions they should take if they want to raise their concerns. Furthermore, the adequate procedures act as a valuable protection tool for organisations to defend themselves in a situation involving corporate liability. The most recent survey administered by Public Concern at Work and Ernst and Young in 2013 revealed that 90% of respondents claimed to have formal whistle-blowing arrangements in their organisation, however, one in three thought their whistle-blowing arrangements were not effective. The survey was conducted in more than 30 different sectors including Central Government, Banking, Healthcare and Construction (Public Concern at Work, 2013a). Overall, all of the attempts mentioned earlier, and the establishment of the PIDA 1998, should be seen as positive efforts in the U.K. in its attempts to deter and prevent significant wrongdoings which may harm the organisations and their stakeholder's interests as a whole.

Despite all of the mechanisms explained above, workers in the U.K. are given no general right to inform wrongdoings (Lewis & Trygstad, 2009). According to Lewis and Trygstad (2009), the whistle-blowing protection is granted to those who adhere to the provisions of Part IVA Employment Rights Act 1996 which underlines *Protected Disclosures* (see Employment Rights Act, 1996). Also, the right or

responsibility of a worker to come forward and raise their concerns concerning questionable practices in organisations has not been expressed aloud. Internal auditors, however, are expected to report their concerns as outlined by the IIA.

In the U.K., whistle-blowing tends to be perceived as a duty (Vandekerckhove & Tsahuridu, 2010). According to Vandekerckhove and Tsahuridu (2010), statutory duty is imposed on workers to report dangerous work situations to their employer, while any money laundering and suspected terrorist activities should be directly reported to the police. Having knowledge about wrongdoings is a liability (Vandekerckhove & Tsahuridu, 2010). However, currently there is no common law duty for workers to report their concerns other than the previous mentioned activities. Lewis (2008) further asserts that the PIDA 1998 has not adequately provided protection to whistle-blowers in the U.K.

## **1.7 Thesis structure**

There are six chapters in this thesis. Chapter Two provides the literature review on whistle-blowing studies, the theoretical approach of this research, hypothesis development and the research conceptual framework. In Chapter Three, research philosophy, research methodology and research methods are discussed. Research findings are presented in Chapter Four and a discussion of the research findings is presented in Chapter Five. The final chapter provides contributions of the study, limitations of the study, suggestions for future research and a summary and conclusion of the research.

## **Chapter Two**

### **Literature Review and Hypothesis Development**

#### **2.0 Introduction**

Chapter One introduced whistle-blowing and its relevance to the internal audit function. In this chapter, the literature on whistle-blowing, in both a general context and in an auditing context, especially internal auditing, is discussed. The literature review is important to assess the current state of knowledge and identify opportunities for further whistle-blowing studies.

In the first section, discussions on whistle-blowing are presented. Whistle-blowing as prosocial behaviour and the U.K. whistle-blowing regulatory framework are discussed in the second and third sections respectively, followed by a discussion of reviews on empirical whistle-blowing studies in the fourth section. In the fifth section, the theoretical approaches to whistle-blowing studies are explained. Next, the variables examined in this study are discussed in the sixth section and the hypotheses are developed. The research conceptual framework and the definition of examined variables are presented in the last section.

#### **2.1 Whistle-blowing reporting**

In this study, the whistle-blowing definition by Near and Miceli (1985) is applied. This definition is used because, not only is it the most popular and has been applied by many scholars, but the definition is relevant to the context of this study (internal audit). Near and Miceli (1985) define whistle-blowing as:

*the disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action* (Near & Miceli, 1985, p. 4)

To elaborate the definition of whistle-blowing, other authors explain what constitutes whistle-blowing. According to Alleyne, Hudaib, and Pike (2013) and Near, Dworkin, and Miceli (1993), there are some arguments among scholars on what constitutes whistle-blowing. Vandekerckhove and Tsahuridu (2010) claim that an act constitutes whistle-blowing if it has the following three characteristics: first, the act is intentional disclosure of information by an individual who has privileged access to the information; second, the information being disclosed is on perceived malpractice or wrongdoing that has occurred in the organisations or under the responsibility of the organisation; and lastly, the intentional disclosure is being made with an aim to rectify the malpractice or wrongdoing before the wrongdoing escalates. The whistle-blowing action is taken with a purpose to promote public interests.

There are some debates on the channels of whistle-blowing. Some scholars argue that reporting questionable organisational practices internally should not be regarded as whistle-blowing (Courtemanche, 1988; Jubb, 1999). In contrast with the definition by Near and Miceli (1985) which does not exclude an internal channel as a possible channel for whistle-blowing, Jubb (1999) only considers one channel for whistle-blowing; external whistle-blowing. Jubb (1999) defines whistle-blowing as:

*a deliberate non-obligatory act of disclosure, which gets onto public record and is made by a person who has or had privileged access to data or information of an organisation, about non-trivial illegality or other wrongdoing whether actual, suspected or anticipated which implicates and is*

*under the control of that organisation, to an external entity having potential to rectify the wrongdoing* (Jubb, 1999, p. 78).

In this study, both internal and external reporting channels are considered as whistle-blowing activities. This is because both channels are the mediums which organisational members can use to raise their concerns. According to Vandekerckhove and Tsahuridu (2010) many previous researchers assert that the term whistle-blowing can be used to describe any disclosure about wrongdoings which are not necessarily pursued within the normal hierarchical line. The researchers further contend that, more recently, the usage of the term whistle-blowing covers internal disclosures. After all, the external and internal reporting channel is used by whistle-blowers to raise their concerns and is aimed at rectifying the wrongdoings (Vandekerckhove & Tsahuridu, 2010). These whistle-blowing channels are necessary and important medium for internal auditors to report any organisational questionable practices.

Whistle-blowers are advised to use internal channels in their first attempt (Near & Miceli, 1996). The reporting should be made to internal members of the organisation who have the power and authority to take remedial action. Ethically, internal whistle-blowing should become the preferred channel, as opposed to external whistle-blowing. Internal whistle-blowing serves various benefits to the organisation, such as providing an opportunity for them to take appropriate action without bringing the internal affairs to the knowledge of the public. The external reporting channel involves whistle-blowers making a report to persons or parties outside the organisation. However, in certain circumstances, whistle-blowers may choose to

report externally in their first attempt to report the organisational questionable practices. For example, an organisation's staff members may blow the whistle outside the organisation if they are confident that their manager is the culprit, or is amongst the culprits, and reporting their concern to the manager or elsewhere in the organization might not bring about any resolution or involve unacceptable personal costs.

It is very important to differentiate between internal whistle-blowing and internal reporting. In general, internal whistle-blowing and internal reporting share some similarities. For example, both internal whistle-blowing and internal reporting are: first, performed by current or former organisation members; and second, the information focuses on potentially illegal, unethical or improper acts and the communication is made to an empowered entity. However, there are also points that make internal whistle-blowing differ from internal reporting: internal whistle-blowing is unauthorised, voluntary reporting of illegal or improper acts to those who have power and authority to take remedial action. In contrast, internal reporting is authorised reporting and it may or may not be voluntary. As internal auditor, who holds a great responsibility and trust to a large group of stakeholders, it is their responsibility to report any questionable practices that occur in their workplace. Internal reporting has been established in the terms of reference as internal auditor and it should be used at its best. If the internal reporting leads to a dead end, the internal auditor may consider the alternative options, internal whistle-blowing. The internal reporting and internal whistle-blowing is essential to allow internal auditors perform their duties properly and appropriately.

Various types of questionable practices might occur in organisations. There are considerable disputes of whether such practices are ethical or unethical. To evaluate the ethicality of a practice is a matter of judgement which might differentiate from one individual to another but also differentiate from one organisation to another. In general, organisational practices that are within the law are normally considered as ethical (Borrie, 1996). There are, however, practices that are legal but unethical, such as accounting irregularities, and some acts that are illegal and unethical, such as corruption and theft.

According to Near and Miceli (1985), whistle-blowing involves reporting organisational activities that bring harm to third parties or that might put public interest at risk. Near and Miceli (1985) further list a few characteristics of activities that necessitate individuals to blow the whistle. The activities involve: first, misconduct, neglect or irresponsibility; second, corrupt, socially harmful or illegal activity; and third, wasteful activities. The authors also briefly mentioned about the legitimacy of activities. Activities that organisations have the authority to commit describe the legitimacy of the activities and activities that are legitimate are activities that are accepted by organisational members and societies (Near & Miceli, 1985).

The U.K whistle-blowing regulatory framework provides guidance on circumstances that support workers to blow the whistle. The circumstances (which are known as qualifying disclosures), as listed in Section 43B ERA 1996 (Employment Rights Act 1996), include activities relating to (a) a criminal offence (b) breach of legal obligation (c) miscarriage of justice (d) danger to the health and safety of any

individual (e) damage to the environment, and (f) the deliberate attempt to conceal any of those activities.

## **2.2 Whistle-blowing as prosocial behaviour**

The lack of comprehensive theory of whistle-blowing has been noted by previous researchers such as Near and Miceli (1985), Miceli and Near (1988) and Park and Blenkinsopp (2009) and this is the same in the present day. Miceli and Near (1988) therefore suggest that researchers can base their studies on other behavioural research that seems appropriate and has similarities, in some way, with whistle-blowing. According to Gundlach, Douglas, and Martinko (2003), following the purpose of whistle-blowing that promotes social welfare, many past whistle-blowing researchers have used a prosocial perspective on which to base their research. Gundlach et al. (2003) also claimed that a prosocial perspective has dominated the whistle-blowing framework due to its richness in explaining an individual's actions towards perceived wrongdoings. In addition, the prosocial behaviour perspective fits with the whistle-blowing practice for several reasons; first, prosocial behaviour has essential impact for organisations; second, it illustrates behaviours that go over the limits of the specified role of individuals in organisations, that are necessary to protect the organisation from any dangers; and lastly, providing ways to improve the organisation with a purpose to maintain organisational survivability (Brief & Motowidlo, 1986).

In their definition of prosocial behaviour, Brief and Motowidlo (1986) emphasise the expected consequences of the behaviour, rather than the motive of actors, which is

the focal point of other scholars' definitions of prosocial behaviour. The prosocial behaviour as defined by Brief and Motowidlo has been used widely in whistle-blowing studies. According to Brief and Motowidlo (1986), prosocial behaviour in organisations refers to:

*behavior which is (a) performed by a member of an organization, (b) directed toward an individual, group, or organization with whom he or she interacts while carrying out his or her organizational role, and (c) performed with the intention of promoting the welfare of the individual, group, or organization toward which it is directed (Brief & Motowidlo, 1986, p. 711).*

Brief and Motowidlo (1986) listed 13 specific kinds of prosocial behaviour, including whistle-blowing. According to Brief and Motowidlo (1986), although the act of external whistle-blowing appears to bring harm to the (reputation of the) organisation, in contrast, the consequence of the external reporting in fact safeguards the interests of other organisations, individuals and society-at-large. Similarly, if individuals opt for internal whistle-blowing, the reporting to the internal members could be more readily illustrated as an effort that aims to bring benefit to the organisation. The action of voicing concerns internally, by any staff member, should not be regarded as damaging the organisation, but as an effort to help the organisation protect itself from damage if the disclosure is made externally. Brief and Motowidlo insist that both the external and internal whistle-blowing action is a form of prosocial behaviour.

### **2.3 The U.K. whistle-blowing legal framework**

The U.K. whistle-blowing legal framework outlines the procedures for organisational members to follow to blow the whistle in order to be protected by the legislation. In

order to be protected by the legislation, the disclosure made by organisational members must be (1) a qualifying disclosure (2) made for public interests and (3) reported to the appropriate person (prescribed person).

A qualifying disclosure is where the worker has a reasonable belief that entails one or more of the following:

- (1) a criminal offence has been, is being, or is likely to be, committed
- (2) a person has failed, is failing, or is likely fail, to comply with any legal obligation which he is subject to
- (3) a miscarriage of justice has occurred, is occurring, or is likely to, occur
- (4) the health and safety of an individual has been, is being, or is likely to be, endangered
- (5) the environment has been, is being, or is likely to be, damaged
- (6) information tending to show any matter falling within any of the preceding categories has been, or is likely to be, deliberately concealed

In terms of methods of disclosure, there are two channels which organisational members should use. The first is internal disclosure, where a qualifying disclosure is made internally to an employer or other reasonable person. For organisational members in a public body, such as the NHS, the internal prescribed person is minister of the Crown. The second channel is external disclosure, where a qualifying disclosure is made to a prescribed person or body such as the media, police, MPs or

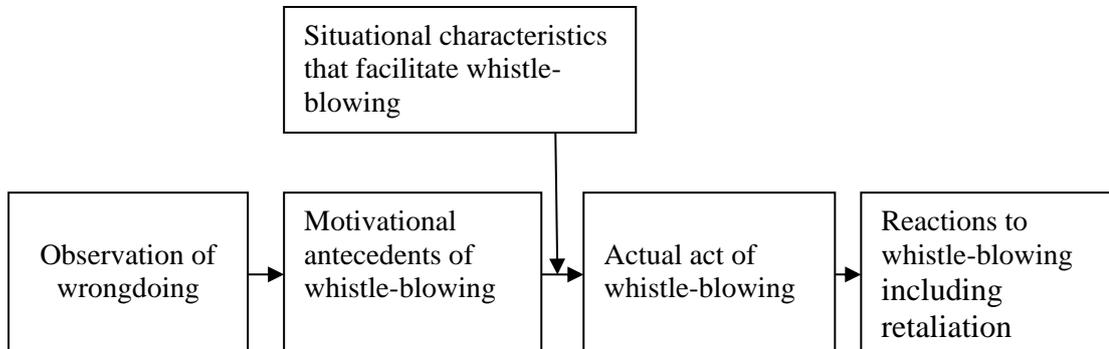
regulators. The internal channel, however, should be exhausted before resorting to an external channel. In circumstances involving suspicions of terrorism or money laundering, workers have a legal duty to report to external parties (police) (Chambers, 1995). These two channels of whistle-blowing, as outlined in the whistle-blowing regulatory framework, are in line with the whistle-blowing definition used in this study.

Protection given by PIDA 1998 covers all organisational members as defined in Section 230(3) of the ERA 1996 and also a number of other categories of organisational members including contractors, trainees, agency staff, home workers and members of an LLP (limited liability partnership).

## **2.4 Empirical literature on whistle-blowing**

In this section, empirical literature on whistle-blowing is presented and discussed. The purpose of this section is to provide a synopsis of the empirical research on whistle-blowing. This is essential in order to have thorough insight on what has been carried out in the field. As this study is interested in examining antecedents or factors that may affect the whistle-blowing decision, reference to a relatively recent review by Vadera et al. (2009) is made. The extant literature on whistle-blowing studies as summarised by Vadera et al. is shown in Figure 2.1. The article reviews the antecedents of whistle-blowing, particularly individual-level and situational-level variables, which have been examined in previous works.

**Figure 2.1: The extant literature of whistle-blowing**



Source: Vadera et al. (2009)

In their review Vadera et al. (2009) highlight the arenas in which whistle-blowing research reported inconsistent and consistent findings. Vadera et al. aim to identify new and fruitful areas for future research. The author notes that the list of papers reviewed and presented in the article had been published from 1982 to 2009. In the review Vadera et al. reported that individual-level variables of whistle-blowing have more inconsistent findings compared to the situational-level variables of whistle-blowing. Demographic characteristics such as age, gender, tenure and personal morality have yielded mixed results compared to other individual-level variables such as role responsibility, job performance, organisational position and pay level. For the situational-level variables, previous whistle-blowing studies report fairly consistent results. In their article Vadera et al. suggest future research regarding whistle-blowing should consider an individual's relationship with several 'actors' such as family, peers, superiors and supervisors. The inconsistent findings of the individual-level factors in addition to the limited studies that investigate individual-level factors certainly provide an opportunity for future research.

The updated empirical whistle-blowing articles are listed in Table 2.1 following a forward citation search (and other methods) on whistle-blowing studies that was performed based on Vadera et al.'s article. This was purposely to update the work by Vadera et al. and gain insight into what factors have been examined to date.

**Table 2.1 Recent empirical whistle-blowing studies**

	<b>Author</b>	<b>Variables Studied</b>	<b>Country &amp; Respondents</b>	<b>Data Collection &amp; Analysis Method</b>	<b>Results</b>
1.	Miceli, Near, Rehg, and Van Scotter (2012)	Perceived organisational support, perceived justice of reporting channels, personality, evidence, co-worker invalidation, observer leverage.	U.S.A.  Organisational members.	Survey.  ANOVA, Logistic regression analysis.	Observation of wrongdoing was associated with lower perceived organisational support and lower perceived justice of reporting channels.
2.	Waytz, Dungan, and Young (2013)	Fairness, loyalty	U.S.A.  Organisational members.	Surveys, essay writing task.  Paired-samples T-tests, independent- samples T-tests, ANOVA.	Fairness-loyalty trade-off predicts people's willingness to blow the whistle.
3.	Casematis and Wortley (2013)	Personal and situational factors	Australia.  Employees in public sector organisations.	Surveys.  Binary logistic regression.	It was possible to classify whistle-blowers on the individual initiative, whistle-blowing propensity (individual and organisational), fear of retaliation, perceived wrongdoing seriousness and perceived personal victimisation. Whistle-blowers are not markedly dissimilar to non-reporting observers. Whistle-blowers are most likely to be ordinary employees making a good faith attempt to stop the wrongdoing.
4.	Lavena (2014)	Individual and organisational variables	U.S.A.  Federal employees.	Using data collected by Merit Systems Protection Board.  Logistic regression analysis.	The likelihood of whistle-blowing is positively associated with norm-based and affective work motives but negatively associated with several key indicators or organisational culture, including perceptions of respect and openness, cooperatives and flexibility in the workplace and fair treatment and trust in supervisors.

5.	Erkmen, Çaliskan, and Esen (2014)	Demographic variables	Turkey.  Accounting professionals.	Scenario based questionnaire.  Kruskal-Wallis and Mann-Whitney. U-test.	Accounting professionals' demographic factors are important to understand the whistle-blowing behaviour. There are no differences in accounting professionals whistle-blowing behaviour in terms of their demographic characteristics with exception of gender and age.
6.	Chen and Lai (2014)	Potential harm, social pressure, organisational commitment.	Taiwan.  Employees in various organisations.	Scenario based questionnaire.  T-test.	Moral intensity is correlated with whistle-blowing intention. Only the potential harm is positively correlated with intention. Potential harm and social pressure differentially affect the choice of internal or external channel. Organisational commitment has a moderated mediated effect among moral intensity, whistle-blowing intention and behaviour.
7.	Jones, Spraakman, and Sánchez-Rodríguez (2014)	Self-interest, anger, perceptions of unfairness.	Canada.  Accounting students.	Web-based survey.  T-test, PLS	All the three variables lead to the whistle-blowing intention. In the case of faculty member misconduct, anger and perceptions of unfairness play a greater role than co-benefit process of prosocial organisational behaviour.

As shown in Table 2.1, there is evidence that individual-level factors have started to receive wider attention in recent studies. For instance, the study by Lavena (2014) investigated the influence of norms. In the study by Cassematis and Wortley (2013) the individual-level variables examined are the demographic characteristics, job satisfaction and trust in management. However, relative to situational-level variables, studies on individual-level factors are limited, and they are not comprehensive. As reported in Miceli et al. (2008) individual-level variable is one of the factors that helps explain reporting behaviour and is worthy of research.

#### **2.4.1 Empirical research on whistle-blowing in accounting and auditing context**

Financial scandals, accounting irregularities and disputable organisational practices that put public safety at risk show the importance of accountants and auditors (external and internal) to raise their concerns on an organisation's questionable practices. To date, however, limited whistle-blowing studies have been conducted on accountants and auditors (external auditors and internal auditors) (see Table 2.2). Review of previous whistle-blowing literature reveals that previous whistle-blowing studies have generally been conducted on general employees.

Whistle-blowing literature in the auditing and accounting context shows that investigations into organisational/situational-level antecedents are dominant. In other words, not many previous studies have examined individual-level variables. This also indicates that the influence of individual-level variables has not been comprehensively and exhaustively examined, therefore more research is needed.

In 22 years (from 1990-2011) there were only seven empirical whistle-blowing studies on internal auditors. Arnold and Ponemon (1991) was the first empirical whistle-blowing study that used internal auditors as their sample. The study by Syahrul Ahmar (2011) is a relatively recent whistle-blowing research in an internal auditing context.

As can be observed from the list of whistle-blowing studies listed in Table 2.2, organisational-level and situational-level variables were frequently examined in previous research and the scenario based survey and mail questionnaire is the most common method used. Findings of the studies found that internal auditors with lower levels of moral reasoning were less likely to blow the whistle due to fear of retaliation (Arnold & Ponemon, 1991) and rewards provided to whistle-blowers have a significant influence on the likelihood of internal auditors to blow the whistle (Xu & Ziegenfuss, 2008). Miceli et al. (1991) found that internal auditors were less likely to whistle-blow when they were not morally compelled or not prescribed in their role. Arnold and Ponemon (1991) reported that internal auditors were less likely to whistle-blow compared to external auditors.

The fact that whistle-blowing behaviour is difficult to examine has driven previous research to investigate whistle-blowing intention (Patel, 2003). Intention is investigated rather than the actual whistle-blowing behaviour due to:

- (1) difficulty of carrying out the investigations into unethical conduct in actual organizations,*
- (2) suggesting that actual whistle-blowers censor the information they provide to investigators due to the perception that data gathered in actual organizations preclude their confidentiality or anonymity,*
- (3) illuminating the difficulty of locating actual whistle-blowers for*

*questioning, or (4) citing the inherently flawed nature of such data (e.g., self-reports or past events)* (Mesmer-Magnus & Viswesvaran, 2005, pp. 278-279).

Research on intention has seen the use of scenario-based survey as the most popular technique used by researchers. Although scenario-based surveys have their limitations, such as they are unable to capture the actual view of the real world, the use of scenario-based survey is contended by Ayers and Kaplan (2005) as particularly useful for whistle-blowing intention studies as it allows for greater control over competing explanations, hence enhancing internal validity. Other types of research technique such as interview, field-experimental and longitudinal survey may not be suitable in whistle-blowing research (Miceli & Near, 1988). Miceli and Near (1988) stated that “because of obvious ethical concerns, one cannot randomly select employees to witness manipulated wrongdoing in order to determine which individual or situational characteristics are associated with whistle-blowing” (p. 277). Furthermore, the scenario-based survey is the popular method used in business ethics studies (Weber, 1992) due to advantages it brings to the studies. One of the obvious advantages of scenario-based survey, compared to simple direct questions, is it allows researchers to incorporate complex, multi-dimensional issues that reflect decision making process in the real world (Weber, 1992). Further discussion on the advantages of scenario-based survey is discussed in section 3.7. Therefore, the use of scenario-based survey is regarded as the most appropriate research technique for whistle-blowing research.

**Table 2.2: Whistle-blowing studies involving accountants and auditors**

	Author	Variables Studied	Country & Respondents	Data Collection & Analysis Method	Results
<b>(A) Studies involving internal auditors</b>					
1	Arnold and Ponemon (1991)	Position, retaliation, moral reasoning	U.S.A.  Internal auditors (public and private sector).	Walk-in questionnaires were distributed to internal auditors who attended professional training programme.  (Scenario-based survey; 1 scenario)	Internal auditors with low level of moral reasoning were unlikely to whistle-blow especially if retaliation meant job termination. External auditors were most inclined towards whistle-blowing act compared to internal auditors.
2	Miceli et al. (1991)	Job performance, role	U.S.A./ Canada.  Internal auditors (public and private sector)	Mail questionnaire  (Not scenario-based survey)	Poor performers with low salary have less interest to blow a whistle. Will blow if it is included in their role description also if they are many observers.
3	Miceli and Near (1994)	Value congruence, perceived victimisation, retaliation	U.S.A.  Director of internal audit	Mail questionnaire  (Not scenario-based survey)	Managerial retaliation was more likely when (1) the whistle-blower perceived that ceasing the wrongdoing would bring harm to the organisation, (2) the wrongdoing harmed the climate or culture in the organisation, (3) the whistle-blower failed to remain anonymous, (4) the wrongdoing was harmful to the public and, (5) there was low value congruence between whistle-blowers and their organisations.

4	Read and Rama (2003)	Authority, codes of conduct	U.S.A.  CIA in public held manufacturing company	Mail questionnaire  (Not scenario-based survey)	71% of chief internal auditors received whistle-blowing complaints. The receipt of complaints was positively associated with involvement of internal auditing in monitoring compliance with the corporate code of conduct, and with audit committee support of internal auditing.
5	Xu and Ziegenfuss (2008)	Rewards, moral reasoning	- Internal auditors	Mail questionnaire  (Scenario-based survey; 1 scenario)	Internal auditors are more likely to report wrongdoing to higher authorities when incentives are provided. Rewards systems have a positive effect on intention to whistle-blow. Internal auditors with lower levels of moral reasoning are more sensitive to cash incentives.
6	Seifert et al. (2010)	Organisational justice	U.S.A.  Internal auditors and management accountants	Walk-in questionnaires were distributed to internal auditors and management accountants who attended monthly chapter meetings at various locations across the USA conducted by IIA and IMA (Institute of Management Accountants).  (Scenario-based survey; 1 scenario)	Whistle-blowing policies and mechanisms which incorporate higher levels of procedural justice, distributive justice and interactional justice were perceived to increase the propensity that organisational accountant would internally report financial statement fraud.
7	Syahrul Ahmar (2011)	Age, gender, tenure, size of organisation, job levels, seriousness of	Malaysia.  Internal auditors.	Mail questionnaire  (Scenario-based survey; 4	Seriousness of wrongdoing is the most consistent and the best predictor of internal whistle-blowing

		wrongdoing, status of wrongdoer		scenarios)	intentions. Gender, age, job level and status of wrongdoer show limited capacity to predict internal whistle-blowing intentions.
<b>(B) Studies involving external auditors</b>					
8	Finn and Lampe (1992)	Measured whistle-blowing decision, ethical judgement, issue-contingent, situational variables	Auditors	Ethical vignettes  (Scenario-based survey; 7 scenarios)	Ethical judgement is positively associated with whistle-blowing decision. Ethical decision making was influenced by issue-contingent, individual and situational variables.
9	Label and Miethe (1999)	Attitudes, whistle-blowing legislation	U.S.A.  AICPA members & CPA in industry and government	Mail questionnaire  (Not scenario-based survey)	Majority of auditors opposed the legislation. Major differences in opinion between different groups of auditors (firm partner, staff auditor, seasoned auditor and novice auditor).
10	Kaplan and Whitecotton (2001)	Reporting intention, seriousness of act, personal costs of reporting, responsibility for reporting, commitment to accounting profession	U.S.A.  Audit seniors	Questionnaire distributed during training programme.  (Scenario-based survey; 1 scenario)	Auditors' reporting intentions were stronger when personal costs of reporting were lower or personal responsibility for reporting was perceived to be higher. Seriousness of act is not significantly related to intentions to report.
11	Taylor and Curtis (2010)	Professional commitment (professional identity), organisational commitment moral intensity, reporting intention (likelihood of reporting and perseverance of	U.S.A.  Audit seniors.	Questionnaire  (Scenario-based survey; 3 scenarios)	Moral intensity and professional identity significantly relate to reporting intention.

		reporting)			
12	Maroun and Atkins (2014)	Enclosure, efficient bodies and disciplinary power	South Africa. External auditors	Detailed interviews	Blowing the whistle on the reportable irregularities increased the information made available to stakeholders. It also helped portray the sense of transparency and accountability of external auditors. The regulation also responsible to the illusion of active reporting.
<b>(C) Studies involving accountants</b>					
13	Somers and Casal (1994)	Commitment, whistle-blowing intention	Management accountants	Data from National Association of Accountants.  Regression analysis	Moderate level of commitment was most likely to influence whistle-blowing intention.
14	Patel (2003)	Culture and demographics	Australia, India, Malaysia  Accountants - Big 6.	Questionnaire  (Scenario-based survey; 2 scenarios)	Compared to Indian and Chinese cultures, whistle-blowing as an internal control mechanism was likely to be more effective in Australian culture.
15	Hwang et al. (2008)	Whistle-blowing intention, social justice, professional ethics, sense of morality, monetary rewards, promotions, peer encouragement, job protection, internal control system, media attention, retaliation, religious beliefs, sense of betrayal, Confucius' teaching, guanxi, auditor independence, employment, contracts or business transactions,	Taiwan.  Accountants – CPA firms, corporations, professional associations and universities	Questionnaire  (Not scenario-based survey)	General sense of morality was the greatest predictor to whistle-blowing followed by abiding organisation policy. Guanxi, fear of retaliation and fear of media coverage may discourage whistle-blowing.

		social justice and fairness.			
16	Liyanarachchi and Adler (2011)	Retaliation, age, gender and whistle-blowing intention	New Zealand. Accountants- CPA members.	Online questionnaire (Scenario-based survey; 3 scenarios)	For early career accountants, males were more likely to whistle-blow. Accountants in mid-age group were not likely to blow the whistle when there would be retaliation. Accountants aged 45 and above respond to retaliation differently between genders.

## **2.5 Theoretical approaches to whistle-blowing study**

The lack of whistle-blowing theory has seen many studies apply various behavioural theories in their research. For example, Arnold and Ponemon (1991) and Xu and Ziegenfuss (2008) used Kohlberg's ethical decision making theory to investigate the influence of moral reasoning on whistle-blowing decision making and Park and Blenkinsopp (2009) based their research on the TPB in examining factors that influence whistle-blowing intention.

None of the empirical whistle-blowing studies in an accounting and auditing context drew their investigation based on reasoned action or planned behaviour. Nevertheless, the theory of planned behaviour was used by Park and Blenkinsopp (2009) in their whistle-blowing study on South Korean police officers and by Randall and Gibson (1991) in their study on nurses' intention to report wrongdoings. The theory of reasoned action (TRA) and the theory of planned behaviour are well-known behavioural theories that help explain intention and behaviour. The limited investigation on individual variables encouraged this research to examine individual variable influences on the whistle-blowing intention using the theory of planned behaviour (the successor of the TRA).

In this study, whistle-blowing is regarded as a prosocial behaviour. Following this line of thought, it is reasonable to assume that there are a number of variables that may influence an individual's intention to blow the whistle. Guided by the premise that whistle-blowing is an action that needs a person to be thoughtful, rather than impulsive, or primarily unconscious with their decision, the model of TPB, therefore

provides a suitable framework for this study. The extended TPB was used where various determinants of whistle-blowing intention were examined; not restricted to the three core variables of the original model of TPB (see Figure 2.3). The TPB has been widely used in predicting various types of behavioural intention (Madden, Ellen, & Ajzen, 1992) including unethical behavioural intention (Chang, 1998). Chang (1998) found the TPB was better than the TRA, the predecessor of the TPB, in predicting unethical behaviour intention. In addition to the TPB, a variable from the Social Learning Theory, self-efficacy, which was introduced by Bandura (1977), and a variable introduced in Jones (1991), moral intensity, were also included in the research conceptual framework. The two variables are included in the research for two reasons. First, the variables have been identified as influential factors in behavioural-based studies (e.g., Manstead & Eekelen, 1998; Povey & Conner, 2000; Rhodes & Courneya, 2003) and, second, very few previous whistle-blowing studies have examined these variables. Therefore, in the author's view there is a necessity to examine these variables.

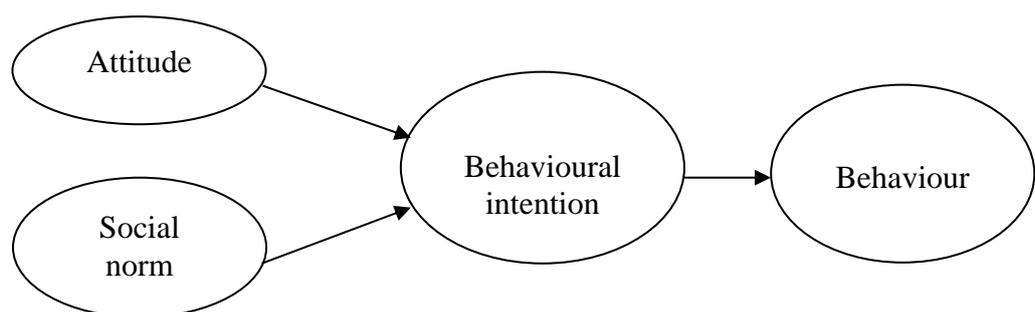
### **2.5.1 Theory of planned behaviour**

The TPB, which was introduced by Ajzen in 1985, is successor to the TRA. These two theories were developed with the purpose to investigate intention and behaviour of a person under a specified situation where the person might have complete control (TRA) or lack of complete control (TPB) on his/her own behaviour. According to

Chang (1998), both theories assume that human beings are basically rational<sup>5</sup> and they make best use of the information they possess in their decision making.

The TRA, a theory introduced by Martin Fishbein and Icek Ajzen in the 1960s, is a theory that focuses on a person's intention to perform a certain behaviour. Intention is the likelihood or subjective probability that a person will perform the behaviour in question, whether or not he or she actually performs the behaviour. The TRA is a general model and it was designed to explain any human behaviour (Davis, Bagozzi, & Warshaw, 1989). Furthermore, the literature explains that the TRA has been widely used and has proved successful in predicting various domains of behaviour (Davis et al., 1989). The theory incorporates both personal and social components in the behavioural intention model. Specifically, the TRA contains two predictors of behavioural intention (see Figure 2.2).

**Figure 2.2: Theory of reasoned action**



Source: Bagozzi (1992)

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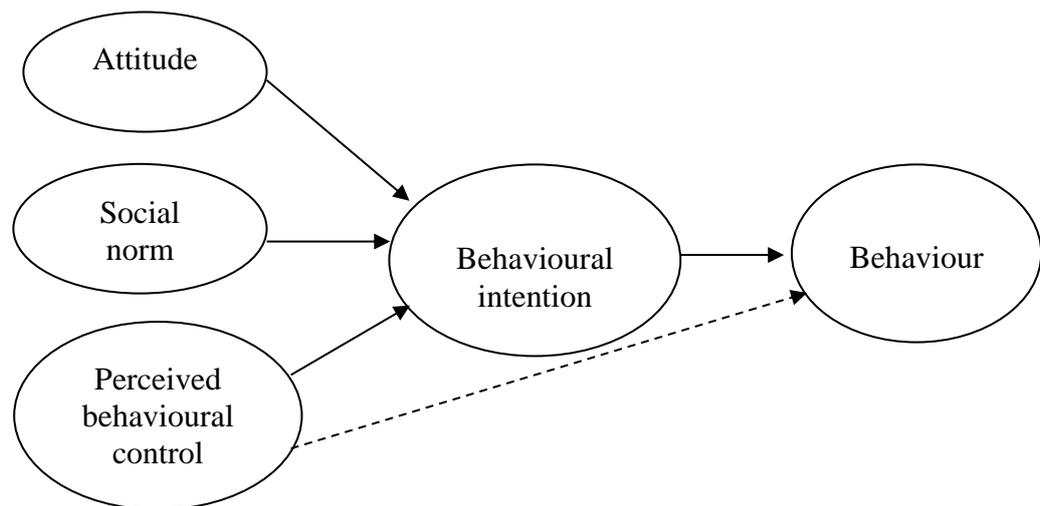
<sup>5</sup> A careful use of the word 'rational' however should be emphasised as it might drive someone to a misunderstanding of the TPB. A brief explanation is provided in Section 2.4.1.1 (see Ajzen, 2014).

The first predictor is attitudes toward behaviour, a personal component in the TRA model. Attitudes toward behaviour refer to the favourableness of one's evaluation of the behaviour under studied. The second predictor is social norms, a social component in the TRA model. Social norm refers to a person's perception of pressure from others to perform the behaviour under studied. The TRA postulates that performance of behaviour is determined by a person's intention (behavioural intention) which is jointly determined by the person's attitude and social norms with regard to the behaviour under studied. According to the TRA, behavioural intention is the immediate antecedent of any behaviour (Ajzen & Madden, 1986). Based on that notion, the TRA assumes that the stronger a person's behavioural intention, the more the person is expected to put effort into the behaviour in question and ultimately the greater the likelihood that the person will actually perform the behaviour (Ajzen & Madden, 1986). The accuracy of prediction is, however, subject to the time interval between the measurement of intention and the observation of the behaviour (Ajzen & Madden, 1986). The TRA has a limitation where the TRA is only useful to predict intention of a behaviour that is under volitional control of the person. A behaviour is said under one's volitional control if the behaviour is completely under a person's control where the person can decide at will either to perform or not to perform the behaviour (Ajzen & Madden, 1986). According to Ajzen and Madden (1986) the TRA is insufficient to predict behavioural intention which a person has not complete control over the behaviour.

Realising that there are various kinds of behaviour that a person may get involved with, and not all the behaviours are under the person's complete control, motivated

Ajzen to introduce the TPB, an extension to the TRA model. The TPB was introduced in the 1980s, where perceived behavioural control was added as one of the determinants of behavioural intention (see Figure 2.3). The TPB is a behavioural model that explains behaviours that are not completely under a person's volitional control. The literature reports a considerable amount of research that supports the TPB (Bagozzi, 1992; Elliott, Armitage, & Baughan, 2003; Norman, Clark, & Walker, 2005).

**Figure 2.3: Theory of planned behaviour**



Source: Bagozzi (1992)

The TPB proposes a person's behaviour is predicted by behavioural intention based on three predictors which are conceptually independent of each other (Ajzen, 2006). The three predictors of intention are: first, the person's evaluation of the behaviour (attitude); second, perceived social pressure to commit the behaviour (social norms); and third, the easiness and controllability of the behaviour (perceived behavioural control) to the person (Lee, 2011). Both the TRA and TPB maintain that behavioural

intention is an additive function of attitude and other factors. All the factors are compensatory to each other which ultimately makes these theories very flexible (Bagozzi, 1992).

Past papers have proved the applicability of the TPB to predict ethical and unethical behaviour (Carpenter & Reimers, 2005; Chan, 1998; Cohen, Ding, Lesage, & Stolowy, 2010; Randall & Gibson, 1991; Rashidian & Russell, 2011; Shaw, Shiu, Hassan, Bekin, & Hogg, 2007). Randall and Gibson (1991), in their paper on ethical decision making in the medical field, report the success of the TPB in predicting nurses' intention to report wrongdoing. Meanwhile, Chang (1998) asserts the effectiveness of the TPB in predicting intention for unethical behaviour. Park and Blenkinsopp (2009) used the TPB model to study the whistle-blowing intention among police officers in South Korea. In their study they found that all of the three core variables of the TPB have significant positive effects on whistle-blowing intentions.

Although the TPB has been widely applied in behavioural research, the theory has been debated for its lack of explanatory power in testing different behavioural intentions in different contexts. In a meta-analysis paper by Sutton (1998), Sutton claimed that the TRA and the TPB explain, on average, between 40% and 50% of the variance in intention respectively, while for variance in behaviour both theories predict between 19% and 38%. Also, in a meta-analysis paper by Armitage and Conner (2001), the scholars report that the "TPB accounted for 27% and 39% of the variance in behaviour and intention, respectively" (p. 471) In other studies, the

explanatory power of the TPB has been reported as low as 13% and 7% (Mirkuzie, Sisay, Moland, & Åstrøm, 2011). In other words, the percentage figures represent the ability of the three core variables of the TPB in explaining behavioural intention. The residual percentage indicates there are other variables which have not been included in the studies that might also have the potential to predict behavioural intention.

The literature reveals that there is a considerable amount of behavioural research that uses the extended theory of planned behaviour (e.g. Conner & Armitage, 1998; Lin, 2006; Warburton & Terry, 2000; Wu & Teng, 2011) by including additional variables. Several other researchers also decomposed the main variables of the TPB. The extension of the TPB is purposely to examine a broader range of behavioural predictors (Ajzen, 1991; Armitage & Conner, 2001). The decomposition of the TPB, on the other hand, occurs when the TPB main constructs are decomposed into multidimensional belief constructs (Taylor & Todd, 1995b). According to Taylor and Todd (1995b), the decomposition provides “a stable set of beliefs” (p. 151) which can be applied in a wider and broader setting. Ultimately, it allows a more in-depth and improved understanding of the relationship between the variables under studied than the original TPB model. Previous studies by Taylor and Todd (1995a) and Shih and Fang (2004) decomposed the attitudinal beliefs and control beliefs from one-dimensional variable into multi-dimensional variables. Bagozzi (1982) found the inappropriateness of combining multi-dimensional variables into one-dimensional variable where in the study invalid results were obtained. In this present study, both the extension and the decomposition of the TPB model are applied in order to optimise its explanatory power.

### **2.5.1.1 Recent debate on the theory of planned behaviour**

Despite its popularity and longevity, the TPB and its predecessor, the TRA, are not exempt from receiving criticism from some scholars. Recently, Sniehotta, Pesseau, and Araújo-Soares (2014), in their editorial article, share their (personal) view about the TPB. In their article, using a provocative title ‘Time to Retire the Theory of Planned Behaviour’, the scholars invited other scholars to stand up and give their comments (e.g. Abraham, 2014; Ajzen, 2014; Armitage, 2014; Conner, 2014; Gollwitzer & Oettingen, 2014; Ogden, 2014; Rhodes, 2014; Schwarzer, 2014; Trafimow, 2014). The validity and utility of the TPB are the main points argued by Sniehotta et al. The rest of the article is merely a list of other scholars’ criticisms of the theory which Sniehotta et al. cite in their editorial. Ajzen, the person who introduced the TPB, notes that in the editorial article the authors did not put any effort into further discussion of the criticisms that they cite (Ajzen, 2014). The editorial article, therefore, makes readers curious about the actual points that Sniehotta and his colleagues try to emphasise.

Ajzen (2014) acknowledges that some scholars have misunderstood the TPB and they continuously criticise the theory based on a shallow and misleading knowledge of the theory. According to Ajzen, the diagram of the TPB is often used by researchers without reading and reasonably understanding the narrative that accompanies the diagram (Ajzen, 2014). Ajzen claims that such circumstance has brought scholars to a misconception about the theory. In addition, Ajzen states that some of the criticisms of the TPB, cited by Sniehotta et al., are false. The lists of

criticisms were used by Sniehotta et al. in an attempt to drive readers to the limitations of the TPB, on which they base their reasoning for the retirement of the theory. One of the points that Sniehotta et al. put forward is the TPB's limited predictability of behaviour particularly when the studies used longitudinal rather than the 'shortitudinal' (Sniehotta et al., 2014, p. 1) types of research. Sniehotta et al. also claim that the TPB fails to encourage researchers to use longitudinal and experimental research. In fact, the use of 'shortitudinal' research is much more relevant as the theory measures intention of behaviour at one particular point in time. It is not possible, or at least very difficult, to measure intention using longitudinal research as the intention is very fragile and volatile as time passes by. With regard to this matter, Sniehotta et al. also raised the issue of the overuse of correlation analysis, which they personally view as unnecessary in the present day. Therefore, should the type of research (longitudinal, 'shortitudinal' (cross-sectional) or experimental) and type of analysis technique (correlational, regression, factorial, or structural equation modelling), which researchers use, be necessarily a fault of the theory? Various factors might lie behind the use of a certain type of research and the type of analysis used. Perhaps what Sniehotta et al. intend to highlight is the limited productivity of the original model of TPB in a health behaviour research context. Sniehotta et al. also mentioned behaviour change, but Ajzen (2014) explains in his counterargument, the TPB is not a theory of behaviour change. In fact, the TPB is developed to help explain and predict people's intentions and behaviours and the theory serves as a good guide for researchers to design effective behaviour change interventions (Ajzen, 2014).

In response to Sniehotta et al.'s point concerning the failure of TPB in explaining behaviour from intentions, Ajzen (2014) explains that the prediction of behaviour from intention is subject to potential problems as that may rise at the time the actual behaviour is being performed. Also, the discrepancy between behaviour and intention might also be caused by the beliefs that individuals have during the real situation which is not really similar to the belief that they have for a hypothetical situation, a method which is usually used by researchers who apply TPB.

Ajzen and Madden (1986) outline that a strong association between intention and behaviour depends on a few factors: first, the measure of intention should correspond in its level of generality to the criteria of the behaviour under investigation; and second, the intention must not have changed in the interval between the time at which it was assessed and the time at which the behaviour is observed. They further suggest that the accuracy of prediction usually varies inversely with the time interval between the time the intention being measured and the time the observation of behaviour took place. This is because the time gap might be filled with a number of events that may produce changes in intentions, or, unanticipated obstacles may prevent people from carrying out their intentions. If this matter has been highlighted by Ajzen in explaining the TPB, why should an argument still exist on this matter, especially three decades after the theory was introduced? The view from Sniehotta et al. is perhaps a matter of misunderstanding that has arisen from their side. There is also no sufficient explanation by Sniehotta et al. on the 'quality' of the research they refer to and use as evidence to prove the failure of the TPB. Any research is exposed to various incidences, including methodological problems, that might affect the

results. The incidences might concern errors, response bias, social desirability bias, errors or bias in measuring the items of constructs and errors that occur during transferring the data into a database. Lots of questions could be proposed for clarification before blaming the theory, particularly when unexpected results are gained from the research.

Sniehotta et al. also forwarded other scholars' criticisms that the TPB is exclusively focused on rational reasoning which has made the theory exclude the aspects of unconscious and emotions that might influence behaviour. In his article Ajzen (2014) explains that the "TPB does not propose that people are rational or that they behave in a rational manner" (p. 13) and "TPB makes no assumptions about the objectivity or veridicality of behavioural, normative and control beliefs" (p. 3). The TPB in fact stipulates that the belief that a person possesses, no matter how it is formed, will reasonably and consistently influence his/her attitudes, subjective norms, perceived control, intentions and behaviour.

In answer to the comments concerning the low explanatory power of the TPB's constructs in predicting intention, Ajzen admits that it has been the case in most of the previous studies that use the TPB model. In his explanation, Ajzen points out that the low explanatory power problem can be explained, in part, by the low reliability and validity of the constructs in that particular research. Apart from that, the use of three to four items to measure each construct, and the imperfection in measuring the constructs, might also be the reason for the low explanatory power. The low explanatory power of the three variables also illustrates that there are some other

variables that might influence intention and Ajzen does not totally prohibit researchers from adding new variable(s) to the original model of TPB. After all, the TPB is developed with an aim to understand human behaviour and human behaviour is a field of study that is very universal. Various factors may affect human behaviour and this might, in part, explain why the TPB is a general model. Indeed, in his previous article, Ajzen asserted:

*The theory of planned behavior is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account (Ajzen, 1991, p. 199).*

In their article, Sniehotta et al. expressed their negative view on the extended-TPB models which were currently practised by various researchers. For them, the “Extended-TPB models do a disservice to the novel ideas” (Sniehotta et al., 2014, p. 4). They further pointed out that what is currently needed is a new theoretical development rather than extending the TPB. Urging the retirement of the TPB and rejecting the extending of the TPB, might indicate, to some readers, that Sniehotta et al. discredit the contributions that the TPB brings to behavioural research. Did they mean to say that the attitudes, social norms and perceived control are no longer relevant for investigation as the results of their effects are already known from past research? If a new theory is developed by anyone, should these three factors be excluded? If they do include them, is this a new theory or a replication of Ajzen and Fishbein’s (1975, 1980) ideas?

In consideration and conclusion of the above paragraphs, one question that came to the author’s mind is ‘Should the limitations of a theory be the reasons for its

retirement?’ This is a question that required a more delicate, careful and in-depth justification before Sniehotta et al. expressed their belief. Any theory might have its limitations, however, are the limitations a major or a minor concern? The theory has been used for the past three decades and has been applied to a wide range of actions. Bagozzi (1992) did mention that “one mark of the success of any theory is its longevity” (p. 178) which, in his article, he refers to the TRA and TPB.

In addition to the comments by Ajzen, the following are some of the comments made by other authors. Armitage (2014) describes Sniehotta et al. “bemoan” (p. 2) the lack of studies that apply TPB in experimental studies. Armitage also points out that Sniehotta et al. should not interpret the mixed findings of TPB as the failure of TPB, but rather it should be viewed as a sign for further research. Conner (2014) disagrees with the action by Sniehotta et al. who interpreted the meta-analytic reviews of prospective correlation tests of TPB as the lack of power of TPB. Interestingly, Conner notes that Sniehotta et al. remain silent on the high explanatory power of variance, for both intentions and behaviour, which has been reported in the same meta-analytic research that they cite in their editorial article. Conner also notes that Sniehotta et al. gave little value to the extended model of TPB, but, at the same time, they do not mind new models that appear to include many of the same variables that have been tested in the extended version of the TPB (Conner, 2014). Gollwitzer and Oettingen (2014) share their opinions and suggest researchers, particularly in health behaviour studies, should be more careful in adapting general theories, such as the TPB, and be certain that the theories which they intend to use really fit with the research that they want to conduct. As suggested by Gollwitzer and Oettingen, any

general theories, when used in health behaviour, require proper adjustments and this is an important point that any health behaviour researcher should take into consideration. With regard to the retirement issue of the TPB, Gollwitzer and Oettingen point out that “the development of novel theories requires knowledge of what has been around. New theorists might do well to obtain knowledge of previous theory and to respect the past work of more weathered faculty” (p. 5).

This debate provided some useful insights for the author and guided her to plan the research methodology based on learning taken from the weaknesses and strengths of the previous studies. The nature of the TPB that helps explain or predict people’s intention and behaviour shows that cross-sectional research is most suited to the TPB. Although the theory has been widely used in various behavioural studies, there are cases where the explanatory power of the theory is low. One of the reasons that lies behind it is the three variables (attitude, social norm and perceived behavioural control) of the theory do not fully explain the behaviour. In other words, there are other variables that might explain the behaviour. The theory, however, does not restrict any other variables from being added (extended TPB model) to the original model of the theory, after the original variables have been taken into account. The new variables selected for investigation must be based on strong literature. Another reason for the low explanatory power is the low reliability and validity of constructs as well as the imperfection in measuring the constructs. This point highlights the essence of a strong and carefully designed research instrument in a study. In this study, therefore, an extended TPB model is used in order to study more variables that may affect whistle-blowing intentions not restricted to the three core variables of

TPB. Along with the three core variables of the theory, four additional independent variables were added in the research conceptual framework. This is purposely to investigate the impact of those variables on whistle-blowing intention, as discussed in whistle-blowing literature. Despite the comments by Sniehotta et al. (2014) which are regarded by Ajzen (2014) as “misguided” (p.1) and by Conner (2014) as “misplaced or lacking in strong evidence” (p.1), this study uses the TPB with consideration of its limitations and has subsequently designed the research instrument accordingly. The ability of the TPB in explaining intention and behaviour has currency, proved in many behavioural research studies including entrepreneurship (for example, Souitaris, Zerbinati, & Al-Laham, 2007; Van Gelderen et al., 2008) and reporting intention (for example, Stone, Jawahar, & Kisamore, 2009). Two particular elements have been added in this research and are discussed below.

### **2.5.2 Bandura’s self-efficacy element in social cognitive theory**

Self-efficacy is one of the constructs in social learning theory which was introduced by Bandura in 1977 (Leganger, Kraft, & Roysamb, 2000). Self-efficacy also plays a key role in more recent theory, introduced by Bandura in the 1980s, known as social cognitive theory (Leganger et al., 2000; Manstead & Eekelen, 1998). According to Bandura, self-efficacy involves a person’s “judgment of how well one can execute courses of action required to deal with prospective situations” (Bandura, 1982, p. 122). Self-efficacy is about optimistic beliefs which individuals possess about their ability to cope with various obstacles. This, in turn, shows their competency to face

challenging situations (Beu, Buckley, & Harvey, 2003). Self-efficacy looks at the qualities which make a person persevere, in challenging situations, with diligence, heightened problem solving skills and coping strategies (MacNab & Worthley, 2008).

Based on Bandura's self-efficacy concept, the construct influences one's actual behaviour via the efficacy expectancy on behavioural intentions. This efficacy expectancy is responsible for influencing people's motivation to engage in a particular behaviour (Terry & O'Leary, 1995). According to Bandura (1982), self-efficacy is not only a matter of what one knows what to do. Indeed, Bandura explains that efficacy requires one to be capable of organising his/her cognitive, social and behaviour skills into an integrated course of action. Self-efficacy is also about how individuals judge a situation on how much effort they should take and how long they can persist to the challenges and obstacles (Bandura, 1982). Relying on what they believe about their capability, individuals normally avoid activities which they think exceed their capability and choose to perform activities that they are assured they are able to manage (Bandura, 1982; Shoemaker, 1999).

Self-efficacy, however, has been regarded by some scholars as similar to the perceived behavioural control variable, a construct in the TPB model. According to Terry and O'Leary (1995), Ajzen provides no specific explanation on the perceived behavioural control variable. Terry and O'Leary state that Ajzen conceptualised the perceived behavioural control variable as "the estimate of the extent to which the person has control over whether he or she is able to perform the behaviour, although

he also claims that the concept of perceived behavioural control is similar to the notion of self-efficacy” (Terry & O’Leary, 1995, p. 201). On his web page, Ajzen explains that although both the perceived behavioural control and self-efficacy variables are conceptually similar, operationally they are assessed differently (Ajzen, 2006). Self-efficacy measures how likely a person can overcome obstacles that they encounter in the process of performing the behaviour, while perceived behavioural control is measured via assessment of how a person thinks that to perform a behaviour is under his/her own control. Bandura (1982) provides explanation of the distinction between perceived control and self-efficacy. According to Bandura, there are two types of expectancies that influence a person’s decision to engage in behaviour (Terry & O’Leary, 1995). The first expectancy is efficacy expectancies. Efficacy expectancies describe how a feeling of doubt about one’s ability to perform behaviour may discourage him/her from performing the behaviour. The second expectancy is outcome expectancy which describes that although a person feels confident that he/she able to perform the behaviour, he/she may be reluctant to perform due to his/her perception that the behaviour will not lead to the desired outcome. The outcome expectancy is viewed by Bandura as perceived control (Terry & O’Leary, 1995). Empirical evidences in literature shows that the perceived control variable is not similar to self-efficacy variable and should be distinguished (e.g. Tavousi et al., 2009; Terry & O’Leary, 1995; Trafimow et al., 2002; White, Terry, & Hogg, 1994).

### **2.5.3 Jones's moral intensity element of ethical decision making**

Acknowledging that none of the previous ethical decision making models, such as Rest (1986), Trevino (1986), Ferrell and Gresham (1985), and other models (see Jones, 1991) incorporate the characteristics of the moral issue in their ethical decision making models, Jones (1991) proposed an issue contingent model. The issue contingent model specifically focuses on the moral intensity of the behaviour in question. According to Jones, moral intensity refers to “the characteristics of the moral issue itself” (Jones, 1991, p. 371). The moral intensity construct is relevant in ethical decision making as the ethical decision making process itself is an issue-contingent matter, and it must be explicitly recognised and examined (Singhapakdi, Vitell, & Franke, 1999). Further, Jones claims that it is likely to be possible to measure moral intensity in a situation that apparently shows relatively large distinctions, for example, an action that results in death compared to actions that result in injuries (Jones, 1991). Accordingly, the investigation of moral intensity in this study is considered relevant.

Reliant on Rest's model, Jones (1991) posits that there are six components of moral issue: magnitude of consequences (MC); social consensus (SC); probability of effect (PE); temporal immediacy (TI); proximity (P); and concentration of effect (CE), that directly influence each stage of the ethical decision making process (see Figure 2.4). These six components jointly function as a moral intensity construct; a construct that “captures the extent of issue-related moral imperative in a situation” (Jones, 1991, p.

372). The six components of moral intensity provided by Jones (1991) are described below.

*Magnitude of consequences*: “the sum of harms (or benefits) done to victims (or beneficiaries) of the moral act in question” (p. 374).

*Social consensus*: “the degree of social agreement that a proposed act is evil (or good)” (p. 375).

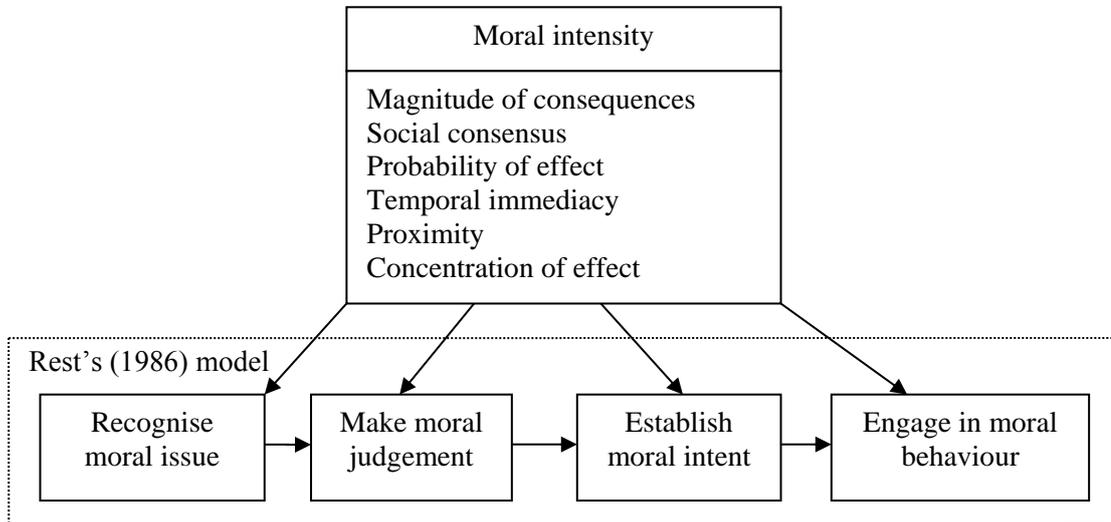
*Probability of effect*: “is a joint function of the probability that the act in question will actually take place and the act in question will actually cause the harm (benefit) predicted” (p. 375).

*Temporal immediacy*: “is the length of time between the present and the onset of consequences of the moral act in question (shorter length of time implies greater immediacy)” (p. 376).

*Proximity*: “is the feeling of nearness (social, cultural, psychological, or physical) that the moral agent has for victims (beneficiaries) of the evil (beneficial) act in question” (p. 376).

*Concentration of effect*: “is an inverse function of the number of people affected by an act of given magnitude” (p. 376).

**Figure 2.4: An issue-contingent model of ethical decision making in organizations\***



\* adapted from Jones (1991, p. 379 )

Moral intensity has received considerable attention by researchers. In a review paper by Loe, Ferrell, and Mansfield (2000), two studies that examined moral intensity were identified. The amount of research that examined this construct then increased to 32 studies, as reported in a paper by O'Fallon and Butterfield (2005). In the paper, consistent findings that support moral intensity as a significant predictor of ethical perceptions were mainly reported.

With regard to the moral intensity variable, some previous researchers only examined some of the individual moral intensity components while others examined all of the components of moral intensity. The literature reveals that moral intensity has been investigated for its direct influence as well as its moderating effect on ethical perceptions and ethical intentions. In this study, all the six components of moral intensity are tested as a unit of moral intensity. All the components of moral

intensity are crucial as they capture the extent of issue-related matters and are therefore relevant to the study.

## **2.6 Variables affecting whistle-blowing intention and hypothesis development**

In this study, seven independent variables were examined. The variables are: attitudes toward whistle-blowing; injunctive norm; descriptive norm; perceived behavioural control; self-efficacy; organisational-professional conflict; and awareness of whistle-blowing protection legislation. In addition, moral intensity was examined for its moderating effect on the individual relationship between the seven independent variables and the dependent variable (whistle-blowing intention). Demographic variables were tested for significant differences that may exist, if any, between respondents on the seven independent variables. These demographic variables are further treated as control variables.

The variables for this study are elaborated on in the following paragraphs, based on the discussion above.

### **2.6.1 Independent variables**

#### **2.6.1.1 Attitudes toward whistle-blowing**

As discussed in section 2.5.1, attitudes toward specific behaviours refer to the degree of favourableness or unfavourableness of one's evaluation of the behaviour understudied. The 'attitudes' variable is a personal component of the TRA and the

TPB. In general, the notion of these theories is the more one has favourable attitudes toward a specific behaviour, the higher the probability that the attitudes will positively influence the person's intention toward performing the behaviour.

Past empirical studies, in various research disciplines, found consistent results on the significant association between attitude and intention. Those studies include whistle-blowing research on police officers by Park and Blenkinsopp (2009), research on corporate managers' decision making by Carpenter and Reimers (2005), reporting on unethical and/or illegal behaviour by university students (Chang, 1998) and in the medical profession (Randall & Gibson, 1991), and intention to get involved in entrepreneurship (Autio, Keeley, Klofsten, Parker, & Hay, 2001; Kautonen, Van Gelderen, & Tornikoski, 2013). All of these studies report positive and significant relationships between attitude and intention.

From the limited literature on whistle-blowing, as shown in Table 2.1 and Table 2.2, there is a small amount of whistle-blowing research which examines the influence of attitudes toward whistle-blowing on the whistle-blowing intention. None of the past whistle-blowing research in an internal auditing context has examined this variable. Therefore, in this study, the influence of attitudes toward whistle-blowing on the whistle-blowing intention was examined and the relationship between these variables is hypothesised as:

**Hypothesis 1(H1):** The whistle-blowing intention among internal auditors in the U.K. is positively influenced by the attitudes toward whistle-blowing.

### **2.6.1.2 Social norm (injunctive norm and descriptive norm)**

Social norm is a component of the TRA and the TPB. Social norm refers to the perceived social pressure on a person either to perform or not to perform the behaviour under studied. The general rule to describe the relationship between social norm and intention is the more positive and favourable social pressure to a person; the stronger the intention of the person to perform the behaviour.

Findings from previous research report mixed results regarding the social influence on behavioural intention. In a meta-analytic review, Armitage and Conner (2001) report social norm as a weak predictor of intention in the TPB model. Due to the weak association between social norm and intention, which were continuously reported in previous research, some researchers have intentionally removed the variable in their study (e.g. Sparks, Shepherd, Wieringa, & Zimmermanns, 1995). However, in other studies, social norm has shown a significant influence on intention, for example, Finlay, Trafimow, and Moroi (1999), Carpenter and Reimers (2005), and Kautonen et al. (2013). In research by Chang (1998), social norm has no influence on the intention. Randall and Gibson (1991) reported only a moderate effect of social norm in influencing intention to report unethical behaviour in the medical profession. As reported by Armitage and Conner (2001), a possible reason for the weak relationship is due to poor measurement where a single-item is used. Sheeran and Orbell (1999) suggest a narrow conceptualisation of the social norm component might contribute to a better norm-intention relationship analysis. In conjunction with that, as explained in Sheeran and Orbell (1999), the distinction

“between the *is* (descriptive) and the *ought* (injunctive) meaning of social norm” Sheeran and Orbell (1999, p. 2112) should be highlighted since both norms drive different basis of motivation. Social norm which concerns the perception approval from significant others, to perform a behaviour, reflects an injunctive norm. Meanwhile, descriptive norm reflects the perception of whether significant others perform the behaviour under studied. Hence, in this study, the decomposition of social norm into injunctive norm and descriptive norm is applied and hypothesised as:

**Hypothesis 2a (H2a):** The whistle-blowing intention among internal auditors in the U.K. is positively influenced by the injunctive norm.

**Hypothesis 2b (H2b):** The whistle-blowing intention among internal auditors in the U.K. is positively influenced by the descriptive norm.

### **2.6.1.3 Perceived behavioural control**

Perceived behavioural control refers to the perceived ease or difficulty to perform the behaviour under consideration. According to Ajzen and Madden (1986), the perceived behavioural control variable was added in the TPB to cater for situations where a person has no control over certain resources, such as time, money, skills and cooperation from others. The general rule that describes the association between intention and perceived behavioural control is the greater a person perceived he or she has control on the behaviour under studied, the stronger the person’s intention to perform the behaviour.

According to Armitage and Conner (2001), a behavioural study is unique in nature because there are no absolutes. Empirical findings reveal an inconsistent relationship between perceived behavioural control and behavioural intention in different behavioural studies. Randall and Gibson (1991), and Mahon, Cowan, and McCarthy (2006) found the role of perceived behavioural control on intention least influential when compared to attitude and social norm. In a study by Park and Blenkinsopp (2009) perceived behavioural control significantly influenced the internal whistle-blowing intention.

Blowing the whistle is not an easy decision for one to make and to blow the whistle is, in part, subject to how much control a person has to blow the whistle. Few whistle-blowing studies have examined the perceived behavioural control variable in their study such as Park and Blenkinsopp (2009), Chiu (2003) (this study specifically examines locus of control)<sup>6</sup>, and Ab Ghani, Galbreath, and Evans (2011) (internal locus of control)<sup>7</sup>.

In this study, perceived behavioural control was examined for its influence on the whistle-blowing intention. The association between the perceived behavioural control and intention is hypothesised as:

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<sup>6</sup> Locus of control is “a belief about whether the outcomes of our actions are contingent on what we do or on events outside our personal control” (Lee, 2013, p. 1047).

<sup>7</sup> Internal locus of control is a “belief that outcomes are generally contingent upon the work and effort put into them” (Ab Ghani et al., 2011, p. 4). The internal locus of control was claimed as consistent with the perceived behavioral control variable and falls within the element of perceived behavioural control (Ab Ghani et al., 2011).

**Hypothesis 3 (H3):** The whistle-blowing intention among internal auditors in the U.K. is positively influenced by perceived behavioural control.

#### **2.6.1.4 Self-efficacy**

Internal auditors are required to ethically-driven in performing their tasks. This requirement is truly emphasised by the IIA. However, when it comes to organizations, internal auditors also need to follow what is being practiced by the organizations and the practices might inconsistent with the IIA requirement. If this happens, in order for the internal auditors to perform their tasks in line with the IIA's requirement, they might need to face with obstacles and challenges which exist in the organizations.

In situations that need internal auditors to speak out or blow the whistle when they found any questionable practices, internal auditors may face with various challenges and obstacles. These challenges may come from top management officers, work colleagues or clients. The challenges may affect internal auditors' capability to take right actions. Therefore, it is very essential to investigate internal auditors' capability to take right actions in a difficult situation such as situation that needs them to blow the whistle on management's wrong actions in managing organizations.

According to Bandura (1986), self-efficacy is "judgment of one's capability to accomplish certain level of performance" (p. 391). Bandura also explain that self-efficacy is one's conviction that one can execute the behaviour that will produce the desired outcome (Bandura, 1977). Self-efficacy is a construct that evaluates one's

competence to successfully perform the behaviour under consideration to reach a desired outcome (Elias, 2009).

A person with high self-efficacy will continuously endeavour with greater effort (MacNab & Worthley, 2008). The general rule that describes self-efficacy in relation to the probability of performing a task is the more confidence one has, the higher the self-efficacy and the more he/she is motivated to succeed in performing the task and vice versa.

As whistle-blowing is one option for internal auditors who have knowledge or observe any questionable practices, it is important to examine the internal auditors' self-efficacy that may influence their whistle-blowing intention. Self-efficacy is relevant in this study as whistle-blowing is often related to a situation that may put individuals into a potentially stressful situation.

**Hypothesis 4:** The whistle-blowing intention among internal auditors in the U.K. is positively influenced by self-efficacy.

#### **2.6.1.5 Organisational-professional conflict**

The work scope and job responsibilities of internal auditors require them to serve many interests – employer, client, public, shareholders and other stakeholders. It puts internal auditors in conflict when the organisation's or client's expectations are incompatible with the professional standard of conduct which internal auditors need to adhere to. This coincides with Lenz and Sarens's (2012) assertion that "positioning internal auditor as agent to the board and, at the same time, as partner to

management is challenging in practice, as there are potential tensions between the board and management” (p. 533). In this situation, organisational-professional conflict (OPC) may arise, as explained by Sorensen (1967). The OPC relates to a situation where the internal auditors are trapped between abiding the code of ethics and professional standards, on one hand, and obeying the employer’s or client’s decisions on the other. Aranya and Ferris (1984) and Sorensen (1967) investigated the influence of this conflict on the accountant’s attitudes and behaviours towards turnover and found a positive association between the variables. OPC has not been studied by previous whistle-blowing scholars in the internal auditing context, and it has also not been extensively studied in other behavioural studies. Brierley and Cowton (2000) in their meta-analysis of accounting studies, assert that the OPC is still relevant for investigation in today’s business ethics environment. Thus, the association between OPC and intention to blow the whistle is hypothesised as follows:

**Hypothesis 5 (H5):** The whistle-blowing intention among internal auditors in the U.K. is positively associated with perceived organisational-professional conflict.

#### **2.6.1.6 Awareness of the whistle-blowing protection legislation**

The existence of whistle-blowing protection acts (e.g., Sarbanes-Oxley Acts 2002 (U.S.A.), Whistle-Blower Protection Act 1989 (USA), Public Interest Disclosure Act 1998 (U.K.), Whistle-Blower Protection Act 2010 (Malaysia)) are frequently mentioned in whistle-blowing literature. However, little is known about how the awareness of whistle-blowing protection legislation impacts the intentions towards

whistle-blowing. There is an obvious notion that if people are not aware of the legislation, it is less likely that they will support whistle-blowing behaviour. Studies in other fields have shown a significant effect of awareness on attitudes, for example, marketing (Mainieri, Barnett, Valdero, Unipan, & Oskamp, 1997; Percy & Rossiter, 1992), tourism (Lee & Moscardo, 2005), and information systems (Bulgurcu, Cavusoglu, & Benbasat, 2010).

As reported in a review paper by Vadera et al. (2009), previous studies have not extensively examined the effect of awareness of whistle-blowing protection legislation on whistle-blowing behaviour. Vadera et al. (2009) recommend that more empirical studies on the role of laws on whistle-blowing should be conducted. One of the suggestions given by Vadera et al. (2009) is to examine how the law and its enforcement facilitate the progress of whistle-blowing across nations. In this study, the association between the awareness of whistle-blowing protection legislation and intention towards whistle-blowing is examined and the relationship is hypothesised as:

**Hypothesis 6 (H6):** The whistle-blowing intention among internal auditors in the U.K. is positively influenced by awareness of the whistle-blowing protection legislation.

## **2.6.2 Moderating variable**

### **2.6.2.1 Moral intensity**

According to Jones (1991), moral intensity, which has six components (as discussed in section 2.5.3), focuses on the characteristics of the issue under consideration. The combined effects of its components define the overall moral intensity.

Based on the previous explanation of moral intensity (see section 2.5.3), Jones claims that the six components of moral intensity are expected to have interactive effects at least at some levels (Jones, 1991). In general, a low effect (high) in moral intensity is expected if: first, the action in question has negligible (severe) negative consequences (result on the MC); second, most people agree that the action is ethical (unethical) (result on the SC); third, the negative consequences are unlikely (certain) to actually happen (result on the PE); fourth, the time gap between the decision and the outcome is long (in immediate future) (result on the TI); fifth, the consequences are spread over a large (small) number of people (result on CE); and lastly, the decision maker is relatively removed from the list of people that might be affected (affects individuals that are close to the decision maker) (P) (Frey, 2000).

Ethics literature suggests that one's perceptions of the characteristics (intensity) of a moral issue are an important element in the decision making process (Singhapakdi et al., 1999) and the suggestion has been supported empirically. Singhapakdi, Vitell, and Kraft (1996) found empirical findings that support their hypotheses on the influence of moral intensity on marketers' ethical perceptions and intentions. Shafer,

Morris, and Ketchand (2001) found that magnitude of consequences (MC) and probability of effect (PE) influenced ethical judgement and behavioural intention. Similar findings have been found by Singhapakdi et al. (1999), where the moral intensity has a direct and indirect effect (mediating effect) on the intention. Taylor and Curtis (2010), who conducted a study in a public accounting firm, found a positive relationship between moral intensity and intention to whistle-blow.

Moral intensity has also been tested for its moderating effect in previous research, for example, the moderating effect of magnitude of consequences on the relationship between attitudes, social norm, self-efficacy, financial cost and ethical climate on managers' environmental ethical decision intentions, as revealed in Flannery and May (2000). The same finding was found by Bhal and Dadhich (2011).

It can be surmised that whistle-blowing studies in an internal auditing context are in their infancy, and there is limited investigation on the moderating effect of moral intensity on the whistle-blowing intention. Thus, this study considers there is a need to investigate the moderating effect of moral intensity on the individual relationships established between independent variables: attitudes towards whistle-blowing; injunctive norm; descriptive norm; perceived behavioural control; self-efficacy; and organisational-professional conflict, and the dependent variable (internal auditors' intention to blow a whistle). All six components are tested as a unit of moral intensity.

Based on the literature, people in the Britain were self-contained (Salter, Guffey & McMillan, 2001) and very concern with serious ethical situations. Therefore, in this

study, it is expected that moral intensity will moderate the relationship between the independent variables and dependent variables.

Thus, it is hypothesised:

**Hypothesis 7a (H7a):** Moral intensity will moderate the individual relationships between attitudes towards whistle-blowing and whistle-blowing intention.

**Hypothesis 7b (H7b):** Moral intensity will moderate the individual relationships between injunctive norm and whistle-blowing intention.

**Hypothesis 7c (H7c):** Moral intensity will moderate the individual relationships between descriptive norm and whistle-blowing intention.

**Hypothesis 7d (H7d):** Moral intensity will moderate the individual relationships between perceived behavioural control and whistle-blowing intention.

**Hypothesis 7e (H7e):** Moral intensity will moderate the individual relationships between self-efficacy and whistle-blowing intention.

**Hypothesis 7f (H7f):** Moral intensity will moderate the individual relationships between organizational-professional conflict and whistle-blowing intention.

**Hypothesis 7g (H7g):** Moral intensity will moderate the individual relationships between awareness towards whistle-blowing protection legislation and whistle-blowing intention.

## **2.6.3 Dependent variable**

### **2.6.3.1 Whistle-blowing intention**

As mentioned in section 2.5.1, the TPB is a theory that predicts and explains an individual's behaviour (Ajzen, 1985). According to the TPB, the intention to perform or not to perform a particular behaviour has been identified as the best proxy for justifying the actual behaviour. Behavioural intention refers to the probability of the individual to engage in the behaviour being studied (Fishbein & Ajzen, 1975). The TPB asserts that the stronger the intention to perform a behaviour, the greater the likelihood to perform the behaviour. This study is concerned with the intention to blow the whistle by internal auditors in the U.K. The nature of investigating the decision to whistle-blow involves a sensitive and confidential element, therefore examining intention is more appropriate and practical, rather than investigating the actual whistle-blowing behaviour. This is examined by means of scenarios.

## **2.6.4 Control variables**

### **2.6.4.1 Demographic variables**

In this present study, five demographic characteristics of internal auditors are treated as control variables. The five demographic profiles are gender, age, years of work experience in internal auditing, client categories and employment position. All of these demographic profiles are examined for significant differences with regard to the seven independent variables tested in this study.

#### **2.6.4.1.1 Gender**

In the ethical decision making literature, gender is one of the most common variables tested (Craft, 2013; Loe et al., 2000; O'Fallon & Butterfield, 2005). Mixed findings are reported in two review papers by Loe et al. (2000) and O'Fallon and Butterfield (2005). According to these authors the majority of published papers found either no significant gender differences or found females were more ethically sensitive and less tolerant of unethical practices than their male counterparts. While the results on gender differences might be regarded as mixed or inconclusive, it is notable that males were rarely found to be more ethically sensitive than females. The findings on gender differences have been reported as inconclusive (Loe et al., 2000). Similar to what has been reported by Loe et al. and O'Fallon and Butterfield, Vadera et al. (2009) report that previous research on gender and whistle-blowing have reported inconsistent findings. Hyde (2005) introduces gender similarities hypothesis which holds that males and females are much alike on most, but not all, psychological variables. Consequently, in this study, gender groups were analysed for their significant differences in the seven independent variables.

#### **2.6.4.1.2 Age**

According to Deshpande (1997), age is a demographic variable that has seldom been investigated in literature on ethical beliefs and decision making. In a more recent ethical decision making review article, there are fewer studies on age (Craft, 2013). However, a review of ethical decision making literature suggests that age is one of the predictors of ethical attitude. Loe et al. (2000), O'Fallon and Butterfield (2005)

and Craft (2013) report mixed and inconsistent findings regarding the effect of age on the ethical decision making process. From these review papers, it was found that quite a few researchers report that there are no significant age differences with regard to ethical decision making. However, there were also a few researchers who reported that age has a positive relationship with the ethical decision making process. However, a number of previous researchers reported a negative relationship between age and the ethical decision making process. Similar findings have been reported in a review article on whistle-blowing, for example, Vadera et al. (2009) reported mixed findings on the association between age and whistle-blowing. These mixed findings suggest that there is a complex association involving age and the ethical decision making process, including matters concerning whistle-blowing. Therefore, in this study, responses on the seven independent variables were compared based on the age groups of the participants.

#### **2.6.4.1.3 Internal auditing work experience**

In a review paper by Loe et al. (2000), the authors list work experience as one of the variables that has received attention for investigation by previous researchers in the ethical decision making field. Loe et al. reviewed eighteen empirical papers that examined education and work experience and found that only three of the papers (by Kidwell, Stevens and Bethke (1987), Callan (1992) and Kohut and Corriher (1994)) had: first, specifically associated the length of employment with ethical values; and second, used actual personnel (state employees) in organisations as their samples. Two of these papers (Callan (1992) and Kohut and Corriher (1994)) found that the length of employment does not relate with ethical values while in the third paper

(Kidwell, Stevens and Bethke 1987) it was found that the greater the work experience a manager had, the more ethical responses they gave. The other papers report findings on education and work position. However, no investigation on length of work experience was conducted. In a more recent review paper on ethical decision making literature (see O'Fallon & Butterfield, 2005), mixed findings were reported by previous researchers. The findings mainly report there were no significant relationship between work experience and moral reasoning. With reference to the association between work experience and whistle-blowing, Vadera et al. (2009) found that most of the previous research that they reviewed focused on the association between the work experience and the whistle-blowing channels (external or internal). Because some studies have found a relationship, in this study, responses by the respondents from different lengths of work experience were examined for any significant differences with regard to the seven tested independent variables.

#### **2.6.4.1.4 Client categories**

As listed in Table 2.2, there are a few researchers who have previously conducted whistle-blowing studies among internal auditors in the public and private sectors (Arnold & Ponemon, 1991; Miceli et al., 1991). However, none of the researchers has examined the possible differences in perception between internal auditors who audit public organisations and internal auditors who audit private organisations. So far, previous research examined perceptions of individuals based on their job positions (e.g., job position as internal auditors, external auditors and market analysts as studied by Arnold & Ponemon, 1991) or based on job performance (e.g., Miceli et al., 1991). Yet, there is no study on whistle-blowing that examines different

perceptions of whistle-blowing between internal auditors in public and private sectors. In addition, it is difficult to find research on ethical decision making involving internal auditors that compares different organisational environments (e.g. public sector versus private sector). However, the issue on the differences which may exist between organisation members from the two different organisation environments has been heavily discussed in public management literature. The discussion has subsequently seen many researchers start to examine differences, if any, between public and private management and leadership, among others. Wittmer (1991) (as cited in Andersen, 2010) states that personnel who work in the public sector are dissimilar to personnel in private sectors in terms of their work-related values, reward preferences, needs and personality types. Similar findings are also found by Rainey, Pandey, and Bozeman (1995). The authors reported that there were notable differences between public and private managers on their personnel rules and constraints. Based on the arguments, discussions and findings from public management literature, this study examines the differences, if any, in the responses on the seven independent variables, between internal auditors who audit public organisations and internal auditors who audit private companies.

#### **2.6.4.1.5 Employment position**

This study has a concern with internal auditors' judgments. This study perceives that employment position might affect internal auditors' judgment during their audit works. There are two main employment positions of internal auditors: in-house and outsourced. As cited in Henderson (1997), Goodwin (1996) states that the types of employment (in-house or outsourced) of individuals in organisations has an impact

on how an individual perceives their judgments (Ahlawat & Lowe, 2004), roles and responsibilities.

A considerable number of previous research examined the ability of internal auditors to maintain their independence and objectivity (i.e., Ahlawat & Lowe, 2004) in pursuing their different roles (assurance provider or consultant) (Stewart & Subramaniam, 2010). The research found that internal auditors who engaged in both assurance and consulting activities are exposed to a self-review threat and/or a social pressure threat (Stewart & Subramaniam, 2010) which subsequently may impair their objectivity. The discussion and findings from the research leads the author to examine internal auditors' judgment on ethical situations based on their employment position (in-house and outsourced). Not only might different roles impair their independence and objectivity, there are other factors, such as employment position, that may also affect their judgment and further their independence and objectivity.

Studies on internal auditors' judgement are limited and extension to different situations are warranted (Stewart & Subramaniam, 2010). Therefore, this study examined the judgment by internal auditors from different employment position. Previous internal audit research on outsourcing examined the extent of outsourcing (i.e., Carey, Subramaniam, & Ching, 2006; Martin, Lavine, Baker, & O'Leary, 2000; Selim & Yiannakas, 2000). However, not much research has examined to what extent in-house and outsourced internal auditors differs in their judgment and decision making. Different employment position of internal auditors create a different type of relationship; first, employer-employee (in-house internal auditors)

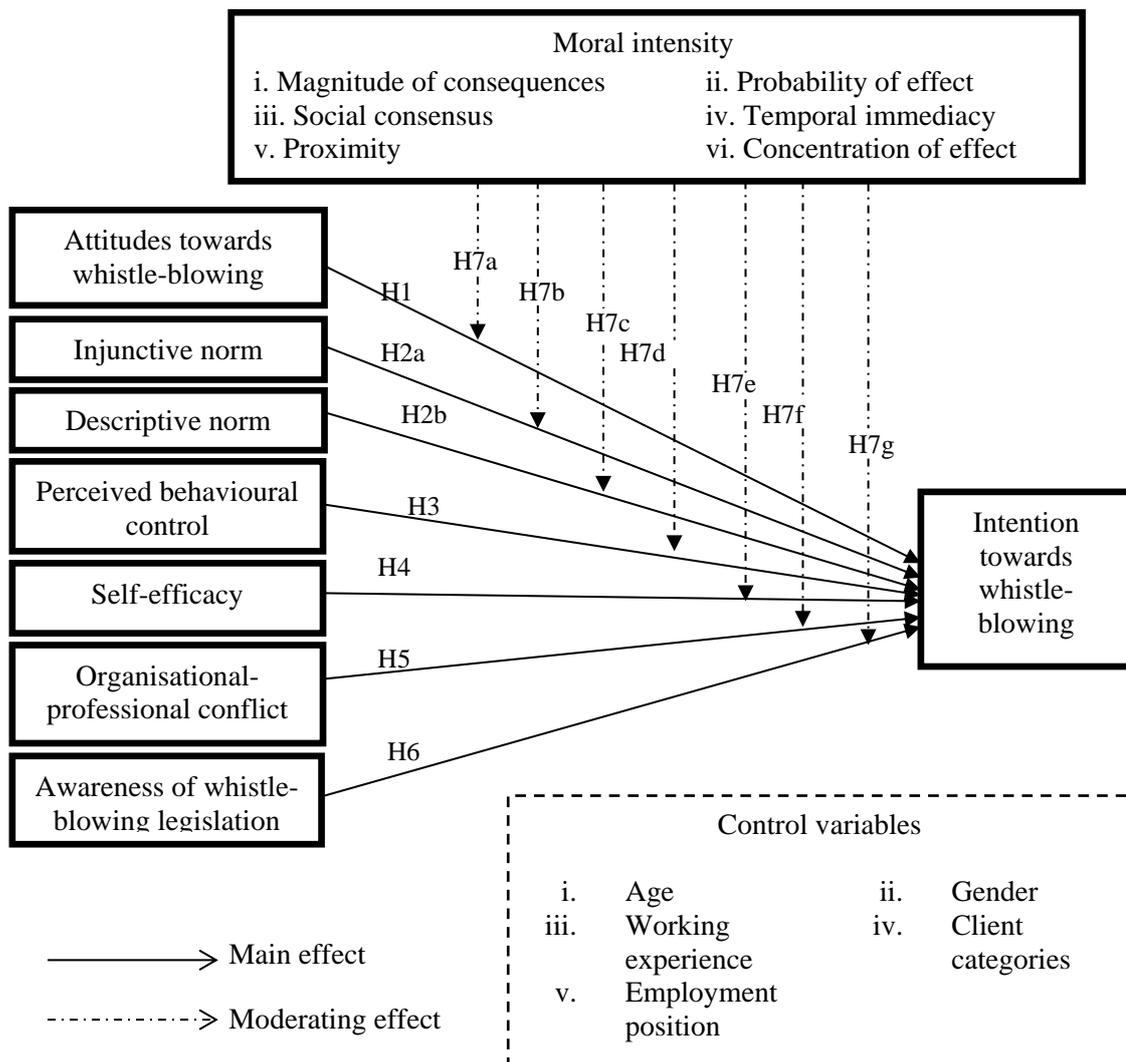
and second, firm-client (outsourced). The different relationship may further brings to different dilemma faced by internal auditors and subsequently may affect their judgments. Schneider (2008) (as cited in Mahzan, Zulkifli, & Umor, 2012) contends that outsourced internal auditors are indeed different from in-house internal auditors. According to Schneider, the two groups of internal auditors have dissimilarity in terms of the management control upon them. The nature of employer-employee relationship provides in-house internal auditors with more conflict of interests. As employees, they are expected to do what management team asked them to do including not to report any questionable practices that occur in their workplace. Obeying to the management orders is very important to them, which in turn may affect their remuneration and career. Compared to in-house position, outsourced position provides internal auditors with lesser conflicts. While safeguarding the interests of clients is a priority for them, the firm-client relationship has one advantage over the employer-employee relationship. In general, outsource firms have a portfolio of clients. The portfolio helps outsource firms to diversify risk better (Ahlawat & Lowe, 2004) than in-house internal auditors. Outsourced internal auditors have more reasons for behaving appropriately for their own reputational capital and avoiding costs of malpractice suits (Ahlawat & Lowe, 2004). Although previous research has found minimal difference, between in-house and outsourced internal auditors (see Mahzan et al., 2012), this issue has been very little studied. Therefore, in this present study, responses on the seven tested variables by the two groups of internal auditors are explored.

In the U.K., outsourcing services has become a major consideration for organization and the limited research that has examined the employment position variable provides avenue for further research. Therefore, in this present study, responses on the seven tested variables by the two groups of internal auditors are explored.

## 2.7 Research conceptual framework

The above explanation of the variables tested in this study is summarised in the research conceptual framework as shown below.

**Figure 2.5: Research conceptual framework of whistle-blowing intentions among internal auditors**



### 2.7.1 Variables definition

Definitions of each of the variables are as listed below.

1. **Awareness of whistle-blowing legislation:** Possession of knowledge of the existence of whistle-blowing protection legislation in the U.K.
2. **Attitudes (towards whistle-blowing):** Feelings of favourable or unfavourableness which a person holds on whistle-blowing.
3. **Injunctive norms:** Perceptions of important people's approval of a person's (whistle-blowing) behaviour (Park & Smith, 2007).
4. **Descriptive norms:** Perceptions possessed by a person of whether the important others themselves perform the (whistle-blowing) behaviour (Park & Smith, 2007).
5. **Perceived behavioural control:** A person's perceptions of the controllability or power he/she has in performing the (whistle-blowing) behaviour.
6. **Self-efficacy:** A person's perceptions of his/her capability to overcome a series of obstacles in performing the behaviour.
7. **Organisational-professional conflict:** A situation when professional loyalties, which a person should hold, are incompatible with the organisational loyalties which are demanded upon them.
8. **Moral intensity:** A multidimensional construct that "captures the extent of issue-related moral imperative in a situation" (Jones, 1991, p. 372).

**9. Intention:** Indication of a person's willingness to perform the (whistle-blowing) behaviour.

**10. Whistle-blowing:** The action of disclosing an organisation's illegal and/or unethical practices by organisation members (former or current) to the person or party who have authority (internal and/or external channels) to take remedial action (Near & Miceli, 1985).

## **2.8 Conclusion**

This chapter discussed the theoretical and empirical literature on whistle-blowing. Whistle-blowing studies have been completed in various fields and involve various professions. However, limited empirical research in an internal auditing context was available. Most of the empirical studies were conducted in the U.S.A. and no empirical whistle-blowing studies in an internal audit context that have been conducted in the U.K. Reviews by MacNab and Worthley (2008) and Vadera et al. (2009) found that individual variables have received little attention in previous studies and more research on individual variables in whistle-blowing studies, particularly in an internal auditing context, is needed.

## **Chapter Three**

### **Research Methodology and Method**

#### **3.0 Introduction**

The two preceding chapters of this thesis discussed whistle-blowing issues in the internal auditing context. A body of literature was presented, reviewed and discussed. Some of the variables discussed in the literature were then put forward and hypothesized for further investigation.

In this chapter, research methodology and research method are discussed. In the first section of this chapter, the research aims and objectives of this study are restated as a reminder of the core investigation of this study. Following this, the general research methodology and research method are discussed. The general types of research philosophy are put forward in the subsequent section and are followed by a discussion. The specific research approach used in this study is explained in the fourth section then, in the fifth and sixth sections, research populations and samples, and data collection method are discussed respectively.

#### **3.1 Research aim and objectives**

As mentioned in Chapter One, the principal aim of this study is to investigate factors that influence an internal auditor's intention to blow the whistle. Seven individual-level factors are examined for their influence on the internal auditor's intention to blow the whistle. Three objectives of this study are:

- 1) To determine whether there are significant differences between respondents from various demographic backgrounds (gender, age, work experience, client categories and employment position) in all of the independent variables examined in this study.
- 2) To investigate the individual-level factors (attitudes towards whistle-blowing, injunctive norm, descriptive norm, perceived behavioural control, self-efficacy, organisational-professional conflict and awareness of the whistle-blowing protection legislation) that influence an internal auditor's intention to blow the whistle upon discovering unethical and/or illegal behaviour during their audit work.
- 3) To identify the moderating effect of moral intensity on the individual relationship established between the individual-level factors and the whistle-blowing intention.

### **3.2 Research methodology and research method**

Oppenheim (1992) explains the distinctions between research design (also known as research methodology) and research technique (also known as research method). Research design is defined as a “basic plan or strategy of the research, and the logic behind it, which will make it possible and valid to draw more general conclusions from it” (Oppenheim, 1992, p. 6). According to Miller (1983), research methodology provides a body of knowledge which enables researchers to explain and analyse their research method. The research methodology should be able to answer research questions and to make valid inferences in terms of generalization, association and

causality (Oppenheim, 1992). On the other hand, research method is a subset of research methodology. Research method refers to “methods used for data generation and collection” (Oppenheim, 1992, p. 6). Both the research methodology and research method play a core role in providing essential information related to the study. Nachmias and Nachmias (2008) assert that research method is crucially important because it links the theory and the argument which researchers use to inform others about their research and data.

Bryman and Bell (2007) claim that the selection of a research method is made based on preference after a range of research process dimensions have been considered. The selection of the research method includes the methodological procedure used in sampling technique, medium used for data collection and statistical analysis, which are also prudently determined. Saunders, Lewis, and Thornhill (2009) emphasize that further to the comprehensive research plan, any constraints and ethical issues which the research encounters should also be taken into account.

### **3.3 Research philosophies**

Research philosophies provide readers with information on a researcher’s holistic belief in viewing the world and/or the phenomenon being studied. In social science, there are two main dimensions of research philosophy: ontology and epistemology.

According to Scotland (2012), “ontology is the study of being” (p.9). Scotland further describes ontology as how researchers perceive “how things really are and how things really work” (p.9). Saunders et al. (2009) describe ontology as the

“nature of reality” (p.110). Overall, the ontology paradigm is a concern about reality. The ontology of the research provides answers to the question of “what is the nature of the social and political reality to be investigated” (Hay, 2002, p.63 cited in Grix, 2002). Answers to that question will then guide researchers to the next aspect of research philosophy – the epistemology.

Epistemology is concerned with discovering the existence of knowledge (Grix, 2002) and is also described as acceptable knowledge (Bryman & Bell, 2007). According to Scotland (2012), epistemology is the nature and form of knowledge and how the knowledge is created.

To summarise, ontology is about “what is out there to know about” while epistemology is about “what and how we can know about it” (Grix, 2002, p. 175). Table 3.1 provides a summary of the difference between ontology and epistemology.

There are two main research philosophies of ontological and epistemological position in social science research (Creswell, 2009). Creswell describes the first branch of the research philosophy as a *quantitative* research that relies on *objectivism* as a way of viewing the world/phenomenon and consequently bases its work on *empirical results* which are obtained from *scientific and experimental* analysis. The second branch of the research philosophy is labelled as a *qualitative* research, the nature of which is described as *phenomenological* and *radical*. Its analysis requires a more *subjective* view. Creswell also relates the latter research philosophy as *interpretive* and *post-positivistic*.

**Table 3.1: Distinctions between ontology and epistemology**

<b>Dimensions of philosophy</b>	<b>Definition</b>
<b>Ontology</b>	What exists in the world
<b>Epistemology</b>	How we come to know about what exists

Source: Adapted from Schuh and Barab (2007, p. 71)

According to Grix (2002), two ontological positions are objectivism and constructivism and two epistemology positions are positivism and interpretivism.

### **3.3.1 Ontological positions: objectivism versus constructivism**

Ontology “defines what is real in the world, whether physical or abstract structures” (Schuh & Barab, 2007, p. 70). Objectivism is derived from two basic elements: realism and essentialism (Jonassen, 1991). Realism is a belief that the world, which is separate to humans and human experience, really exists. According to Lakoff (1987), knowledge is available for humans to seek. In other words, realists believe that knowledge will be similarly understood by humans. According to Trigg (1980), realism “indicates the view that reality exists independently of our conceptions of it, though it may coincide with them” (p. 3). Trigg (1980) further distinguishes realism from ‘idealism’, a view which purports that everything that exists is dependent on the mind. Essentialism, on the other hand, refers to a nucleus element which is necessary for making something be what it should be, without which it would not be the thing that it should be (Jonassen, 1991). In conclusion, from the objectivist’s point of view, reality exists on its own and is independent of humans (Vrasidas, 2000).

A contrasting view to objectivism is constructivism. From the constructivist's point of view, knowledge does not exist independent of humans, but is, in fact, constructed (Vrasidas, 2000). Simplified by Jonassen (1991), if the emphasis of objectivism is on *object*, constructivism puts attention on *how* knowledge is constructed. According to Jonassen (1991), construction of knowledge may be affected by previous experience, mental structures and beliefs which individuals hold in interpreting the objects or events. Jonassen (1991) notes that constructivism includes the existence of external reality in constructing their own reality. The assumptions which underlie the views of objectivism and constructivism are shown in Table 3.2.

**Table 3.2: Assumptions inherent in objectivism and constructivism**

	<b>Objectivism</b>	<b>Constructivism</b>
<b>Reality (real world)</b>	External to the knower. Structure determined by entities, properties, and relations.  Structure can be modelled.	Determined by the knower. Dependent upon human mental activity. Product of mind. Symbolic procedures construct reality. Structure relies on experiences/interpretations.
<b>Mind</b>	Processor of symbols. Mirror of nature. Abstract machine for manipulating symbols.	Builder of symbols. Perceiver/interpreter of nature. Conceptual system for constructing reality.
<b>Thought</b>	Disembodied: independent of human experience. Governed by external reality. Reflects external reality. Manipulates abstract symbols. Represents (mirrors) reality. Atomistic: decomposable into "building blocks". Algorithmic. Classification.	Embodied: grows out of bodily reality.  Grounded in perception/construction. Grows out of physical and social experience. Imaginative: enables abstract thought. More than representation (mirrors) of reality. Gestalt properties.

		Relies on ecological structure of conceptual system. Building cognitive models.
<b>Meaning</b>	Corresponds to entities and categories in the world. Independent of the understanding of any organism. External to the understander.	Does not rely on correspondence to world. Depending upon understanding.  Determined by understander.
<b>Symbols</b>	Represent reality. Internal representations of external reality (“building blocks”).	Tools for constructing reality. Representations of internal reality.

Source: Adapted from Jonassen (1991, p. 7)

### 3.3.2 Epistemological positions: positivism versus interpretivism

Epistemology “concerns what constitutes acceptable knowledge” (Saunders et al., 2009, p. 112). It addresses four main, related, aspects of human knowledge: origins, nature, methods and limits (Reber, 1995). According to Grix (2002), epistemology is categorized into positivism and interpretivism.

Positivists believe that reality is observable and explainable. According to Kirk and Miller (1986) the real world provides the best answer to the phenomenon being studied. This is parallel with the way positivists view a phenomenon which is independent of the process or circumstances involved in interpreting it. Willig (2001) notes that the goal of conducting positivist research is to produce “objective knowledge” (p. 3) which can be achieved without any personal involvement from the researcher.

Interpretivists are also known as anti-positivists (Mack, 2010). The core principle of interpretivism is any phenomenon that cannot be objectively observed, instead it

needs to be experienced. In contrast to positivists whose objective is ‘to explain’, the interpretivist’s aim is ‘to understand’ (which is very subjective in nature) before they can proceed to the explaining stage. In the interpretivist point of view, reality is an event which surrounds many people. These people then interpret the reality differently.

The ontological and epistemological positions of a positivist and interpretivist are summarized in Table 3.3.

**Table 3.3: Ontological and epistemological positions of a positivist and interpretivist**

	<b>Positivist</b>	<b>Interpretivist</b>
<b>Ontology assumptions</b>	<ul style="list-style-type: none"> <li>• Reality is external to the researcher and represented by objects in space.</li> <li>• Objects have meaning independently of any consciousness of them.</li> <li>• Reality can be captured by our senses and predicted.</li> </ul>	<ul style="list-style-type: none"> <li>• Reality is indirectly constructed based on individual interpretation and is subjective.</li> <li>• People interpret and make their own meaning of events.</li> <li>• Events are distinctive and cannot be generalized.</li> <li>• There are multiple perspectives on one incident.</li> <li>• Causation in social sciences is determined by interpreted meaning and symbols.</li> </ul>
<b>Epistemology assumptions</b>	<ul style="list-style-type: none"> <li>• The methodology of the natural sciences should be employed to study social reality.</li> <li>• Truth can be attained because knowledge rests on a set of firm, unquestionable, indisputable truths from</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge is gained through a strategy that “respects the differences between people and the objects of natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action”.</li> </ul>

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<p>which our beliefs may be deduced.</p> <ul style="list-style-type: none"> <li>• Knowledge is generated deductively from a theory or hypothesis.</li> <li>• Knowledge is objective.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge is gained inductively to create theory.</li> <li>• Knowledge arises from particular situations and is not reducible to simplistic interpretation.</li> <li>• Knowledge is gained through personal experience.</li> </ul>
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Source: Adapted from Mack (2010, pp. 7-8)

### **3.3.3 Research strategy: quantitative versus qualitative versus mixed-method research**

There are three main research strategies: quantitative; qualitative; and mixed-method. According to Brannen (2005), a research strategy is chosen based on the epistemological position of the research. Bryman (2012) asserts that apart from the epistemology, the ontological considerations and the connection between theory and research also contribute to the classification of quantitative and qualitative research. In addition, selection of research strategy is also based on the research objectives and the research questions (Bazeley, 2008).

In quantitative research design, researchers use scientific method, embark on specific theory, develop hypotheses and analyse data using quantitative methods (Warfield, 2010).

On the other hand, qualitative researchers observe and interact with events being studied. The direct involvement of the qualitative researcher, with the events, might influence the interpretation of the data being analysed (Warfield, 2010).

Literature on research methodology revealed that some scholars describe quantitative research as a research that relies heavily on the use of number (number-oriented, for instance, percentage, mean, and median), while qualitative research is a research that uses words more than numbers (explanation or justification-oriented). This idea, however, seems contradicted by Brannen (2005). Brannen disagreed with some scholars' idea that associates, first, the quantitative research with hypothetic-deduction and, second, the qualitative research with inductive logic of enquiry. From Brannen's point of view, both types of research strategy may employ both forms of logic.

Within the literature, there are many different terms used to describe quantitative and qualitative researchers. According to Bryman (1984), quantitative researchers are known as 'positivist' and 'empiricist' and qualitative researchers are referred to as 'naturalistic', 'ethnographic', 'interpretivist' and 'constructivist'.

A mixed-method strategy may also be used by researchers (Bryman, 2006). Mixed-method research contains elements of both qualitative and quantitative approach (Baarspul & Wilderom, 2011; Warfield, 2010). Although, some scholars assert that mixed-method research is relevant and current (Bryman, 2006), there is considerable debate on mixed-method research in literature. This includes: debates on the types of study that are suitable for a mixed-method strategy; the philosophical position of mixed-method research; validity strategies; rationales for using mixed-method research; and data analysis (Johnson & Onwuegbuzie, 2004). Theoretically mixed-method research may be ideal. However, in practice, it is very challenging and real

life is complicated. It is difficult to match or to integrate the philosophical view of quantitative research and qualitative research in one as both research strategies view the world differently. Furthermore, there are other considerations, such as: type of project; type of data collection and operations; type of data analysis; and inferences (Baarspul & Wilderom, 2011) that researchers need to take into account in using a mixed-method strategy. More challenges are expected when a mixed-method is used (Clark & Creswell, 2011). Bazeley (2008) provides a list of situations when mixed-method is usually applied (see Table 3.4). In this study a pure quantitative research strategy is adopted as it is most appropriate for the aim of the research.

**Table 3.4: Situations appropriate to use mixed-methods**

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Mixed-methods are appropriate when:

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- i. Complementary data are sought, either qualitative data to enhance understanding of quantitative findings, or quantitative data to help generalize or test qualitative insights.
- ii. Different methods are appropriate for different elements of the project, with each contributing to an overall picture.
- iii. Data are sought from multiple independent sources, to offset or counteract biases from each method, in order to confirm, validate or corroborate the results and conclusions of the study.
- iv. The goal of an evaluative study is to understand both process and outcome.
- v. One method provides data that is useful in preparation for the other, for example, when interviews or focus groups provide the basis for design of survey or scale items, or when a quantitative survey is used to design a sample for qualitative interviewing.

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Source: Bazeley (2008)

Each research strategy has its own form for constructing research as shown in Table 3.5.

**Table 3.5: The forms of quantitative, qualitative and mixed-methods research**

Quantitative	Qualitative	Mixed-methods
<ul style="list-style-type: none"> <li>a. Experimental Researcher needs to design specific conditions to test their theories or propositions. Also, controlling the experiment is crucial to isolate the associations between the independent and dependent variables.</li> <li>b. Quasi-experimental*</li> <li>c. Correlational*</li> <li>d. Descriptive*</li> </ul>	<ul style="list-style-type: none"> <li>a. Narrative This design is used when a study has a specific contextual focus such as classroom and students. Usually it involves biographical, life history of one or more individuals.</li> <li>b. Phenomenology Is used when the study involves life experiences of a concept or phenomenon experienced by one or more individuals.</li> <li>c. Grounded Theory This form of research is used when the researcher wants to generate or discover a theory.</li> <li>d. Ethnography This research form is used when the subject involves an entire cultural group.</li> <li>e. Case study Is used to study one or more cases within a bounded setting or context.</li> </ul>	<ul style="list-style-type: none"> <li>a. Complementary Researchers combined the results of one method with the results of the other method.</li> <li>b. Development Results from one method help develop or inform the other method.</li> <li>c. Initiation Researchers recast the results from one method to questions or results from the other method.</li> <li>d. Expansion Different methods are used to extend the breadth or range of inquiry.</li> </ul>
<p>* In (b) – (d), researchers study phenomena without the ability to control or manipulate variables. Researchers only collect information from existing data and determine relationships without inferring causality or develop additional techniques for gathering the information (i.e. surveys).</p>		

Source: Warfield (2010, pp. 29-30)

### **3.3.4 Method of reasoning: deductive versus inductive**

Method of reasoning is another aspect worthy of discussion. In general there are two main reasoning methods: deductive and inductive (Hyde, 2000; Spens & Kovács, 2006). Both of the reasoning methods entail a series of distinctive steps.

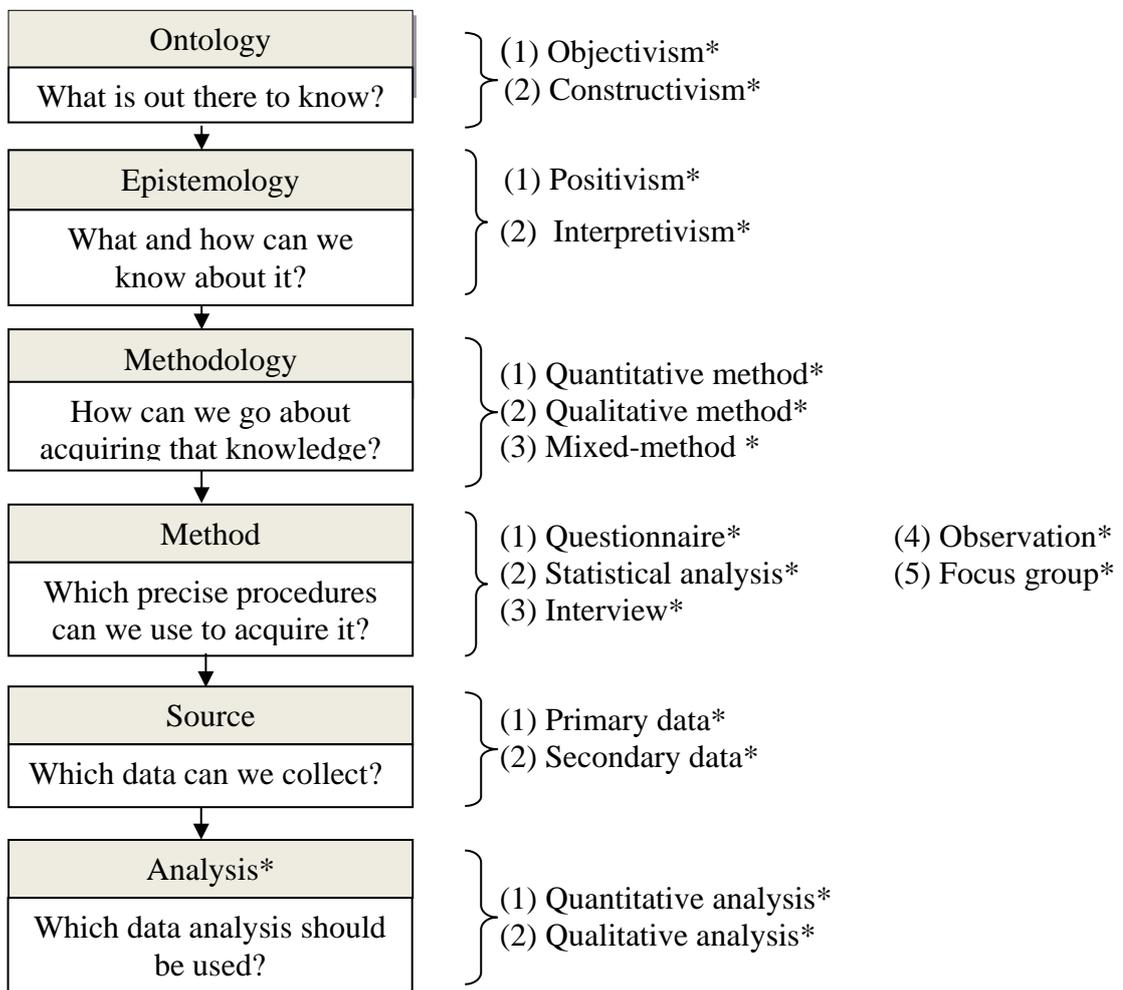
In deductive reasoning researchers start with an “an abstract, logical relationship among concepts then move(s) towards concrete empirical evidence” (Neuman, 1997, p. 46). Accordingly, deductive researchers initiate their works on a well-established theory. Researchers then select variables as discussed in the theory and the literature for their research and investigation. Hypotheses are then developed for further analysis (Ali & Birley, 1999). The deductive reasoning approach is also known as a hypothetico-deductive method (Sekaran, 2003) and is described as a theory testing process (Hyde, 2000). Henwood and Pidgeon (1993) illustrate deductive reasoning as a perspective which emphasises “universal laws of cause and effect on an explanatory framework which assumes a realist ontology; that is reality consists of a world of objectively defined facts” (p. 15).

Alternatively, inductive reasoning is quite the opposite. Inductive reasoning is described as a theory building process (Hyde, 2000; Spens & Kovács, 2006). The reasoning process starts with observations then generalizations about the studied phenomenon are made. In summary, inductive reasoning moves from a specific observation(s) to general law (Spens & Kovács, 2006). In this study, a deductive reasoning approach is used.

### 3.3.5 Interrelationship between each building block of the research

The research philosophy, research methodology and research method represent building blocks of the research. The interrelationship between each of the building blocks is shown in the following diagram.

**Figure: 3.1 Interrelationship between building blocks of research**



Source: Adapted from Grix (2002, p. 180)

\* Extended by the author

### **3.4 Research approach adopted by current study**

In this section onwards, an explanation of the adopted research philosophy, research strategy and method of reasoning applied for this study is discussed in greater detail.

Given the aims of the research, this study is based on the positions of positivism and objectivism. It uses a quantitative research strategy because it is commonly used in business ethics research and is relevant to this study. Using deductive reasoning, several variables from an established human behaviour theory, the theory of planned behaviour, and other variables as discussed in Chapter 2, are examined.

This research is cross-sectional or also known as one-time study. Data is collected at one point in time to provide snapshot of a particular phenomenon. In this cross-sectional study, data is collected using a survey (questionnaire) method and analysed quantitatively.

### **3.5 Research populations and samples**

At present, internal auditing functions are held either internally (in-house) or outsourced (contracted to service providers). In order to get good and representative samples, responses from internal auditors from various organisations (public and private sectors) are targeted.

In terms of the number of internal auditors in the U.K., the researcher faced difficulties in finding this information. There are no authorities or bodies in the U.K. that provide the statistics of internal auditors. Consequently, for the purpose of this

study, the researcher used the number of registered members in the Chartered Institute of Internal Auditors (CIIA) as the benchmark for the approximate number of internal auditors in the U.K. The CIIA is the professional body that is responsible for training, supporting and representing internal auditors in the U.K. and Ireland. As at July 2013, the CIIA had over 8,000 members.

For sampling purposes, 369 surveys were sent out to internal auditors in local councils, FTSE100, FTSE250 and business service providers. These organisations were selected because information regarding their internal auditing functions was public and could be accessed from their websites and annual reports.

In this study, a convenience sampling method was used. Bryman and Bell (2007) claim that a convenience sampling method is common in business and management research. The convenience sampling in this study is considered as reasonably representative because the internal auditors are selected from large organisations: local councils, FTSE100, FTSE250, UNIAC and business service providers. However, although there were elements of convenience in the sample design, the survey was targeted at actual internal auditors and not, say, trainees or students.

### **3.6 Data collection method**

Survey or questionnaire has been a common medium for data collection method in business ethics research (Ford & Richardson, 1994; Randall & Gibson, 1990). According to Cowton (1998), business ethics research examines real events of business, management and organisations. Cowton mentions that it is common for

business ethics researchers to find difficulties in getting good data on attitudes and behaviour. He also notes that there are always possibilities that the content of the survey used for collecting data may raise sensitive issues to some or perhaps the majority of the participants. This issue has also been raised by Dalton and Metzger (1992) who point out that questions in surveys may make participants feel embarrassed, threatened, stigmatized and incriminated. It is advised that business ethics researchers should carefully and delicately develop their survey otherwise the survey may not achieve a high response rate or the participants may not respond honestly (Cowton, 1998; Dalton & Metzger, 1992).

According to Cowton (1998) increasing challenges are faced by business ethics researchers in obtaining valid and reliable primary data. Cowton (1998) suggests researchers should consider using secondary data as either complementing or substituting the primary data. One of the secondary data sources that researchers could use is previous academic research. The researcher, however, found that the constructive and credible suggestion by Cowton is currently difficult to implement. This is because at present there is no empirical data available which would provide the researcher with related information needed in this study.

In this study, a personally administered survey technique is used for collecting data. The survey technique is chosen over other techniques, such as interview, because the survey technique serves more advantages to this study rather than the interview technique. The survey technique is cheap, quick, an easy tool to employ (Cowton, 1998) and is suitable for relatively large samples. In addition, the survey technique

does not involve face-to-face interaction. The absence of the researcher during the data collection period gives advantages to the participants, for example, they are under no pressure to answer the survey. In addition, there is a high probability that the answers they provide are more honest and true. The use of interview technique would provide little benefit to this study. The presence of the researcher during the interview might bring pressures to the participants while answering questions. Participants may act in a way to please the researcher; consequently there is a high possibility that the participants provide dishonest and untrue answers.

### **3.7 Scenario-based survey**

In the survey, participants are presented with hypothetical scenarios. Scenarios are defined as “stories which present hypothetical situations requiring action or judgment from respondents” (Wason & Cox, 1996, p. 155). Weber (1992) reports that scenario is a technique frequently used in empirical business research. Scenario-based surveys have been used in various studies including: ethical reasoning; ethical judgment and decision making preference; ethical behaviour (Weber, 1992) and whistle-blowing studies (Vadera et al., 2009). Scenarios have long been applied in social science research which studies attitudes, perceptions, beliefs and norms (Finch, 1987) and are most appropriate in studies involving judgment on sensitive issues (Robertson, 1993). This is because scenarios can be used to evaluate ethical judgments and behavioural intention (George & Mallery, 2003). The use of scenario-based survey has been claimed by many scholars to have advantages for ethical based studies (Beu et al., 2003; Weber, 1992).

The scenarios research technique was developed to allow for the pitfalls of conventional questionnaire (which use direct questions) and interview research techniques. In these techniques, vague questions are used without any specific reference. As a result, respondents may answer the questions based on their own mental picture of the task (Poulou, 2001) which may differ from one respondent to another. Scenarios are said to be superior to direct-questions because scenarios (1) provide greater realism by offering a range of situational factors that are similar to real ethical decision making situations (2) supply standardized stimuli to all respondents which enhances internal validity and measurement reliability (3) improve construct validity by focusing a respondent's attention on the research question (4) reduce social desirability response bias and (5) enhance a respondent's involvement and dramatize issues (George & Mallery, 2003).

As in any research technique, the hypothetical scenario technique is not without limitations. Despite its advantages, there is a risk when using hypothetical scenario; answers to hypothetical scenarios may not reflect the way a respondent may respond in actual situations. In other words, it is difficult to ascertain whether a participant would react in the real world in a similar way in which they respond to the scenarios. This limitation has caused researchers to study 'whistle-blowing intention' rather than actual whistle-blowing behaviour.

According to Poulou (2001), the number of scenarios used in surveys varies and the nature of the scenarios ranges from short and simple to longer and more complex. As reviewed by Poulou (2001) the number of scenarios used has association with the

nature of the scenarios. If the nature of the scenario is longer and more complex, the numbers of scenarios used is generally smaller. In other cases, the numbers of scenarios are also based on the complexity of the task given to the respondents (see Finch, 1987; Poulou, 2001; Weber, 1992). The complexity of the task may exist in various forms and they include a number of questions that follow each scenario. In a review of 26 studies, Weber (1992) clustered the number of scenarios into three groups. Weber found there were ten studies which used less than five scenarios in their research, eight studies that used nine to eleven, and eight studies that used fourteen to eighteen. Subsequently, in this study, three scenarios are considered appropriate as there are 30-item statements that participants are required to answer in each scenario. The issue of the number of scenarios has also been discussed by O'Fallon and Butterfield (2005) who found that too few scenarios may limit the ability of a researcher to manipulate the variables studied which later results in response bias. However, if too many scenarios are used respondents may feel overloaded.

### **3.7.1 Scenario development**

A review of previous whistle-blowing research in an accounting and auditing context was undertaken to help the researcher identify relevant scenarios. Table 3.6 shows the scenarios used in previous empirical whistle-blowing studies.

**Table 3.6: Scenario(s) used in previous whistle-blowing studies (accounting and auditing context)**

<b>(a) Internal audit context</b>		
<b>Article</b>	<b>Scenario</b>	<b>Scenario(s)</b>
Arnold and Ponemon (1991)	1 Scenario.	A situation where internal auditors found a series of bogus (inflated or falsified) invoices within a subsidiary's billing system. The internal auditor reports to director of internal audit who then promised to report to the authorities within the company, but no action was actually been taken by the director.
Xu and Ziegenfuss (2008)	1 Scenario.	The scenario was adapted from Arnold and Ponemon (1991)
Seifert et al. (2010)	1 Scenario.	A situation where a senior accountant discovered a suspicious sales revenue entry in general ledger. The accountant investigated the entry and found it was input by the CFO. The CFO explained that the entry was for a contract that was in negotiation and that it was needed to meet the earnings forecast for the quarter. The contract would be completed soon and subsequently would be backdated. At the third quarter of the fiscal year the accountant had still not received the contract. The accountant was very concerned about the misreporting of revenues and considered reporting the CFO actions within the corporation.
<b>(b) Accounting and external audit context</b>		
Liyanarachchi and Adler (2011)	3 scenarios.	<p><b>Scenario 1: Fake invoices.</b> This scenario was adapted from Arnold and Ponemon (1991).</p> <p><b>Scenario 2: Mysterious bank*.</b> A situation where an internal auditor found an unusual and large decrease in cash-flow statement for the quarter. The internal auditor conducted an investigation and it appeared the decrease in cash was due to the purchase of equipment in the last quarter. Upon further investigation, the internal auditor found no such purchase took place. The investigation led to a deposit of a significant amount of cash into an unknown bank account and also multiple one-off payments to this account. The internal auditor informed the director of internal audit, but nothing happened. Due to the lack of response, the internal auditor asked the director to take action. The director told the internal auditor that he would be most unlikely to receive a promotion or find other work in another public organisation if he disclosed the information.</p>

		<p><b>Scenario 3: Misclassification*.</b>  A situation where an internal auditor found that the local community pool has a significant increase in sales for the past 5 years. The internal auditor discovers that the pool has been disclosing higher profits to avoid being closed down. The internal auditor reports this situation to the director of internal audit but nothing has happened. The internal auditor told the director that he will report this matter to the CEO of the council. The director threatened the internal auditor that if he proceeded with his plan, he would lose his bonus for the year along with other benefits (car and apartment) which are owned by the council.  * It is not mentioned in the article whether these scenarios were developed by the researchers or were adapted from literature.</p>
Brennan and Kelly (2007)	4 scenarios.	<p><b>Scenario 1: Uncovering a minor fraud.</b>  A situation of an audit senior within an audit team at Morris Ltd. The company has expanded rapidly over the last three years. While auditing the stock purchases the audit senior discovers that the Production Manager insists on paying one of the suppliers in cash only. When the audit senior asks the Production Manager about this situation he explains that he is able to negotiate discounts by paying for the goods in cash. Upon further investigation, the audit senior discovers that the Production Manager is overstating purchases and taking the money for himself. The scheme has gone unnoticed because of weak internal controls and the close relationship between the Production Manager and Mr. Morris, the Managing Director. The audit senior estimates the amount of the cash misappropriated in the current period to be €12,000. The audit senior reports the issue to the Audit Partner who assures him that the matter will be dealt with and is thanked for his diligent work. However during the final audit (six months later) the audit senior discovers that the scheme is still in operation.</p> <p><b>Scenario 2: Disagreement over the proper accounting treatment.</b>  A situation where an audit senior at Collins Ltd. becomes concerned about the company's treatment of R&amp;D expenditure. In particular he believes that the company is classifying some research expenditure as development expenditure and capitalising it in the balance sheet. This accounting treatment has a material impact on the financial statements. He passes on his concerns to the Audit Partner who subsequently invites him into his office. While noting the audit senior's concern he explains that the amounts involved are not material from the overall group perspective.</p>

	<p>The Audit Partner reminds the audit senior that this client is a very important client for the audit firm globally. Noting that the audit senior still has a year to do under the terms of his training contract, and concerned for his welfare and career prospects, the Audit Partner suggests that the audit senior ‘let sleeping dogs lie’.</p> <p><b>Scenario 3: Obligation to investigate suspected fraud or error.</b></p> <p>A situation where audit senior carries out the interim audit on First Province Bank. After detailed investigation he becomes concerned about irregularities in relation to the variable interest rate charged on mortgages to first time buyers. In particular he has noticed that in a number of branches the variable rate charged to this class of customer fluctuates more often than the underlying base rate, with the consequential effect of overcharging mortgage holders in the month in which the fluctuation occurs. In further examination, he recognizes that substantial sums of money could be raised by even a small adjustment to the variable rate. He raises these concerns with the Audit Partner who assures him that there is nothing to worry about citing the reputation of the bank and its management, but curiously did not elaborate further.</p> <p><b>Scenario 4: Serious public interest misdemeanour.</b></p> <p>A situation of an audit senior in the audit team performing an audit at Public Hospital Ltd. During the course of his audit work, he discovers a file relating to Hospital Waste Ltd., a specialist firm contracted by the hospital to safely dispose of its used surgical equipment. He discovers a memo from the Manager of the hospital’s Waste Disposal Unit to the Chief Executive of the Hospital, outlining her concerns regarding the repute of Hospital Waste Ltd. Specifically her concern relates to a conversation she overheard among Hospital Waste Ltd. employees indicating that all the waste is being buried. After reading through the file he uncovers the response from the Chief Executive who notes that there is no documentary evidence for her allegations and that in his opinion no further investigation of the matter is warranted. This reply is dated seven months ago. The audit senior brings his concerns to the Audit Partner who reminds him that the audit is being performed on Public Hospital Ltd. and not on Hospital Waste Ltd. and that there is nothing he can do.</p>
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In this study, participants were given three hypothetical scenarios. The scenarios were adapted from studies by Brennan and Kelly (2007) and Liyanarachchi and Adler (2011). The combination of three scenarios is a good range as each scenario represents a real life situation. This is crucial in order to get the respondents easily engaged with the case and give more considerate responses. In the scenario-based survey participants are asked how they would respond to the scenarios presented in the survey. Participants are required to evaluate the action taken by the actor in each scenario, where they need to state their agreement with the item statements that follow each scenario. They are asked to indicate their degree of agreement with each of the item statements. This study used a five-point (1 = Strongly Disagree to 5 = Strongly Agree) Likert-type scale.

Scenario 1 describes a situation where an internal auditor encountered a series of bogus (inflated or falsified) invoices which have been paid to customers. The discovery led the internal auditor to raise the issue to the director of internal audit. Unsure of the action which the director assured to take, the internal auditor further plans to report the situation to the chief financial officer. The director threatens the internal auditor with losing his job if he continues with his plan.

In Scenario 2, participants were presented with a scenario on overstating purchases which has occurred due to the weak internal controls of the company. At the same time, the close relationship between the production manager and managing director make the recording of overstated purchases easier. The reporting of the overstated purchases situation to the director of internal audit, by the internal auditor, has seen

unfavourable results where the director has chosen to do nothing concerning the situation.

In the third scenario, participants were presented with a situation of wider concern involving public safety risks. Specifically, the internal auditor in the scenario discovered the illegal and unethical practice of dumping used syringes in an open space in a nearby residential area. The concern that the internal auditor has for the good reputation of the firm and the public's safety has made the internal auditor meet with the responsible staff and asked them to take immediate corrective action. Realizing no action has been taken by the responsible staff, the internal auditor raises the issue with the chief executive officer, but still no action has been taken.

There is enough difference between the scenarios. Scenario 1 describes a situation involving falsified invoices (internal issue), Scenario 2 depicts a situation on collusion and tiers of hierarchy (internal issue) and Scenario 3 illustrates a situation involving public harm (internal and external issue). Overall, there is a variation of seriousness in the scenarios used in this study.

Some changes to the original scenarios were made, such as names of individuals changed to names common to the U.K. context. Some words or terms in the original scenarios were re-worded using British English. This is necessary to infuse the U.K. environment in the scenarios. To do this, assistance from supervisors was obtained.

There were 30 questions following each scenario and the same questions were repeated for each scenario. The 30 questions covered items measuring attitude,

injunctive norm, descriptive norm, perceived-behavioural control, self-efficacy, moral intensity and intention variables. The proportion of the items to each construct and their sources are shown in Table 3.7.

**Table 3.7: Number of items and sources for each variable**

<b>Construct</b>	<b>Number of items</b>	<b>Source</b>
<b>(A) Questions that follow each scenario</b>		
<b>Moral intensity</b>	6	Singhapakdi et al. (1996)
<b>Attitudes towards whistle-blowing</b>	4	Taylor and Todd (1995b)
<b>Injunctive norm</b>	6	Rhodes and Courneya (2003)
<b>Descriptive norm</b>	4	Rhodes and Courneya (2003)
<b>Perceived behavioural control</b>	2	Tavousi et al. (2009)
<b>Self-efficacy</b>	4	Tavousi et al. (2009)
<b>Intention</b>	4	Harding, Mayhew, Finelli, and Carpenter (2007)
<b>(B) Direct Questions</b>		
<b>Organisational-professional conflict</b>	4	(Aranya and Ferris (1984); Shafer, Park, and Liao (2002))
<b>Awareness towards whistle-blowing protection legislation</b>	5	Ramayah, Lee, and Lim (2012)
<b>Social desirability response bias</b>	20	Steenkamp, De Jong, and Baumgartner (2010)
<b>Total of items</b>	59	

### **3.7.2 Controlling measurement error**

This section outlines the actions taken by the researcher to minimize biases.

#### **3.7.2.1 Social desirability bias**

Nederhof (1985) describes social desirable response as a “tendency on behalf of the subjects to deny socially undesirable traits and to claim socially desirable ones, and the tendency to say things which place the speaker in a favourable light” (p. 264). In order to minimize the social desirability bias, participants were given assurance of

their anonymity and confidentiality. Respondents were informed that the researcher was very interested in their opinion; therefore there were no right or wrong answers. They were also informed that information derived from the survey would be kept confidential and used only for the purpose of the research.

In addition, items to measure bias were included in the survey. The Balanced Inventory of Desirable Responding (BIDR) scale, introduced by Paulhus (1991), was used to measure socially desirable response bias. This scale was chosen because it has been regarded as the best measure of socially desirable response bias (SDRB) (Gignac, 2013; Paulhus & Reid, 1991) and it has been widely validated (Meston, Heiman, Trapnell, & Paulhus, 1998). The BIDR contains 40-items which were originally measured using a 7-point Likert Scale. The BIDR consists of two subscales. First, the Self-Deception scale, which is designed to assess the tendency of respondents to give ‘unconscious positive bias’ responses (Steenkamp et al., 2010). The unconscious positive bias response may be due to personality factors such as anxiety, achievement motivation and self-esteem (Lee & Sargeant, 2011). Second, the Impression Management scale, which is designed to measure deliberate self-presentation to an audience (Paulhus, 1991) or in other words, “responding that is guided by a desire to create a favourable impression on others” (Kroner & Weekes, 1996, p. 325).

In this study, the 40-item scale was considered lengthy, thus only 20-items were used with 10-items for each subscale. Items which were potentially offensive and/or inappropriate were excluded while retaining the balanced structure of the scale (each

subscale contained 5 positively worded items and 5 negatively worded items). The selection of the items was adopted from Steenkamp et al. (2010).

In addition to the BIDR scale, the use of hypothetical scenarios also helped to reduce the social desirability bias rate (Butterfield, Trevino, & Weaver, 2000; Robertson, 1993). Empirical evidence suggests that people react more honestly to the ethical problem in question if they are presented with vignettes, rather than if they are asked for their views using direct questions (Weber, 1992).

### **3.7.2.2 Order of scenarios effect on bias**

In addition to the social-desirability response bias, the researcher was aware of other potential biases that required consideration. As three scenarios were presented the ordering of these scenarios was important to alleviate a bias effect. In this study, however, the use of a web-survey meant it was not feasible to use different sets of surveys. Also, there was a logical order to the scenarios in terms of their breadth and depth. Therefore, there was only one set order of the scenarios presented to all of the respondents and the same set was used in both online and postal surveys.

### **3.7.2.3 Acquiescence and dis-acquiescence bias**

According to Podsakoff, MacKenzie, and Podsakoff (2012), situations more commonly known as acquiescence (yea-saying) and dis-acquiescence (no-saying) always occur in a survey that asks for a participant's level of agreement. In this study, the problem of acquiescence and extreme response bias was also considered. In the item statements, several negatively worded items were included. The method

of alternating negative and positive worded items has been applied and discussed in previous studies (Nunnally, 1978) and is commonly used to reduce acquiescence and extreme response biases. It has also been found that questionnaires which contain both positive and negative worded statements force greater attention from the participants in assessing and answering the item statements. Consequently these methods were adopted for the research. The researcher was also aware of the need to reverse the scales during the data analysis process.

#### **3.7.2.4 Common method variance (CMV) bias**

CMV is described as “variance that is attributable to the measurement method rather than to the constructs the measures represent” (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879). CMV is a common source of bias in self-reporting surveys and should be attended to (Chang, Van Witteloostuijn, & Eden, 2010) because it may affect validity and reliability of a study.

In this study, the researcher used different anchor label scales in different parts of the questionnaires. Also, every point of the response scales was labelled (rather than only the end points) as Krosnick (1991) notes that labelling is also effective for reducing item ambiguity. Although there is a recommendation in the literature for researchers to use different scale formats such as Likert, Thurstone, Guttman and semantic differential in a survey, the suggestion is not without limitation. According to Nunnally and Bernstein (1994), although it is possible to translate some types of scale formats into other scale formats (for example: translate Likert-scales into semantic differential), without changing the content or properties of the items, the

process is not always easy and it is a worry that the conceptual meaning of the measures may change. Accordingly, the researcher chose to maintain content validity of the items otherwise the research may have been exposed to a bigger threat - a threat to variable validity rather than CMV, as explained in MacKenzie, Podsakoff, and Podsakoff (2011).

Secondly, the mixture of positive and negative worded items used to cater for acquiescence and dis-acquiescence bias could also be used to cater for CMV bias.

Thirdly, in the cover page of the questionnaire, the contents were written with care. This was to ensure that words and statements were written in a way which would encourage the participants to (voluntarily) participate and provide honest answers in their responses. According to Podsakoff et al. (2012) the cover story and instructions have their own role in persuading participants to provide accurate answers to the questions. In the cover page, the aim of the study was presented to inform the participants of the need to answer the surveys. In addition, the term 'whistle-blowing' was defined as the researcher felt it was important to define the term for the context of the study. Refer section 2.1 for the whistle-blowing definition.

### **3.7.3 Types of questions and scales of measurement**

In the survey, participants were presented with close-ended questions. Close-ended questions have been used in previous whistle-blowing literature and other ethics studies. They make analysis of responses easier and less ambiguous. A five-point Likert scale was used in all of the scaled question items. Likert scale is the most

common scale used in survey research (Neuman, 2006). A five or seven-point Likert scale was frequently employed in previous studies (Malhotra & Peterson, 2006) as it was found adequate for most items (Hinkin, 1995).

In this study, there were three types of label used in the five-point Likert scale. First, scales which denote 'Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5)' were used to assess the respondent's level of agreement on the 30 questions that follow each scenario. Second, the scales of 'Never (1), Almost Never (2) Occasionally/Sometimes (3), Almost Every Time (4) and Every Time (5)' were used to assess the respondent's level of frequencies regarding the organisational-professional conflicts they encountered during their audit work.

Third, scales of 'Very Untrue of Me (1), Somewhat Untrue of Me (2), Neutral (3), Somewhat True of Me (4) and Very True of Me (5)' were applied in the 20-item BIDR.

The selection of a five-point scale, over a seven-point scale, was based on a number of reasons. Firstly, the five-point scale is quite simple (Dawes, 2008) considering there are a large number of questions following each scenario. In addition, the tasks given to the participants require them to assess their level of agreement on each item of the examined variables. The assessment task for a large number of questions can be considered quite complex. Using more finely graded scales (for example, a seven-point scale) requires participants to critically assess and answer each item statement and there is a concern that it may raise some drawbacks to the quality of the response given by the participant; and some might even give up completing the questionnaire.

Imposing too many questions and using a very detailed scale, at the same time, might cause mental fatigue and could subsequently jeopardize the answers, or the participants may end their participation without completing the whole survey. This could lead to a high non-response rate. As mentioned by Dawes (2008), there is sufficient evidence from previous literature which reports that reliability and validity of responses are improved by using five to seven-point scales. The use of a more finely graded scale (for example, more than seven-point scale) does not further improve the reliability and validity.

### **3.7.3.1 Measurement of dependent variable – whistle-blowing intention**

Whistle-blowing intention refers to the likelihood of internal auditors to report or disclose any unethical and/or illegal practices in their workplaces to those who have authority to take remedial action(s). For the purpose of this study, internal auditors were asked for their intention to blow the whistle. Whistle-blowing intention was measured by asking participants to indicate their willingness to blow the whistle on the actor's action, as presented in the three scenarios. There were four items used to measure the whistle-blowing intention, adapted from Harding et al. (2007). The items are (1) "I intend to blow the whistle on the ...", (2) "I would not blow the whistle on the ...", (3) "If I had the opportunity, I would blow the whistle on the ...", and (4) "To the extent possible, I would try to blow the whistle on the ...."

Participants were asked to indicate their agreement on the four item statements. Participants who scored higher on the (positive) item statements were more likely to

agree that there was a high possibility that they would blow the whistle on the actor's action. Those who scored lower on the (positive) statements were more unlikely to agree that there was a high possibility that they would blow the whistle. The internal consistency, or reliability, between the items or item inter-relatedness in measuring a variable, was measured using Cronbach's alpha value. Cronbach's alpha value for intention in each scenario is .85 (Scenario 1), .89 (Scenario 2) and .94 (Scenario 3). The alpha value of 0.60 is 'good', 0.70 is 'satisfactory' and 0.80 is considered as 'acceptable' (Bryman, 2012). Therefore, there is an acceptable level of internal consistency between the items used to measure whistle-blowing intention.

### **3.7.3.2 Measurement of independent variables**

#### **3.7.3.2.1 Attitude towards whistle-blowing**

Taken from the work by Ramayah et al. (2012), attitude refers to a respondent's favourable or unfavourable position towards the behaviour being studied. The attitude towards whistle-blowing was measured by asking for the participant's agreement on four item statements which were adapted from a study on information technology usage by Taylor and Todd (1995b). The items are (1) "Blowing the whistle on the ... would be a good idea", (2) "Blowing the whistle on the ... would be a wise idea", (3) "Blowing the whistle on the ... would be a pleasant experience", and (4) "I like the idea of blowing the whistle on the ..."

Participants who scored higher on the (positive) item statements are more likely to agree that blowing the whistle on the actor's action in the scenario is appropriate.

Those who scored lower on the (positive) statements are more likely to agree that blowing the whistle on the actor's action is inappropriate. Cronbach's alpha value for attitude in each scenario is .32 (Scenario 1); .40 (Scenario 2) and .42 (Scenario 3). The threshold internal consistency value, suggested by Nunnally, is .70 (Ayers & Kaplan, 2005; Bandura, 1986). The internal consistency values for attitude gained in this study are far from the threshold value and are considered unacceptable (George & Mallery, 2003). The low internal consistency value of attitude shows there is low or weak inter-relatedness between the items.

This attitude measurement, however, has been widely used in previous studies. In the original source, the items have Cronbach's alpha value of .85. The items have the ability to measure the attitude variable. Although the internal consistency value is relatively low in this study, the high reliability value obtained in previous studies show the validity of the items in measuring attitude. In a study that measures a more sensitive topic, such as whistle-blowing, the items may need to be refined or additional items may be needed to measure attitude.

#### **3.7.3.2.2 Injunctive norm**

Injunctive norm refers to the perceptions of important people's approval on the participant's (whistle-blowing) behaviour (Park & Smith, 2007). This variable was measured using six items and were adapted from Rhodes and Courneya (2003). The items are (1) "Most people in my family would want me to blow the whistle on the ...", (2) "Most people in my family would approve if I blew the whistle on the ...", (3) "Most of my friends would want me to blow the whistle on the ...", (4) "Most of

my friends would approve if I blew the whistle on the ...”, (5) “Most of my work colleagues would want me to blow the whistle on the ...”, (6) “Most of my work colleagues would approve if I blew the whistle on the ...”

In measuring this variable, the participants were asked to indicate their agreement on the approval they may get from their family, friends and work colleagues on their (participant) action to blow the whistle. Participants who scored higher on the (positive) item statements are more likely to agree that significant others (family, friends and work colleagues) agree with them concerning the action to blow the whistle on the actor’s action. Those who scored lower on the (positive) item statements are more unlikely to agree that the significant others agreed to them blowing the whistle on the actor’s action. Cronbach’s alpha value for injunctive norm in each scenario is .87 (Scenario 1), .91 (Scenario 2) and .94 (Scenario 3). This means there is an acceptable level of internal consistency between the six items in measuring the injunctive norm.

### **3.7.3.2.3 Descriptive norm**

Descriptive norm refers to the participant’s perception whether the important others themselves perform the (whistle-blowing) behaviour (Park & Smith, 2007). There were four items used to measure this variable. The items were adapted from Rhodes and Courneya (2003). In contrast to the injunctive norm, respondents were asked about their agreement that their family, friends, work colleagues and most people who they know would actually blow the whistle. The items are (1) “Most of my family members would blow the whistle on the ...”, (2) “Most of my friends would

blow the whistle on the ...”, (3) “Most of my co-workers would blow the whistle on the ...”, and (4) “Most of people I know would blow the whistle on the ...”. Subjects who scored higher on the (positive) item statements are more likely to agree that the significant others would blow the whistle on the actor’s action. Those who scored lower on the (positive) items statements are more unlikely to agree that the significant other would blow the whistle on the actor’s action. Cronbach’s alpha value for injunctive norm in each scenario is .83 (Scenario 1), .85 (Scenario 2) and .91 (Scenario 3). This means there is an acceptable level of internal consistency between the four items in measuring the descriptive norm.

#### **3.7.3.2.4 Perceived behavioural control**

Perceived behavioural control refers to the participant’s perceptions of the controllability or power they have in performing the whistle-blowing behaviour. There were two items used to measure the perceived behavioural control variable. The items were applied from Tavousi et al. (2009). The items are (1) “To blow the whistle on the ... would be entirely up to me” and (2) “To blow the whistle on the ... would be entirely within my control”.

The participants were asked about their agreement on the power they possessed to blow the whistle. Participants who scored higher on the (positive) items statements were more likely to agree that the end decision to blow or not to blow the whistle is totally within their control and vice versa. Cronbach’s alpha value for perceived behavioural control in each scenario is .60 (Scenario 1), .86 (Scenario 2) and .91 (Scenario 3). There is a relatively lower internal consistency of perceived

behavioural control in Scenario 1 than in Scenario 2 and Scenario 3. This was caused by the variance in the scenarios. Scholars in whistle-blowing studies have found that respondents are sensitive to the situations presented in scenarios (Kaplan & Schultz, 2007; Miceli et al., 1991; Near & Miceli, 1995; Near, Rehg, Van Scotter, & Miceli, 2004). Overall, in this study, the internal consistency of the perceived behaviour control ranged from good to acceptable.

#### **3.7.3.2.5 Self-efficacy**

Self-efficacy is about a participant's perceptions of their capabilities to overcome a series of obstacles in performing the whistle-blowing behaviour. The participants were asked to indicate their agreement on four item statements which were adapted from Tavousi et al. (2009). The items are "I am confident that I would be able to blow the whistle on the ...", (2) "I am confident that I would be able to blow the whistle on the ... even if my friends urged against it", (3) "I am confident that I would be able to blow the whistle on the ... even if I am in a situation that rejects the practice" and (4) "I am confident that I would be able to blow the whistle on the ... even if the management teams discourage the practice".

Participants who scored higher on the (positive) item statements were more likely to agree that they were capable to overcome any obstacles they faced in blowing the whistle on the actor's action. Those who scored lower on the (positive) statements were more unlikely to agree that they were capable of overcoming obstacles in blowing the whistle. Cronbach's alpha value for self-efficacy in each scenario is .90

(Scenario 1), .90 (Scenario 2) and .93 (Scenario 3). This means there is an acceptable level of internal consistency between the four items in measuring the self-efficacy.

#### **3.7.3.2.6 Organisational-professional conflict**

Organisational-professional conflict refers to a situation when professional loyalty is incompatible with organisational loyalty. For this variable, participants were asked to indicate the frequency in which they faced situations that put them in conflict between professional loyalties and organisational loyalties. The four item statements were adapted from Aranya and Ferris (1984) and Shafer et al. (2002). The items are (1) “My current employment situation gives me the opportunity to express myself fully as a professional”, (2) “Being an internal auditor in the organization(s) I audit has significantly put me under pressure to perform my work in ways that could directly and/or indirectly breach compliance with professional standards, (3) “In the organization(s) I audit, I have conflict(s) between applying the work standards and procedures outlined by the company that I work for and pursuing with my professional judgments” and (4) “There is/are situation(s) where my professional judgments are overridden by the demands of the organization that I work for”. The third and fourth items are answered in-house internal auditors. While for outsource internal auditors the item three and fourth are replaced by “In the organization(s) I audit, I have conflict(s) between applying the work standards and procedures outlined by the client company(ies) and pursuing with my professional judgments” and “There is/are situation(s) where my professional judgments are overridden by the demands of the client organization(s)”.

Participants who scored lower on the (positive) item statements have minimal or no conflicts during their audit work and vice versa. Cronbach's alpha value for organisational-professional conflict is .30. The internal consistency values for organisational-professional conflict gained in this study are far from the threshold value and are considered unacceptable (George & Mallery, 2003). The low internal consistency value of organisational-professional conflict shows there is low or weak inter-relatedness between the items used in this study to measure the organisational-professional conflict variable.

The organisational-professional conflict measurement item, however, has a Cronbach's alpha value of .77. The items have the ability to measure the organisational-professional conflict.

#### **3.7.3.2.7 Awareness of the whistle-blowing protection legislation**

Awareness of the whistle-blowing protection legislation refers to the participant's possession of knowledge on the existence of any whistle-blowing protection legislation in the U.K. Specifically, participants were asked about their knowledge on the existence of PIDA, the legislation that provides protection to whistle-blowers, and PCaW, a charity that provides advice to individual(s) in a dilemma regarding whistle-blowing. In assessing the participant's knowledge about the existence of PIDA and PCaW, they were required to state 'Yes' if they knew they existed and 'No' if they did not know they existed. They were also required to indicate their agreement on three item statements regarding whistle-blowing protection legislation in the U.K. The three item statements were adapted from Ramayah et al. (2012). The

items are (1) “Whistle-blowing legislation in the U.K. helps deter unethical behaviour(s)”, (2) “Whistle-blowing legislation in the U.K. helps deter illegal behaviour(s)” and (3) “Whistle-blowing legislation in the U.K. provides effective protection to whistle-blowers”.

Subjects who scored higher on the (positive) items statements were more likely to have a positive perception of whistle-blowing protection legislation. Those who scored lower on the statements were more likely to have a negative perception of whistle-blowing protection legislation. Cronbach’s alpha value for awareness is .68. In other words, there is a good level of internal consistency between the three items used to measure awareness of whistle-blowing protection legislation.

### **3.7.3.3 Measurement of moderating variable – moral intensity**

In this study, moral intensity was measured using the joint effect of all six components of moral intensity, as introduced by Jones (1991). Each component was measured using one item. The items for moral intensity were adapted from Singhapakdi et al. (1996). The items are (1) “The overall harm (if any) done as a result of the director of internal audit’s action would be very small”, (2) “Most people would agree that the ... action is wrong”, (3) “The ... action would not cause any harm in the immediate future”, (4) “There is very little likelihood that the ... action would actually cause any harm”, (5) “If the ... is a personal friend of the ..., the action is wrong” and (6) “The ... would harm very few people (if any)”.

Cronbach's alpha value for moral intensity in each scenario is .52 (Scenario 1), .55 (Scenario 2) and .55 (Scenario 3). According to George and Mallery (2003), an internal consistency value that is between 0.5 and 0.6 shows a poor level of reliability.

#### **3.7.3.4 Measurement of control variables - demographic variables**

Participants were asked to provide information on age, gender, number of years' experience working in internal audit, type of client and employment position. These demographic characteristics are standard control variables that have been examined in many studies.

#### **3.7.4 Survey design**

The survey was fourteen pages long and divided into five sections. On the cover page, participants were informed about the aims of the survey, the length of time to complete the survey, the anonymity and confidentiality of the participants, the donation of £2 (provided by the Financial Ethics and Governance Research Group, University of Huddersfield Business School) for each response received, as a token of appreciation to the participants, and the contact details of the researcher and the supervisor.

In the first section, participants were required to provide details of their demographic background. In the second section, organisational-professional conflict was assessed. The participant's awareness of whistle-blowing protection legislation in the U.K. was then evaluated in the third section. In the fourth section, respondents were presented

with the three hypothetical scenarios. The items of BIDR which were used to address the social desirability bias issue were presented in the last section (refer Appendix G for the survey).

According to Brennan (1992) mail surveys are relatively cheaper than other survey methods such as interview. However, a low response rate has been mentioned as one of its pitfalls. Olson (2006) acknowledges the situation in developed countries which have faced low response rates over the past three decades. As this study used mail/postal surveys, greater care was given to minimize non-response rate. In addition, the researcher integrated various techniques during the survey design stage to help enhance response rates. These are outlined below:

1. Each survey was printed on pale yellow (cream) colour (for initial mailing) and light blue colour (for reminder mailing), A3 size paper. The A3 paper was then folded into a booklet resulting in an A4 page size. Literature states that printing surveys on coloured paper increases the response rate (Fanning, 2005). Coloured paper has a positive ‘psychological effect’, as noted by Hartley and Rutherford (2003). Blue and yellow have been identified as two primary colours which improve response rate over black and white (Dillman, 2000). They are “viewed as [a] cool colour[s] and [typify] restraint” and yellow implies “warmth” (Brennan & Charbonneau, 2005, p. 5).
2. In the cover page of the survey, the purpose of the research and the written instructions to complete the survey were outlined. Assurance on confidentiality and anonymity were given to enhance the participant’s

confidence to answer the survey. According to King and Bruner (2000), assuring participants of their anonymity would also minimise social desirability bias.

3. The survey has 14 printed pages including the cover page. Although the survey is quite long, its length is within the recommendation from the literature. Neuman (2006) suggests a 15-page survey is appropriate for well-educated respondents.
4. As a matter of respect, a personal salutation was used for the participants where their names were known (especially internal auditors from local councils and service providers as this information is made public). There were 207 names of internal auditors that the researcher was able to find through the request of information from the Freedom of Information (FOI) website (WhatDoTheyKnow website) and annual reports.
5. In the covering letter (of initial mailing), the deadline date for returning the survey was provided. Approximately 3 weeks were allocated for the participants to complete the surveys. The use of deadline dates has been found to be very useful in obtaining immediate response (Ferris, 1951).
6. In each of the surveys, a return pre-paid envelope was enclosed. This has been widely used and seems to be generally accepted practice in mail surveys.

7. On the cover page of the survey an appeal was made to the participants for their response. They were informed of the importance of their honest response to the results generated from the survey. They were also acknowledged for their invaluable experience and knowledge to the study.
8. The participants were also offered an opportunity to ask for a copy of the results by emailing their request to the researcher.
9. A follow-up was done approximately one month after the deadline for returning the survey ended. A copy of the survey, a new covering letter and a pre-paid enveloped were enclosed.

In an attempt to measure non-response bias, a simple statistical analysis was used to compare the answers provided by early respondents and late respondents. Late respondents are taken as a proxy of non-respondents. Details are discussed in Chapter 4.

### **3.7.5 Survey administration**

In an attempt to receive as many responses as possible from participants, surveys were distributed using various means, one method of distribution at a time. Initially, this study used online survey and professional bodies with direct access to their members, currently working as internal auditors, were targeted for their assistance. In the first attempt the Institute of Chartered Accountants in England and Wales (ICAEW) was approached. The ICAEW was chosen because it is recognized and the biggest accounting professional body in the U.K. A series of discussions and

meetings with the Ethics Manager in the professional body were held. Upon approval, as agreed by the Ethics Manager, the researcher emailed the link to the online survey to the Ethics Manager for further action.

The researcher was not given any access to the members' contact details. The link was distributed to relevant ICAEW members on behalf of the researcher. The researcher was informed that the link to the online survey would be copied to those who currently work as an internal auditor or provide internal auditing services to organisations. The researcher was not directly involved with the process and thus did not know the exact number of surveys that had been distributed. Two weeks after the online survey was launched (May 2013), only five participants had completed the survey. No additional responses were received in the following two months. Due to the very minimal number of responses received, the researcher had to agree with the Ethics Manager's opinion that even if the reminder to the survey was sent to the ICAEW members, it would not help much in improving the response rate. The researcher then proceeded with a second plan and The Chartered Institute of Internal Auditors (CIIA) was approached. CIIA is the professional body that is responsible for training, supporting and representing internal auditors in the U.K. and Ireland. However, the researcher was faced with obstacles and difficulties to approach the key person in the CIIA. Consequently, due to the time constraint, the researcher proceeded with a third plan.

In November 2013, UNIAC was approached. UNIAC is a shared service provider owned by eleven universities that provides internal auditing and assurance services.

UNIAC was selected because it is the market leader in providing internal audit services to the Higher Education sector in the U.K. The University of Huddersfield is one of UNIAC's members. UNIAC has a team of expertise who have various professional qualifications and wide experience which is of extreme value to this study. One of the directors at UNIAC was emailed to ask for his assistance. The director agreed to distribute the link to the online survey to the UNIAC internal audit specialist team. Attached in the email was a soft copy of the survey. The soft copy was an alternative to the online version, considering there are people who may prefer a paper-version survey rather than online survey. Participants who preferred to answer the survey using the paper-version were asked for their kindness to print the survey and mail the completed survey to the researcher. Providing the respondents with alternative options, the online or the paper version, was essential to increase the response rate.

Knowing that UNIAC could only provide a limited number of participants, another method for distributing the questionnaire was needed. Subsequently, in the fourth plan, mail surveys were used. Internal auditors in local councils, FTSE100 and FTSE250 and business service providers were approached. These organisations were selected for several reasons. First, participants from these organisations would provide the researcher with reasonably representative samples. For example, participants from local councils represent the voice of internal auditors employed in public organisation, while responses from FTSE represent internal auditors employed in private organisations. Responses from the business service providers represent the voice of contracted internal auditors. Secondly, information on the internal auditors

in these organisations was easier to obtain. Names and contact details of internal auditors in the local council were gained from the Freedom of Information site, WhatDoTheyKnow. The annual reports of the FTSE organisations were checked for their availability of the internal auditor position(s). Surveys were sent to the companies that had internal audit departments.

Surveys were sent out using a personal salutation to the participants whose names were known. Where the names of internal auditors in the organisations were not known, surveys were addressed to Head of Internal Audit. The addresses of the FTSE companies were taken from the company information provided on the London Stock Exchange website. Twelve business service provider companies which provide internal audit services were also approached. These companies were selected because the information and contact details of the employees that provide internal audit services were made public in their websites. The mail surveys were posted in early December 2013. One hundred surveys were posted to internal auditors in local councils across the U.K. Ninety-one and ninety-seven surveys were posted to internal auditors in the FTSE100 and FTSE250 respectively. A further eighty-one surveys were posted to the service provider companies located across the U.K. The hard-copy survey was used because it provided convenience to the participants. The hard-copy survey is handy and practical and does not need participants to sit in front of computer or to have access to the internet. Also, in an era when professionals receive so many unwanted emails and less post, it was thought that mailed questionnaires might be an attractive approach. The use of hard-copy survey enabled

participants to answer the survey at any time and in circumstances in which they felt comfortable.

The mail surveys were attached with a covering letter which was signed (handwritten) by the supervisor and researcher. In the letter, four main points were highlighted. First, participants were given the end date by which they were expected to return the completed surveys. Second, participants were asked to use the enclosed pre-paid envelopes and return the completed surveys before the end date. Third, respondents were given information on the approximate time it may take to complete the survey. Lastly, respondents were informed about the £2 donation which was provided by the Financial Ethics and Governance Research Group, University of Huddersfield Business School for each of the responses received. The Financial Ethics and Governance Research Group listed four charitable bodies and the respondents were asked to select a body for the donation. The four charities were (1) Amnesty International (2) Macmillan Cancer Support (3) National Trust and (4) Save the Children. The idea to provide a £2 charitable donation per response was a token of appreciation to the respondents.

In February 2014, a reminder to the survey was sent. A copy of the survey was attached to a new introductory letter and a pre-paid envelope was enclosed. In the reminder stage, questionnaires were printed on different coloured paper. The different colour (see subsection 3.7.4) enabled the researcher to easily distinguish the early respondents from the late respondents. A total of 359 surveys were posted in the reminder stage. Ten of the internal auditors from the initial mailing were

withdrawn from the list of samples. These included those who had returned the survey with letters mentioning their reluctance to participate in the survey due to sensitivity issues, in the first instance, which the persons individually perceived and, secondly, the policy of their company did not allow them to participate in any surveys. Table 3.8 summarizes the details of the surveys.

**Table 3.8: Survey response rate**

	Mail		Online
	First mail	Reminder	
<b>Total distributed</b>	369	359	Unknown
<b>No. of responses</b>	88	38	18
<b>Unusable/partially complete</b>	2	0	10
<b>Usable</b>	86	38	8
<b>Usable response rate</b>	34%		Unknown

### 3.7.6 Pre-testing

The contents of the survey were pre-tested before being sent out to actual samples. According to Hunt, Sparkman, and Wilcox (1982) the pre-testing is essential to ascertain how well the survey works.

In this study, the purpose for conducting pre-testing was, first, to examine whether participants were able to understand the questions, second, whether the questions were understood in the same way by all participants, and third, whether there were any other problems which may arise from the questionnaire itself. In the pre-testing stage, the researcher distributed the questionnaire to ten employees in the University

of Huddersfield Business School. These individuals were selected based on their academic background and the relevant experience they possessed. The feedback received in the pre-testing stage was then brought to the supervisors for further discussions. Minor amendments to the questionnaire were made based on each of the supervisor's suggestions.

### **3.8 Analysis plan**

This section outlines the statistical analysis techniques used in testing the hypotheses.

Descriptive analyses were computed for each variable. Means, standard deviations and frequencies were used to assess the accuracy of the data entry, identify missing data and data normality. Descriptive analysis was also used to present participant profiles.

Parametric testing was used to compare group differences. In a situation where some assumptions were not met, non-parametric testing was used.

In order to examine the direct influence of independent variables on the dependent variable, Pearson's correlation and standard multiple regression analysis were used. Pearson's correlations between all the variables were calculated. Pearson's correlation values provide information on degree of correlation between variables. Pearson's correlation values were also used to identify if there were any independent variables that were highly correlated to each other. A standard multiple regression analysis was used to examine the extent to which each of the independent variables influenced the internal auditors' intention to blow the whistle.

Moderated multiple regression analysis was used to examine the moderating effects of moral intensity on each of the individual relationships between independent variables and dependent variable.

### **3.9 Conclusion**

This chapter has discussed the methodology and method for the research. This study adopts positivistic and objectivist philosophical positions. A personally administered, scenario-based survey technique was used to collect the data. Three scenarios, differ in the seriousness of wrongdoing, were used to measure the tested variables. Scenarios and items used to measure the variables were adapted from previous studies.

The philosophical stance and the research method used in this study are in line with the previous studies of this kind. Overall, reliability of the variables was acceptable. However, attitude and organisational-professional conflict have unacceptable reliability level.

## **Chapter Four**

### **Analysis of Results**

#### **4.0 Introduction**

The purpose of this chapter is to present and explain the results of statistical analysis used in testing the hypothesised relationships among the studied variables. The chapter begins with a descriptive analysis of the respondents' profiles. The possible non-response bias and the social desirability response bias are also discussed in the first section. In the second section, a descriptive analysis of the variables is presented. Statistical results for comparing group differences among respondents are presented in the third section. The results of the exploration of the relationship between independent variables and dependent variables are presented in the fourth section. In this section, statistical results and an analysis one provided for each of the hypotheses. Analyses for testing the assumptions of multiple regressions are also discussed in this section. In the fifth section, results for the effect of the moderator (moral intensity) on each of the relationships between independent variables and dependent variables, are explained. The key findings of this study are summarised at the end of the chapter.

#### **4.1 Descriptive statistic results for demographic profiles**

In this section, the demographic characteristics of the respondents are presented. As shown in Table 3.8, the total of usable returned questionnaires are 132. However, to analysis the demographic profiles, only 127 samples are analysed. This is because

five samples have not completed answering the profiles data. The profiles of the respondents are summarised in Table 4.1a and Table 4.1b. Table 4.1a shows details on age and educational background while Table 4.1b shows details on the background of respondents' work experience and awareness of whistle-blowing protection legislation.

**Table 4.1a: Educational background of participants**

Age	Females		Males		Unspecified		Total		
	Freq	%	Freq	%	Freq	%	Freq	%	
< 30 years old	2	2	3	2	0	0	5	4	
31-40 years old	10	8	18	14	3	2	31	24	
41-50 years old	13	10	32	25	5	4	50	39	
51-60 years old	8	6	32	26	1	1	41	33	
Total	33	26	85	67	9	7	127	100	
Mean	44		46		43				
Overall mean								54.73	
Highest Academic Qualification	Females		Males		Unspecified		Total		
	Freq	%	Freq	%	Freq	%	Freq	%	
O-level/GSCE	2	2	4	3	1	1	7	6	
A-level	8	6	16	12	0	0	24	18	
Bachelor's degree	10	8	37	29	6	5	53	42	
Master's degree	12	9	28	22	2	2	42	33	
PhD	1	1	0	0	0	0	1	1	
Total	33	26	85	66	9	8	127	100	
Professional Qualification	Females		Males		Unspecified		Total		
	Freq	%	Freq	%	Freq	%	Freq	%	
Accounting-related qualification	28	22	63	49	7	6	98	77	
Non-accounting related qualification	2	2	4	3	0	0	6	5	
None	3	2	18	14	2	2	23	18	
Total	33	26	85	66	9	8	127	100	
Professional Membership	Females		Males		Unspecified		Total		
	Freq	%	Freq	%	Freq	%	Freq	%	
Yes	30	24	82	64	8	6	120	94	
No	3	2	3	2	1	1	7	6	
Total	33	26	85	66	9	8	127	100	

Note: Percentages are rounded.

Seventy-two percent of the respondents who disclosed their gender details were male. There were nine respondents who did not provide their gender (7%). The mean

ages for females and males were 44 and 46 respectively. The mean for age was calculated by first, finding the mid-point (x) for each age group. The total age for each age group was calculated by multiplying the frequency (freq) with the mid-point (x) of each age group. Lastly, the mean was obtained by dividing the subtotal of each age group ( $\sum(\text{freq} \cdot x)$ ) with the total frequency ( $\sum \text{freq}$ ).

Regardless of gender, most of the respondents had a Bachelor's degree and a surprising number (33%) had a Master's degree (compared to qualified accountants generally). Only one respondent had a PhD. Over three quarters (77%) of the respondents were registered members of accounting professional bodies. Another 18% of the total respondents had no professional qualification, while another 5% held non-accounting professional qualifications. The majority of the respondents (94%) were current members of a professional body.

**Table 4.1b: Participants' work experience and awareness of whistle-blowing protection legislation**

Working experience	Females		Males		Unspecified		Total	
	Mean		Mean		Mean		Mean	
Internal auditing	16.7 years		15.3 years		14 years		15.5 years	
General auditing	18.4 years		17.2 years		18.7 years		17.6 years	
Client categories	Females		Males		Unspecified		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Public organisations	16	13	34	27	6	5	56	44
Private companies	16	13	40	31	2	2	58	46
Combination*	1	1	11	9	1	1	13	10
Total	33	27	85	67	9	8	127	100
Employment position	Females		Males		Unspecified		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
In-house	26	20	61	48	7	6	94	74
Outsource	0	0	8	6	1	1	9	7
Consortium	5	4	13	10	0	0	18	15
Combination**	1	1	1	1	1	1	3	2
Others	1	1	2	2	0	0	3	2

Total	33	26	85	67	9	8	127	100
<b>Awareness of whistle-blowing protection legislation</b>	<b>Females</b>		<b>Males</b>		<b>Unspecified</b>		<b>Total</b>	
	Freq	%	Freq	%	Freq	%	Freq	%
Public Interest Disclosure Act (PIDA) 1998:								
Yes	30	24	80	63	8	6	118	93
No	3	2	5	4	1	1	9	7
Total	33	26	85	67	9	7	127	100
Public Concern at Work (PCaW):								
Yes	20	16	46	36	4	3	70	55
No	13	10	39	31	5	4	57	45
Total	33	26	85	67	9	7	127	100

Note: Percentages are rounded.

\* Respondents having both the public organisations and private companies as their clients.

\*\* Respondents having dual-employment positions: consortium and outsource.

In terms of work experience, both genders had a similar length of years of experience. In internal auditing specifically, the mean values of work experience for females and males were 16.7 and 15.3 years respectively. The mean values for respondents with experience in general auditing were 18.4 years for females and 17.2 years for males.

For the types of client that the participants audit, 44% of the internal auditors audited public organisations and another 46% audit private organisations. Only 10% of the internal auditors had clients from both public and private organisations.

With regard to the types of employment position, 74% of the respondents were employed by organisations (in-house). The residual percentage represents those who are contracted by organisations for their internal audit services. This is generally known as outsourcing. Outsourcing here includes specialist internal audit service providers, specialist business and financial service providers or a consortium<sup>8</sup>. From

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<sup>8</sup> Consortium is a body formed by several internal audit departments in similar business.

the dataset, 7% of the total respondents were from (any) service providers while another 15% of the total respondents were from a consortium.

In terms of awareness of whistle-blowing protection legislation, 93% of the respondents admitted that they knew about the existence of the Public Interest Disclosure Act (PIDA) 1998, the whistle-blowing legislation in the U.K. However, only 55% of the respondents were aware of the existence of Public Concern at Work (PCaW), a charity in the U.K. that offers free legal advice to potential whistle-blowers.

From the above tables it can be considered that this study obtained a varied set of participants. Firstly, responses were received from actual internal auditors and the majority of them had the minimum educational qualification (Bachelor degree) and extensive experience in internal auditing works. Secondly, the dataset had responses from both internal auditors who were employed (in-house) and auditors who were contracted for their services (outsourced and consortium). Thirdly, the dataset also has a good mix of genders. Fourthly, while the majority of the respondents are well aware of the whistle-blowing legislation and the whistle-blowing facility which is made available for them, some are not.

All these four elements provide advantages to this study. One of the advantages is that the answers given by the respondents represent the actual voice of internal auditors. Moreover, the educational background and the extensive work experience of the respondents enhances the credibility of the answers they provided in the

survey. In addition, the invaluable work experience of the respondents, as internal auditors, and their reasonable knowledge concerning whistle-blowing, increases the likelihood that the answers they provided were true. Further, the findings of this research provide valuable empirical evidence, particularly in the U.K. context, regarding internal auditors' perception and intention towards whistle-blowing. As mentioned in the earlier chapter, there is, currently, limited empirical evidence on internal auditors' perception and intention towards whistle-blowing in the U.K. context. The findings of this research are therefore very valuable and beneficial, especially as a reference for interested parties who also venture into this area of research. The results, however, may have limitations which will be discussed in the last chapter of this thesis.

#### **4.1.1 Non-response bias**

The measurable response rate of this study was 34%. Although the participants were in the minority, the response rate is reasonable given the length of the questionnaire. In addition, the response rate of this study was better than that of previous research which used mail surveys and internal auditors as subjects. Using a 25-page questionnaire, the response rate received by Miceli and Near (1994) was 27%. The response rates received by Seifert et al. (2010) and O'Leary and Stewart (2007) were 23% and 26% respectively.

It is impossible to know whether the respondents are representative of the population of U.K. internal auditors. However, to test for non-response bias, responses from early respondents and late respondents were compared. Participants who responded

in the first mailing were considered as early respondents while those who responded after the reminder mailing was sent out were considered as late respondents. There was a lapse of at least seven weeks from the date of the first mailing before a reminder was sent to the subjects. Responses from the two groups of participants (early respondents and late respondents) were compared using an independent T-test for all independent variables and the dependent variable.

For each variable, there were no significant differences between the two groups, therefore the independent T-test results suggest that non-response bias is not a major concern for this study.

#### **4.1.2 Social desirability response bias**

Social desirability bias refers to the tendency of participants to answer surveys in a manner that makes them look good rather than give accurate and truthful answers. Whistle-blowing is a sensitive issue and the use of personally administered survey enables social desirability response bias to exist. The BIDR items which were included in the survey were used to determine whether respondents were trying to present themselves well instead of answering the questions in the survey honestly. Social desirability bias needs to be attended to because its presence may pose a threat to the validity of the findings.

The presence of social desirability response bias was tested in two stages. First, the patterns of responses to each of the BIDR item statements were reviewed using frequency analysis. This is the basic way of detecting social desirability response

bias. The rule that was applied for the research was if many respondents scored high (positive) in most of the items, as compared to those who score low (negative), it could be said that social desirability response bias may exist. Table 4.2 refers to this analysis.

**Table 4.2 Frequency analysis for social desirability bias items**

<b>Self-deception scale</b>				
<b>Items</b>	<b>N</b>	<b>Positive response (frequency)</b>	<b>Neutral (frequency)</b>	<b>Negative response (frequency)</b>
Item no.1	114	93	19	2
Item no.2*	114	41	32	41
Item no.3*	114	71	14	29
Item no.4	114	72	23	19
Item no.5	114	31	35	48
Item no.6*	114	17	19	78
Item no.7	114	35	27	52
Item no.8*	114	46	40	28
Item no.9	114	90	19	5
Item no.10*	114	80	12	22
<b>Impression management scale</b>				
<b>Items</b>	<b>N</b>	<b>Positive response (frequency)</b>	<b>Neutral (frequency)</b>	<b>Negative response (frequency)</b>
Item no. 11*	114	68	23	23
Item no. 12	114	66	14	34
Item no. 13	114	82	11	21
Item no.14*	114	39	25	50
Item no.15	114	42	29	43
Item no.16*	114	60	22	32
Item no.17*	114	68	16	30
Item no.18*	114	28	17	69
Item no.19	114	87	8	19
Item no.20	114	54	28	32

\*Item was reverse coded.

The information in Table 4.2 shows some evidence of social desirability response bias in the study. There were a relatively high number of participants who responded positively in most of the Self-Deception scale items (Item no. 1, 3, 4, 8, 9, 10). The Self-Deception frequency analysis result shows an obvious presence of a situation

where the respondents have unconsciously given responses, where they overly describe themselves positively, which they themselves believe to be true. There were also a relatively high number of participants who responded positively in most of the Impression Management scale items (Item no. 11, 12, 13, 16, 17, 19, 20). The Impression Management scale results indicate that there is high probability that the respondents consciously gave favourable and biased self-assessment responses (Dalton & Ortegren, 2011) in their efforts to ‘fake good’ (Meston et al., 1998).

In the second stage of analysis, the existence of social desirability bias in each variable is further analysed. The association between the tested variables and the Self-Deception and Impression Management scales were examined. As suggested by Steenkamp et al. (2010), if the associations between the tested variables and the Self-Deception and Impression Management scales are negligible, no social desirability response bias problem exists. In contrast, if the associations are non-negligible, social desirability response bias does exist. In relation to the Self-Deception scale, the Impression Management scale has been greatly used in previous research in an attempt to identify such bias. The Impression Management scale is relied upon because it is the appropriate measure to investigate social desirability effect (Moorman & Podsakoff, 1992) and it is the most preferred scale (Randall & Fernandes, 1991). The correlation between Impression Management and all the tested variables, for testing social desirability bias, was also used by Shafer (2009). In this study, the correlation between both the Self-Deception and Impression Management and all the tested variables are used for testing the social desirability bias.

As proposed by Steenkamp et al. (2010), the standardised regression coefficient is used as the guideline to identify the type of association that exists between the tested variables and the Self-Deception and Impression Management scales. Standardised coefficients that exceed .2 indicate that there is a non-negligible association between the variable and the SDB scale. Results from standard multiple regressions are presented in Table 4.3 below.

**Table 4.3: Association between the SDRB scales and the tested variables**

Variables	Social desirability response bias (SDRB)			
	Self-Deception Scale		Impression Management Scale	
	Standardised coefficient	Types of association	Standardised coefficient	Types of association
<b>Scenario 1:</b>				
Attitude	.04	Negligible	.16	Negligible
Injunctive norm	-.29	<i>Non-negligible</i>	-.18	Negligible
Descriptive norm	-.11	Negligible	.17	Negligible
Perceived behavioural control	.12	Negligible	.00	Negligible
Self-efficacy	.06	Negligible	-.21	<i>Non-negligible</i>
Organisational-professional conflict	-.28	<i>Non-negligible</i>	.15	Negligible
Awareness	-.03	Negligible	.00	Negligible
Intention	.33	<i>Non-negligible</i>	.14	Negligible
Moral intensity	-.23	<i>Non-negligible</i>	-.06	Negligible
<b>Scenario 2:</b>				
Attitude	.09	Negligible	.10	Negligible
Injunctive norm	-.21	<i>Non-negligible</i>	-.23	<i>Non-negligible</i>
Descriptive norm	-.10	Negligible	.26	<i>Non-negligible</i>
Perceived behavioural control	.09	Negligible	-.01	Negligible
Self-efficacy	-.08	Negligible	-.28	<i>Non-negligible</i>
Organisational-professional conflict	-.27	<i>Non-negligible</i>	.01	Negligible
Awareness	-.01	Negligible	.12	Negligible
Intention	.30	<i>Non-negligible</i>	.11	Negligible
Moral intensity	-.19	Negligible	.09	Negligible

<b>Scenario 3:</b>				
Attitude	-.04	Negligible	-.05	Negligible
Injunctive norm	-.21	<i>Non-negligible</i>	-.15	Negligible
Descriptive norm	-.04	Negligible	.31	<i>Non-negligible</i>
Perceived behavioural control	.25	<i>Non-negligible</i>	.06	Negligible
Self-efficacy	-.01	Negligible	-.16	Negligible
Organisational-professional conflict	-.27	<i>Non-negligible</i>	.08	Negligible
Awareness	-.03	Negligible	.13	Negligible
Intention	.11	Negligible	.05	Negligible
Moral intensity	-.10	Negligible	.17	Negligible

Table 4.3 provides the regression results used to identify the possible existence of social desirability response bias in each of the tested variables. As demonstrated, some of the variables are affected by social desirability response bias. The overall impact of the social desirability response bias per variable is summarised in Table 4.4.

**Table 4.4: Summary of the association results between variables and SDRB scales**

Variable	Type of association					
	Negligible			Non-negligible		
	SD	IM	Total	SD	IM	Total
Attitude	3	3	6	0	0	0
Injunctive norm	0	2	2	3	1	4
Descriptive norm	3	1	4	0	2	2
Perceived behavioural control	2	3	5	1	0	1
Self-efficacy	3	1	4	0	2	2
Organisational-professional conflict	0	3	3	3	0	3
Awareness	3	3	6	0	0	0
Intention	1	3	4	2	0	2
Moral intensity	2	3	5	1	0	1

The most right-hand total column (the total for the non-negligible association between the tested variables and Self-Deception and Impression Management) as

shown in Table 4.4 gives information on social desirability bias. These results show that there is no social desirability response bias in the attitude and awareness variables (i.e. there are zero occasions of non-negligible association between the tested variables and the Self-Deception and Impression Management scales).

However, there is evidence of an emergence of social desirability response bias for the injunctive norm, descriptive norm, perceived behavioural control, self-efficacy, intention and moral intensity variables. Injunctive norm reported the highest number of social desirability bias occasions (there were four non-negligible association occasions). Referring to Table 4.3, the biases existed across the three scenarios. Organizational-professional conflict is the second variable that has the highest occasions of social desirability bias (there were three non-negligible association occasions). Similar to the injunctive norm, the biases occurred in all the three scenarios. In addition to that, two occasions of social desirability bias were found in each of descriptive norm, self-efficacy and intention variables, and one occasion of social desirability bias in each of perceived behavioural control and moral intensity variables. For the descriptive norm, social desirability biases existed in Scenario 2 and Scenario 3 while for the self-efficacy and intention variables, social desirability biases were found in Scenario 1 and Scenario 2. Another one occasion of social desirability bias was reported in each Scenario 1 and Scenario 3 involving the moral intensity variable and perceived behavioural control variable respectively.

The above results show that in all the three scenarios social desirability bias involving a few variables has been detected. This demands caution in interpreting further analysis results.

## 4.2 Descriptive statistics of variables

The descriptive statistics for all of the variables are presented in Table 4.5.

**Table 4.5: Descriptive statistics of all variables**

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Organisational-professional conflict	114	1.67	.60	1.00	3.75
Awareness of whistle-blowing protection legislation	114	3.30	.76	1.00	4.67
<b>Scenario 1:</b>					
Attitude towards whistle-blowing	114	3.18	.55	1.75	4.25
Injunctive norm	114	4.08	.64	2.67	5.00
Descriptive norm	114	3.46	.77	1.25	5.00
Perceived behaviour control	114	4.00	.67	2.00	5.00
Self-efficacy	114	4.02	.78	1.75	5.00
Intention	114	4.28	.55	2.50	5.00
Moral intensity	114	4.28	.40	3.17	4.83
<b>Scenario 2:</b>					
Attitude towards whistle-blowing	114	3.37	.63	2.00	5.00
Injunctive norm	114	4.00	.63	2.33	5.00
Descriptive norm	114	3.65	.71	1.75	5.00
Perceived behaviour control	114	4.49	.55	2.00	5.00
Self-efficacy	114	4.32	.70	2.00	5.00
Intention	114	4.57	.59	3.00	5.00
Moral intensity	114	4.36	.52	3.17	5.00
<b>Scenario 3:</b>					
Attitude towards whistle-blowing	114	3.52	.62	2.00	5.00
Injunctive norm	114	4.30	.73	1.67	5.00
Descriptive norm	114	4.06	.78	1.75	5.00
Perceived behaviour control	114	4.53	.62	3.00	5.00
Self-efficacy	114	4.42	.68	2.50	5.00
Intention	114	4.59	.63	2.00	5.00
Moral intensity	114	4.53	.52	2.67	5.00

For the purpose of analysing the descriptive analysis for the tested variables, only 114 responses were analysed. Thirteen returned questionnaires which did not

completely answer Section C and Section D (sections on tested variables) were excluded from the analysis. Therefore only one hundred and fourteen responses are analysed.

The information in Table 4.5 shows that, overall, respondents had low organisational-professional conflict. However, as reported in previous section, there is social desirability bias in the organizational-professional conflict variable. Considering the bias issue, there is a probability that respondents have higher conflict which they do not want to report it.

As the seriousness of scenarios increased, the mean values for all the variables also increased as shown in Table 4.5. These results show that internal auditors feel obligated to blow the whistle in a situation that involves more serious and severe wrongdoing, such as wrongdoing that may harm public safety (situation in Scenario 3).

### **4.3 Statistical results for comparing group differences in relation to independent variables**

In this section, the results for the seven independent variables are compared between groups. The groups are based on gender, age, internal audit work experience, type of client and employment position. The statistical analysis conducted in this section is particularly to fulfil the first objective of this study. The results of the seven independent variables (listed in the left-most column in Figure 2.5) are the core of

the investigation. The demographic variables are among the variables tested in previous research.

Parametric tests, such as ANOVA and the independent T-test, were used. However, in circumstances where the parametric test does not conform to the data, a non-parametric test, such as the Mann-Whitney U test was used. The results of the statistical analysis of each of the five demographic variables are shown in the followings sections.

### **4.3.1 Gender**

There was an unequal sample size in relation to gender where the ratio of males to females was greater than 1.5. Furthermore, there was violation of the homogeneity variances in the organisational-professional conflict variable. Consequently, the Mann-Whitney U test was used instead of the independent T-test. According to Laerd Statistics (2013) the use of independent T-test in this situation causes a large influence on the Type I<sup>9</sup> error rates as an extremely unequal sample size can affect the homogeneity of variances. Table 4.6 provides the results for the Mann-Whitney U test.

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<sup>9</sup> Type I error occurs when “we believe that there is a genuine effect in our population, when in fact there isn’t” (Field, 2009, p. 795).

**Table 4.6: Mann-Whitney U Test results for gender groups**

<b>Mann-Whitney U Test for gender groups (Female (F): n = 33, Male (M): n = 85)</b>					
<b>Independent variables</b>	<b>U value</b>	<b>Z value</b>	<b>p (2-tailed)</b>	<b>r</b>	<b>Median</b>
Awareness of WPL	1133.5	-1.63	.10	.15	F: 3.33; M: 3.33
Organisational-professional conflict	1157.5	-1.49	.14	.14	F: 1.75; M :1.50
<b>Scenario 1:</b>					
Attitudes towards whistle-blowing	1233.5	-1.03	.31	.10	F: 3.00; M: 3.25
Injunctive norms	1332.5	-.42	.67	.04	F: 4.00; M: 4.00
Descriptive norm	1383.0	-.12	.91	.01	F: 3.25; M: 3.25
Perceived behavioural control	1247.5	-.99	.32	.09	F: 4.00; M: 4.00
Self-efficacy	1356.5	-.28	.78	.03	F: 4.00; M: 4.00
<b>Scenario 2:</b>					
Attitudes towards whistle-blowing	1079.5	-1.96	.05*	.18#	F: 3.25; M: 3.50
Injunctive norms	1399.5	-.02	.99	.00	F: 4.00; M: 4.00
Descriptive norm	1296.0	-.64	.52	.06	F: 3.50; M: 3.75
Perceived behavioural control	1358.5	-.28	.78	.03	F: 4.50; M: 4.50
Self-efficacy	1325.5	-.48	.63	.04	F: 4.50; M: 4.50
<b>Scenario 3:</b>					
Attitudes towards whistle-blowing	965.0	-2.66	.01**	.24##	F: 3.25; M: 3.50
Injunctive norms	1193.5	-1.28	.20	.12	F: 4.00; M: 4.33
Descriptive norm	1279.5	-.75	.46	.07	F: 4.00; M: 4.00
Perceived behavioural control	1330.0	-.48	.63	.04	F: 5.00; M: 5.00
Self-efficacy	1385.5	-.11	.91	.01	F: 4.25; M: 4.75

WPL = whistle-blowing protection legislation

\*p<.1, \*\*p<.05; p is at 2-tailed;

Effect size (r): .1= small effect, .3 = medium effect, .5 = large effect (Pallant, 2013)

#small effect (% of variance explained: 1%)

## (almost) medium effect (% of variance explained: 6%)

The Mann-Whitney U test results show there were few significant differences. There was significant difference in attitude towards whistle-blowing between females and males. The result for the attitude variable in Scenario 2 and Scenario 3 demonstrate that attitude towards whistle-blowing is greater among males than females. Using Scenario 3 as example, the median of attitude towards whistle-blowing for males is

3.50 and females is 3.25. However, the effect size is small ( $r$  value = .24) which indicates there is small difference in attitudes towards whistle-blowing between males and females.

The level for the attitude variable varied across scenarios; in Scenario 1 there was no significant difference, however, in Scenario 2 and Scenario 3 there was a significant difference at  $p < .1$  and  $p < .05$  respectively. The variance in these levels is possibly due to the different ethical situations described in the scenarios<sup>10</sup>. As explained by Near et al. (2004) and Somers and Casal (2011), the seriousness of wrongdoing has an impact on whistle-blowing.

The Mann-Whitney U test results also show that, apart from the attitude, there was no significant difference in perception, for both gender groups, on the other six independent variables. In this study the results reveal that, if there is a difference, males have a more positive attitude towards whistle-blowing than females. It will be recalled that attitude appears to have been free of social desirability bias.

Table 4.7 provides mean and standard deviation values of the independent variables for both gender groups. The mean value refers to the average value of the individual variables and the standard deviation gives information of the average distance to the mean. This information may help readers to better understand the nature of the data.

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<sup>10</sup> Scenario 1 was an examples of improper accounting treatment involving falsified invoices to customers. Scenario 2 involved financial statements fraud. Scenario 3 was a situation that may pose danger to public and environment.

**Table 4.7: Exploratory data analysis on gender groups in relation to independent variables**

Variables	Females		Males	
	Mean	SD	Mean	SD
Organisational professional conflict	1.85	.72	1.61	.53
Awareness of protection legislation	3.12	.74	3.37	.76
<b>Scenario 1</b>				
Variables	Females		Males	
	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.15	.45	3.21	.61
Injunctive norm	3.99	.59	4.01	.74
Descriptive norm	3.43	.62	3.38	.84
Perceived behavioural control	3.88	.70	4.00	.70
Self-efficacy	4.04	.73	3.97	.83
<b>Scenario 2</b>				
Variables	Females		Males	
	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.18	.56	3.45	.67
Injunctive norm	3.96	.60	3.96	.69
Descriptive norm	3.53	.61	3.60	.76
Perceived behavioural control	4.43	.59	4.46	.59
Self-efficacy	4.29	.64	4.31	.76
<b>Scenario 3</b>				
Variables	Females		Males	
	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.29	.56	3.62	.60
Injunctive norm	4.15	.66	4.33	.70
Descriptive norm	4.14	.70	4.02	.78
Perceived behavioural control	4.46	.62	4.49	.67
Self-efficacy	4.41	.57	4.37	.74

SD = standard deviation

As shown in Table 4.7, the mean value of organisational-professional conflict for males and females was not much different. However, the standard deviation value for females is higher than males. This means that for the organisational-professional conflict variable, the responses from female internal auditors were highly scattered or showed greater variance from the average opinion of the group members compared to their male counterparts.

In contrast, the standard deviation values for the attitudes, injunctive norm, descriptive norm and self-efficacy variables, across the three scenarios, for males were relatively higher than females. This means that a higher proportion of male responses varied from the mean value of the group members, compared to the female group. For perceived behavioural control, there was not much difference in the mean and standard deviation values between females and males across the three scenarios. This means that both gender groups seem to have mutual agreement regarding their control on whistle-blowing.

The background of the respondents might well explain the findings of this study. The composition of respondents (see Table 4.1a) shows that the majority of the male respondents were in the age range of 41-60 years old (frequency = 64), while for females respondents, the majority were ranged between 31-50 years old (frequency = 23). Respondents in an age range of between 41-60 years old, might have greater experience and/or may have received further training which would subsequently increase their professionalism in their career. Consequently, male respondents were more positive in their attitude towards whistle-blowing than females. No significant differences between genders were found for the other six variables.

### **4.3.2 Age**

In this study, participants were grouped into three different age groups: Group 1 (31-40 years old); Group 2 (41-50 years old) and Group 3 (51-60 years old). Participants who were aged 30 years old and below were excluded from the analysis as there were only five respondents in the group. It is likely that by including these

participants in the analysis the ANOVA results would be exposed to the Type I error. This is because the inclusion of the age group would make the ratio of largest to smallest sample size group greater than 1.5. An unequal sample size is a circumstance that needs to be avoided in any parametric test such as the ANOVA. In this study, the ANOVA test was used to analyse the differences in the responses by the participants from the three different age groups.

Before running the ANOVA test, checks were conducted on the ANOVA assumptions. There are three general ANOVA assumptions which require examination. The first assumption is independence of observations, the second is normality and the third is homogeneity of variances.

The data collection method used in this study provided no reason to assume that the participants were not independent. The assumption of normality was tested using the QQ-Plots and the graphs showed an approximately normal distribution.<sup>11</sup> The homogeneity of variances was tested using the Levene Test and found to be tenable.

Self-efficacy (in Scenario 2) was the only variable that violated the homogeneity variance assumption (significance value less than .05). Although there was some violation in one of the assumptions, the ANOVA test is still robust, especially if the sample size of each group does not differ significantly. Table 4.8 provides the ANOVA results.

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<sup>11</sup> The normality test results for the ANOVA and independent T-tests, analysed in this study, showed that the dataset conform to the statistical general assumptions. No (severe) violations to the statistical test assumptions were detected. Therefore, only a few samples of normality test results, using the QQ-Plots graphs, are shown in the Appendix of this thesis.

**Table 4.8: One-way ANOVA results for age groups**

One-way ANOVA for age groups (Group 1 (G1): n = 31; Group 2 (G2): n = 50; Group 3 (G3): n = 41)											
Variables	Mean			SD			SE			p (r)	Levene test: F (sig)
	G1	G2	G3	G1	G2	G3	G1	G2	G3		
OPC	1.77	1.76	1.50	.50	.62	.54	.09	.09	.08	.06* (.05)	.64 (.53)
AW	3.37	3.32	3.23	.53	.79	.87	.09	.11	.14	.85	2.13 (.12)
Scenario 1											
	Mean			SD			SE			p (r)	Levene test: F (sig)
	G1	G2	G3	G1	G2	G3	G1	G2	G3		
Attitudes	3.15	3.19	3.21	.42	.58	.62	.08	.08	.10	.88	2.13(.12)
IN	3.89	3.95	4.27	.69	.63	.69	.13	.09	.11	.03** (.06)	.28 (.76)
DN	3.41	3.28	3.50	.61	.86	.76	.11	.12	.12	.39	1.10 (.34)
PBC	3.87	3.92	4.03	.69	.79	.67	.13	.11	.12	.65	.70 (.50)
SE	3.98	3.95	4.09	.58	.84	.81	.11	.12	.13	.65	1.39 (.25)
Scenario 2											
	Mean			SD			SE			p (r)	Levene test: F (sig)
	G1	G2	G3	G1	G2	G3	G1	G2	G3		
Attitudes	3.32	3.31	3.51	.51	.67	.68	.09	.10	.11	.29	1.26 (.29)
IN	3.92	3.95	4.04	.62	.70	.59	.11	.10	.09	.45	.93 (.40)
DN	3.58	3.55	3.64	.58	.79	.70	.11	.11	.11	.62	2.02 (.14)
PBC	4.36	4.49	4.42	.60	.57	.60	.11	.08	.10	.59	.34 (.72)
SE	4.14	4.28	4.44	.50	.80	.68	.09	.11	.11	.19	4.22 (.02)
Scenario 3											
	Mean			SD			SE			p (r)	Levene test: F (sig)
	G1	G2	G3	G1	G2	G3	G1	G2	G3		
Attitudes	3.34	3.54	3.67	.55	.63	.67	.10	.09	.11	.09* (.04)	.51 (.60)
IN	4.07	4.28	4.50	.72	.67	.69	.13	.10	.11	.03** (.06)	.61 (.55)
DN	3.89	4.00	4.15	.74	.81	.77	.13	.12	.12	.364	.50 (.61)
PBC	4.36	4.52	4.54	.70	.62	.68	.13	.09	.11	.449	.32(.73)
SE	4.19	4.35	4.54	.62	.74	.67	.11	.11	.11	.09* (.04)	1.02 (.37)

OPC = organisational-professional conflict; AW = awareness, IN = injunctive norm; DN = descriptive norm; PBC = perceived behavioural conflict; SE = self-efficacy;

\*p<.1; \*\*p<.05; p is at 2-tailed;

Effect size (r): .01 = small effect, .06 = medium effect, .14 = large effect (Pallant, 2013).

#small effect (% of variance explained: 1%) (Pallant, 2013);

## (almost) medium effect (% of variance explained: 6%) (Pallant, 2013).

G1: 31-40 years old, G2: 41-50 years old, G3: 51-60 years old.

From the analysis, it was found that participants from different age groups do not differ significantly in descriptive norm, perceived behavioural control and awareness of whistle-blowing protection legislation (see Table 4.8). Based on the social desirability bias results, no social desirability bias was reported on the awareness

variable. This means that respondents in this study, regardless of their age, do not have significant different on their level of awareness of whistle-blowing protection legislation.

The ANOVA identified a significant difference at  $p < .1$  in organisational-professional conflict between participants in Group 1 (31-40 years old) and Group 3 (51-60 years old). The results show that participants in young age group (Group 1) reported higher organizational-professional conflict in relative to participants in older age group (Group 3). Also, a significant difference at  $p < .05$  was found in injunctive norm between participants in Group 1 (31-40 years old) and Group 3 (51-60 years old) in both Scenario 1 and Scenario 3. The findings show that participants in older age groups are more agreed than participants in younger age group that significant others do want them to blow the whistle.

For the injunctive norm, using Scenario 1 as an example, the post-hoc test, Tukey HSD, found that the mean of injunctive norm in Scenario 1 for Group 1 is  $M = 3.89$  and Group 3 is  $M = 4.27$ . Group 2 ( $M = 3.95$ ) was not significantly different to either Group 1 or Group 3. In addition, the ANOVA was also significant with  $F(2,119) = 3.516$ ,  $p = .033$ . The results provide sufficient evidence that there is a significant different in injunctive norms among participants from different age groups, specifically between participants in Group 1 (31-40 years old) and Group 3 (51-60 years old). Using the guidelines by Cohen, the effect size of the difference between the groups was moderate ( $r = .06$ ). In Scenario 3, the significant level for injunctive norm was  $p < .05$  and the effect size of the difference was also moderate ( $.06$ ).

In Scenario 3, the ANOVA results showed that participants in Group 1 and Group 3 had a significant difference in attitude, injunctive norm and self-efficacy. The results show that older respondents have a more positive attitude towards whistle-blowing than the younger respondents. Also, they are more agreed that first, important people in their life support their decision to blow the whistle and second, they are more capable to blow the whistle than the younger respondents. The significance level for both the attitude towards whistle-blowing and self-efficacy is at  $p < .1$  and the effect size is small. The significant level for injunctive norm is at  $p < .05$  and the effect size is moderate. As reported in the social desirability bias section, there is no social desirability response bias on the attitude variable. This means that in this study, older respondents have a more positive attitude towards whistle-blowing than the younger respondents.

Table 4.9 provides information on the mean and standard deviation.

**Table 4.9: Exploratory data analysis on age groups in relation to independent variables**

Variables	Age					
	31-40 years old		41-50 years old		51-60 years old	
	Mean	SD	Mean	SD	Mean	SD
Organisational-professional conflict	1.77	.50	1.76	.62	1.50	.54
Awareness of protection legislation	3.37	.53	3.32	.79	3.23	.87
<b>Scenario 1</b>						
Variables	Age					
	31-40 years old		41-50 years old		51-60 years old	
	Mean	SD	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.15	.42	3.19	.58	3.21	.62
Injunctive norm	3.89	.69	3.95	.63	4.27	.69
Descriptive norm	3.41	.61	3.28	.86	3.50	.76
Perceived behavioural control	3.87	.69	3.92	.79	4.03	.67
Self-efficacy	3.98	.58	3.95	.84	4.09	.81
<b>Scenario 2</b>						
Variables	Age					
	31-40 years old		41-50 years old		51-60 years old	
	Mean	SD	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.32	.51	3.31	.67	3.51	.68
Injunctive norm	3.92	.62	3.95	.70	4.09	.59
Descriptive norm	3.58	.58	3.55	.79	3.64	.70
Perceived behavioural control	4.36	.60	4.49	.57	4.42	.60
Self-efficacy	4.14	.50	4.28	.80	4.44	.68
<b>Scenario 3</b>						
Variables	Age					
	31-40 years old		41-50 years old		51-60 years old	
	Mean	SD	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.34	.55	3.54	.63	3.67	.67
Injunctive norm	4.07	.72	4.28	.67	4.50	.69
Descriptive norm	3.89	.74	4.00	.81	4.15	.77
Perceived behavioural control	4.36	.70	4.52	.62	4.54	.68
Self-efficacy	4.19	.62	4.35	.74	4.54	.67

SD = standard deviation

As shown in Table 4.9, the mean value and the standard deviation value for organisational-professional conflict for the three age groups were not much different. The result is consistent with the effect size value shown in Table 4.8 which indicates a moderate level of difference in organizational-professional conflict between respondents in each age group.

In each scenario, there was little difference in the mean value and the standard deviation value for the attitude, injunctive norm and perceived behavioural control variables. The little difference in the mean and standard deviation values between age groups indicates no much difference in the respondents' opinion on these particular variables. However, as shown in Table 4.9, although the mean value of the awareness variable for the three age groups was not significantly different, the standard deviation for the younger age group (G1) was much lower than the other two groups. This shows that respondents in the older age groups (G2 and G3) do not have similar opinions, among group members, on the awareness variable, in comparison to those in the younger age group (G1). The same situation also applies to the descriptive norm and the self-efficacy variables. These findings suggest that as internal auditors get older, their views on the whistle-blowing protection legislation as well as their opinions on the whistle-blowing practice by their significant others and their own capabilities to blow the whistle change. Perhaps, their work experience plays a role in shaping their views.

The results presented in Table 4.8 provide evidence that there is significant difference between respondents from different age groups. Significant differences were found in the organisational-professional conflict, attitude, injunctive norm and self-efficacy variables. Obvious differences were found between the younger age group respondents (G1) and the older age group respondents (G3). The effect size of the differences ranged from low to moderate. Out of these four variables, respondents in the younger age group reported higher organisational-professional conflict than the respondents in the older age groups. On the contrary, the older age

group respondents were likely to have a more positive attitude towards whistle-blowing, receive more support from their significant others (injunctive norm) and were more certain about their capability to blow the whistle (self-efficacy) than the younger age group respondents. The findings suggest that a more positive view of whistle-blowing and confidence in themselves to blow the whistle exist among older internal auditors. However, in the other three variables; descriptive norm, perceived behavioural control and awareness, there was no significant difference between the respondents from different age groups.

Caution should be given in interpreting the results of injunctive norm, descriptive norm, perceived behavioural control, organizational-professional conflict and self-efficacy. This is due to the social desirability response biases that have been found in the analysis. The results on these variables might differ within actual situations. From the ANOVA results, this study suggest that internal auditors from different age groups vary significantly with regards to their attitudes, the support they receive from their significant others (injunctive norm), their capability to blow the whistle (self-efficacy) and their organisational-professional conflict.

### **4.3.3 Internal auditing work experience**

A one-way ANOVA was performed in order to examine whether there were significant differences, for each of the seven variables, between respondents with different work experience. Three groups of respondents were formed. Group 1 comprised of internal auditors with work experience, in internal auditing, of 10 years

or less and Groups 2 and 3 consisted of internal auditors with 11-19 years experience and 20+ years experience, respectively.

Statistical tests for normality and homogeneity of variance were conducted prior to ANOVA test. For normality, graphical methods using QQ-Plots showed the deviations of the data from the straight line are minimal. In other words, there was no severe violation to the normality assumption. The homogeneity of variance was tested using the Levene Test and the results were tenable (with exception of the perceived behavioural control in Scenario 2 where the significant value was .4). Table 4.10 provides summary of the ANOVA results.

**Table 4.10: One-way ANOVA results for internal auditing work experience groups**

<b>One-way ANOVA for work experience (in internal auditing) group: (Group 1 (G1): n = 35; Group 2 (G2):n = 52; Group 3 (G3): n= 40)</b>											
<b>Variables</b>	<b>Mean</b>			<b>SD</b>			<b>SE</b>			<b>p (r)</b>	<b>Levene test: F (sig)</b>
	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>		
OPC	1.62	1.71	1.71	.64	.57	.58	.11	.08	.09	.76	1.43 (.24)
Awareness	3.67	3.22	3.11	.64	.68	.84	.11	.09	.13	.00***(.09)	1.91 (.15)
<i>Scenario 1</i>											
	<b>Mean</b>			<b>SD</b>			<b>SE</b>			<b>p (r)</b>	<b>Levene test: F (sig)</b>
	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>		
Attitudes	3.22	3.11	3.26	.57	.54	.61	.10	.08	.10	.42	.01 (.91)
IN	3.97	4.03	4.11	.79	.59	.73	.07	.09	.12	.71	2.26 (.11)
DN	3.45	3.40	3.40	.92	.71	.76	.16	.10	.12	.94	1.62 (.20)
PBC	3.96	3.91	4.00	.59	.72	.81	.10	.10	.13	.81	1.07 (.35)
SE	4.09	3.85	4.10	.72	.80	.80	.12	.11	.13	.23	.15 (.87)
<i>Scenario 2</i>											
	<b>Mean</b>			<b>SD</b>			<b>SE</b>			<b>p (r)</b>	<b>Levene test: F (sig)</b>
	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>		
Attitudes	3.32	3.29	3.51	.64	.55	.77	.11	.08	.12	.25	.88 (.42)
IN	3.97	3.97	4.03	.73	.61	.66	.12	.09	.10	.89	.79 (.46)
DN	3.69	3.55	3.63	.85	.62	.72	.15	.09	.12	.69	2.34 (.10)
PBC	4.42	4.49	4.37	.61	.49	.66	.11	.07	.11	.57	3.20 (.04)
SE	4.27	4.16	4.48	.62	.76	.69	.11	.11	.11	.10* (.04)	.71 (.49)
<i>Scenario 3</i>											
	<b>Mean</b>			<b>SD</b>			<b>SE</b>			<b>p (r)</b>	<b>Levene test: F (sig)</b>
	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>		

Attitudes	3.44	3.47	3.66	.55	.58	.76	.09	.08	.12	.26	2.26 (.11)
IN	4.17	4.28	4.39	.81	.66	.71	.14	.09	.11	.40	.08 (.92)
DN	3.96	4.04	4.03	.86	.70	.84	.15	.10	.13	.89	1.01 (.37)
PBC	4.50	4.48	4.44	.62	.67	.68	.11	.09	.11	.91	.35 (.71)
SE	4.33	4.26	4.55	.65	.73	.67	.12	.10	.11	.12	.94 (.39)

OPC = organisational-professional conflict; IN = injunctive norm; DN = descriptive norm; PBC = perceived behavioural conflict; SE = self-efficacy;

\*p<.1; \*\*\*p<.01; p is at 2-tailed

Effect size (r): 0.01 = small, 0.06 = moderate, 0.14 = large (Pallant, 2013).

G1: ten years experience or less, G2: 11-19 years experience, G3: 20+ years experience.

The results show that only the awareness of whistle-blowing protection legislation and the self-efficacy variables differ significantly between participants. In the former variable, participants in Group 1 (ten years' experience or less) differ significantly from participants in Group 2 (11-19 years' experience) and Group 3 (20+ years experience) at  $p<.01$  with a moderate effect size. However, no significant difference was found between Group 2 (11-19 years' experience) and Group 3 (20 years' experience or more). From the results, it was found that participants in Group 1 (ten years' experience or less) have a higher mean value than participants in the other two groups. The higher awareness on the whistle-blowing protection legislation among those who have less experience in internal auditing (respondents in Group 1) compared to those who have more experience (respondents in Group 2 and Group 3) might be caused by the relatively higher queries they have on the protection provided by the whistle-blowing protection legislation. The higher queries perhaps have led them to information searching on the U.K. whistle-blowing protection legislation. The relative higher mean value for Group 1, than for Groups 2 and 3, however, does not necessarily mean they have good and thorough knowledge about the whistle-blowing protection legislation. The items statement in the survey only asked general questions regarding their perceptions of the PIDA 1998. The responses to the general

questions, however, provide no association with the depth of knowledge they have concerning whistle-blowing protection legislation. Any logic for explanation might be relevant. Perhaps, the participants who have more sound knowledge about the PIDA 1998 responded more wisely to the items statements than those with a more shallow knowledge. However, there were no further questions or information requested in the survey which could link the responses of the participants to the level of knowledge they have on the PIDA 1998.

In the latter variable, self-efficacy, the results presented for Scenario 2 show that participants in Group 2 differed significantly with participants in Group 3 at  $p < .1$  with a small effect size. The mean score for Group 3 is greater than the other two groups which indicates that participants with more years of experience are convinced of their capability to take action (blow the whistle).

There was no significant difference in the participants' attitudes towards whistle-blowing, injunctive norm, descriptive norm, organisational-professional conflict and the perceived behavioural control, regardless of the participants' number of years of work experience.

In addition to the ANOVA results, this study also provides information of mean and standard deviation (see Table 4.11) which is useful in assisting readers to understand the nature of the data.

**Table 4.11: Exploratory data analysis on internal auditing work experience groups in relation to independent variables**

Variables	Work experience					
	10 years or less		11-19 years		20+ years	
	Mean	SD	Mean	SD	Mean	SD
Organisational professional conflict	1.62	.64	1.71	.57	1.71	.58
Awareness of protection legislation	3.67	.64	3.22	.68	3.11	.84
<b>Scenario 1</b>						
Variables	Work experience					
	10 years or less		11-19 years		20+ years	
	Mean	SD	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.22	.57	3.11	.54	3.26	.61
Injunctive norm	3.97	.79	4.03	.59	4.11	.73
Descriptive norm	3.45	.92	3.40	.71	3.40	.76
Perceived behavioural control	3.96	.59	3.91	.72	4.00	.81
Self-efficacy	4.09	.72	3.85	.80	4.10	.80
<b>Scenario 2</b>						
Variables	Work experience					
	10 years or less		11-19 years		20+ years	
	Mean	SD	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.32	.64	3.29	.55	3.51	.77
Injunctive norm	3.97	.73	3.97	.61	4.03	.66
Descriptive norm	3.69	.85	3.55	.62	3.63	.72
Perceived behavioural control	4.42	.61	4.49	.49	4.37	.66
Self-efficacy	4.27	.62	4.16	.76	4.48	.69
<b>Scenario 3</b>						
Variables	Work experience					
	10 years or less		11-19 years		20+ years	
	Mean	SD	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.44	.55	3.47	.58	3.66	.76
Injunctive norm	4.17	.81	4.28	.66	4.39	.71
Descriptive norm	3.96	.86	4.04	.70	4.03	.84
Perceived behavioural control	4.50	.62	4.48	.67	4.44	.68
Self-efficacy	4.33	.65	4.26	.73	4.55	.67

SD = standard deviation

As shown in Table 4.11, the mean and the standard deviation value of the organisational-professional conflict and the attitude towards whistle-blowing variables (in Scenario 1), for the three groups of years work experience, are not dissimilar. This means that the respondents in each group share the same, basic,

opinion regarding the two variables. However, in Scenario 2 and Scenario 3, there are relatively higher mean and standard deviation values for attitude among respondents in G3 compared to the respondents in G1 and G2. The higher standard deviation value shows that there are relatively more respondents in that particular group that responded differently from the average responses given by other members of the group.

For the awareness variable, respondents in G3 have a much higher standard deviation value (0.84) than the other two groups (.64 and .68). This indicates that there are more inconsistencies in opinion on the awareness between respondents who have more years experience in internal auditing work than other respondents with less work experience.

For the injunctive norm and descriptive norm across the three scenarios and the self-efficacy in Scenario 1, the mean and the standard deviation values for the three groups are relatively high compared to other variables. This means that, despite the high mean value, the inconsistencies in opinions between the respondents within each group are also high.

For the perceived behavioural control variable, there is not much difference between groups with regards to the mean and standard deviation values except in Scenario 1 where there is a higher value of standard deviation for the group of respondents with experience of 20 years or more.

The results show that the number of years of work experience plays a role in an individual's perception on whistle-blowing. In this study, the number of years of work experience positively influences internal auditors' ability to blow the whistle (self-efficacy).

#### **4.3.4 Client categories**

As presented in Table 4.1b, the majority of the participants were in-house internal auditors. Therefore, it is reasonable to assume that respondents who reported that their client organisation was public sector were employed in the public sector and those whose clients were private sector were employed in the private sector.

An independent T-test was used to explore significant differences in the seven tested independent variables between participants who audited public sector organisations (Group 1) and private sector organisations (Group 2). The private sector organisations group comprised of private-for-profit and private-not-for-profit organisations.

Similar to the previous sections, the data was first tested for the assumptions of normality and homogeneity of variances. The normality was tested using the QQ-Plots. The graphs showed an approximate normal distribution on the variables for both client-type groups. For the assumption of homogeneity of variances, the Levene Test results showed there was no violation to the assumption in all of the variables except for injunctive norm (Scenario 2). The T-test is a robust test and can cater for the normality and homogeneity of variances assumption, especially in situations

where the sample size of the largest group to the smallest group is not greater than 1.5. The independent T-test results are shown in Table 4.12.

**Table 4.12: T-test results for client categories groups**

T-test for client categories (Group1 (G1): n= 56; Group 2 (G2): n = 58)										
Variables	Mean		SD		T	df	p (2-tailed)	95% CI		Levene test F (sig)
	G1	G2	G1	G2				Lower	Upper	
OPC	1.75	1.59	.61	.58	1.47	112	.15	-.23	1.54	.02 (.88)
Awareness	3.17	3.43	.84	.66	-1.83	112	.07*	-1.61	.06	2.41 (.12)
<i>Scenario 1</i>										
	Mean		SD		T	df	p (2-tailed)	95% CI		Levene test F (sig)
	G1	G2	G1	G2				Lower	Upper	
Attitudes	3.11	3.24	.54	.55	-1.27	112	.21	-1.33	.29	.13 (.72)
IN	4.14	4.02	.62	.67	1.02	112	.31	-.70	2.17	.21 (.65)
DN	3.51	3.42	.77	.77	.63	112	.53	-.78	1.50	.00 (.97)
PBC	3.93	4.06	.72	.62	-1.05	112	.30	-.76	.23	.06 (.80)
SE	3.87	4.17	.74	.80	-2.10	112	.04**	-2.35	-.07	.12 (.73)
<i>Scenario 2</i>										
	Mean		SD		T	df	P (2-tailed)	95% CI		Levene test F (sig)
	G1	G2	G1	G2				Lower	Upper	
Attitudes	3.32	3.42	.62	.65	-.81	112	.42	-1.33	.55	.234 (.63)
IN	3.99	4.02	.53	.71	-.30	105	.77	-1.61	1.19	6.74 (.01)
DN	3.67	3.64	.68	.74	.21	112	.84	-.95	1.16	1.01(.32)
PBC	4.47	4.51	.56	.56	-.43	112	.67	-.50	.32	.33 (.57)
SE	4.30	4.35	.67	.73	-.45	112	.66	-1.28	.81	.01 (.92)
<i>Scenario 3</i>										
	Mean		SD		T	df	P (2-tailed)	95% CI		Levene test F (sig)
	G1	G2	G1	G2				Lower	Upper	
Attitudes	3.61	3.45	.61	.62	1.41	112	.16	-.26	1.57	.15 (.70)
IN	4.42	4.18	.65	.78	1.75	112	.08*	-.19	3.02	.04 (.08)
DN	4.26	3.87	.73	.80	2.69	112	.01***	.40	2.67	.33 (.57)
PBC	4.51	4.55	.69	.56	-.37	112	.72	-.55	.38	3.48 (.07)
SE	4.46	4.38	.64	.71	.60	112	.55	-.70	1.31	.78 (.38)

OPC = organisational-professional conflict; IN = injunctive norm; DN = descriptive norm; PBC = perceived behavioural conflict; SE = self-efficacy;  
 \*p<.1; \*\*p<.05;\*\*\*p<.01; p is at 2-tailed,  
 G1: public organisations, G2: private organisations

The T-test results found significant differences in the awareness, self-efficacy, injunctive norm and descriptive norm variables between respondents who audited public sector organisations and those who audited private sector organisations. The results found that respondents who audited private sector organizations have a higher

awareness of the whistle-blowing protection legislation than respondents who audited public sector organizations. The awareness of whistle-blowing protection legislation between the two groups was significantly different at  $p < .1$ . For self-efficacy, in Scenario 1, there was a significant difference between both groups at  $p < .05$ . The T-test results found that the perceptions on the capability to blow the whistle are relatively higher among internal auditors who audited private sector organizations than those who audited public sector organizations. Based on Cohen's (1988) convention, both of the variables share a small effect size. In addition, injunctive norm and descriptive norm were also significantly different between both groups at  $p < .1$  and  $p < 0.01$  respectively. Internal auditors who audited public sector organizations reported a higher influence of norms (injunctive and descriptive) than internal auditors who audited private sector organizations. The effect size for injunctive norm is small, however, descriptive norm has a moderately sized effect.

Table 4.13 provides information on the mean and standard deviation values for the variables. As shown in the table, the standard deviation for the awareness variable in public sector organisations is relatively high than for private sector organisation. The high standard deviation value implies that there are more members in the particular group that have diverse opinions on awareness compared to the other group. In the other variables, there are no noticeable differences in mean and standard deviation values.

**Table 4.13: Exploratory data analysis on client categories groups in relation to independent variables**

Variables	Public organisation		Private organisation	
	Mean	SD	Mean	SD
Organisational professional conflict	1.75	.61	1.59	.58
Awareness of protection legislation	3.17	.84	3.43	.66
Variables	Public organisation		Private organisation	
	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.11	.54	3.24	.55
Injunctive norm	4.14	.62	4.02	.67
Descriptive norm	3.51	.77	3.42	.77
Perceived behavioural control	3.93	.72	4.06	.62
Self-efficacy	3.87	.74	4.17	.80
Variables	Public organisation		Private organisation	
	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.32	.62	3.42	.63
Injunctive norm	2.99	.53	4.02	.71
Descriptive norm	3.67	.68	3.64	.74
Perceived behavioural control	4.47	.56	4.51	.56
Self-efficacy	4.30	.67	4.35	.73
Variables	Public organisation		Private organisation	
	Mean	SD	Mean	SD
Attitudes towards whistle-blowing	3.61	.61	3.45	.62
Injunctive norm	4.42	.65	4.18	.78
Descriptive norm	4.23	.73	3.87	.80
Perceived behavioural control	4.51	.69	4.55	.56
Self-efficacy	4.46	.64	4.38	.71

SD = standard deviation

The results of this study found significant differences in the awareness, injunctive norm, descriptive norm and self-efficacy variables between the two groups. Internal auditors in public sector organisation gained more support from their significant others (results for the Scenario 3) to blow the whistle. However, internal auditors in private sector organisation have more confidence in their capability (self-efficacy) to take action by blowing the whistle, as shown in the result for Scenario 1. Internal auditors in private sector organisations also have a greater awareness of whistle-blowing protection legislation than their public sector counterparts.

As mentioned in the earlier sections of this chapter, some of the variables have social desirability bias. Although respondents from the two groups (G1 and G2) have significant different on the influence of injunctive norm, descriptive norm and self-efficacy, however, there is possibility that actual situations are differ from the results obtained in this study. Nevertheless, the awareness variable was not exposed to the bias.

### **4.3.5 Employment position**

An objective of this study was to identify significant differences in the tested variables between in-house internal auditors and outsourced internal auditors. However, this was not achievable due to the low number of responses received from outsourced internal auditors. This unequal sample size restricted the types of statistical tools that could be used to compare these group differences (see Table 4.1b).

In this study, cross-tabulation was used and the results are presented in Table 4.14 to Table 4.20. The information in the tables is useful as they provide readers with information on how the two groups of internal auditors responded to the item statements in the survey.

For analysis purposes, answers to each of the item statements were grouped into three categories: negative/low, neutral, and positive/high. Responses of '1' and '2' in the questionnaire were combined and represent the negative/low criterion, responses of '3' represent neutral criterion, while responses of '4' and '5' represent

positive/high criterion. Participants that declare they are from outsourced, consortium, combination and others are grouped together and they represent the outsource group. The negative-worded items were reverse-coded.

Table 4.14 provides cross-tabulation results of organisational-professional conflict.

**Table 4.14: Cross-tabulation for organisational-professional conflict (OPC)**

Items of OPC	Low OPC		Neutral		High OPC		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	70.08% (89)	23.62% (30)	3.94 % (5)	1.57% (2)	0% (0)	0.79% (1)	100% (127)
Item 2	66.14% (84)	22.83% (29)	6.30% (8)	3.15% (4)	1.57% (2)	0% (0)	100% (127)
Item 3	62.99% (80)	22.05% (28)	9.45% (12)	3.94% (5)	1.57% (2)	0% (0)	100% (127)
Item 4	59.06% (75)	17.32% (22)	14.17% (18)	7.09 % (9)	0.79% (1)	1.57% (2)	100% (127)

Item 1: Full opportunity as professional (reverse coded).

Item 2: Being put under significant pressure.

Item 3: Conflict between work standard and professional judgment.

Item 4: Organisation demands override professional judgment.

In Table 4.14, the answers to each of the (four) item statements of organisational-professional conflict, by the two groups of employment positions, indicates disagreement to all the items statements asked in the questionnaire. In other words, the respondents, regardless of their employment positions, experienced a low conflict in their work.

Table 4.15 provides cross-tabulation results on awareness of whistle-blowing protection legislation.

**Table 4.15: Cross-tabulation for awareness of whistle-blowing protection legislation**

Items of AW	Negative AW		Neutral		Positive AW		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	11.81% (15)	3.94% (5)	18.90% (24)	7.87% (10)	43.31% (55)	14.17% (18)	100% (127)
Item 2	14.96% (19)	3.15% (4)	18.11% (23)	7.09% (9)	40.94% (52)	15.75% (20)	100% (127)
Item 3	21.26% (27)	10.23% (13)	25.98% (33)	7.09% (9)	26.77% (34)	8.66 % (11)	100% (127)

AW = awareness

Item 1: Whistle-blowing legislation helps deter unethical behaviours.

Item 2: Whistle-blowing legislation helps deter illegal behaviours.

Item 3: Whistle-blowing legislation provides effective protection.

In Table 4.15, the majority of participants in the in-house position had a positive awareness of whistle-blowing protection legislation. A high percentage of the participants agreed that whistle-blowing protection legislation was capable of deterring negative and unethical behaviours. However, with regard to the third item (provide effective protection) in the questionnaire, there was not much difference between the in-house internal auditors who agreed, disagreed and were neutral with the items statements. For the outsourced group, a conclusion cannot be made due to the small responses received, however, from the table, they appear to have a similar point of view to those in the in-house group.

Table 4.16 provides cross-tabulation results on attitude towards whistle-blowing.

**Table 4.16: Cross-tabulation for attitude towards whistle-blowing**

Scenario 1							
Items of attitude	Negative attitude		Neutral		Positive attitude		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	0% (0)	1.57% (2)	5.51% (7)	1.57% (2)	68.50% (87)	22.83% (29)	100% (127)
Item 2	6.30% (8)	1.57% (2)	9.45% (12)	3.15% (4)	58.27% (74)	21.26% (27)	100% (127)
Item 3	65.35% (83)	22.83% (29)	7.09% (9)	3.15% (4)	1.57% (2)	0% (0)	100% (127)
Item 4	29.13% (37)	8.66% (11)	22.05% (28)	9.45% (12)	22.83% (29)	7.09% (9)	100% (127)
Scenario 2							
Items of attitude	Negative attitude		Neutral		Positive attitude		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	0.79% (1)	1.57% (2)	3.15% (4)	0.79% (1)	70.08% (89)	23.62% (30)	100% (127)
Item 2	7.09% (9)	2.36% (3)	5.51% (7)	0.79% (1)	61.42% (78)	22.83% (29)	100% (127)
Item 3	61.42% (78)	18.90% (24)	9.45% (12)	5.51% (7)	3.15% (4)	1.57% (2)	100% (127)
Item 4	22.05% (28)	11.81% (15)	17.32% (22)	7.09% (9)	34.65% (44)	7.09% (9)	100% (127)
Scenario 3							
Items of attitude	Negative attitude		Neutral		Positive attitude		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	0% (0)	0.79% (1)	3.94% (5)	1.57% (2)	70.08% (89)	23.62% (30)	100% (127)
Item 2	4.72% (6)	1.57% (2)	7.87% (10)	1.57% (2)	61.42% (78)	22.83% (29)	100% (127)
Item 3	61.42% (78)	14.96% (19)	9.45% (12)	9.45% (12)	3.15% (4)	1.57% (2)	100% (127)
Item 4	18.90% (24)	6.30% (8)	16.54% (21)	8.66% (11)	38.58% (49)	11.02% (14)	100% (127)

Item 1 = Whistle-blowing is a good idea.

Item 2 = Whistle-blowing is a wise idea.

Item 3 = Whistle-blowing is a pleasant experience.

Item 4 = I like the idea of whistle-blowing.

In Table 4.16, all respondents, regardless of their group, agreed that whistle-blowing is a good and wise idea. However, they also agreed that whistle-blowing is not a pleasant experience. Results in Table 4.16 also show that their favourable view (Item 4), concerning whistle-blowing itself, was very subjective to types of questionable behaviour or seriousness of the wrongdoings they encountered in their audit work.

As revealed in Table 4.16, there is a noticeable increasing percentage of positive response on the fourth item across the scenarios.

Table 4.17 provides cross-tabulation results on injunctive norm.

**Table 4.17: Cross-tabulation for injunctive norm**

Scenario 1							
Items of IN	Negative IN		Neutral		Positive IN		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	6.30% (8)	0.79% (1)	19.69% (25)	8.66% (11)	48.03% (61)	16.54% (21)	100% (127)
Item 2	6.30% (8)	0.79% (1)	14.96% (19)	4.72% (6)	52.76% (67)	20.47% (26)	100% (127)
Item 3	3.15% (4)	2.36% (3)	20.47% (26)	3.94% (5)	50.39% (64)	19.69% (25)	100% (127)
Item 4	1.57% (2)	2.36% (3)	12.60% (16)	3.94% (5)	59.84% (76)	19.69% (25)	100% (127)
Item 5	1.57% (2)	2.36% (3)	13.39% (17)	2.36% (3)	59.06% (75)	21.26% (27)	100% (127)
Item 6	1.57% (2)	0.79% (1)	9.45% (12)	3.15% (4)	62.99% (80)	22.05% (28)	100% (127)
Scenario 2							
Items of IN	Negative IN		Neutral		Positive IN		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	5.51% (7)	2.36% (3)	18.11% (23)	6.30 % (8)	50.39% (64)	17.32% (22)	100% (127)
Item 2	4.72% (6)	0.79% (1)	17.32% (22)	7.09 % (9)	51.97% (66)	18.11% (23)	100% (127)
Item 3	3.15% (4)	0.79% (1)	18.11% (23)	7.09 % (9)	52.76% (67)	18.11% (23)	100% (127)
Item 4	3.15% (4)	0% (0)	14.96% (19)	7.09 % (9)	55.91% (71)	18.90% (24)	100% (127)
Item 5	2.36% (3)	0.79% (1)	12.60% (16)	3.15% (4)	59.06% (75)	22.05% (28)	100% (127)
Item 6	2.36% (3)	0.79% (1)	9.45% (12)	3.15% (4)	62.20% (79)	21.26% (27)	100% (127)
Scenario 3							
Items of IN	Negative IN		Neutral		Positive IN		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	3.15% (4)	0% (0)	10.24% (13)	3.94 % (5)	60.63% (77)	22.05% (28)	100% (127)
Item 2	3.94 % (5)	0.79% (1)	9.45% (12)	1.57% (2)	60.63% (77)	23.62% (30)	100% (127)
Item 3	2.36% (3)	0% (0)	12.60% (16)	2.36% (3)	59.06% (75)	23.62% (30)	100% (127)

Item 4	2.36% (3)	0% (0)	10.24% (13)	1.57% (2)	61.42% (78)	24.41% (31)	100% (127)
Item 5	3.15% (4)	0.79% (1)	7.87% (10)	0.79% (1)	62.99% (80)	24.41% (31)	100% (127)
Item 6	3.15% (4)	0.79% (1)	6.30% (8)	1.57% (2)	64.57% (82)	23.62% (30)	100% (127)

IN = Injunctive norm

Item 1 = My family would want me to blow the whistle.

Item 2 = My family would approve if I blew the whistle.

Item 3 = My friend would want me to blow the whistle.

Item 4 = My friends would approve if I blew the whistle.

Item 5 = My work colleagues would want me to blow the whistle.

Item 6 = My work colleagues would approve if I blew the whistle.

Results in Table 4.17 show that there are a considerable number of respondents in both groups that positively agreed with all six item statements. This result suggests that the respondents would not have substantial obstacles getting supportive advice from their family, friends and work colleagues concerning the action of blowing the whistle.

Table 4.18 provides cross-tabulation results on descriptive norm.

**Table 4.18: Cross-tabulation for descriptive norm**

Scenario 1							
Items of DN	Negative DN		Neutral		Positive DN		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	7.87% (10)	5.51% (7)	31.50% (40)	6.30% (8)	34.65% (44)	14.17% (18)	100% (127)
Item 2	11.02% (14)	4.72% (6)	30.71% (39)	8.66% (11)	32.28% (41)	12.60% (16)	100% (127)
Item 3	13.39% (17)	3.15% (4)	22.83% (29)	6.30% (8)	37.80% (48)	16.54% (21)	100% (127)
Item 4	12.60% (16)	2.36% (3)	36.22% (46)	13.39% (17)	25.20% (32)	10.24% (13)	100% (127)
Scenario 2							
Items of DN	Negative DN		Neutral		Positive DN		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	6.30% (8)	2.36% (3)	27.56% (35)	7.87% (10)	40.16% (51)	15.75% (20)	100% (127)
Item 2	9.45%	1.57%	25.98%	9.45%	38.58%	14.96%	100%

	(12)	(2)	(33)	(12)	(49)	(19)	(127)
Item 3	5.51% (7)	2.36% (3)	22.83% (29)	6.30% (8)	45.67% (58)	17.32% (22)	100% (127)
Item 4	6.30% (8)	1.57% (2)	33.86% (43)	11.02% (14)	33.86% (43)	13.39% (17)	100% (127)
<b>Scenario 3</b>							
Items of DN	Negative descriptive norm		Neutral		Positive descriptive norm		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	4.72% (6)	1.57% (2)	14.96% (19)	4.72% (6)	54.33% (69)	21.26% (27)	100% (127)
Item 2	6.30% (8)	0.79% (1)	17.32% (22)	3.94% (5)	50.39% (64)	21.26% (27)	100% (127)
Item 3	3.15% (4)	1.57% (2)	16.54% (21)	2.36% (3)	54.33% (69)	22.05% (28)	100% (127)
Item 4	5.51% (7)	0.79% (1)	19.69% (25)	2.36% (3)	48.82% (62)	22.83% (29)	100% (127)

DN = Descriptive norm

Item 1 = My family would blow the whistle.

Item 2 = My friends would blow the whistle.

Item 3 = My work colleagues would blow the whistle.

Item 4 = Most people I know would blow the whistle.

The results in Table 4.18 show that there are a significant number of participants who neither agree nor disagree (neutral level of agreement) with the four item statements, particularly in the first two scenarios. However, across the scenarios, the neutral level agreement percentage, particularly by the in-house participants, increasingly declines. The decreases have instead brought increases in the percentage of the in-house participants who agree with the items statements. The different types of ethical situations as illustrated in each of the scenarios probably play a role in this matter. The results show that, in a situation that involves relatively severe and serious matters, respondents believe that their significant others would be more likely to take action by blowing the whistle, than in a situation involving less severe matters.

Table 4.19 provides cross-tabulation results on perceived behavioural control.

**Table 4.19: Cross-tabulation for perceived behavioural control**

Scenario 1							
Items of PBC	Negative PBC		Neutral		Positive PBC		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	6.30% (8)	3.15% (4)	3.15% (4)	5.51% (7)	64.57% (82)	17.32% (22)	100% (127)
Item 2	7.09% (9)	3.94% (5)	4.72% (6)	2.36% (3)	62.20% (79)	19.69% (25)	100% (127)
Scenario 2							
Items of PBC	Negative PBC		Neutral		Positive PBC		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	3.15% (4)	1.57% (2)	2.36% (3)	3.94% (5)	68.50% (87)	20.47% (26)	100% (127)
Item 2	2.36% (3)	1.57% (2)	4.72% (6)	3.15% (4)	66.93% (85)	21.26% (27)	100% (127)
Scenario 3							
Items of PBC	Negative PBC		Neutral		Positive PBC		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	4.72% (6)	3.15% (4)	2.36% (3)	5.51% (7)	66.93% (85)	19.69% (25)	100% (127)
Item 2	3.15% (4)	3.15% (4)	1.57% (2)	5.51% (7)	69.29% (88)	19.69% (25)	100% (127)

PBC = perceived behavioural control

Item 1 = To blow the whistle would be entirely up to me.

Item 2 = To blow the whistle would be within my control.

Table 4.19 presents results for perceived behavioural control. The majority of the respondents in each group share a similar point of view on their controllability or power to blow the whistle. Overall there was agreement between the respondents that they themselves hold the power to blow the whistle.

Table 4.20 provides cross-tabulation results on self-efficacy.

**Table 4.20: Cross tabulation for self-efficacy**

Scenario 1							
Items of SE	Negative SE		Neutral		Positive SE		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	
Item 1	4.72% (6)	0.79% (1)	3.94 % (5)	5.51% (7)	65.35% (83)	19.69% (25)	100% (127)
Item 2	6.30% (8)	0% (0)	3.15% (4)	5.51% (7)	64.57% (82)	20.47% (26)	100% (127)
Item 3	8.66% (11)	3.94 % (5)	9.45% (12)	7.09% (9)	55.91% (71)	14.96% (19)	100% (127)
Item 4	10.24% (13)	4.72% (6)	6.30% (8)	7.87% (10)	57.48% (73)	13.39% (17)	100% (127)
Scenario 2							
Items of SE	Negative SE		Neutral		Positive SE		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	3.94 % (5)	0.79% (1)	0.79% (1)	4.72% (6)	69.29% (88)	20.47% (26)	100% (127)
Item 2	3.94 % (5)	0% (0)	1.57% (2)	5.51% (7)	68.50% (87)	20.47% (26)	100% (127)
Item 3	7.87% (10)	3.15% (4)	6.30% (8)	7.09% (9)	59.84% (76)	15.75% (20)	100% (127)
Item 4	7.87% (10)	3.94 % (5)	7.09% (9)	6.30% (8)	59.06% (75)	15.75% (20)	100% (127)
Scenario 3							
Items of SE	Negative SE		Neutral		Positive SE		Total % (Base)
	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	In-house (n = 94)	Outsource (n = 33)	
Item 1	1.57% (2)	0% (0)	2.36% (3)	2.36% (3)	70.08% (89)	23.62% (30)	100% (127)
Item 2	3.15% (4)	0% (0)	3.94 % (5)	3.15% (4)	66.93% (85)	22.83% (29)	100% (127)
Item 3	6.30% (8)	1.57% (2)	8.66% (11)	3.15% (4)	59.06% (75)	21.26% (27)	100% (127)
Item 4	3.94 % (5)	1.57% (2)	8.66% (11)	3.94 % (5)	61.42% (78)	20.47% (26)	100% (127)

SE = Self-efficacy

Item 1 = Confident able to blow the whistle.

Item 2 = Confident able to blow the whistle even friends against it.

Item 3 = Confident able to blow the whistle even I am in a situation that rejects the practice.

Item 4 = Confident able to blow the whistle even though management discourage.

The results in Table 4.20 show that more than half of the participants in each group believe that they could confront the constraints that hinder them from blowing the whistle.

### 4.3.6 Results summary

The above sections (subsection 4.3.1 to subsection 4.3.5) present the statistical results for comparing group differences. The results are summarized in Table 4.21.

**Table 4.21: Summary of group differences results**

Groups	Variables						
	Attitude	IN	DN	PBC	SE	Awareness	OPC
Gender	√	X	X	X	X	X	X
Age	√	√	X	X	√	X	√
Work experience	X	X	X	X	√	√	X
Client categories	X	√	√	X	√	√	X

√ = significant difference  
X = insignificant difference

### 4.4 Results on the intention to blow the whistle

In this section, the overall internal auditors' intention to blow the whistle is presented. Although not included as part of the research objectives, presenting these results might provide additional useful information to the reader.

Across the three scenarios, the mean (standard deviation) value for the intention to blow the whistle-blow in Scenario 1, Scenario 2 and Scenario 3 is 4.28 (.55), 4.57 (.59) and 4.59 (.63) respectively. The high mean values of intention (above 4.00) show that internal auditors in the U.K. have a high intention to blow the whistle.

## **4.5 Statistical results for exploring relationship between variables**

In section 4.3, the researcher was looking at variables in isolation which was interesting because it provides information on variables that have significant difference based on groups such as gender, age, work experience and client categories.

In this section, the seven individual-level variables, which were tested in isolation in the previous section, were analysed for their influence on the dependent variable; the intention to blow the whistle. Statistical analysis performed in this section provides answers to the first seven hypotheses that were presented in the previous chapter. The analysis was conducted to correspond to the second objective of this study.

Standard multiple regression was used to examine the influence of all seven independent variables on the intention towards whistle-blowing. Standard multiple regression was chosen over hierarchical regression and stepwise regression as it is the most common method used, according to the literature (Pallant, 2013). Hierarchical regression is based on theoretical grounds that guide a researcher on the sequence of variables that need to be inserted in the regression analysis. This requirement, however, is irrelevant to this study as no discussion on this issue has been raised in literature. Also, the minimum number of samples needed for stepwise regression is not sufficient.<sup>12</sup>

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<sup>12</sup> A ratio of 40 cases per independent variable are needed for stepwise regression (Pallant, 2013).

In ensuring that the results produced by the multiple regressions are the best possible, accurate, and free from excessive bias, the dataset was first checked for multiple regression assumptions to ensure conformity with the regression test, before the hypotheses testing proceeded. There are three main criteria which statisticians ask researchers to check prior to using the multiple regressions test. The three criteria are: minimum sample size needed for the test; multicollinearity; and finally, linearity, normality, homoscedasticity and outliers. The results of the multiple regression assumption tests are discussed in the following sections.

#### **4.5.1 Assumptions of standard multiple regressions**

The standard multiple regressions analysis is a sensitive statistics analysis tool. The multiple regressions require any dataset to meet the three general minimum requirements prior to using the statistical tool. These requirements are tested in the following sections.

With regards to the missing data, there was a small number of missing data in the dataset of this study. This was predominantly missing data or incomplete answers from the demographic profile, where several respondents had not provided their gender. Also, five respondents did not complete the survey in its entirety; consequently they were excluded in the following analysis.

##### **4.5.1.1 Minimum sample size**

The issue of the minimum sample needed for multiple regressions has been raised by many scholars. Following the guide provided in Tabachnick and Fidell (2007), taking

into account that there are seven independent variables tested in this study, the minimum sample size required, therefore, was 106. There were 127 responses in this study and therefore sufficient for the multiple regression test.

#### **4.5.1.2 Multicollinearity and correlation**

Multicollinearity is a situation where two or more independent variables are highly correlated ( $r = .7$  and above) (Pallant, 2013). In a case where the multicollinearity exists, only one of the variables should be maintained. From the correlation tables produced by the multiple regressions test (see Table 4.22 (Scenario1), Appendix C (Scenario 2) and Appendix D (Scenario 3)), there was no critical multicollinearity problem identified. In Scenario 3, the correlation table showed that the injunctive norm and the descriptive norm had a Pearson coefficient value of slightly higher than  $.7$ . Further examination, using the Tolerance and VIF<sup>13</sup> value (see Appendix E), showed no multicollinearity existed between the two norm variables. Therefore, all of the seven independent variables were retained for further analysis.

In addition to multicollinearity, the relationship between the independent variables and dependent variable were also examined. According to Pallant (2013), the independent variables should show at least some relationship with the dependent variables (preferably  $r > .3$ ). As presented in the correlation tables, both the

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<sup>13</sup> A tolerance value of less than  $.1$  and VIF value of above  $10$  indicates a problem of multicollinearity (Pallant, 2013). In this study, the tolerance values and VIF values were between  $.294$  and  $.972$  and  $1.029$  to  $3.398$  respectively.

organisational-professional conflict and awareness of whistle-blowing protection legislation variables have a weak relationship with the dependent variable ( $r < .3$ ).

As shown in Table 4.22, in Scenario 1, there was no significant correlation between the dependent variable (intention) and four demographic variables (age, gender, work experience and client categories). A significant correlation at  $p < .01$  was found between intention and employment position. In Scenario 2, there was a significant correlation between intention and gender and employment position, while in Scenario 3, a significant relationship existed between intention and age. The correlation results for Scenario 2 and Scenario 3 are provided in Appendix C and Appendix D respectively.

Correlation provides information about the existence of a relationship between two variables. However, it does not indicate that one variable causes the other. The correlation information is used to describe the strength and the direction of the relationship between two variables.

The information presented in Table 4.23 summarises the association and the strength of the correlation between the independent variables and the dependent variable. In all three of the scenarios, five of the seven independent variables had a positive relationship with the dependent variable. The other two variables, organisational-professional conflict and awareness, had a negative relationship with the dependent variable, though not in all of the scenarios. The strength of the relationships were varied. Using Cohen's guidelines, correlation values of .1 to .29 denote a small strength, .3 to .49 denotes a medium strength and .5 to 1.0 denotes a large strength

(Pallant, 2013). A positive association between variables implies that if one variable increases, the other variable also increases. Similarly, if one variable decreases, the other variable also decreases. As an example, an increase in attitude towards whistle-blowing would increase the intention to blow the whistle.

**Table 4.22: Means, standard deviations and correlations among control, independent and dependent variables (Scenario 1)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>Controls</b>																
1	Age	3.03	.86	1.00												
2	Gender	1.79	.56	.11	1.00											
3	Exp.	2.05	.76	.54***	-.08	1.00										
4	Client	1.51	.50	-.30***	-.06	-.37***	1.00									
5	Position	1.46	.98	-.08	-.03	.17**	-.33***	1.00								
<b>Dependent</b>																
6	Intention	4.28	.55	.03	-.04	-.05	.11	-.13*	1.00							
<b>Independents</b>																
7	Attitude	3.18	.55	.05	.02	.09	.12**	-.09	.31***	1.00						
8	IN	4.07	.64	.19**	.12	.04	-.10	.11	.41***	.36***	1.00					
9	DN	3.46	.77	-.04	.03	-.02	-.06	.18**	.34***	.32***	.60***	1.00				
10	PBC	4.00	.67	.01	.06	.04	.10	-.02	.31***	.18**	.21**	.17**	1.00			
11	SE	4.02	.78	.05	.02	-.00	.20**	-.09	.50***	.41***	.37***	.35***	.26***	1.00		
12	OPC	1.67	.60	-.19**	-.16**	.11	-.14**	.16**	-.01	-.01	-.13**	-.11	-.06	-.25***	1.00	
13	Awareness	3.30	.76	-.04	.16**	-.25***	.17**	.00	.01	.03	-.01	.10	-.03	.04	-.09	1.00

Exp = experience, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy,

OPC = organisational-professional conflict

\*p<.1, \*\*p<.05, \*\*\*p<.01

**Table 4.23: Summary of the correlation between each independent variable and dependent variable**

<b>Dependent variable: intention</b>		
<b>Scenario 1</b>		
<b>Independent variable</b>	<b>Association</b>	<b>Strength</b>
Attitude	Positive	Medium
Injunctive norm	Positive	Medium
Descriptive norm	Positive	Medium
Perceived behavioural control	Positive	Medium
Self-efficacy	Positive	Large
Awareness	Positive	Small
Organisational-professional conflict	Negative	Small
<b>Scenario 2</b>		
<b>Independent variable</b>	<b>Association</b>	<b>Strength</b>
Attitude	Positive	Medium
Injunctive norm	Positive	Medium
Descriptive norm	Positive	Medium
Perceived behavioural control	Positive	Medium
Self-efficacy	Positive	Large
Awareness	Positive	Small
Organisational-professional conflict	Negative	Small
<b>Scenario 3</b>		
<b>Independent variable</b>	<b>Association</b>	<b>Strength</b>
Attitude	Positive	Large
Injunctive norm	Positive	Large
Descriptive norm	Positive	Large
Perceived behavioural control	Positive	Large
Self-efficacy	Positive	Large
Awareness	Negative	Small
Organisational-professional conflict	Positive	Small

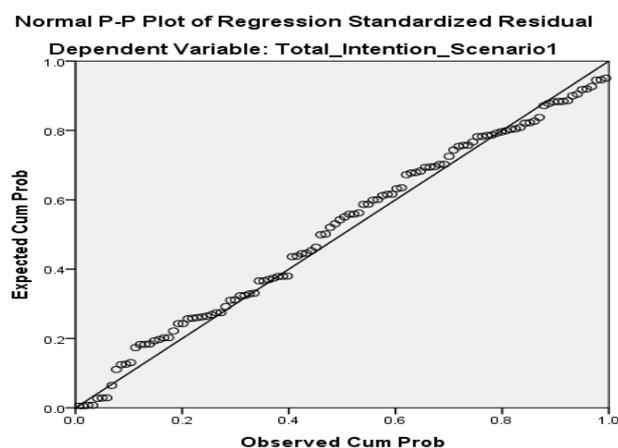
Across the three scenarios, there were notable increases in the strength of the correlation between the intention variable and four of the independent variables: attitude, injunctive norm, descriptive norm and perceived behavioural control. As mentioned earlier in this chapter, Scenario 3 illustrated a more serious, unethical practice, than Scenario 1 and Scenario 2, and concerned public safety and welfare. The correlation results show that the four independent variables correlate relatively

highly in the third scenario. In other words, respondents appear to react more sensitively towards situations that bring harm to the public than situations that do not. Self-efficacy was the only variable that consistently correlated largely with the intention. In contrast, the organisational-professional conflict and the awareness variables had small correlations with intention across the scenarios.

#### 4.5.1.3 Normality, linearity, homoscedasticity and outliers

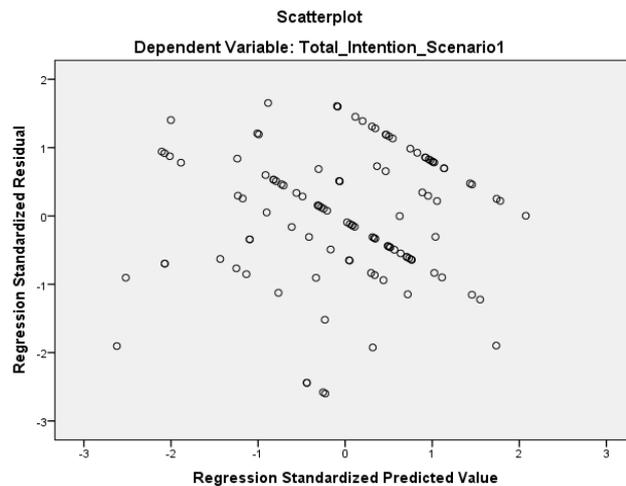
The P-P Plot of the regression standardised residual is used to compare the distribution of residuals against a normal distribution. The P-P Plot graph for all three scenarios showed that all points lie in a reasonably straight diagonal line from bottom left to top right. This means that the normality assumption has not been violated. Below is an example of the P-P Plots of regression standardised residual graph for the intention variable in Scenario 1. The P-P Plots regression standardised residual graphs for Scenario 2 and Scenario 3 are shown in Appendix B.

**Figure 4.1: Normal P-P plot of regression standardised residual graph for intention (Scenario 1)**



The above P-P plot graph shows a plot check on normality. The plotted points suggest there is no serious departure from the straight line.

**Figure 4.2: Scatterplot graph for intention (Scenario 1)**



A scatterplot graph was used to examine the linearity, homoscedasticity and outliers. The use of scatterplot for this purpose is common and widely used (Pallant, 2013). In each scenario, the scatterplot graph shows a rectangular shape of residual distributions with most of the scores approximately along the 0 point line. This means no critical violations to the linearity and homoscedasticity has occurred. The scatterplot graph was also used to check for outliers. There were minimal outliers appearing in the graph. For the decision to either retain or omit the outliers, Mahalanobis and Cook's Distance value rules were used. The critical value for evaluating Mahalanobis distance value, for seven independent variables (see Tabachnick & Fidell, 2007), is 24.32. This means any case with a Mahalanobis value exceeding 24.32 is strongly recommended to be excluded from analysis.

Subsequently, six respondents were discarded and not included in the analysis. In Scenario 3, one case with a Mahalanobis value that was slightly greater than 24.32 was retained. The Cook's Distance value of the case was not greater than 1, which meant, if included in the analysis, it would not have any undue influence on the analysis results (Pallant, 2013).

#### 4.5.2 Standard multiple regression results

With regard to testing the hypotheses, further analysis using the standard multiple regression is detailed in this section. The regression outputs are presented in Table 4.24.

**Table 4.24: Standard multiple regression results of whistle-blowing intention**

Model & Variables		Scenario 1				Scenario 2				Scenario 3			
		B	SE	B	PCC	B	SE	$\beta$	PCC	B	SE	B	PCC
Model One	Cons.	6.04	1.82			-.45	2.01			1.58	1.90		
	ATT	.04	.09	.04	.04	.16	.08	.17	.13	.13	.10	.13	.09
	IN	.11	.06	.20	.15	.19	.06	.30	.20	.20	.07	.34	.19
	DN	.05	.07	.07	.05	-.04	.08	-.05	-.03	.02	.10	.03	.01
	PBC	.26	.13	.16	.15	.68	.16	.32	.29	.55	.17	.27	.23
	SE	.27	.07	.38	.32	.27	.07	.32	.27	.17	.08	.18	.14
	OPC	.12	.07	.13	.12	.10	.07	.10	.09	.11	.08	.11	.10
	AW	.01	.08	.01	.01	.12	.08	.12	.11	.08	.08	.07	.07
	R <sup>2</sup>	.36				.52				.50			
	Adjusted R <sup>2</sup>	.32				.49				.47			
F-value	8.33***				16.36***				15.41***				
Model Two	Cons.	6.89	2.11			-.11	2.25			2.58	2.26		
	ATT	.03	.09	.03	.02	.13	.08	.14	.11	.17	.10	.16	.11
	IN	.12	.06	.21	.15	.18	.06	.29	.19	.19	.08	.33	.17
	DN	.07	.07	.10	.08	-.01	.08	-.01	-.01	.02	.11	.02	.01
	PBC	.27	.13	.16	.16	.69	.16	.32	.29	.54	.17	.27	.22

			*				***				***	
SE	.25	.07	.36 ***	.30	.28	.07	.33 ***	.28	.16	.09	.17 **	.13
OPC	.15	.08	.16 *	.14	.15	.07	.15 *	.13	.11	.08	.11	.07
AW	.00	.08	.00	.00	.09	.08	.09	.08	.08	.08	.07	.09
Age	.12	.27	.05	.04	.06	.25	.02	.02	.17	.28	.06	.04
Gender	-.32	.32	-.08	-.08	.30	.30	.07	.07	-.41	.34	-.09	-.08
Exp.	-.24	.30	-.09	-.06	-.28	.28	-.09	-.07	-.27	.31	-.08	-.06
Client	-.00	.41	.00	.00	-.12	.38	-.03	-.02	-.15	.43	-.03	-.02
Post.	-.33	.20	-.15	-.13	-.39	.18	-.16 **	-.14	-.04	.20	-.01	-.01
R <sup>2</sup>	.39			.56			.52					
Adjusted R <sup>2</sup>	.32			.50			.46					
F-value	5.33***			10.57***			8.92***					

Const = constant, ATT = attitude, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy, OPC = organisational-professional conflict, AW = awareness, Exp. = experience, Post.= position.

\*p<.1, \*\*p<.05, \*\*\*p<.01

In the multiple regression analysis, two models were produced. In Model One, only the main independent variables were included in the analysis, while in Model Two both the main independent variables and control variables were included. The control variables were included to better isolate the influence of the variables of interest.

Prior to explaining the results and analysis for each individual hypothesis, attention should first be given to the R<sup>2</sup> value. The R<sup>2</sup> value provides information on how much of the whistle-blowing intention is explained by the independent variables listed in the model. The R<sup>2</sup> value measures the goodness-of-fit of the model with the data.

Model One in Scenario 1 explains 36% (R<sup>2</sup> = .36) variance of whistle-blowing intention among internal auditors in the U.K. The residual percent (64%) indicates that there are other variables, which are not tested in this study that may also contribute to the whistle-blowing intention prediction. The result is quite a

respectable result particularly if comparison is made to previous studies. Any study regarding human behaviour, and factors that potentially influence behaviour, such as this, are diverse. A study by Liyanarachchi and Adler (2011), who studied accountants' whistle-blowing intention, obtained an adjusted  $R^2$  of 18%. Keenan (1990) who studied determinants of upper-level manager's whistle-blowing, obtained an adjusted  $R^2$  value of 30%. In another study of whistle-blowing, conducted by Park and Blenkinsopp (2009), an  $R^2$  value of 24.9% was obtained. In a thesis by Syahrul Ahmar (2011), who studied internal auditors' intention to whistle-blow internally,  $R^2$  values of between 13% and 34% were obtained ( $R^2$  values differed in three different scenarios used by the researcher).

The model for this present study is a good model for predicting whistle-blowing intention. This can be seen from the increasing  $R^2$  value of Model One in Scenario 2 and Scenario 3. In addition, in Model Two, there is a slight increase in the  $R^2$  value compared to Model One in each scenario. Although the increment is very small, it indicates that demographic variables play a role in influencing intention to blow the whistle. In all three scenarios, both Model One and Model Two are significant at  $p < .01$ .

The beta value ( $\beta$ ) is used to compare the contribution of each independent variable on the dependent variable. The  $\beta$  values are used instead of the B values because the former is standardised coefficients which mean that the values have been converted to the same scale so that comparison can be made. However, the latter is unstandardized coefficient that usually used for the purpose of constructing a

regression equation. The squared value of PCC (part correlation coefficients) provides information on the contribution of that variable to the total R square.

#### **4.5.2.1 Attitude**

In this study, it was hypothesised that attitude towards whistle-blowing has a positive relationship with the intention to blow the whistle. As predicted, the positive standardised regression coefficients  $\beta$  value for attitude (see Table 4.24) shows that, in all the three scenarios, attitude towards whistle-blowing has a positive association with intention. However, the statistical analysis only found a significant relationship between attitudes and intention in Scenario 2 (Model One). No significant relationship was found in Scenario 1 and Scenario 3. This means that hypothesis 1 (H1) was only slightly supported.

The  $\beta$  value of attitude in Model One of Scenario 2 is .17. This value demonstrates that attitude contributes 17% in explaining intention, when all other variables are controlled. In other words, attitude provides a strong unique contribution to the intention prediction. The relationship between attitude and intention is significant at  $p < .05$ .

The squared value of the part correlation coefficients (PCC) explains the contribution of the variable to the total  $R^2$  value. For example, Model Two of Scenario 1 shows that attitude contributes a very small amount of .0169 (1.69%) to the total  $R^2$  value.

Although the result provides evidence that slightly support H1, the statistical finding shows that attitude has a positive and significant influence on whistle-blowing

intention. In Scenario 2 the attitude contributes 17% to the whistle-blowing intention and the value can be considered as high. This finding suggests attitude as one of the variables that need further examination in future research.

#### **4.5.2.2 Injunctive norm**

This study hypothesised that there is a positive relationship between injunctive norm and whistle-blowing intention. The statistical analysis results in Table 4.24 show that there is a positive and significant relationship between injunctive norm and intention across each of the three scenarios. Both Model One and Model Two of Scenario 2 and Scenario 3 show that injunctive norm has a significant contribution to whistle-blowing intention at  $p < .01$ . In addition, injunctive norm also has a significant positive association with whistle-blowing intention at  $p < .1$  as appeared in Model One and Model Two of Scenario 1. Therefore, hypothesis 2a (H2a) was fully supported.

Furthermore, the squared value of the PCC shows that the contribution of injunctive norm to the total  $R^2$  value ranges from 2.25% to 4.00%.

The results provide evidence that show social injunctive norm has a positive and significant relationship with the intention to blow the whistle. Additionally, the  $\beta$  value of injunctive norm is within the range between 20%-34%. The  $\beta$  values of injunctive norm are among the highest in the research model which mean that injunctive norm is the one of the biggest contributor to the whistle-blowing intention.

#### **4.5.2.3 Descriptive norm**

It was also hypothesised that descriptive norm has a positive relationship with whistle-blowing intention. The regression results in Table 4.24, however, rejected this hypothesis (H2b). The contribution of descriptive norm was minimal to the  $R^2$  value (between .01% and .64%).

The regression analysis did not find any significant influence of descriptive norm on whistle-blowing intention. The findings suggest that in making decision either to blow or not to blow the whistle, the influence or permission of significant others play important role than their belief that the significant others do themselves blow the whistle.

#### **4.5.2.4 Perceived behavioural control**

In this study, it was hypothesised that there is a positive relationship between perceived behavioural control and whistle-blowing intention. Across the three scenarios, the regression results found a positive association between perceived behavioural control and whistle-blowing intention. The regression analysis found that there was a significant positive association at  $p < .01$  between the variables (perceived behavioural control-intention) in Scenario 2 and Scenario 3, and at  $p < .1$  in Scenario 1. These results provide evidence that fully support hypothesis 3 (H3).

The significant unique contribution of the perceived behavioural control to the  $R^2$  value ranges from 2.25% to 8.41%.

The results show that perceived behavioural control has a positive and significant association with intention to blow the whistle. Moreover, the  $\beta$  value of perceived behavioural control is within 16%-32%. The  $\beta$  value implies the contribution of perceived behavioural control to whistle-blowing intention is also high.

#### **4.5.2.5 Self-efficacy**

This study also hypothesised that there is a positive relationship between self-efficacy and whistle-blowing intention. As presented in Table 4.24, the regression results showed a significant relationship between self-efficacy and intention at  $p < .01$  (Scenario 1 and Scenario 2) and at  $p < .05$  (Scenario 3). Therefore, the regression results provide evidence that fully support hypothesis 4 (H4).

The squared value of the PCC shows that self-efficacy contributes between 1.69% and 10.24% to the  $R^2$  value.

The results show that self-efficacy has a positive and significant relationship with whistle-blowing intention. The  $\beta$  value of self-efficacy is within 17%-38%. The  $\beta$  value shows that self-efficacy contributes up to 38% to whistle-blowing intention. In this study, self-efficacy is the highest contributor to the whistle-blowing intention.

#### **4.5.2.6 Organisational-professional conflict**

This study hypothesised that there is a positive relationship between organisational-professional conflict and whistle-blowing intention. As shown in Table 4.24, in Model 1 across the three scenarios, no significant relationship was found between

organisational-professional conflict and whistle-blowing intention. However, positive and significant results at  $p < .1$  were found in Model 2 for both Scenario 1 and Scenario 2. However, in Scenario 3 of Model 2, the relationship was not significant. The regression results in Table 4.24 provide evidence that slightly support hypothesis 5 (H5).

In addition, the correlation analysis revealed a weak relationship between organisational-professional conflict and intention. This variable contributes between 0.49% and 1.96% to the  $R^2$  value.

The regression results found evidence of a positive and significant relationship between organisational-professional conflict and whistle-blowing intention. Although significant results were only found in Scenario 1 and Scenario 2 (Model Two), the findings suggest that being in a situation where the instructions or orders from a person or a group of people in organizations in conflict with the demands of internal auditing professionalism may lead internal auditors to blowing the whistle.

#### **4.5.2.7 Awareness of whistle-blowing protection legislation**

In this study, it was hypothesized that there is a positive relationship between awareness of whistle-blowing protection legislation and whistle-blowing intention. Results in Model One of Scenario 2 show a significant positive relationship between awareness and intention at  $p < .1$ . However, regression results in Model One for Scenario 1 and Scenario 3 show that the relationship between awareness of whistle-blowing protection legislation and whistle-blowing intention is not significant. In

Model Two, no significant relationship was found across the three scenarios. Therefore, hypothesis 6 (H6) was slightly supported.

The contribution of the awareness to the  $R^2$  value is relatively lower (ranges in between 0% to 1.21%) than the other variables.

Overall, the regression results fully support H2a, H3 and H4 and slightly support H1, H5 and H6. The regression results however rejected H2b. The summary of the regression results is shown in section 4.7.

#### **4.5.2.8 Regression results for control variables**

The statistical results presented in Model Two (see Table 4.24) provide answers to the question: ‘to what extent do the control variables influence an individual’s intention to blow the whistle?’ which has traditionally been examined in previous behavioural research. These variables were used mainly as control variables, as a means to examine their potential influence (along with the main independent variables) on the whistle-blowing intention.

As explained in the last part of section 4.5.2, across each scenario, there is an increase in the  $R^2$  value in Model 2. The increasing  $R^2$  value indicates that the inclusion of these control variables provides evidence that they also play their own role in influencing intention to blow the whistle. For example, in Scenario 1, the  $R^2$  value in Model One (where there are only seven main independent variables tested) is 36%, and the  $R^2$  increased by 3% in Model Two (where there were an additional 5 control variables tested simultaneously with the other seven independent variables).

The effect of each control variable on the intention to whistle-blow is best illustrated by multiplying the B value with the value that represents each group of the control variables. This is the value that the researcher used in categorising the groups of the control variables during the preparation of the dataset (see Table 4.25). The long form of the linear equation for predicting the intention is also included in Table 4.25. The long form equation was generated from the basic form of linear equation as follows:

$$Y = \text{Constant} + \text{independent variables}^a + \text{control variables}^b + \text{error}$$

$$Y = \text{Intention to blow the whistle}$$

$$A = \text{Attitude, injunctive norm, descriptive norm, perceived behavioural control, self efficacy, organisational-professional conflict, awareness}$$

$$B = \text{Age, gender, experience in internal auditing, client categories, employment position}$$

The results of the influence of the control variables on whistle-blowing intention are summarised in Table 4.25.

**Table 4.25: Summary of the influence of the control variables to whistle-blowing intention**

<b>Scenario 1</b>					
$Y = 6.89 + [.03Att + .12IN + .07DN + .27PBC + .25SE + .15OPC] + .00AW + [(.12Age) + (-.32Gender) + (-.24Experience) + (-.00Client + (-.33Position))] + \text{error}$					
	<b>Age (years old)</b> 1: 31-40 2: 41-50 3: 51-60	<b>Gender</b> 1: Female 2: Male	<b>Experience (years)</b> 1: < 10 2: 11-19 3: 20+	<b>Client</b> 1: Public 2: Private 3: Combination	<b>Position</b> 1: In-house 2: Consortium 3: Outsource 4: Others
B values	.12	-.32	-.24	-.00	-.33
Conclusion	Younger internal auditors have a <i>lower</i> intention to blow the whistle than	Female internal auditors have a <i>higher</i> intention to blow the	Internal auditors with less years experience have a <i>higher</i> intention to	Internal auditors who have both types of clients have a <i>lower</i> intention than internal auditors who hold only	In-house internal auditors have a <i>higher</i> intention compared to other types of employment

	older internal auditors.	whistle than male internal auditors.	blow the whistle than internal auditors with more years experience.	one type of client. Or internal auditors who audited private organisations have a <i>higher</i> intention in comparison to those who audited public organisations.	positions.
<b>Scenario 2</b>					
$Y = -.11 + [.13Att + .18IN + (-.01DN) + .69PBC + .28SE + .15OPC + .09AW] + [.06Age + .30Gender + (-.28Experience) + (-.12Client + (-.39Position))] + \text{error}$					
	<b>Age (years old)</b> 1: 31-40 2: 41-50 3: 51-60	<b>Gender</b> 1: Female 2: Male	<b>Experience (years)</b> 1: < 10 2: 11-19 3: 20+	<b>Client</b> 1: Public 2: Private 3: Combination	<b>Position</b> 1: In-house 2: Consortium 3: Outsource 4: Others
$\beta$ values	.06	.30	-.28	-.12	-.39
Conclusion	Younger internal auditors have a <i>lower</i> intention to blow the whistle than older internal auditors.	Female internal auditors have a <i>lower</i> intention to blow the whistle than male internal auditors.	Internal auditors with less years experience have a <i>higher</i> intention to blow the whistle than internal auditors with more years experience.	Internal auditors who have both types of clients have a <i>lower</i> intention than internal auditors who hold only one type of client. Or internal auditors who audited private organisations have a <i>lower</i> intention in comparison to those who audited public organisations.	In-house internal auditors have a <i>higher</i> intention compared to other types of employment positions.
<b>Scenario 3</b>					
$Y = 2.58 + [.17Att + .19IN + .02DN + .54PBC + .16SE + .11OPC + .08AW] + [.17Age + (-.41Gender) + (-.27Experience) + (-.15Client + (-.04Position))] + \text{error}$					
	<b>Age (years old)</b> 1: 31-40 2: 41-50 3: 51-60	<b>Gender</b> 1: Female 2: Male	<b>Experience (years)</b> 1: < 10 2: 11-19 3: 20 +	<b>Client</b> 1: Public 2: Private 3: Combination	<b>Position</b> 1: In-house 2: Consortium 3: Outsource 4: Others
$\beta$ values	.17	-.41	-.27	-.15	-.04
Conclusion	Younger internal auditors have a <i>lower</i> intention to	Female internal auditors have a <i>higher</i>	Internal auditors with less years experience have a	Internal auditors who have both types of clients have a <i>lower</i> intention than	In-house internal auditors have a <i>higher</i> intention compared to

	blow the whistle than older internal auditors.	intention to blow the whistle than male internal auditors.	<i>higher</i> intention to blow the whistle than internal auditors with more years experience.	internal auditors who hold only one type of client. Or internal auditors who audited private organisations have a <i>lower</i> intention in comparison to those who audited public organisations.	other types of employment positions.
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Att=Attitude, In=injunctive norm, DN=descriptive norm, PBC=perceived behavioural control, SE=self-efficacy, OPC=organisational-professional conflict, AW=awareness of whistle-blowing protection legislation

In conclusion, the results of this study suggest that, apart from the seven tested main independent variables, demographic variables are factors that may influence whistle-blowing intention. Regression results in Table 4.24 show that employment position is the control variable that has a significant influence on the whistle-blowing intention. As a set, however, they add relatively little to R<sup>2</sup>.

#### 4.6 Statistical results for moderating effects of moral intensity

In this study, moderated multiple regression was used for analysing the moderation effects of a moderating variable, moral intensity. The purpose of this analysis is to identify whether moral intensity affects the direction and/or the strength of the relationship that exist between dependent variable (intention) and the independent variables (e.g., attitude, injunctive norm, descriptive norm).

All the variables - independent, dependant and moderator - were continuous variables. In particular, work by Cohen, Cohen, West, and Aiken (2003) and Aiken and West (1991) (who are by far the most popular moderating regression scholars in

social science (Whisman & McClelland, 2005)), is referred to and applied in this study. This means the transformation approach, also known as mean-centering, to the independent variables was used in the analysis. Mean-centering involves subtracting the sample mean from each observed value on the regressor variables (Kromrey & Foster-Johnson, 1998).

According to Echambadi and Hess (2007), the moderator (interaction) effect in the moderated regression model is evaluated by including a cross-product term as an additional predictor variable to the existing model. Cross-product term is a multiplicative function of the individual independent variables (predictors) with the moderator variable, for example,  $ATT*MI$  ( $ATT$  here is attitude and  $MI$  is moral intensity).

Dalal and Zickar (2012) highlight that the mean-centering helps to reduce the nonessential ill-conditioning multicollinearity but not the essential ill-conditioning multicollinearity. The nonessential ill-conditioning multicollinearity exists due to the scaling of the variables, while the essential ill-conditioning multicollinearity arise from the substantive relationship between variables (Dalal & Zickar, 2012). The essential multicollinearity problems which are normally caused by skewed data do not disappear even after centering (Cohen et al., 2003). This means that prior to using the mean-centering, the data itself should fit with the multiple regression tests (refer to Appendix F for the sample of the normality test results). In other words, the data should not critically violate the general assumptions of the multiple regression tests (the assumptions have been explained in subsection 4.5.1).

Echambadi and Hess (2007) note that mean-centering does not harm the results and conclusions drawn by the previous literatures. Although they do not seem to favour mean-centering, they do not show any sign of resistance to the approach. In addition, Dalal and Zickar (2012) conclude that mean-centering does not have an impact on the fit of the regression model nor does it change the reliability of the product terms. In the same paper, Dalal and Zickar mention the current and wide use of mean-centering by scholars in the related field, such as Aiken and West (1991), Cohen et al. (2003) and Jaccard and Turrisi (2003). Dalal and Zickar also state one of the positive effects of mean-centering is the increased interpretability of the results. Dalal and Zickar (2012) along with Cohen et al. (2003) and Whisman and McClelland (2005), further recommend that researchers apply mean-centering to their independent variables prior to conducting moderated regression analysis.

In this study, mean-centering of the independent variables, including the moderator variable, was implemented prior to the moderated regression analysis. In relation to the ways the moderated regression analysis was conducted, firstly, the (seven) independent variables and control variables were regressed (Model 1). Secondly, the (seven) independent variables, control variables and the moderator variable were entered into the multiple regression to test for their main effects (Model 2). In this stage, the moderator was treated as an independent variable. This was essential to examine whether the moderator variable may also play a role in predicting intention. Next, the interactions of the cross-product terms were added into the regression (Model 3). Cross-product terms were generated by multiplying each independent variable with the moderator (e.g. Attitude x moral intensity, injunctive norm x moral

intensity). In the moderated regression analysis, the main effects and the interaction effects were conducted at separate steps. The main effects were tested prior to the cross-product terms. Tables 4.26, 4.27 and 4.28 provide the moderated regression analysis results.

According to Cohen et al. (2003), the moderator effect exists when, first, the coefficient for cross-product terms are not equal to zero, and second, when there is a change in the coefficients of the independent variables. The issue of which coefficient value should be referred to is discussed by Cohen et al. (2003) and Whisman and McClelland (2005). Whisman and McClelland state that the standardised regression coefficients were not generalised to the moderator model. Due to the complications that the standardised form may bring to the interpretation of the results, Whisman and McClelland (2005) further recommended that the raw (unstandardised) coefficients should be referred to instead of the standardised coefficients, in reading the results of the moderator models. The use of raw coefficients is also supported by Cohen et al. (2003).

**Table 4.26: Moderated regression analysis results of the main effects and moderating effects of internal auditors' whistle-blowing intentions (Scenario 1)**

Scenario 1						
Dependent variable:	Intention to blow the whistle					
Independent variables:	Model 1		Model 2		Model 3	
	B	p	B	p	B	p
Attitude	.05	.55	.05	.55	.05	.57
Injunctive norm	.12	.03**	.12	.04**	.10	.11
Descriptive norm	.09	.24	.09	.24	.09	.22
Perceived behavioural control	.19	.12	.19	.12	.27	.04**
Self-efficacy	.24	.00***	.24	.00***	.20	.00***
Organisational-professional conflict	.13	.11	.13	.11	.13	.11

Awareness	.01	.90	.01	.90	-.04	.63
<b>Control variables:</b>						
Age	-.01	.97	-.01	.97	.04	.89
Gender	-.30	.34	-.30	.34	-.15	.65
Working experience	-.12	.68	-.12	.68	-.19	.52
Client categories	.01	.97	.01	.97	.09	.65
Employment position	-.35	.06*	-.35	.06*	-.26	.16
<b>Moderator:</b>						
Moral intensity (MI)			.00	.99	.04	.56
<b>Cross-product term:</b>						
Attitudes x MI					-.01	.76
Injunctive norm x MI					-.03	.13
Descriptive norm x MI					-.01	.51
Perceived behavioural control x MI					.06	.18
Self-efficacy x MI					-.02	.52
Organisational-professional conflict x MI					.04	.12
Awareness x MI					.03	.27
Constant		18.38		18.38		17.91
F value (sig)		6.35 (.00***)		5.81 (.00***)		4.33 (.00***)
Durbin-Watson		1.76		1.76		1.79
R <sup>2</sup>		.40		.40		.45
Adjusted R <sup>2</sup>		.34		.33		.35

\*p<.1, \*\*\*p<.01

**Table 4.27: Moderated regression analysis results of the main effects and moderating effects of internal auditors' whistle-blowing intentions (Scenario 2)**

Scenario 2						
Dependent variable:	Intention to blow the whistle					
Independent variables:	Model 1		Model 2		Model 3	
	B	p	B	p	B	p
Attitude	.11	.18	.09	.25	.14	.10
Injunctive norm	.16	.00***	.16	.00**	.14	.03**
Descriptive norm	-.03	.76	-.03	.71	-.03	.74
Perceived behavioural control	.54	.00***	.51	.00***	.59	.00***
Self-efficacy	.30	.00***	.31	.00***	.28	.00***
Organisational-professional conflict	.08	.28	.08	.31	.06	.48
Awareness	.07	.39	.06	.45	.09	.30
<b>Control variables:</b>						
Age	.01	.96	-.04	.89	.05	.84
Gender	.25	.42	.25	.41	.28	.38
Working experience	-.07	.82	-.05	.87	-.07	.82

Client categories	-.06	.77	-.05	.79	-.02	.90
Employment position	-.30	.09*	-.30	.09*	-.27	.14
<b>Moderator:</b>						
Moral intensity (MI)			.06	.27	.04	.45
<b>Cross-product term:</b>						
Attitudes x MI					.02	.53
Injunctive norm x MI					-.02	.32
Descriptive norm x MI					.06	.05
Perceived behavioural control x MI					-.05	.34
Self-efficacy x MI					-.03	.26
Organisational-professional conflict x MI					-.02	.40
Awareness x MI					-.04	.12
Constant	18.32		18.42		18.04	
F value (sig)	9.44 (.00***)		8.83 (.00***)		6.23 (.00***)	
Durbin-Watson	1.62		1.61		1.57	
R <sup>2</sup>	.50		.50		.54	
Adjusted R <sup>2</sup>	.45		.45		.45	

\*p<.1, \*\*p<.05, \*\*\*p<.01

**Table 4.28: Moderated regression analysis results of the main effects and moderating effects of internal auditors' whistle-blowing intentions (Scenario3)**

Scenario 3						
Dependent variable:	Intention to blow the whistle					
Independent variables:	Model 1		Model 2		Model 3	
	B	p	B	p	B	p
Attitude	.18	.06*	.16	.10	.19	.06*
Injunctive norm	.20	.00***	.19	.00***	.16	.04**
Descriptive norm	.02	.87	.01	.91	-.00	.98
Perceived behavioural control	.40	.02**	.38	.02**	.48	.00***
Self-efficacy	.19	.03**	.19	.03**	.17	.04**
Organisational-professional conflict	.06	.42	.07	.41	.11	.19
Awareness	.11	.17	.10	.25	.08	.35
<b>Control variables:</b>						
Age	-.03	.93	-.05	.86	.02	.63
Gender	-.50	.14	-.47	.16	-.22	.65
Working experience	-.01	.97	.02	.94	.01	.80
Client categories	-.18	.40	-.20	.36	-.17	.64
Employment position	-.13	.50	-.13	.50	-.05	.64
<b>Moderator:</b>						
Moral intensity (MI)			.08	.23	.05	.48
<b>Cross-product term:</b>						
Attitudes x MI					.00	.99
Injunctive norm x MI					-.07	.00***

Descriptive norm x MI				.06	.05*
Perceived behavioural control x MI				.03	.60
Self-efficacy x MI				-.02	.53
Organisational-professional conflict x MI				-.01	.71
Awareness x MI				.02	.56
Constant	19.71	19.70	19.00		
F value (sig)	9.85 (.00***)	9.24 (.00***)	6.92 (.00***)		
Durbin-Watson	1.88	1.89	2.09		
R <sup>2</sup>	.51	.52	.57		
Adjusted R <sup>2</sup>	.46	.46	.48		

\*p<.1, \*\*p<.05, \*\*\*p<.01

The non-zero coefficients of the moral intensity in Model 2 of Scenario 2 and Scenario 3 show that the variable has a direct influence and impact on whistle-blowing intention. The coefficient values of the moral intensity in Scenario 2 and Scenario 3 are 0.6 and 0.8 respectively. The positive coefficient values show a positive relationship between moral intensity and whistle-blowing intention. In contrast, in Scenario 1 the unexpected result of zero coefficient value for moral intensity-whistle-blowing intention was obtained. The difference in the substance of the ethical issues raised in each of the scenarios might explain the inconsistent results. In other words, the association between moral intensity and whistle-blowing intention is subject to the type of ethical and questionable behaviour being discussed.

In addition to the coefficient value, the R<sup>2</sup> value, which illustrates the goodness-of-fit of the model in predicting the intention, provides further explanation. As presented in Table 4.26 to Table 4.28, the R<sup>2</sup> value in Model 1 and in Model 2, for both Scenario 1 and Scenario 2, does not really change, whereas in Scenario 3 there is a slight increment. These results provide additional evidence that moral intensity does not demonstrate any significant effect or contribute towards influencing whistle-blowing

intention. Overall, the small coefficient values for moral intensity in Model 2, across the three scenarios (ranges from .00 to .08), and the minimal increment to the  $R^2$  value in Model 2, as compared to the value in Model 1, as found in Scenario 1 and Scenario 2, explains the minimal contribution of moral intensity to the whistle-blowing intention.

As discussed in the above paragraph, the moderating effect of moral intensity is evaluated in Model 3. Specifically, the coefficient values of the cross-product terms in Model 3 are used as a means to examine the moderating effect of moral intensity. As presented in Table 4.26 to Table 4.28, the coefficient values for all seven cross-product terms in each of the scenarios are non-zero (except for the cross-product term of attitude-moral intensity in Scenario 3). As explained by Cohen et al. (2003), the non-zero coefficient value of the cross-product terms implies that moral intensity has a moderating effect on the relationships between the independent variables and the dependent variable. Conversely, the zero coefficient value of the cross-product term involving attitude-moral intensity indicates that there is no moderating effect of moral intensity on the relationship between attitude and intention to blow the whistle ( $B = .00$ ,  $p = .99$ ). In summary, the results, in general, provide evidence that slightly support H7.

In addition, the results identified a significant cross-product effect in Scenario 3 involving injunctive norm-moral intensity ( $B = -.07$ ,  $p = .00$  significant at  $p < .01$ ). This implies that, in Scenario 3, the moral intensity significantly moderates the positive relationship between injunctive norm and intention to blow the whistle. The

result also reveals that moral intensity significantly moderates the positive relationship between descriptive norm and intention to blow the whistle ( $B=.06$ ,  $p = .05$  significant at  $p<.1$ ). However, there is no significant moderating effect of moral intensity in the relationship involving perceived behavioural control and intention to whistle blow ( $B = .03$ ,  $p = .60$ ); self-efficacy and intention to whistle blow ( $B = -.02$ ,  $p = .53$ ); organisational-professional conflict and intention to whistle blow ( $B = -.01$ ,  $p = .71$ ); and awareness of whistle-blowing protection legislation and intention to whistle blow ( $B = .02$ ,  $p = .56$ ). Summary of the results are presented in Table 4.29.

**Table 4.29: Summary of moderating effect results**

<b>Dependent variable: Intention to blow the whistle</b>						
<b>Moderating variable: Moral intensity</b>						
<b>Independent variable</b>	<b>Scenario 1</b>		<b>Scenario 2</b>		<b>Scenario 3</b>	
	<b>Sig. result</b>	<b>Sig. level</b>	<b>Sig. result</b>	<b>Sig. level</b>	<b>Sig. result</b>	<b>Sig. level</b>
<b>Attitude</b>	X		X		-	
<b>Injunctive norm</b>	X		X		√	<b>p&lt;.01</b>
<b>Descriptive norm</b>	X		X		√	<b>p&lt;.1</b>
<b>Perceived behavioural conflict</b>	X		X		X	
<b>Self-efficacy</b>	X		X		X	
<b>Organizational-professional conflict</b>	X		X		X	
<b>Awareness</b>	X		X		X	

X = insignificant; √ = significant; - = no moderating effect

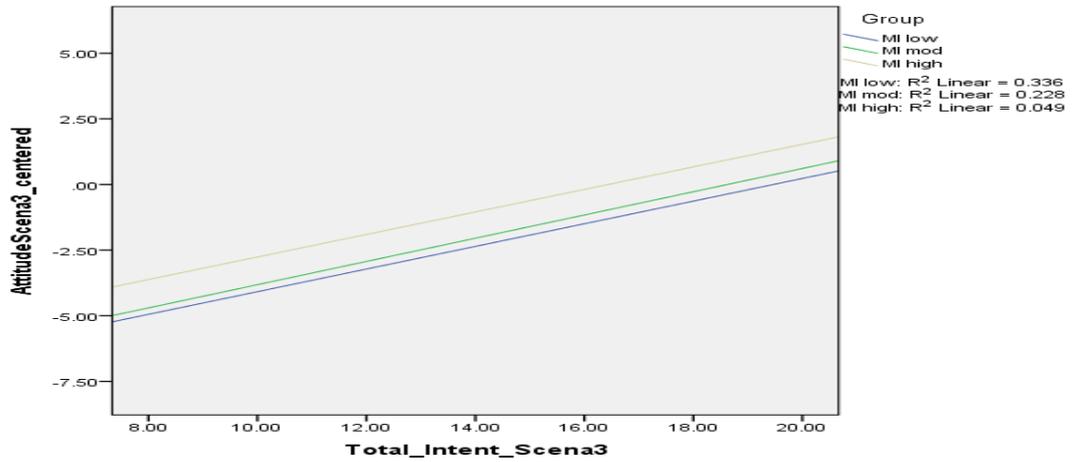
The graphs displayed in Figure 4.3 to Figure 4.9 show the moderating effects of moral intensity on the relationship between each independent variable and dependent

variable (whistle-blowing intention)<sup>14</sup>. Graphs for the Scenario 3 results are used as examples.

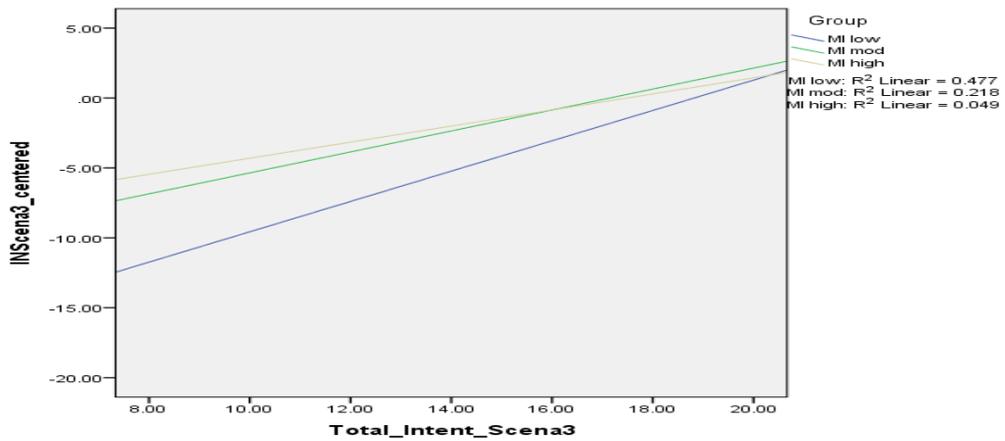
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<sup>14</sup> There is not much difference in the results of Scenario 1 with the results of Scenario 2 and Scenario 3. In this chapter, only graphs on moderating effects of moral intensity on Scenario 3 are shown.

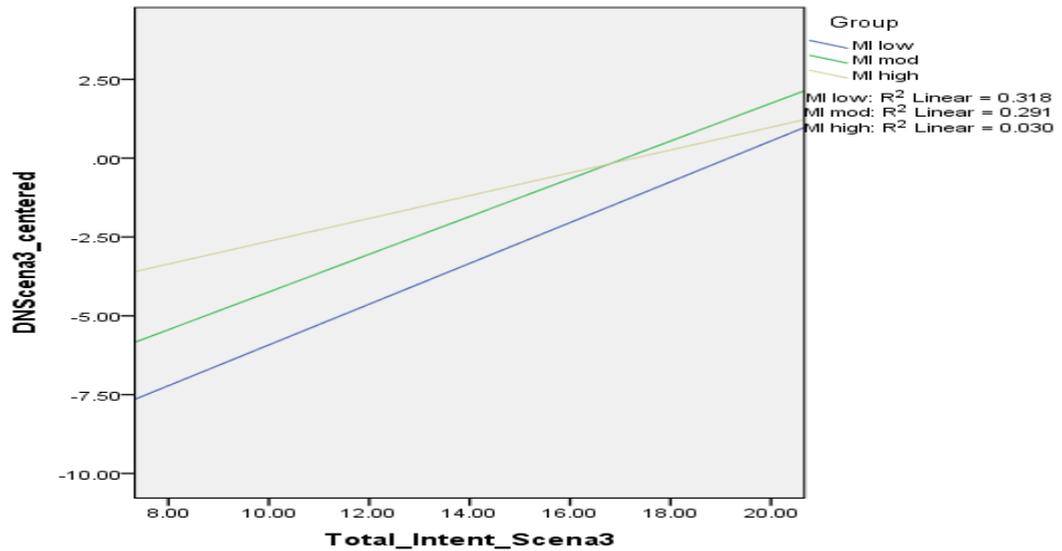
**Figure 4.3: Plot of moderating effect of moral intensity and attitude towards whistle-blowing on whistle-blowing intention**



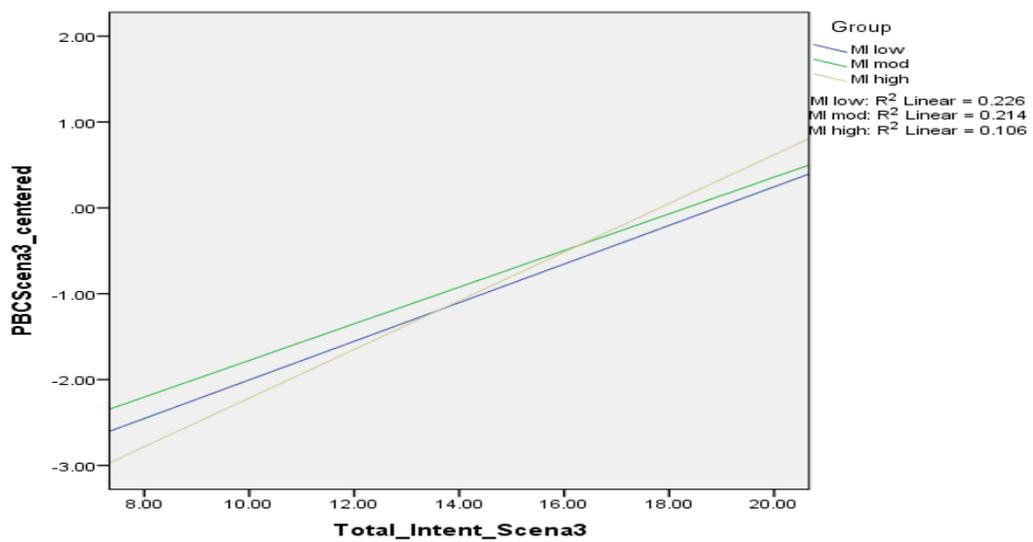
**Figure 4.4: Plot of moderating effect of moral intensity and injunctive norm on whistle-blowing intention**



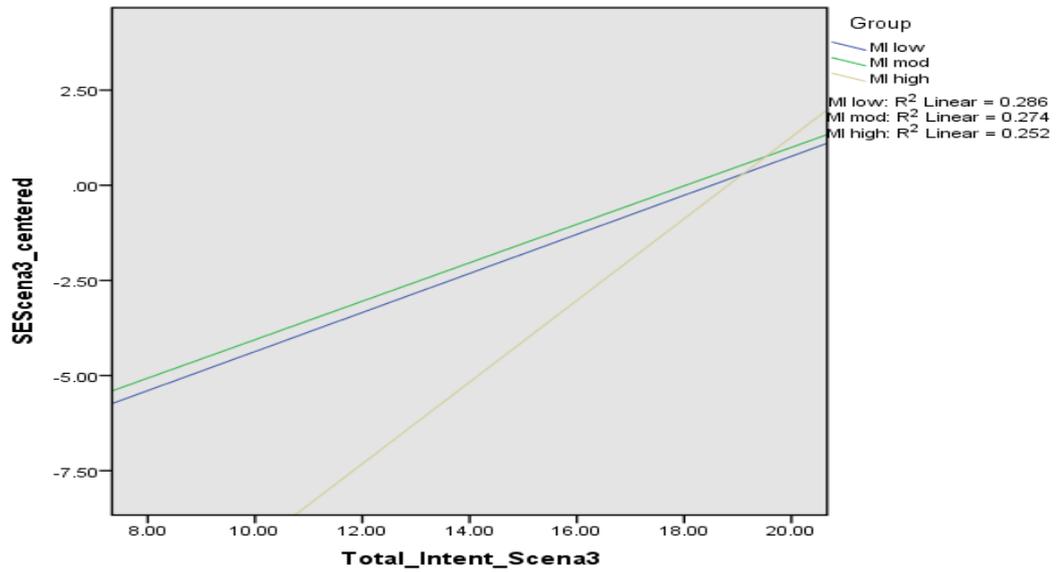
**Figure 4.5: Plot of moderating effect of moral intensity and descriptive norm on whistle-blowing intention**



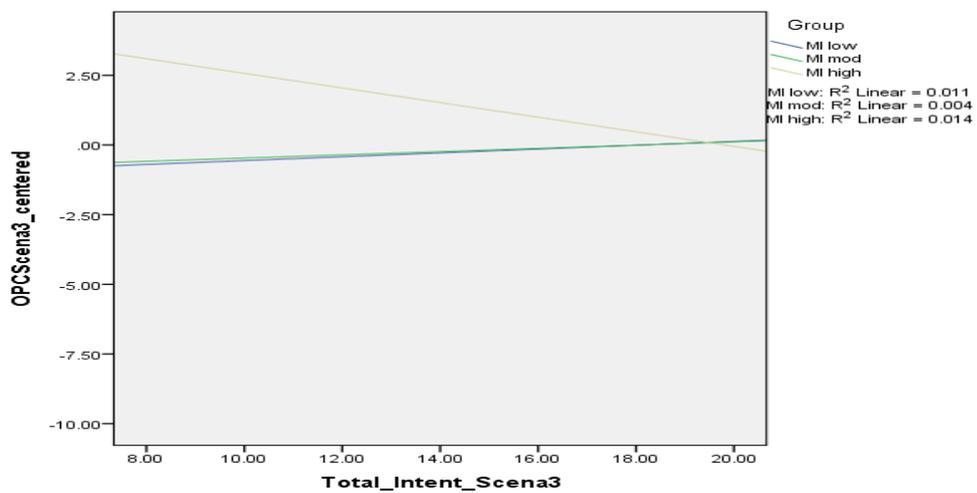
**Figure 4.6: Plot of moderating effect of moral intensity and perceived behavioural control on whistle-blowing intention**



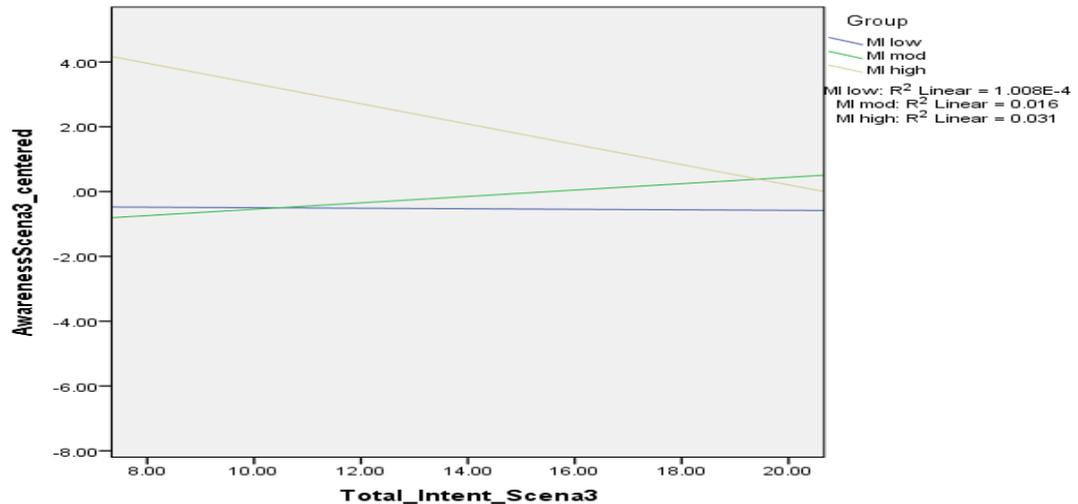
**Figure 4.7: Plot of moderating effect of moral intensity and self-efficacy on whistle-blowing intention**



**Figure 4.8: Plot of moderating effect of moral intensity and organizational-professional conflict on whistle-blowing intention**



**Figure 4.9: Plot of moderating effect of moral intensity and awareness of whistle-blowing protection legislation on whistle-blowing intention**



In Figure 4.3, the line graphs are parallel with each other and there is no interception between the line graphs. This depicts no interaction effect of moral intensity on the relationship between attitude and intention to whistle blow. In contrast to that, line graphs shown in Figure 4.4 and Figure 4.5 shows non-parallel line graphs where one or two of the line graphs (in each figure) is or are steeper than the other and there is an interception points between the lines. Graphs in Figure 4.4 and Figure 4.5 illustrate significant moderating effect of moral intensity on the relationship between intention to blow the whistle and injunctive norm and descriptive norm, respectively. Graphs in Figure 4.6 to Figure 4.9 also show non-parallel line graphs. However, the interaction effect of moral intensity on the relationship between intention to whistle blow and perceived behavioural control (Figure 4.6), self-efficacy (Figure 4.7), organizational-professional conflict (Figure 4.8) and awareness of whistle-blowing protection legislation (Figure 4.9) is not significant.

Overall, these findings suggest that the total moral intensity of the ethical situations may interrupt the relationship between the individual-level variables and the intention of internal auditors to blow the whistle. The total moral intensity of an ethical situation here refers to all six dimensions as suggested by Jones (1991): magnitude of consequences; temporal immediacy; social consensus; proximity; and probability of effect. However, this study found little evidence that moral intensity directly influences the intention to blow the whistle.

In conclusion, these results suggest that moral intensity has no direct impact on whistle-blowing intention. However, the moral intensity variable has the ability to moderate some of the individual relationships between the independent variables and the dependent variable. Future researchers should consider testing the moderating effect of moral intensity in their research framework.

#### 4.7 Hypothesis results summary

The results of the hypotheses tested are summarised in Table 4.30.

**Table 4.30: Hypothesis results summary**

Dependent variable: Intention to blow the whistle					
Part A: Results on significant level					
Variables	H	Model	Significant/Insignificant level		
			Scenario 1	Scenario 2	Scenario 3
Attitude	H1	One	Insignificant	Sig at p<.05	Insignificant
		Two	Insignificant	Insignificant	Insignificant
IN	H2a	One	Sig at p<.1	Sig at p<.01	Sig at p<.01
		Two	Sig at p<.1	Sig at p<.01	Sig at p<.01
DN	H2b	One	Insignificant	Insignificant	Insignificant
		Two	Insignificant	Insignificant	Insignificant
PBC	H3	One	Sig at p<.1	Sig at p<.01	Sig at p<.01
		Two	Sig at p<.1	Sig at p<.01	Sig at p<.01
SE	H4	One	Sig at p<.01	Sig at p<.01	Sig at p<.05

		Two	Sig at p<.01	Sig at p<.01	Sig at p<.05
OPC	H5	One	Insignificant	Insignificant	Insignificant
		Two	Sig at p<.1	Sig at p<.1	Insignificant
Awareness	H6	One	Insignificant	Sig at p<.1	Insignificant
		Two	Insignificant	Insignificant	Insignificant
MI	H7a	-	Insignificant	Insignificant	Insignificant
	H7b	-	Insignificant	Insignificant	Sig at p<.01
	H7c	-	Insignificant	Insignificant	Sig at p<.1
	H7d	-	Insignificant	Insignificant	Insignificant
	H7e	-	Insignificant	Insignificant	Insignificant
	H7f	-	Insignificant	Insignificant	Insignificant
	H7g	-	Insignificant	Insignificant	Insignificant

**Part B: Results on hypotheses approval/rejection**

Variables	H	Model	Relationship direction			Hypothesis Status
			Scenario 1	Scenario 2	Scenario 3	
Attitude	H1	One	Positive	Positive	Positive	Slightly support
		Two	Positive	Positive	Positive	
IN	H2a	One	Positive	Positive	Positive	Fully support
		Two	Positive	Positive	Positive	
DN	H2b	One	Positive	Negative	Positive	Rejected
		Two	Positive	Negative	Positive	
PBC	H3	One	Positive	Positive	Positive	Fully support
		Two	Positive	Positive	Positive	
SE	H4	One	Positive	Positive	Positive	Fully support
		Two	Positive	Positive	Positive	
OPC	H5	One	Positive	Positive	Positive	Slightly support
		Two	Positive	Positive	Positive	
Awareness	H6	One	Positive	Positive	Positive	Slightly Support
		Two	Positive	Positive	Positive	
MI	H7a	-	Negative	Positive	Positive	Rejected
	H7b	-	Negative	Negative	Negative	Slightly support
	H7c	-	Negative	Positive	Positive	Slightly support
	H7d	-	Positive	Negative	Positive	Rejected
	H7e	-	Negative	Negative	Negative	Rejected
	H7f	-	Positive	Negative	Negative	Rejected
	H7g	-	Positive	Negative	Positive	Rejected

## 4.8 Conclusion

This chapter has presented the analysis of the results. The descriptive analyses of the profile of the respondents showed that this study obtained a good set of participants.

In the comparison of group differences there were significant differences between respondents from different groups. For example, males were found to have a significantly different attitude towards whistle-blowing than females, and older internal auditors were found to have a significantly different attitude, received greater support from their significant others and had more confidence in their capability to blow the whistle, than those in younger age groups.

The results from standard multiple regressions revealed that some of the hypotheses were fully supported, while some were only slightly supported and others were rejected. It was found that the descriptive norm variable had no significant influence on whistle-blowing intention. The support received from significant others, perceived control and ability to blow the whistle were the variables that were found to have a significant influence on whistle-blowing intention in all the three scenarios. In one or two of the three scenarios, attitudes, awareness of whistle-blowing protection legislation and organizational-professional conflict significantly influence whistle-blowing intention.

The moderated multiple regression analysis found that moral intensity significantly moderated the positive relationship between injunctive norm and whistle-blowing intention and descriptive norm and whistle-blowing intention. Moral intensity, however, has no direct influential impact on the intention.

A discussion of the results is presented in the next chapter.

## **Chapter Five**

### **Discussion of Findings**

#### **5.0 Introduction**

This study aims to identify factors that influence internal auditors' whistle-blowing intention. This study has examined seven independent individual-level factors that influence internal auditors' intention to whistle-blow. In this chapter, the results, presented in the earlier chapter, are discussed. The discussion will relate the findings of this study with the points which have been discussed in related literature. Review papers are mainly referred to as part of and summary of previous literature used in discussing the findings of this study.

This chapter is organised into four sections. The first section discusses the results of the differences of the seven tested variables between respondents from different demographic backgrounds (gender, age, internal auditing work experience, client categories and employment position). The second section discusses the results of the relationship between the individual-level variables and the dependent variable. The third section discusses the moderating effect of moral intensity on the individual relationship between the independent variables and the dependent variable. The conclusion is presented in the last section.

## **5.1 Statistical results of comparing group differences in relation to the independent variables**

One of the research aims of this study was to examine whether there were any significant differences between participants (from different gender, age, years of work experience, client categories and employment position) with regard to the seven independent variables examined in this study.

### **5.1.1 Gender**

Loe et al. (2000) and O'Fallon and Butterfield (2005) reported findings that there were no significant gender differences and if differences are found, females tend to be more ethical than males. However, in this study, the results showed that males have a greater positive attitude towards whistle-blowing than females.

Although results from this study contrast with the findings reported in the review articles particularly in the ethical decision making discipline, the results of males being more ethical conscious on whistle-blowing than females is explainable. In social-role theory, males are usually associated with heroic behaviour (Hyde, 2005) which, in turn, associates males as risk-takers. Females, on the other hand, are commonly associated as being risk-averse. Being risk-takers might have convinced the male internal auditors to hold more ethical stands regarding the whistle-blowing issue, which is very sensitive and complex in nature. Also, whistle-blowing involves a high likelihood of retaliation upon one's involvement with the whistle-blowing practice which is not so severe, if at all, in other ethical types of behaviour studied.

These points might explain why males have more positive attitude than females towards whistle-blowing. In this study, only the attitude variable has significant difference between genders. This is consistent with assertions by Hyde (2005) who reported that males and females are much alike on most, but not all, psychological variables.

Caution needs to be exercised in comparing the results of this present study with the findings reported in Loe et al.'s (2000) review paper. Almost half of the papers reviewed by Loe et al. used students as their samples. In comparison, this present study used actual personnel (internal auditors) in organisations. Students are usually younger and less experienced than actual personnel in organisations; actual internal auditors have more life and work experience. The age and experience gap may create a knowledge gap between actual internal auditors and students which might cause a gap in their cognitive ability, particularly their ethical judgement.

Although there is small amount of research on whistle-blowing that examines the influence of gender (Keenan, 2000) the results of this present study appear to have some consistencies with what Keenan suggested in his article. According to Keenan (2000) there is some preliminary evidence that indicates males have a greater tendency to blow the whistle than females, such as findings by Keenan (1989) and Miceli, Dozier and Near (1987). In addition, research by Miceli and Near (1988) also reported that whistle-blowing was more likely to occur when the observer of the wrongdoings was male.

The average value of attitude for both males and females was above 3.0 which indicates that both groups have a positive attitude towards whistle-blowing. Based on the social desirability response bias result, the attitude variable is not affected by the bias. This means that there is a high probability that the result illustrates the actual attitude of the participants.

Overall, the results show that internal auditors in the U.K. are very concerned with the illegal and unethical practices that occur in organisations and agreed that whistle-blowing is a good and wise idea for reporting questionable practices. Both gender groups also reported positive responses on the other six variables. This means that internal auditors, regardless of their gender, receive support from their significant others in their decision to blow the whistle, have high perceived behavioural control, self-efficacy, low organisational-professional conflict and high awareness of the whistle-blowing protection legislation.

### **5.1.2 Age**

With regards to age, this study found that younger group participants and older group participants differed significantly in terms of attitude, injunctive norm, self-efficacy and organisational-professional conflict. The younger group here refers to internal auditors between 31-40 years old and the older group refers to those between 51-60 years old. Overall results showed that older participants possess more positive attitudes towards whistle-blowing, receive support from significant others (injunctive norm) and they are more confident in their capability (self-efficacy) to embark on any complex and serious ethical decision making, such as whistle-blowing. The

younger participants, however, have a higher organisational-professional conflict than the older participants. An explanation to these findings includes a range of rationales, including the amount of exposure they have had in their work-life. Perhaps, the older respondents in this study have more experience and have had greater exposure to questionable practices in their audit works which have made them more courageous than the younger participants. Serwinek (1992) stated that older people were more exposed to either overt or implied ethical standards. Serwinek also mentioned that an older person is more likely to comply with ethical standards. In the same article, Serwinek also associated older people with financial security obsession. According to Serwinek (1992), older people were less likely to put themselves into a situation which may jeopardise them. Also, people in the older group, at their best, would avoid taking part in any unethical activity. They believed that involvement in any unethical behaviour would eventually make them suffer and they would be likely to get caught and punished.

Overall, the results of this study are consistent with the findings reported in the review articles both in ethical decision making literature (Loe et al., 2000; O'Fallon & Butterfield, 2005) and whistle-blowing literature (Vadera et al., 2009). As predicted, the older participants responded more positively compared to the younger participants.

### **5.1.3 Internal auditing work experience**

Significant results were found on the awareness of whistle-blowing protection legislation and self-efficacy variables. As presented in the analysis of results chapter,

participants with less work experience have a relatively higher awareness of whistle-blowing protection legislation than participants with more work experience. The limited experience in internal audit may have prompted them to seek more in-depth information related to whistle-blowing particularly the whistle-blowing protection legislation. However, in contrast to the self-efficacy results, participants with more work experience were more convinced of their capability to blow the whistle. In the other five variables, no significant results between participants from different work experience groups were obtained.

The results of this study found that respondents with more years of work experience had a more positive score on self-efficacy than the respondents who had fewer years of work experience. A greater number of years of work experience might have given them more exposure in directly dealing with, or knowing the existence of, unethical and illegal behaviours in their workplace. The experiences may have motivated them to gain as much knowledge as they could with regard to the action which they should and could take. For instance, they could gain as much knowledge as they could about whistle-blowing if they regard whistle-blowing as one of the possible resorts they could take. The knowledge would make them aware that they are potentially protected by whistle-blowing legislation, subject to how they make the disclosure. Consequently this could increase their confidence in their capability (self-efficacy) to raise their concerns.

The results of this present study do not stray too far from results reported in the review papers related to ethical decision making. As mentioned in O'Fallon and

Butterfield (2005) and Weeks, Moore, McKinney, and Longenecker (1999), individuals in the more senior years of their career displayed a higher ethical judgment than those in the early years of their career.

#### **5.1.4 Client categories**

For the client category variable, the results found significant differences in the injunctive norm, descriptive norm, awareness of the whistle-blowing legislation and self-efficacy variables.

Internal auditors who audit public sector organisations perceived they would have more support from their significant others than what their counterparts in the private sector organisations perceived. Public-sector organizations are different from private-sector organizations in many ways such as governance (Baarspul & Wilderom, 2011). The differences subsequently bring dissimilarity in the working environment in both sectors. Different working environment between public-sector organizations and private-sector organizations then contributes some implications to the individuals' work motivation, expectation as well as potential risks which ones exposed to. Working in the public sector organizations prioritizes a higher sense of community service which encourages workers to do something valuable for society. Being in this work environment and sharing the same work motives, work climates and organizational culture with their work colleagues, in particular, and with others who close and important to them, in general, contribute confidence to blow the whistle. The support gained from their significant others is also possibly rooted in the belief that blowing the whistle on any questionable organizational practices is

consistent with the public sector organizations' policies and therefore find no difficulties to obtain support from their significant others.

This study also found that internal auditors who audited private sector organisations are more aware of the whistle-blowing legislation and believed in their capability (self-efficacy) to whistle-blow. In contrast to public-sector organizations, most of private-sector organizations are profit-oriented and this has subsequently brings to the different work motives, work motivation and risks. Realizing that there is probability that they might have a conflict in performing duties as internal auditors (such as produce a faithful report versus window dressing audit report) and knowing that probability for losing job, if they do not follow what their organizations asked them to do, is higher in the private sector than in public-sector encouraged internal auditors to be aware of any protection legislation that provides protection to them. This includes situation involving whistle-blowing. The information assists them to understand their rights in reporting any questionable organizational practices and to know the right procedure for making any report of questionable organizational practices. Having that information consequently helps boost their confidence to whistle-blow.

As mentioned in the previous chapter, no whistle-blowing studies have studied or discussed the difference between internal auditors in public sector and private sector organisations. Referring to the article in public management literature such as articles by Andersen (2010) and Rainey et al. (1995) the findings of this present study

support the findings by these authors that differences exist between employees in private and public sectors.

Although past research has not empirically examined the difference between internal auditors in public-sector organisations and internal auditors in private-sector organisations, results from this study provide some evidence that differences exist between internal auditors from different organisations. This study therefore suggests that the organisational environment (public sector versus private sector) might be one of the significant predictors that can explain an individual's perception of whistleblowing. Any future research should include an investigation of the differences between internal auditors in different organisational sectors.

### **5.1.5 Employment position**

With regard to employment position the cross-tabulation analysis did not find much difference between in-house internal auditors and outsourced internal auditors in relation to the seven tested variables. Mahzan et al. (2012) also found minimal differences between in-house and outsourced internal auditors. However, caution should be exercised in concluding the results of this present study as a minimal number of outsourced internal auditors participated in this survey.

Outsourcing is now becoming more common in organizations and this includes outsourcing the internal auditing function. This fact along with the results obtained in this study suggests that the investigation of differences between in-house and outsourced internal auditors should be looked at again in future research.

## 5.2 Statistical results for exploring relationship between variables

The results in Chapter Four show that positive and significant relationships exist between whistle-blowing intention and attitude (H1), injunctive norm (H2a), perceived behavioural control (H3), self-efficacy (H4), organisational-professional conflict (H5) and awareness of whistle-blowing protection legislation (H6). However, the relationship between whistle-blowing intention and descriptive norm (H2b) was rejected.

Injunctive norm, perceived behavioural control and self-efficacy are three variables that had a positive and significant influence in all of the three scenarios. In contrast, the results on attitude, awareness and organisational-professional conflict only showed significant results in one or two of the scenarios. The results, however, provide evidence that shows potentiality of attitude, awareness and organisational-professional conflict to significantly influence whistle-blowing intention. The summary of the results is shown in Table 5.1.

**Table 5.1: Results of hypothesis analysis**

Scenario	Independent variables						
	Attitude	IN	DN	PBC	SE	OPC	Awareness
Scenario 1	X	√	X	√	√	√	X
Scenario 2	√	√	X	√	√	√	√
Scenario 3	X	√	X	√	√	X	X

IN= injunctive norm; DN = descriptive norm; PBC = perceived behavioural control, SE = self-efficacy; OPC = organizational-professional conflict  
 √ = significant; X = insignificant

The findings of each of the seven tested variables are discussed in the following paragraphs.

### **5.2.1 The influence of attitude towards whistle-blowing on the intention to blow the whistle**

Regression results show mix findings on the significant association between attitude and whistle-blowing intention. A significant influence of attitude on the intention was found in the Scenario 2. In Scenario 1 and Scenario 3, the results found insignificant influence of attitude on the whistle-blowing intention. The study, however, predicted that in all the scenarios attitude has a significant influence on the intention. The unexpected insignificant influence of attitude on intention as found in Scenario 1 and Scenario 3 might be due to the ethical situations described in the scenarios. As compared to Scenario 1 and Scenario 3, ethical situations described in Scenario 2 mentioned about ‘material’. However, no materiality concern was mentioned in the other two scenarios.

Although only in Scenario 2 the association between attitude and whistle-blowing intention is significant, the results provide empirical evidence that attitude has the potential to significantly influence whistle-blowing intention.

This result is consistent with most previous research, for example, a study by Park and Blenkinsopp (2009). In the study, the authors found a significant positive result on the association between attitude towards whistle-blowing and the intention to blow the whistle. Similarly, a study by Randall and Gibson (1991) also found that attitude has a significant influence on intention. However, Chang (1998) found that

attitude had a positive but insignificant contribution than the perceived behavioural control variable in predicting intention. Findings in the present study provide additional evidence that show attitude may play a role in influencing behavioural intention including risky behaviour such as whistle-blowing.

The following paragraphs provide an explanation of the significant influence of attitude, among internal auditors in the U.K., on the whistle-blowing practices.

In the U.K. whistle-blowing is no longer a new occurrence. Vinten and Gavin (2005) mention that at present more whistle-blowing cases are reported than compared to the past 25 years where whistle-blowing was relatively rare. Whistle-blowing has achieved an unprecedented reception from both the political and organisational level (Vinten & Gavin, 2005). Due to the recognition of whistle-blowing practices and also the on-going improvements in the whistle-blowing legislation (the PIDA 1998), the term 'whistle-blowing' is no longer unusual for organisational members in the U.K., including internal auditors. Additionally, whistle-blowing practices have received strong support from the Institute of Directors, the Confederation of British Industry, the Committee Standards in Public Life and the Trades Union Congress (Public Concern at Work, 2013b). The encouragement given by regulators of organisations, to provide whistle-blowing policies and procedures, to some extent assists in cultivating a positive attitude towards whistle-blowing. All these determined efforts and available support have contributed advantages, such as promoting whistle-blowing practices. It is believed that one of the implicit aims of

these efforts is to instil positive views and attitudes among all workers, organisations and the public, in general, toward whistle-blowing practices.

The positive attitude among individuals in the U.K., toward whistle-blowing practices, was also reported in one of the recent whistle-blowing surveys conducted by YouGov on behalf of PCaW, the U.K.'s leading authority on whistle-blowing. The survey found that 1 in 10 workers in the U.K. have a concern regarding possible wrongdoings in their organisations. It is interesting to note that, in the survey, the majority of the workers report a positive view on the whistle-blowing practice which demonstrates a positive attitude towards whistle-blowing practices (Public Concern at Work, 2013c).

In addition to the above justification, the predicted positive attitude towards whistle-blowing is consistent with the claim by Schmidt (2005) that common law countries, such as the U.K., seem to regard whistle-blowing practice as a valuable device for strengthening ethical conduct in the workplace.

### **5.2.2 The significant influence of injunctive norm and insignificant influence of descriptive norm on the intention to blow the whistle**

This study found a positive and significant relationship between the injunctive norm and intention to blow the whistle. These results are consistent with the findings from previous research such as by Park, Klein, Smith, and Martell (2009) who found a positive association between the injunctive norm variables on the intention to limit alcohol consumption. In the present study, it was found that descriptive norm had an insignificant relationship with whistle-blowing intention. In the study by Park et al.

(2009), the authors report that both norm variables are unique to each other which indicate that they measure two different things. A study by Sotiropoulos and D'Astous (2013) also found a positive influence of the descriptive norm on the intention to overspend on credit cards. In a study by Park and Blenkinsopp (2009) that investigated the whistle-blowing intention among police officers, the general social norms variable played an important role in predicting the intention to blow the whistle. In a different study conducted by Rhodes and Courneya (2003), the authors found that the general social norms variable played a role in predicting intention.

As discussed in Chapter Two, previous research reports mixed findings on the significant influence of social norms in intention prediction. In this study, it was found that injunctive norm is the variable that has a significant influence on the intention to blow the whistle. However, the regression results showed that in relation to injunctive norm, the descriptive norm had an insignificant impact on the intention to blow the whistle. In other words, participant perceptions of whether their important others approve or support their decision to blow the whistle plays a more significant role than the perception of whether their important others would blow the whistle if they themselves were put in the same situation. The results of this study provide additional evidence that support the important role of support received from significant others, such as family members and peers, in influencing an individual's whistle-blowing intention. This result is consistent with previous research such as Finlay et al. (1999), Carpenter and Reimers (2005) and Kautonen et al. (2013) who also found a significant influence of the social norms variable in intention prediction.

The following paragraphs provide possible explanations of the significance of the above findings. One possible explanation of the significant influence of the injunctive norms variable on the internal auditors' intention to blow the whistle is the way whistle-blowing is reported in the media. Based on a content analysis of U.K. national newspapers from 1997 to 2009, it was found that whistle-blowing activities are broadly reported in the media and, interestingly, most of the reports highlight the whistle-blowing action in a neutral or positive mode (Wahl-Jorgensen & Hunt, 2012). This can be regarded as a form of support given by the media on the culture of raising concern on ethical wrongdoing (Wahl-Jorgensen & Hunt, 2012). It is undeniable that the media provide the main source of daily information to any individual; therefore, the way they describe and justify whistle-blowing practices might impact on how the individual perceives whistle-blowing. The perception an individual has of whistle-blowing is very valuable as it may influence the kind of action they would take if they were in a situation that required them to blow the whistle, or in a situation to persuade/advise someone in relation to blowing the whistle.

In addition, in the present day, the merits of whistle-blowing practices are actively promoted by the government and regulators in the U.K. These can be seen from the concerted efforts made by regulators and the government which are discussed in the following section. The efforts have indeed added additional advantages in disseminating a better view about whistle-blowing practices among the public in particular. One of the subsequent positive implications is the cultivation of the positive attitude towards whistle-blowing practice among the society in the U.K. The

nature of the whistle-blowing practice, which is complex and sensitive to individuals, needs a very delicate and convincing approach to ensure the core and the positive side of the whistle-blowing is shared thoroughly among the society at large.

It is also possible that popular whistle-blowing films may further influence society's perceptions on whistle-blowing practices. Among the popular whistle-blowing films are *The Insider* (1999) and *The Whistleblower* (2010) which might have successfully shared the positive value of whistle-blowing and the significance of whistle-blowing practices. In the films, whistle-blowing is described as an action that uncovers illegal and unethical behaviour in organisations taken to safeguard stakeholders' interests particularly the public.

### **5.2.3 The influence of perceived behavioural control and self-efficacy on the intention to blow the whistle**

This study found that the two variables, perceived behavioural control and self-efficacy significantly influence the internal auditors' intention to blow the whistle. The results of this study are consistent with previous research. A study by Trafimow et al. (2002) reported that perceived difficulty (self-efficacy) is a better predictor of most behavioural intentions than the perceived controllability (perceived behavioural control). Similarly, the same output was reported by Rhodes and Courneya (2003). In a study by Park and Blenkinsopp (2009), perceived behavioural control has a significant positive association with intention to blow the whistle.

In this study, the results show that internal auditors in the U.K. appear to have strong confidence in their controllability and ability to whistle-blow. One of the possible reasons for this outcome is the mechanism for whistle-blowing which is currently provided in most organisations. In recent years, regulators and the government have legislated new rules that encourage organisations to provide whistle-blowing policies and procedures. The effective whistle-blowing policies and procedures play a crucial role in encouraging workers to raise their concerns (Public Concern at Work, 2013a). The effective whistle-blowing policies and procedures act as a reference for organisational staff members to place trust that their management teams promote the whistle-blowing practice. Furthermore, this helps create a positive and open culture towards whistle-blowing practices in the organisation. In addition, it helps increase the self-confidence among employees to voice their concerns, using their right as a staff member who wants to see unethical and/or illegal action rectified before it escalates. However, the effectiveness of the whistle-blowing policies and procedures is much dependent on the management. There are some organisations that seriously create a whistle-blowing culture in their workplace by putting in place whistle-blowing policies and procedures. However, some organisations provide whistle-blowing policies and procedures just as a tool to prevent themselves from any legal liability. This is where the organisations are merely paying lip service to whistle-blowing practices. The importance of establishing a whistle-blowing mechanism in organisations is reported by Hartman, Elm, Radin, and Pope (2009).

The U.K. legal environment also provides an explanation as to the confidence of internal auditors on their controllability and ability to raise their concern. PIDA 1998

was enacted with the main purpose to provide protection to whistle-blowers. Knowing that there is legislation that provides protection to whistle-blowers sends a message that whistle-blowing is encouraged. The protection provided by the legislation should help remove any fear or worry to blow the whistle (Hartman et al., 2009). All of the efforts made by the government and regulators have indeed sent a strong message to workers in the U.K. that they have a human right to come forward and voice their concerns.

This study also found that in circumstances involving a more serious unethical and illegal organisational practice, such as bringing harm to public safety, the confidence among internal auditors of their controllability and ability to raise their concern is relatively high.

#### **5.2.4 The influence of the awareness of the whistle-blowing legislation on the intention to blow the whistle**

For the awareness of the whistle-blowing legislation variable, the results presented in Chapter Four found evidence that only slightly supported the hypothesis. In other words, there were mixed findings. In Scenario 1 and Scenario 3, unpredicted insignificant results on the relationship between awareness and whistle-blowing intention were found. However, in Scenario 2 there was a positive and significant relationship between the awareness variable with the intention to blow the whistle.

This study's findings on the positive and significant relationship are consistent with previous research. For example, Lee and Shin (2010). Lee and Shin reported a

positive association between consumers' awareness of CSR activities and the purchase intention. A similar finding was also reported by Golnaz, Phuah, Zainalabidin, and Mad (2012) where the authors investigated an awareness of the green concept and the intention to go green in food consumption. Additionally, in a study of recycling behaviour, conducted by Garces, Lafuente, Pedraja, and Rivera (2002), the authors found a positive relationship between environmental awareness and recycling behaviour.

Significant results of awareness's influence on intention or behaviour are mainly reported in marketing research studies such as by Grewal, Krishnan, Baker, and Borin (1998) and Aaker and Keller (1990). Overall, the findings from this study provide evidence that awareness plays an important role in influencing individual's behavioural or intention. The following paragraphs provide an explanation of the above findings.

The U.K. is presently very serious and active in its efforts to strengthen governance in organisations; one such effort concerns whistle-blowing practice. The continuous efforts in promoting whistle-blowing practice have kept whistle-blowing protection legislation at the forefront of mind of organisational members in the U.K. Thus, this might explain the significant influence of awareness on the whistle-blowing intention. Many efforts from various parties are continuously taken in ensuring good governance in organisations. Much attention is given to organisations in both the public and the private sectors and groups of high profile positions (this includes internal auditors) in the effort to protect and increase organisational good

governance. This further combats any illegal and unethical practices in organisations. For example, in the financial services industry the Financial Conduct Authority encourages organisations to have whistle-blowing arrangements in place. In addition, the Financial Reporting Council, in its U.K. Corporate Governance Code 2012, encourages listed companies to have whistle-blowing policies in place, or, if they do not have such policies, they will need to explain the reason why in their annual reports. Although there is no certainty that having whistle-blowing arrangements in place in organisations will ensure that workers will come forward to raise their concerns, putting in place whistle-blowing procedures might send out a positive message to workers of the paths they could use to raise their concern. These efforts indicate to internal auditors the high expectation which is placed upon them to come forward and raise their concerns. Although the right for workers in the U.K. to blow the whistle is not explicitly stated, the concerted efforts by various parties, including the government, can be regarded as one of the factors that should have driven workers, including internal auditors, to follow whistle-blowing practice. The seriousness of this country to strengthen organisation governance has provided a way for the PIDA to get closer to the heart of potential whistle-blowers.

The PIDA 1998 is the only whistle-blowing protection legislation in the U.K. and it was established to give protection to whistle-blowers. Since the first draft of the legislation, the PIDA has received various constructive comments from several parties, particularly among regulators on the coverage of the protection given by the PIDA. As a result, PIDA was amended accordingly with a purpose to provide a better and more effective protection. One of the recent amendments was made in

2013 by the Enterprise and Regulatory Reform Act where the good faith requirement was removed and replaced with the public interest requirement. The removal of the good faith requirement indicates that currently in the U.K. whistle-blowing should be done on the grounds of public interest for the whistle-blowers to be protected by the PIDA. In other words, the motive of disclosure by the whistle-blowers is no more a major concern. The amendment was made with the hope that organisational members would feel more motivated towards whistle-blowing.

### **5.2.5 The influence of organisational-professional conflict on the intention to blow the whistle**

This study found mixed findings on the relationship between organisational-professional conflict and whistle-blowing intention. The regression analysis found a positive and significant relationship between the variables in Scenario 1 and Scenario 2. In Scenario 3, a non-significant relationship was found. The mix findings of significant and insignificant results might due to the ethical situations described in each scenarios. Scenarios 1 and 2 described about bad practices of accounting and involve the misuse of organization's financial resources. In these two scenarios, the impacts of the ethical situations to the organizations are indeed very close. The conflict which internal auditors have in these two scenarios is more intense than the situation described in Scenario 3. Compared to ethical situation in the Scenario 1 and scenario 2, the ethical situation in scenario 3 is more intense than in the other two scenarios. However, the ethical situation in Scenario 3 does not yet impose bad effect to the organization as the matter has not yet reached the external parties knowledge.

Internal auditor needs to take immediate action before the matter escalates. The current situation faced by the internal auditors as presented in Scenario 1 and Scenario 2 caused more conflict to internal auditors compared to situation in Scenario 3 where the current effect to the organization is not yet occurred. The ethical situations described in Scenario 1 and Scenario put more conflict on the internal auditors than the ethical situation in Scenario 3.

These findings are consistent with previous research. For example, a positive relationship between organisational-professional conflict and turnover intention was reported in a study by Aranya and Ferris (1984). A similar finding was also reported in Shafer (2002) who found that there was a positive relationship between ethical pressure and organisational-professional conflict. Furthermore, the higher organisational-professional conflict the higher the turnover intention.

Previous research in the accounting field that investigates the organisational-professional conflict mainly reports that accountants, in general, have a high organisational-professional conflict. However, from the previous studies, no information on the significant influence of the organisational-professional conflict on behavioural intention has been reported. In this study, the finding of the significant influence of organisational-professional conflict (in Model 2 of both Scenario 1 and Scenario 2) provides preliminary empirical evidence on the significant influence of the organisational-professional conflict on whistle-blowing intention.

In this study, most of the internal auditors reported that they had been given a massive opportunity to hold their professionalism during their audit works and they

faced minimal conflict during their work. This finding is consistent with what was asserted by Vinten (2004), that British workers in general:

*have less fear of, and respect and obedience to, their seniors and those in positions of power, they are more able to cope with ambiguity and uncertainty, more tenacious, more independent, less emotional, less fatalistic, more arrogant, more reserved, and they care more for other people* (Vinten, 2004, p. 148)

In addition, internal auditing is commonly recognised as a profession and internal auditors are generally highly educated with a sound knowledge of their responsibilities and duties. Also, they are under close scrutiny from professional bodies and this might have made them consciously aware to always uphold the code of ethics of internal auditors. The code of ethics provides guidelines for internal auditors in rationally taking action parallel to their professionalism whenever they are faced with ethical issues.

### **5.2.6 The intention to blow the whistle among internal auditors in the U.K.**

With regards to the level of intention, this research found a highly positive intention among internal auditors to blow the whistle in all the three scenarios.

One explanation for this finding is the culture factor. According to Bierstaker (2009), Hofstede defines culture as a “collective programming of the mind which includes ethical values” (p.242). In Hofstede’s original cultural dimensions, there are four culture values that best describe the effects of society’s culture on values and the subsequent behaviour of the members in that particular culture. The four culture

values are: individualism-collectivism; uncertainty avoidance; power distance; and masculinity-femininity.

Based on Hofstede's cultural dimension theory, the U.K. is a country that scores high in individualism and masculinity-femininity culture dimensions but scores low in the remaining dimensions. Cross-cultural studies by previous researchers reports that in individualism culture, everyone is expected to look out for him/herself as well as his/her family (see Tavakoli, Keenan, & Cranjak-Karanovic, 2003). In the workplace, workers are independent from the organisation which means that individual achievements are stressed rather than group achievements. In addition to individualism, the U.K. is also masculine in culture. This means individuals feel more comfortable in taking action and directly confronting a situation of conflict (Tavakoli et al., 2003). In other words, the individualism and masculinity culture dimensions illustrate that individuals in the U.K use their human right to speak out or take action, when they consider necessary, and this includes whistle-blowing action.

Scoring low in power-distance illustrates that individuals in the U.K. assume everyone is relatively equal in terms of power. Workers and supervisors are considered as equal in status. In a case where there is dispute on certain issues, individuals are more likely to challenge the authority. Apart from that, a low score in the uncertainty-avoidance dimension means that individuals in the country perceive that every problem can be solved by using the existing rules or regulations. Mistakes that occur are considered as normal and part of the learning process. Also, individuals have a high tolerance of ambiguity and further high risk situations. These

traits of the U.K culture may help explain the high intention of internal auditors to blow the whistle.

It was also found that intention level among respondents was relatively higher in Scenario 3 than in Scenario 1 and Scenario 2. This might have been caused by the different nature of ethical situation presented in each of the scenarios (see Near et al., 2004; Somers & Casal, 2011). As mentioned earlier, Scenario 1 presented a situation involving improper accounting treatment, Scenario 2 involved financial statements fraud and Scenario 3 involved a situation that may pose danger to the environment and public in general. A considerable amount of previous research contends that what individuals perceive to be right or wrong and ethical or unethical differs between cultures. Evidence to this claim is provided by Robertson and Schlegelmilch (1993) who found that respondents in the U.S.A and the U.K differ in their perceptions. According to the authors, although the U.K. and the U.S.A. are in the same cluster – they are Anglo-Saxon - in the U.K. problems involving quality control, environment pollution, plant closings and layoffs, conflict of interest and misuse of propriety information (in that order) are considered as serious ethical misbehaviours. In contrast, in the U.S.A., problems involving drug and alcohol abuse, employee theft, conflict of interest, quality control, discrimination, misuse of propriety information and abuse of expense accounts (in that order) are considered as a serious ethical misbehaviour. Based on the findings, as predicted, this study found that more internal auditors scored in the higher end of the whistle-blowing intention scale in Scenario 3 than in Scenario 1 and Scenario 2.

### **5.3 The influence of moral intensity as moderator**

As reported in Chapter Four, it was found that moral intensity has moderating effects on some of the individual relationships between the individual-level variables (independent variables) and the intention to blow the whistle (dependent variable). A significant moderating effect of moral intensity was found in the relationship between injunctive norm and intention. Injunctive norm is one of the variables that significantly influences the whistle-blowing intention. A significant moderating effect of moral intensity was also found in the relationship between the descriptive norm and whistle-blowing intention, although the descriptive norm did not significantly influence the whistle-blowing intention. In the regression analysis, it was also found that moral intensity plays a minimal role on the intention to blow the whistle.

In general, the result is consistent with previous research that has investigated the moderating role of moral intensity. For example, in a study by Chen, Pan, and Pan (2009), the authors found that the joint moderating effect of moral intensity and moral judgment moderated the positive relationship between consumers' attitudes towards software piracy and the consumers' intention of using pirated software. In the same article, the authors also reported that the joint moderating effect of moral intensity and moral judgment also moderated the positive relationship between subjective norms and the consumers' intention of using pirated software. A study by Flannery and May (2000) revealed that moral intensity moderates the relationship between each of five variables (attitudes, subjective norms, self-efficacy, financial

costs and ethical climate) and the managers' environmental ethical decisions intentions.

As discussed previously, injunctive norm is one of the variables that has a significant influence on whistle-blowing intention. This study also found that whistle-blowing intention level was higher in Scenario 3 than in the other two scenarios. Consistent with conclusions by Robertson and Schlegelmilch (1993), the results of the present study show that respondents perceived the situations presented in Scenario 3 were more ethical and intense than in the other two scenarios (the mean of intention in Scenario 3 is much higher than in Scenario 1 and Scenario 2. See section 4.2).

The results of the moderating effects of moral intensity show that the issue-contingent (the joint effect of all the six components of moral intensity) of ethical situation plays a crucial role on an individual's intention to blow the whistle. The results suggest that the higher the moral intensity of the organisational questionable practices, the higher the influence of the important others surrounding those who intend to blow the whistle. One of the explanations of these findings is because whistle-blowing is a very risky decision for any individual to make, and the significant others of the decision maker are a big influence in the decision making process.

## **5.4 Conclusion**

This chapter has discussed the findings of this study. In this study, positive attitude towards whistle-blowing is reported by first, male internal auditors and second,

internal auditors in older age group. The positive attitude toward whistle-blowing among males in relative to female internal auditors is consistent with social-role theory that asserts males are usually associated with heroic action which in turn refers them as risk-takers. The positive attitude among older internal auditors is associated with the exposure and experience they have gained in their work-life. Older internal auditors are more likely to comply with ethical standards and are less likely to put themselves in a situation that may put them into trouble and jeopardise their career. Internal auditors in older age group also have a higher confidence on their ability to whistle-blow. Confidence to blow the whistle is also higher among those who have a greater work experience.

Injunctive norm, perceived behavioural control and self-efficacy are three independent variables that have significant influence on intention to whistle-blow in all the three scenarios. Attitude, awareness of whistle-blowing protection legislation and organizational-professional conflict also significantly influence whistle-blowing intention, however not in all the three scenarios.

The significant influences of these factors on whistle-blowing intention are resulted from the efforts that have been taken by regulators and government in the U.K. The establishment of the PIDA 1998, the formation of Public Concern at Work and the continuous improvement to the PIDA are among the efforts that have fostered a good view of whistle-blowing among internal auditors in the U.K.

Findings of this study contribute valuable inputs to the literature and also provide recommendations to various parties such as government, government bodies, private

organizations, regulators and policy makers. The contributions and recommendations of this study are presented in the next chapter.

## **Chapter Six**

### **Conclusion**

#### **6.0 Introduction**

The practices of illegal and unethical activities in any organization can bring bad impact to various parties such as the organization itself, employees and society. Therefore, measures to address such practices are needed. Whistle-blowing is one of the tools that has been introduced to attend such situation. Whistle-blowing needs an individual who has any knowledge of the practice of illegal and unethical activities in their organizations to disclose the information to the appropriate parties which in turn may help the organization to take remedial action. Despite the good of the whistle-blowing practice, blowing the whistle is a risky action. Therefore, investigation of factors that may influence one to blow or not to blow the whistle is a valuable study and it contributes valuable inputs to various parties.

This study examined factors affecting U.K. internal auditors' whistle-blowing intentions. Based on discussions from literature, seven individual-level independent variables (attitude towards whistle-blowing, injunctive norm, descriptive norm, perceived behavioural control, self-efficacy, organisational-professional conflict and awareness of whistle-blowing protection legislation) were examined for, first, their relationship with whistle-blowing intention and second, their significant influence on whistle-blowing intention. This study also examined the moderating effect of moral intensity on each of the relationships between the seven independent variables and whistle-blowing intention. In addition, the independent variables were examined for

significant differences based on the internal auditors' demographic backgrounds (gender, age, work experience, client categories and employment position).

This chapter provides the summary of the study, the contributions of the study to the body of knowledge, recommendations for practice, limitations of the study and suggestions for future research. The chapter concludes by addressing the fulfilment of the research objectives.

## **6.1 Summary of the study**

Literature in business ethics, management and auditing has discussed the role of internal auditors in organisations. Due to the unique position of an internal audit function and its role in an organisation, internal auditors have long been described as the eyes and ears of the management and the board. The role of internal auditors has expanded and, at present, internal auditors are one of the pillars of good organisational governance. Good governance is a means to develop confidence among various parties towards organisations. Through good governance, organisations send a message to stakeholders that the organisations are, first, run efficiently, effectively and ethically, and secondly, comply with all the applicable rules and regulations. With regards to good governance, and as part of their role, internal auditors need to make a report on any type of questionable practices that have taken place in their workplace. However, the decision to make a report, or blow the whistle, on the questionable practice is not an easy decision to make.

This research is the first study to investigate whistle-blowing intention among internal auditors in the U.K. The objective of this study was to identify factors that may influence whistle-blowing intention. In achieving the aim, the relationship

between seven independent variables on the whistle-blowing intention was examined. Then the significant influence of the independent variables on whistle-blowing intention was examined. In addition, the moral intensity was tested for its moderating effect on the relationship between each of the seven independent variables and the dependent variable. This study also investigated significant differences in the seven independent variables among internal auditors based on their demographic background.

The results of the study showed that individual-level factors play a significant role in influencing internal auditors to blow the whistle. Six independent variables had a positive and significant relationship with the whistle-blowing intention. Three of the variables (injunctive norm, perceived behavioural control and self-efficacy) had a positive and significant relationship in all of the scenarios; the remaining three variables (attitudes towards whistle-blowing, awareness of whistle-blowing protection legislation and organisational-professional conflict) had a positive and significant relationship with whistle-blowing intention in one or two scenarios. The descriptive norm, however, had an insignificant relationship with whistle-blowing intention in all three scenarios. The moral intensity had a significant moderating effect on the relationship between the injunctive norm and whistle-blowing intention, and the descriptive norm and whistle-blowing intention.

With regard to demographic background, the study found that men and women had a significant difference in their attitudes towards whistle-blowing, while internal auditors in the age group of 51-60 years old differed significantly in their attitudes towards whistle-blowing, injunctive norm, self-efficacy and organisational-professional conflict than those in the age group of 31-40 years old. Older internal

auditors had more positive attitudes towards whistle-blowing, received more support from their significant others (injunctive norm) and were more confident in their capability (self-efficacy) to blow the whistle. Conversely, younger internal auditors reported higher organisational-professional conflict. In addition, internal auditors with more years work experience had greater awareness of the whistle-blowing legislation and higher self-efficacy than those with less years work experience. Furthermore, internal auditors that audit public sector organisations perceived they gained more support from their important others than their counterparts in private sector organisations. It was also found that internal auditors that audit private sector organisations perceived a greater awareness of whistle-blowing protection legislation and reported a higher capability (self-efficacy) to whistle-blow. The study, however, was unable to perform statistical analysis in examining the difference between in-house internal auditors and outsourced internal auditors due to the small participation of outsourced internal auditors.

## **6.2 Contributions of the study**

The results of this study make several contributions to the body of knowledge. Firstly, a considerable amount of previous research has mainly focused on organisational-level and situational-level factors with regard to whistle-blowing intention. There is limited research that investigates individual-level factors in whistle-blowing literature. By investigating the seven individual-level factors the findings from this study provide evidence of the influence of individual-level factors on whistle-blowing intention. This study provide evidence that whistle-blowing intention is not solely influenced by externally-based factors, for instance, the amount of rewards provided (Xu & Ziegenfuss, 2008) or the level of personal costs

involved for reporting (Arnold & Ponemon, 1991; Kaplan & Whitecotton, 2001) which have gained wide attention in previous research. Factors that are relatively closer to individuals or named as individual-level factors also play roles in influencing whistle-blowing intention. This is evident from the results of this study which found that individual-level factors such as: (1) social norm – the approval from significant others to blow the whistle; (2) perceived behavioural control – the controllability of individuals to blow the whistle; (3) self-efficacy – the ability of individuals to blow the whistle under a series of obstacles; (4) attitudes; (5) organizational-professional conflict; and (6) awareness of whistle-blowing protection legislation are the factors that may significantly influence whistle-blowing intention. Therefore, this study recommends that, in future, whistle-blowing researchers should also give attention on individual-level factors in line with the organisational-level factors and situational-level factors in their research work. Consideration of the individual-level factors along with organizational-level and situational-level factors provides a better and extensive view of factors that may influence whistle-blowing intention. Investigating all the three level factors is also essential in developing whistle-blowing theory. In addition, results of this study show that extended TPB is compatible with whistle-blowing study. Apart from studying direct relationship between independent and dependent variables, it is also important to investigate the effect of moderating variable(s).

Secondly, this study provides evidence that internal auditors in the U.K. have a positive attitude towards whistle-blowing practice. Despite the secrecy culture and limitations to the freedom of speech that generally describe U.K culture, the practices do not prohibit internal auditors from having a positive perception towards whistle-

blowing and in turn mould a positive attitude towards whistle-blowing. This finding also contrast with the assertion by Appelbaum (2006) that whistle-blowing is not favoured by the British. The positive attitude towards whistle-blowing might explain the results of high intention among internal auditors in the U.K. to blow the whistle.

Thirdly, this study shows that the extended TPB model can be employed for investigating whistle-blowing intention. In previous whistle-blowing research, the original TPB model has been widely used, for instance by Park and Blenkinsopp (2009) and Randall and Gibson (1991). The inclusion of self-efficacy to the research conceptual framework found it to be one of the significant factors influencing whistle-blowing intention. In addition, the inclusion of moral intensity as a moderator in the research model provides important information on the moderating effect of moral intensity to the relationship that exists between both the injunctive and descriptive norm and whistle-blowing intention. The extended TPB thus gives a broader picture of the factors that might influence whistle-blowing intentions.

### **6.3 Recommendations**

In addition to the contributions listed in the previous section, the findings of this study also provide valuable recommendations to a wide range of groups.

First and foremost, this study recommends some ideas to government, media, organisations and other responsible parties on what they could do in their attempts to encourage whistle-blowing practice in organisations. In other words, the results provide organisations with information on aspects that should be emphasised in an effort to cultivate a whistle-blowing spirit among their employees. Results of this study show that injunctive norms, perceived behavioural control, self-efficacy and

attitude are significant factors that influence whistle-blowing intention. With regard to the injunctive norms and attitude towards whistle-blowing, government, media, and other responsible parties should start to take progressive and consistent actions in promoting whistle-blowing. This is vital in disseminating the positive value of whistle-blowing and ensuring a positive perception towards whistle-blowing is shared among society. Organisations should also put effort into convincing their internal auditors that an internal whistle-blowing culture is very much welcome. This is one of the means to infuse the spirit of whistle-blowing among internal auditors in particular (and to all other staff in general). Amongst the efforts that organisations could take would be to frequently highlight the encouragement of whistle-blowing practice in meetings with internal auditors. In addition, news on whistle-blowing practice could be published in weekly newsletters and/or monthly bulletins. In this way, organisations would help internal auditors to have a sense of confidence that the whistle-blowing culture is strictly and seriously cultivated in their workplace and convey a message that their colleagues and management teams support the action of employees to raise their concerns.

With regard to perceived behavioural control and self-efficacy, findings from this study indicate what organisations could do to help increase the confidence for their employees to blow the whistle. In the U.K. there is no requirement for organisations to institutionalise whistle-blowing policies (Hassink et al., 2007). Nevertheless, as reported by Seifert et al. (2010), whistle-blowing policies and mechanisms that incorporate higher levels of procedural justice, distributive justice and interactional justice are one of the points that may increase confidence among staff to blow the whistle. Similarly to the point reported by Public Concern at Work (2013a), effective

whistle-blowing policies are very important in encouraging staff to blow the whistle. The results of this study provide additional evidence that putting in place effective whistle-blowing policies and mechanisms is very important and beneficial to the whistle-blowing practice. By putting in place effective whistle-blowing policies and procedures, internal auditors will have an increased awareness of what they should and could do with regard to raising their concerns. Cultivating the whistle-blowing practice culture and simultaneously providing effective whistle-blowing policies and mechanisms helps to increase an internal auditor's perceived controllability and ability to blow the whistle. In addition, not only the policies and mechanisms should provide ways and channels for blowing the whistle, the policies should also guarantee appropriate response to the reports. This can be performed via investigating the reports fully and fairly and providing feedback to the whistle-blowers (if it is non-anonymous reporting).

Secondly, this study recommends Public Concern at Work to increasingly promote its work. From the findings, it was found that there is low awareness among internal auditors (in this study) on the existence of Public Concern at Work - a charity that provides advices on whistle-blowing to potential whistle-blowers. More intensive efforts should be made by the charity to ensure its existence is widely known by potential whistle-blowers. For example, Public Concern at Work could take a more rigorous step in promoting their organisation and its services in the media. They could also visit organisations in an effort to develop collaboration opportunities which also help promote the charity. Their work might also be promoted by public bodies.

## 6.4 Limitations of the study

Despite the above mentioned contributions of the study, a number of limitations need to be noted. These limitations in some ways represent opportunities for future research. The following are the main limitations of this present study:

1. The use of convenience sampling method

The use of convenience sampling method means only internal auditors that were easy to access were included in the sampling frame. In other words, the convenience sampling method exposes this study to various sources of bias. For instance, the sample might over/under represent one particular group. Therefore the convenience sampling exposes this research to a limitation in generalising the results of the populations. Nevertheless, the sample in this study is not a bad sample as it obtained a varied set of participants.

2. The existence of social desirability bias

As mentioned previously, the use of self-reported survey might provide this study with a dataset that contains social desirability bias. Although the researcher has taken several appropriate measures to address this bias problem, there will always be a possibility that participants give undetected social desirability bias responses. When biases exist, results of the study need to be interpreted with caution. This is because the results may differ from the actual situations. In this study, no social desirability response bias was found in the attitude and awareness variables. The analysis, however, found evidence that social desirability response bias existed in the injunctive norm, descriptive norm, perceived behavioural control, self-efficacy, intention and

moral intensity variables. Injunctive norm recorded the highest number of social desirability bias (four occasions) followed by organizational-professional conflict (three occasions), descriptive norm, self-efficacy and intention (two occasions for each variable) and perceived behavioural control and moral intensity (one occasion for each variable). It is recommended, therefore, that future studies include suitable measures in their research instrument.

3. Whistle-blowing intention and not actual whistle-blowing behaviour

As mentioned earlier, whistle-blowing is a very sensitive issue. Individuals might feel uncomfortable if they are asked about their actual whistle-blowing behaviour. Therefore, instead of studying actual whistle-blowing behaviour, whistle-blowing intention was investigated in this study. The findings from the research might not accurately illustrate the actual whistle-blowing behaviour among internal auditors in the U.K. However, according to Ajzen and Madden (1986), intention is the immediate antecedent of any behaviour.

4. The use of hypothetical scenarios

The use of scenarios is said to be most widely used in ethics research (O'Fallon & Butterfield, 2005), and is suitable for studies that investigate sensitive topics (Alexander & Becker, 1978). However, it brings some limitations to the research (Hughes, 1998). Scenario is a narrative of a selected given situation. However, the narrative might not mirror a real life situation and respondents might respond differently in a real life situation (Hughes, 1998). Although scenarios are only a snapshot of a selected

situation, no research tool is able to entirely capture real life events (Hughes, 1998). Further, the use of vignettes encourages “satisficing” (Stolte, 1994, p. 727). Satisficing is “a tendency for subjects to process vignette information less carefully and effectively than they would under ideal or real conditions” (Stolte, 1994, p. 727). In other words, there is some doubt that responses in scenarios are similar to responses to real life situations. Nevertheless, the use of hypothetical scenarios in ethics-based research have been supported in literature (see Kaplan & Schultz, 2007; Mesmer-Magnus & Viswesvaran, 2005), and the researcher took care to devise a set of scenarios that were realistic and people would take seriously.

5. Low reliability value of attitude and organisational-professional conflict

In this study, the reliability or internal consistency of the items to measure attitudes towards whistle-blowing and organisational-professional conflict were very low. The items may not accurately measure the variables. However, the items were adapted from previous studies and have acceptable reliability value. Future studies should revise the items or add more items. Statistical analysis by Ayers and Kaplan (2005) found that “alpha is very much a function of the number of items in a scale” (p.101)(p. 102).

## **6.5 Suggestions for future research**

This study is the first research that empirically investigates whistle-blowing intention among internal auditors in the U.K. However, the research focused only on individual-level factors. Many other variables from the individual-level, such as cognitive moral development (Rest, 1986), as well as variables from organisational-

level, such as whistle-blowing policy (Barnett, 1992), and situational, such as perceived support (Dworkin & Baucus, 1998), as discussed in the literature, could be considered in future research.

Future research could also plan for a more extensive sampling of internal auditors in public sectors and private sectors, as well as internal auditors in in-house positions and outsourced positions. As mentioned in the contribution section, outsourcing the internal auditing function has been practised in both the public and private sectors in the U.K. Investigating the dilemma faced by internal auditors in the public and private sector, as well as those in in-house positions and outsourced positions, might give some interesting results. Future research also should consider other countries beyond U.S.A. and U.K. and whether there are significant cultural effects. In addition, complementary research methods, such as interviews – though these might encounter challenges and candour – should also be considered. This is essential in complement the limitations of questionnaire survey.

## **6.6 Conclusion of the study**

Findings from this study provide valuable information that internal auditors in the U.K. have positive perceptions on the whistle-blowing practice. Six individual-level factors have been identified that significantly influence their intention to blow the whistle. This study suggests additional variables should be tested in future research. Despite investigating the direct influence of the factors on the whistle-blowing intention, this study also suggests future research to test the moderating effects of moral intensity.

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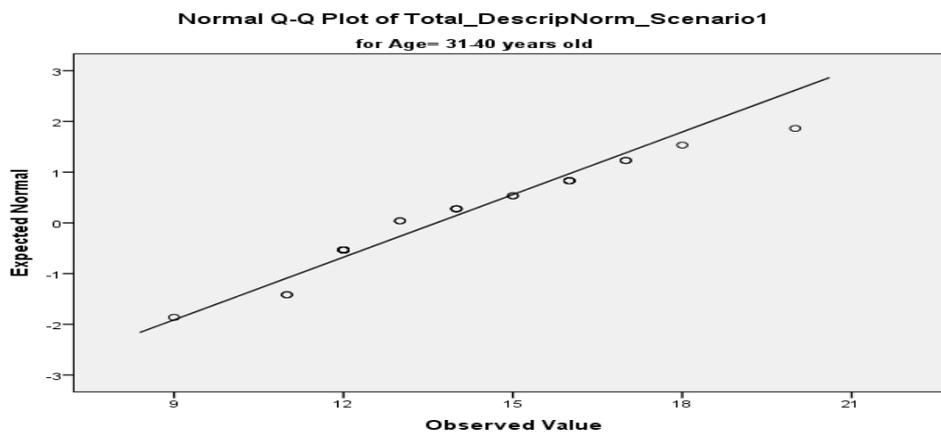
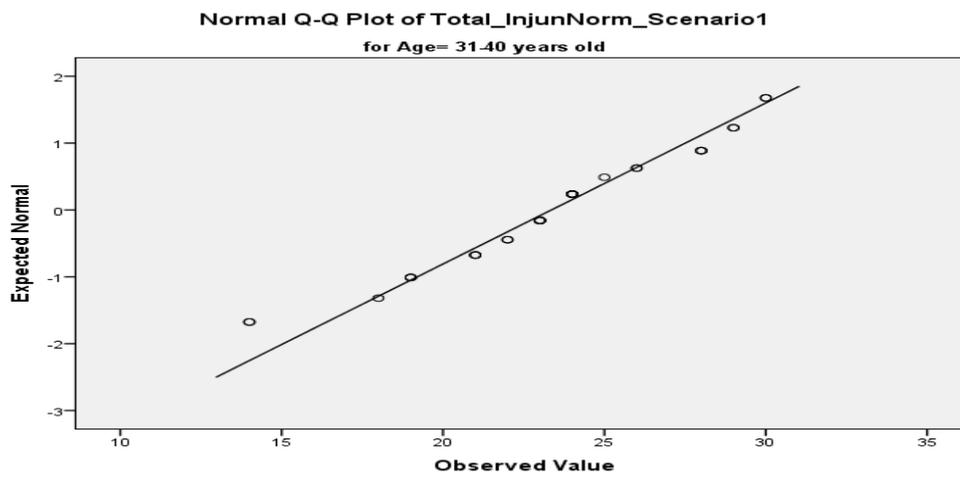
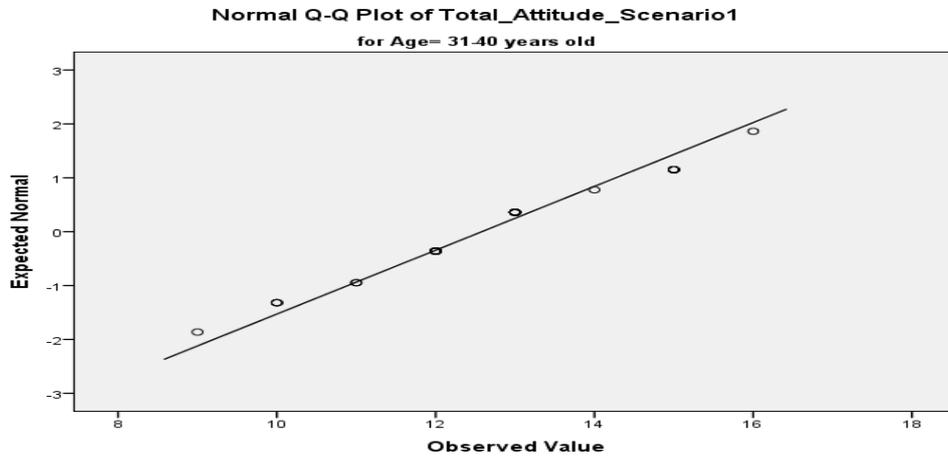
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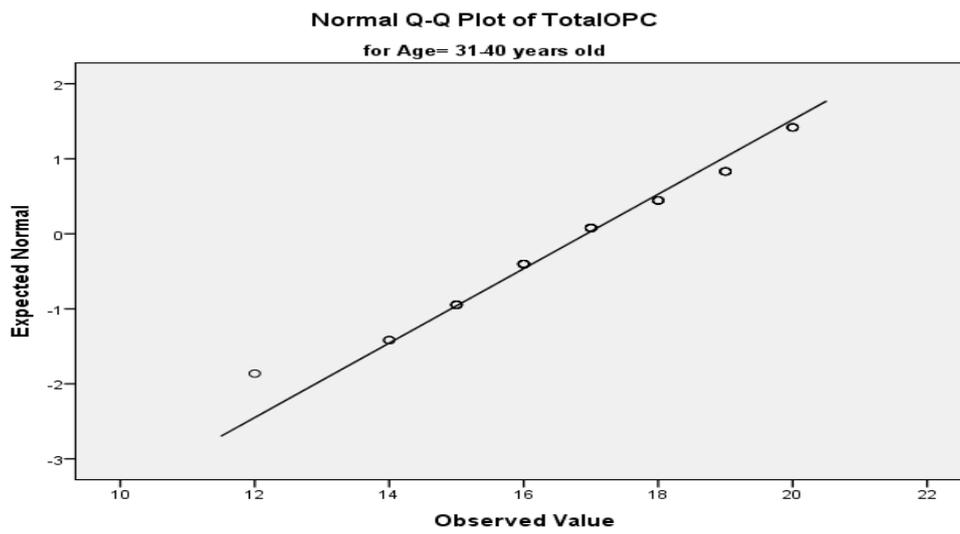
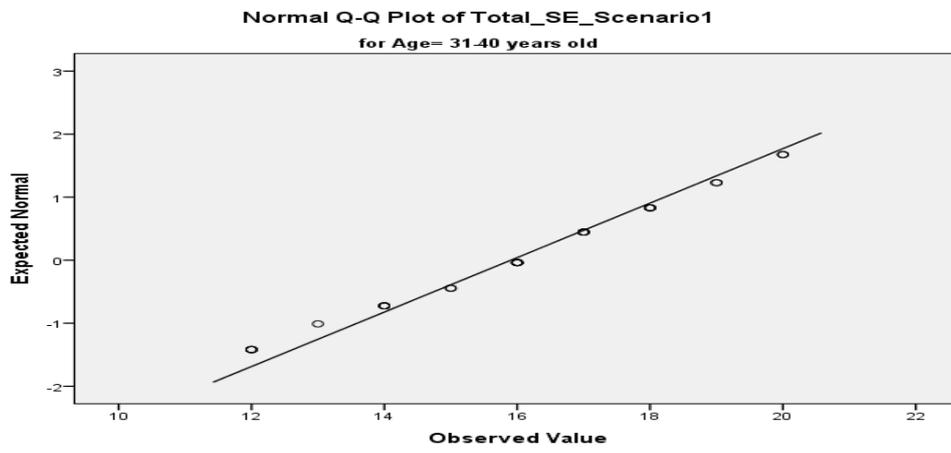
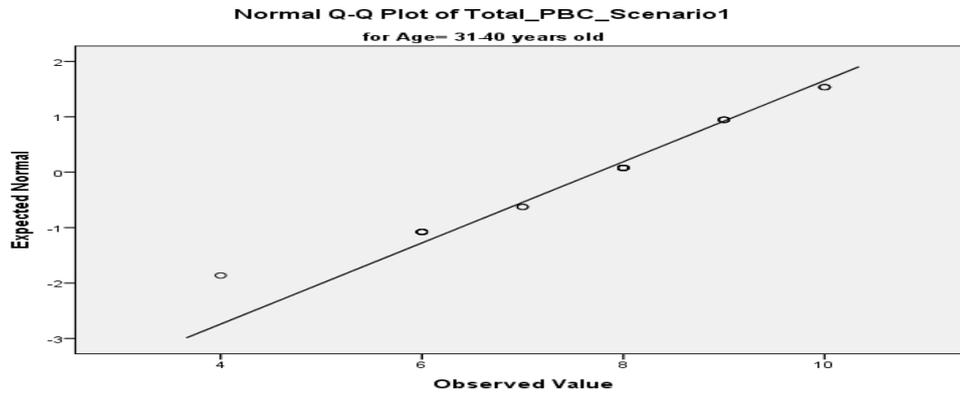
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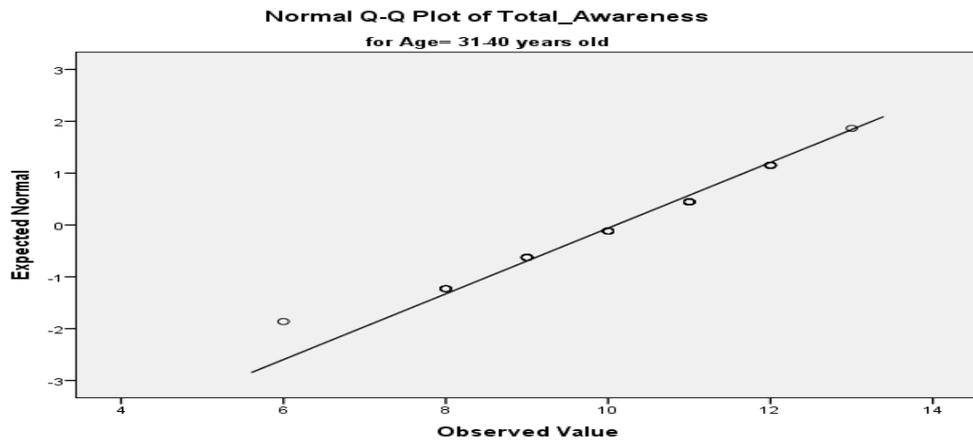
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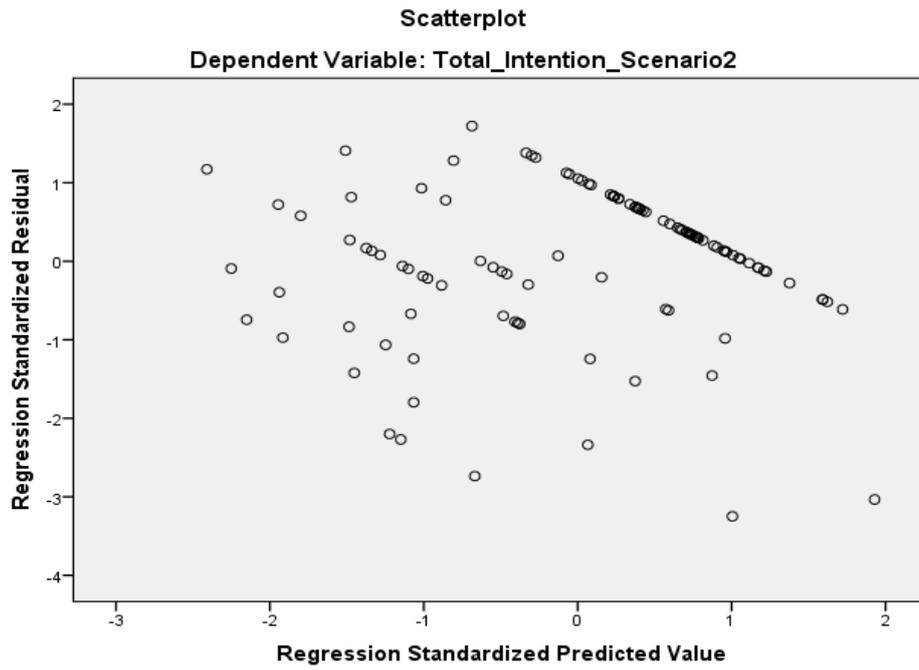
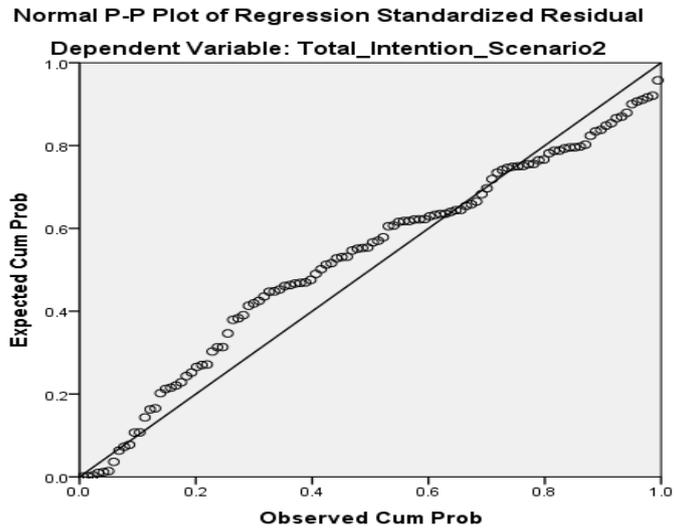
## Appendix A: Q-Q plot graphs for Scenario 1





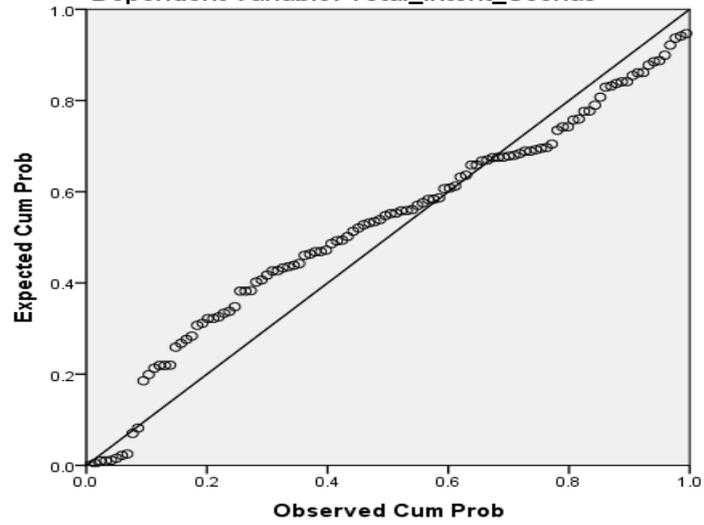


## Appendix B: P-P plot and scatterplot for Scenario 2 and Scenario 3



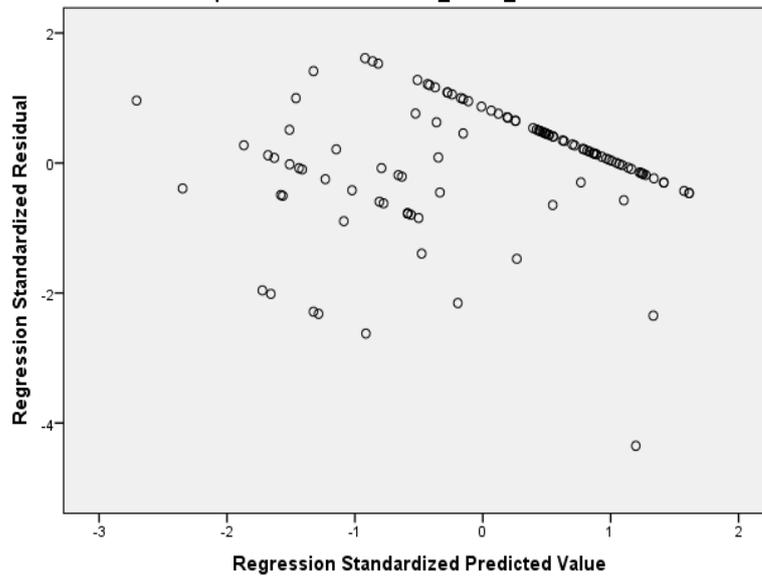
**Normal P-P Plot of Regression Standardized Residual**

**Dependent Variable: Total\_Intent\_Scena3**



**Scatterplot**

**Dependent Variable: Total\_Intent\_Scena3**



**Appendix C: Means, standard deviations and correlations among control, independent and dependent variables (Scenario 2)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>Controls</b>																
1	Age	3.03	.86	1.00												
2	Gender	1.79	.56	.11	1.00											
3	Exp.	2.05	.76	.54***	-.08	1.00										
4	Client	1.51	.50	-.30***	-.06	-.37***	1.00									
5	Position	1.46	.98	-.08	-.03	.17**	-.33***	1.00								
<b>Dependent</b>																
6	Intention	4.57	.59	.07	.12*	-.05	-.09	-.13*	1.00							
<b>Independents</b>																
7	Attitude	3.37	.63	.16	.14*	.19**	.08	-.07	.47***	1.00						
8	IN	4.00	.63	.09	.10	.02	.03	.09	.44***	.49***	1.00					
9	DN	3.65	.71	.03	.14*	.01	-.02	.17**	.37***	.43***	.68***	1.00				
10	PBC	4.49	.55	-.01	-.02	-.05	.04	.06	.47***	.19**	.11	.19**	1.00			
11	SE	4.32	.70	.15	.02	.12	.04	-.07	.54***	.39***	.24***	.25***	.36***	1.00		
12	OPC	1.67	.60	-.19	-.16**	.11	-.14*	.16**	-.01	.03	.07	-.10	-.06	-.21**	1.00	
13	AW	3.30	.76	-.04	.16**	-.25***	.17**	.00	.03	-.07	-.14*	.05	-.10	.01	-.08	1.00

Exp. = experience, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy, OPC = organizational-professional conflict, AW = awareness

\*p<.1, \*\*p<.05, \*\*\*p<.01

**Appendix D: Means, standard deviations and correlations among control, independent and dependent variables (Scenario 3)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>Controls</b>																
1	Age	3.03	.86	1.00												
2	Gender	1.79	.56	.11	1.00											
3	Exp.	2.05	.76	.54***	-.08	1.00										
4	Client	1.51	.50	-.30***	-.06	-.37***	1.00									
5	Position	1.46	.98	-.08	-.03	.17**	-.33***	1.00								
<b>Dependent</b>																
6	Intention	4.59	.63	.19**	-.01	.06	-.09	.04	1.00							
<b>Independents</b>																
7	Attitude	3.52	.62	.24***	.19**	.21**	-.13**	.10	.52***	1.00						
8	IN	4.30	.73	.29***	.10	.15*	-.16**	.08	.57***	.63***	1.00					
9	DN	4.06	.78	.16**	.10	.07	-.25***	.17**	.53***	.59***	.81	1.00				
10	PBC	4.53	.62	.12	.03	-.01	.04	-.03	.52***	.32***	.32***	.35***	1.00			
11	SE	4.42	.67	.16**	-.02	.14*	-.06	.03	.50***	.45***	.37***	.42***	.53***	1.00		
12	OPC	1.67	.60	-.19**	-.16**	.11	-.14*	.16**	.00	-.01	-.14*	-.16**	-.06	-.14*	1.00	
13	AW	3.30	.76	-.04	.16**	-.25***	.17**	.00	-.00	-.09	-.16**	-.06	.01	-.00	-.08	1.00

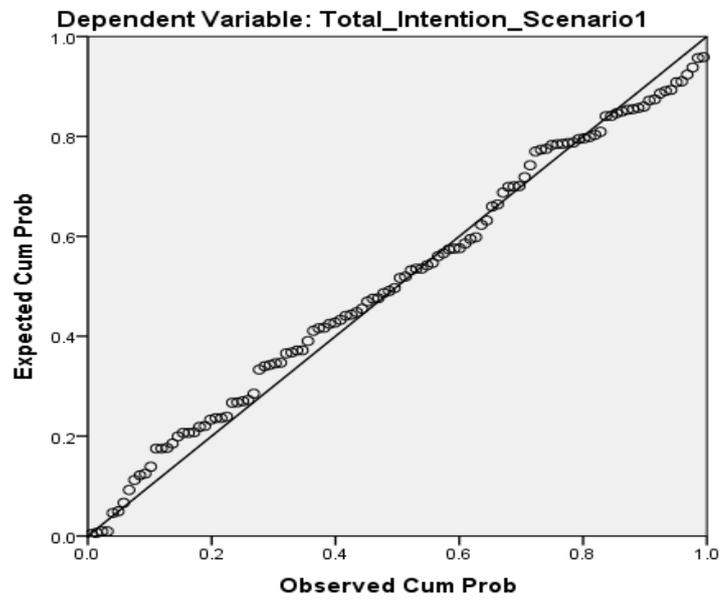
Exp. = experience, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy, OPC = organizational-professional conflict, AW = awareness \*p<.1, \*\*p<.05,\*\*\*p<.01

**Appendix E: Multiple regression results for tolerance (VIF) and Durbin-Watson values among the independent variables**

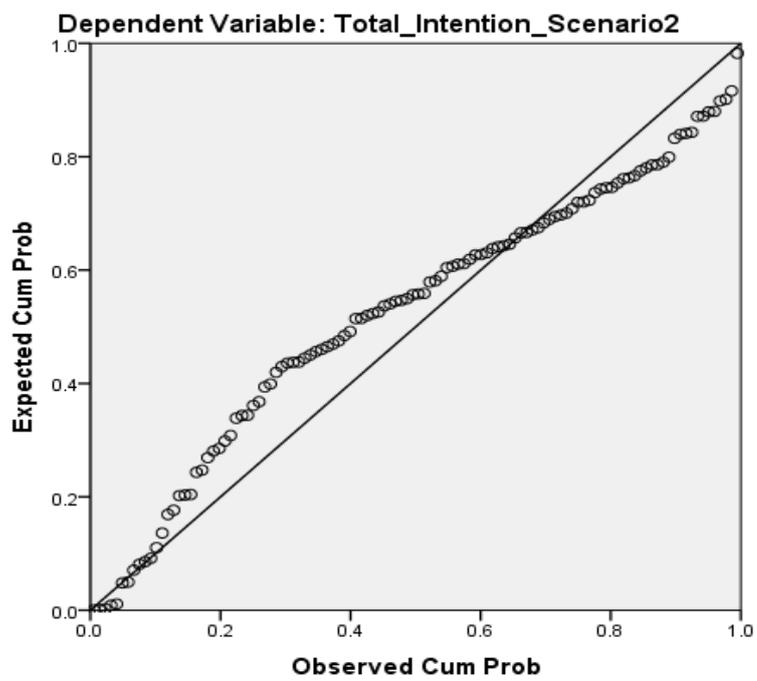
<b>Scenario</b>	<b>Tolerance (range)</b>	<b>VIF (range)</b>	<b>Durbin-Watson</b>
Scenario 1	.580 - .972	1.029 – 1.724	1.773
Scenario 2	.461 - .922	1.085 – 2.169	1.561
Scenario 3	.294 - .950	1.052 – 3.398	1.842

## Appendix F: P-P plot for moderated multiple regression

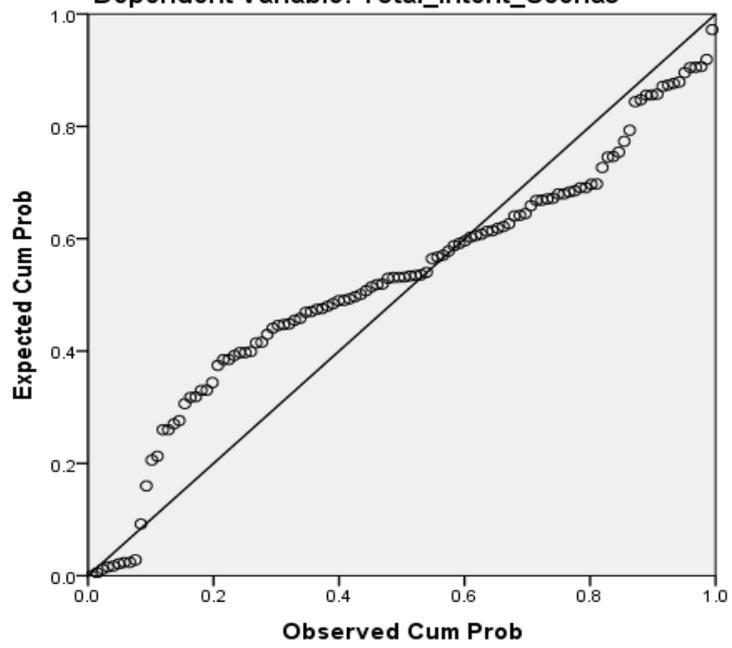
Normal P-P Plot of Regression Standardized Residual



Normal P-P Plot of Regression Standardized Residual



Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: Total\_Intent\_Scena3



## Appendix G: Questionnaire



### **A Survey on Intention towards Whistle-Blowing Among Internal Auditors in the United Kingdom**

Dear Participant,

I am a PhD student from FEGRG, at the University of Huddersfield, conducting research, supervised by Professor Chris Cowton. The aim of this study is to investigate the factors that influence internal auditors' intention to whistle-blow. Whistle-blowing here refers to reporting to appropriate parties **either internally or externally**, any illegal and/or unethical behaviour that internal auditors encounter during their audit works.

You are selected to participate in this survey due to your invaluable knowledge and experience. Please read the instructions for each section carefully and answer all questions. There are no right or wrong answers as I am **only interested with your opinion**. Choose a response that gives the best indication of how you would typically think, feel and experience. You will require about 15 to 20 minutes completing the questionnaire. This survey is completely anonymous. Your individual responses and other information derived from this survey will be kept confidential and only used for the research purposes. **If you would like to receive a summary of the results, please email me.**

For every response received, the University will donate £2 to a charity of your choice (please circle one): (1) Amnesty International (2) Macmillan Cancer Support (3) National Trust (4) Save the Children. You will be able to check the overall donation to each of the charity body on the FEGRG websites. <http://www.hud.ac.uk/research/researchcentres/fegreg//>

I am very grateful for your participation in this important study as the higher the response rate will contribute to its success. If you have any further questions, please contact:

Zakiyah Sharif  
PhD Student  
FEGRG,  
University of Huddersfield Business School  
Queensgate, Huddersfield  
HD1 3DH, U.K.  
Email: [U1074921@hud.ac.uk](mailto:U1074921@hud.ac.uk)

Professor Chris Cowton  
Dean of the Business School  
University of Huddersfield  
Queensgate, Huddersfield  
HD1 3DH, U.K.

Email: [c.j.cowton@hud.ac.uk](mailto:c.j.cowton@hud.ac.uk)

Yours sincerely,  
Zakiyah Sharif

## A Survey on Internal Auditors' Whistle-blowing Intentions

**Please answer ALL questions**

### Section A

This section relates to demographic information and your organisation. Please tick (✓) the appropriate box. All answers will remain strictly confidential and anonymous.

**A1: Age**

- |  |   |
|--|---|
| <input type="checkbox"/> 30 years old or below | <input type="checkbox"/> 31 - 35 years old      |
| <input type="checkbox"/> 36 - 40 years old     | <input type="checkbox"/> 41 - 45 years old      |
| <input type="checkbox"/> 46 - 50 years old     | <input type="checkbox"/> 51 - 55 years old      |
| <input type="checkbox"/> 56-60 years old       | <input type="checkbox"/> 61 years old and above |

**A2: Gender**

- |                                 |                               |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> Female | <input type="checkbox"/> Male |
|---------------------------------|-------------------------------|

**A3: Highest Academic Qualification (Please tick one)**

- |   |  |
|---|--|
| <input type="checkbox"/> O-level/GCSE (or equivalent) | <input type="checkbox"/> A-levels (or equivalent)    |
| <input type="checkbox"/> Bachelor's Degree in _____   | <input type="checkbox"/> Master's Degree in _____    |
| <input type="checkbox"/> PhD in _____                 | <input type="checkbox"/> Other, please specify _____ |

**A4: Professional Qualifications (You may tick more than one)**

Professional Qualifications (You may tick more than one)	Still a member?	
	Yes	No
<input type="checkbox"/> IIA (Institute of Internal Auditors - UK and Ireland)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> ICAEW (Institute of Chartered Accountants in England & Wales)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> ICAS (Institute of Chartered Accountants of Scotland)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> ICAI (Institute of Chartered Accountants in Ireland)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> CIPFA (Chartered Institute of Public Finance and Accountancy)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> ACCA (Association of Chartered Certified Accountants)	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/> CIMA (Chartered Institute of Management Accountants)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> AAT (Association of Accounting Technicians)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other (Please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

**A5: Work Experience (Audit in General)**

Less than 5 years       5 - 9 years       10 - 14 years  
 15 - 19 years       20-24 years       25 years or more

**A6: Work Experience (Internal audit)**

Less than 5 years       5 - 9 years       10 - 14 years  
 15 - 19 years       20-24 years       25 years or more

**A7: Type of Organization(s) you internally audit (You may tick more than one)**

Public Sector  
 Private For-Profit Sector  
 Private Not-For-Profit Sector

**A8: Current Employment Position as an Internal Auditor (You may tick more than one)**

In-house (i.e. employed wholly by the organization you audit).  
 Outsourced (i.e.: employed by an external organization(s) that is contracted to provide all aspects of the full internal audit services to the organization(s) that you audit).  
 Consortium (i.e. formed by a group of independent organizations (or several internal audit departments) that join forces to provide internal audit services to the organization(s) that you audit).  
 Other (Please specify) \_\_\_\_\_

**Section B**

**Instructions:** In this section, the level of organizational-professional conflict faced by internal auditor will be measured. Please **CIRCLE** the number corresponding to your level of agreement with each statement.

Part B(i): Compulsory to be answered by **all** kinds of current employment positions: (Inhouse/outsource/consortium/others)

		Never	Almost Never	Occasionally/ Sometimes	Almost Every Time	Every Time
1	My current employment situation gives me the opportunity to express myself fully as a professional.	1	2	3	4	5
2	Being an internal auditor in the organization(s) I audit has significantly put me under pressure to perform my work in ways that could directly and/or indirectly breach compliance with professional standards.	1	2	3	4	5

Part B(ii): If you are **in-house** internal auditors, please answer these questions:

		Never	Almost Never	Occasionally/ Sometimes	Almost Every Time	Every Time
1	In the organization(s) I audit, I have conflict(s) between applying the work standards and procedures outlined by the <b>company that I work for</b> and pursuing with my professional judgments.	1	2	3	4	5
2	There is/are situation(s) where my professional judgments are overridden by the <b>demands of the organization that I work for.</b>	1	2	3	4	5

Part B(iii): If you are **outsource/consortium/others**, please answer these questions:

		Never	Almost Never	Occasionally/ Sometimes	Almost Every Time	Every Time
1	In the organization(s) I audit, I have conflict(s) between applying the work standards and procedures outlined by the <b>client company(ies) and</b> pursuing with my professional judgments.	1	2	3	4	5
2	There is/are situation(s) where my professional judgments are overridden by the <b>demands of the client organization(s)</b> .	1	2	3	4	5

### Section C

**Instructions:** In this section, the level of awareness of whistle-blowing legislation in the UK will be measured. Please **TICK** one box for each of the questions.

I am aware of the existence of the Public Interest Disclosure Act 1998 (PIDA 1998) as the whistle-blowing law in the UK.  Yes  No

I am aware of the existence of Public Concern at Work (PCaW) as a charity body in the UK that offers free legal advice for potential whistle-blower.  Yes  No

For the following questions, please **CIRCLE** the number corresponding to your level of agreement with each statement.

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1	Whistle-blowing legislation in the UK helps deter <b>unethical</b> behaviour(s).	1	2	3	4	5
2	Whistle-blowing legislation in the UK helps deter <b>illegal</b> behaviour(s).	1	2	3	4	5
3	Whistle-blowing legislation in the UK provides effective protection to whistle-blowers.	1	2	3	4	5

## Section D

**Instructions:** Please read the following scenarios and answer **ALL** following questions. The study is about perception. There is no right or wrong answers. Please **CIRCLE** the number you feel best reflects your opinion.

### Scenario 1:

You are Mike and you are an internal auditor for a firm that carries out contract work for a government department. You recently completed an audit of a subsidiary business unit (ABC plant) which is contracting in large values for various agencies. The invoicing of the subsidiary has been audited previously and no major problems were detected. During the present audit, you discovered, within the subsidiary's billing system, a series of bogus (inflated or falsified) invoices to customers that have already been paid. You reported this finding to the director of internal audit. The director said that he would report it to the Chief Financial Officer (CFO). After a few days, you asked the director what has become of you findings but the director told you to forget about it. Doubts about the director's action in reporting the falsified invoices to the CFO have driven you to report in person to the CFO. When the director knows about the action you propose to take, he tells you that if you disclose the findings, you will lose your job.

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1	The overall harm (if any) done as a result of the director of internal audit's action would be very small.	1	2	3	4	5
2	Most people would agree that the director of internal audit's action is wrong.	1	2	3	4	5
3	The director of internal audit's action would not cause any harm in the immediate future.	1	2	3	4	5
4	There is very little likelihood that the director of internal audit's actions would actually cause any harm.	1	2	3	4	5
5	If the director of internal audit is a personal friend of the CFO, the action is wrong.	1	2	3	4	5
6	The director of internal audit's action would harm very few people (if any).	1	2	3	4	5
7	Blowing the whistle on the director of internal audit's action would be a good idea.	1	2	3	4	5
8	Blowing the whistle on the director of internal audit's action would be a wise idea.	1	2	3	4	5
9	Blowing the whistle on the director of internal audit's action would be a pleasant experience.	1	2	3	4	5
10	I like the idea of blowing the whistle on the director of internal audit's action.	1	2	3	4	5

11	Most people in my family would want me to blow the whistle on the director of internal audit's action.	1	2	3	4	5
12	Most people in my family would approve if I blew the whistle on the director of internal audit's action.	1	2	3	4	5
13	Most of my friends would want me to blow the whistle on the director of internal audit's action.	1	2	3	4	5
14	Most of my friends would approve if I blew the whistle on the director of internal audit's action.	1	2	3	4	5
15	Most of my work colleagues would want me to blow the whistle on the director of internal audit's action.	1	2	3	4	5
16	Most of my work colleagues would approve if I blew the whistle on the director of internal audit's action.	1	2	3	4	5
17	Most of my family members would blow the whistle on the director of internal audit.	1	2	3	4	5
18	Most of my friends would blow the whistle on the director of internal audit.	1	2	3	4	5
19	Most of my co-workers would blow the whistle on the director of internal audit.	1	2	3	4	5
20	Most people I know would blow the whistle on the director of internal audit.	1	2	3	4	5
21	To blow the whistle on the director of internal audit would be entirely up to me.	1	2	3	4	5
22	To blow the whistle on the director of internal audit would be entirely within my control.	1	2	3	4	5
23	I am confident that I would be able to blow the whistle on the director of internal audit.	1	2	3	4	5
24	I am confident that I would be able to blow the whistle on the director of internal audit even if my friends urged against it.	1	2	3	4	5
25	I am confident that I would be able to blow the whistle on the director of internal audit even if I am in a situation that rejects the practice.	1	2	3	4	5
26	I am confident that I would be able to blow the whistle on the director of internal audit even if the management teams in the government department discourage the practice.	1	2	3	4	5
27	I intend to blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5
28	I would not blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5
29	If I had the opportunity, I would blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5
30	To the extent possible, I would try to blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5

### Scenario 2:

You are Doris and you have been appointed as an internal auditor at Ferris Ltd. The company has expanded rapidly over the last three years, growing its sales in Eastern Europe by in excess of 50% per annum. The draft financial statements for the current period show that Turnover was £5.8 million and Profit after Tax was £0.57 million. While auditing the stock purchases you discovered that the Production Manager insists on paying one of the suppliers in cash only. When you asked the Production Manager about this situation, he explained that he was able to negotiate discounts by paying for the goods in cash. However, upon further investigation you discovered that the Production Manager was in fact overstating purchases from this supplier and took the money for himself. The

scheme has gone unnoticed because of weak internal controls and the close relationship between the Production Manager and Mr. Ferris, the Managing Director. You estimated the amount of the cash misappropriated in the current period to be £52,000 and the amount was material. You reported the issue to the director of internal audit who assures you that the matter will be dealt with and thanks you for your diligent work. However, during the final audit (six months later) you discover that the scheme is still in operation because the director of internal audit chose to do nothing about it.

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1	The overall harm (if any) done as a result of the director of internal audit's action would be very small.	1	2	3	4	5
2	Most people would agree that the director of internal audit's action is wrong.	1	2	3	4	5
3	The director of internal audit's action will not cause any harm in the immediate future.	1	2	3	4	5
4	There is very small likelihood that the director of internal audit's actions will actually cause any harm.	1	2	3	4	5
5	If the director of internal audit is a personal friend of the Managing Director, the action is wrong.	1	2	3	4	5
6	The director of internal audit's action will harm very few people (if any).	1	2	3	4	5
7	Blowing the whistle on the director of internal audit's action would be a good idea.	1	2	3	4	5
8	Blowing the whistle on the director of internal audit's would be a wise idea.	1	2	3	4	5
9	Blowing the whistle on the director of internal audit's action would be a pleasant experience.	1	2	3	4	5
10	I like the idea of blowing the whistle on the director of internal audit's action.	1	2	3	4	5
11	Most people in my family would want me to blow the whistle on the director of internal audit's action.	1	2	3	4	5
12	Most people in my family would approve if I blew the whistle on the director of internal audit's action.	1	2	3	4	5
13	Most of my friends would want me to blow the whistle on the director of internal audit's action.	1	2	3	4	5
14	Most of my friends would approve if I blew the whistle on the director of internal audit's action.	1	2	3	4	5
15	Most of my work colleagues would want me to blow the whistle on the director of internal audit's action.	1	2	3	4	5
16	Most of my work colleagues would approve if I blew the whistle on the director of internal audit's action.	1	2	3	4	5
17	Most of my family members would blow the whistle on the director of internal audit.	1	2	3	4	5
18	Most of my friends would blow the whistle on the director of internal	1	2	3	4	5

	audit.					
19	Most of my co-workers would blow the whistle on the director of internal audit.	1	2	3	4	5
20	Most of people I know would blow the whistle on the director of internal audit.	1	2	3	4	5
21	To blow the whistle on the director of internal audit was entirely up to me.	1	2	3	4	5
22	To blow the whistle on the director of internal audit was entirely within my control.	1	2	3	4	5
23	I am confident that I would be able to blow the whistle on the director of internal audit.	1	2	3	4	5
24	I am confident that I would be able to blow the whistle on the director of internal audit even if my friends urged against it.	1	2	3	4	5
25	I am confident that I would be able to blow the whistle on the director of internal audit even if I am in a situation that rejects the practice.	1	2	3	4	5
26	I am confident that I would be able to blow the whistle on the director of internal audit even if the management teams in Ferris Ltd. discourage the practice.	1	2	3	4	5
27	I intend to blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5
28	I would not blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5
29	If I had the opportunity, I would blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5
30	To the extent possible, I would try to blow the whistle on the director of internal audit's behaviour.	1	2	3	4	5

### Scenario 3:

You are David, an internal auditor at Medical Waste Ltd., a specialist firm responsible for safely disposing of used surgical equipment. During the course of your audit work, you discovered documents revealing that, for the past two years, used surgical equipment received from clients had not been disposed of in a way that follows regulations. This included dumping used syringes in an open space near a residential area. This is a very serious matter because it is illegal and the firm can be sued if found guilty. You were very concerned about the good reputation of the firm and public safety. You had a meeting with Mark who is the member of staff responsible for this process and informed him that the company must comply with Health and Safety Legislation and as such must alter the current procedure used to dispose of used surgical equipment with immediate effect. Two months later you noticed that Mark had not altered the procedure. You bring your concerns to the Chief Executive Officer (CEO) and still no action has been taken by the CEO.

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1	The overall harm (if any) done as a result of the CEO's action would be very small.	1	2	3	4	5
2	Most people would agree that the CEO's action is wrong.	1	2	3	4	5
3	The CEO's action would not cause any harm in the immediate future.	1	2	3	4	5
4	There is very little likelihood that the CEO's actions would actually cause any harm.	1	2	3	4	5
5	If the CEO has friends in the nearby neighbourhood in which the dumping takes place, the action is wrong.	1	2	3	4	5
6	The CEO's actions would harm very few people (if any).	1	2	3	4	5
7	Blowing the whistle on the CEO's action would be a good idea.	1	2	3	4	5
8	Blowing the whistle on the CEO's action would be a wise idea.	1	2	3	4	5
9	Blowing the whistle on the CEO's action would be a pleasant experience.	1	2	3	4	5
10	I like the idea of blowing the whistle on the CEO's action.	1	2	3	4	5
11	Most people in my family would want me to blow the whistle on the CEO's action.	1	2	3	4	5
12	Most people in my family would approve if I blew the whistle on the CEO's action.	1	2	3	4	5
13	Most of my friends would want me to blow the whistle on the CEO's action.	1	2	3	4	5
14	Most of my friends would approve if I blew the whistle on the CEO's action.	1	2	3	4	5
15	Most of my work colleagues would want me to blow the whistle on the CEO's action.	1	2	3	4	5
16	Most of my work colleagues would approve if I blew the whistle on the CEO's action.	1	2	3	4	5
17	Most of my family members would blow the whistle on the CEO's behaviour.	1	2	3	4	5
18	Most of my friends would blow the whistle on CEO's behaviour.	1	2	3	4	5
19	Most of my co-workers would blow the whistle on the CEO's behaviour.	1	2	3	4	5
20	Most of people I know would blow the whistle on the CEO's behaviour.	1	2	3	4	5
21	To blow the whistle on the CEO would be entirely up to me.	1	2	3	4	5
22	To blow the whistle on the CEO would be entirely within my control.	1	2	3	4	5
23	I am confident that I would be able to blow the whistle on the CEO.	1	2	3	4	5
24	I am confident that I would be able to blow the whistle on the CEO even if my friends urged against it.	1	2	3	4	5
25	I am confident that I would be able to blow the whistle on the CEO even if I am in a situation that rejects the practice.	1	2	3	4	5
26	I am confident that I would be able to blow the whistle on the CEO even if the management teams at Medical Waste Ltd. discourage the practice.	1	2	3	4	5
27	I intend to blow the whistle on the CEO's behaviour.	1	2	3	4	5

28	I would not blow the whistle on the CEO's behaviour.	1	2	3	4	5
29	If I had the opportunity, I would blow the whistle on the CEO's behaviour.	1	2	3	4	5
30	To the extent possible, I would try to blow the whistle on the CEO's behaviour.	1	2	3	4	5

**Section E**

		Very Untrue of Me	Somewhat Untrue of Me	Neutral	Somewhat True of Me	Very True of Me
1	My first impressions of people usually turn out to be right.	1	2	3	4	5
2	It would be hard for me to break any of my bad habits. (*)	1	2	3	4	5
3	I have not always been honest with myself. (*)	1	2	3	4	5
4	I always know why I like things.	1	2	3	4	5
5	Once I've made up my mind, other people can seldom change my opinion.	1	2	3	4	5
6	It's hard for me to shut off a disturbing thought. (*)	1	2	3	4	5
7	I never regret my decisions.	1	2	3	4	5
8	I rarely appreciate criticism. (*)	1	2	3	4	5
9	I am very confident of my judgments.	1	2	3	4	5
10	I don't always know the reasons why I do the things I do. (*)	1	2	3	4	5
11	I sometimes tell lies if I have to. (*)	1	2	3	4	5
12	I never cover up my mistakes.	1	2	3	4	5
13	I always obey laws, even if I am unlikely to get caught.	1	2	3	4	5
14	I have said something bad about a friend behind his or her back. (*)	1	2	3	4	5
15	When I hear people talking privately, I avoid listening.	1	2	3	4	5
16	I have received too much change from a salesperson without telling him or her. (*)	1	2	3	4	5
17	When I was young I sometimes stole things. (*)	1	2	3	4	5
18	I have done things that I don't tell others about. (*)	1	2	3	4	5
19	I never take things that don't belong to me.	1	2	3	4	5
20	I don't gossip about other people's business.	1	2	3	4	5

Thank you.

Have you selected your charity for the donation by the University?

## **Appendix H: Cover letter**

18 November 2013

To whom it may concern,

### **Invitation to participate in a survey on whistle-blowing**

Internal auditors play a crucial role in business, but their contribution is often ignored in debates about good governance and management. Recognising the important work that internal auditors do, we would be very grateful if you would complete the enclosed questionnaire and return it in the pre-paid envelope.

Further information is provided on the front of the questionnaire itself, but I would like to highlight:

- It shouldn't take long to complete – about 15 minutes;
- We will use the results only for academic purposes and will ensure anonymity and confidentiality;
- For each response received, we will make a donation to charity;
- Please let me know separately if you would like a summary of the findings.

We would be very grateful for your response by 20<sup>th</sup> December 2013. If you have any questions about the research, please do not hesitate to contact me.

Yours sincerely

Professor Christopher J Cowton  
BA, MA, MScEcon, PhD, DLitt,  
ACIS, FHEA, FRSA  
Dean  
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Zakiyah Sharif  
BAcct(Hons), MBA(Accounting)  
PhD Student

## **Appendix I: Cover letter (reminder)**

22<sup>nd</sup> January 2014

Our Ref: CJC/JC/1314

To whom it may concern,

Before Christmas we sent out nearly 400 questionnaires, including one to yourself. If you have responded (we don't know because responses are anonymous), please ignore this letter and accept our sincere thanks for your help. We are delighted to report that we have already achieved a response rate of 20%, which is very encouraging for this kind of research.

If you have not yet had an opportunity to respond, there is still time to do so. All further responses will add to the research's quality and credibility. We enclose a further copy of the questionnaire in case you no longer have the original one, together with a prepaid envelope for its return. We estimate that it will take 15-20 minutes to complete.

We know that you will be very busy, but if you could find time to return the questionnaire, we would be very grateful. As mentioned previously, for every response received we will make a donation to charity, the responses will be kept confidential, and the research will be used only for academic purposes. The cover of the questionnaire gives more information.

If you have any questions about the research, please do not hesitate to contact us. We do hope you will be able to participate.

Yours faithfully,



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## Appendix J: Details of samples

List of local councils, FTSE100, FTSe250 and service provider companies in actual sample.

### List of local councils:

	<b>Local councils</b>	<b>Numbers of samples</b>
1	Aberdeen City Council	1
2	Aberdeenshire Council	1
3	Argyll & Bute Council	1
4	Barnsley Metropolitan Borough Council	1
5	Birmingham City Council	1
6	Blackpool City Council	1
7	Bridgend County Borough Council	1
8	Brighton & Hove City Council	1
9	Caerphilly County Borough Council	1
10	Calderdale Metropolitan Borough Council	1
11	Cambridge City Council	1
12	Cannock Chase Council	1
13	Carlisle City Council	1
14	City of Bradford Metropolitan District Council	1
15	City of Edinburgh Council	1
16	City of Lincoln Council	1
17	City of York Council	2
18	Comhairle Nan Eilean Siar	3
19	Conwy County Borough Council	1
20	Coventry City Council	1
21	Coventry & Warwickshire NHS Trust	1
22	Denbighshire County Council	1
23	Derby City Council	1
24	Dumfries & Galloway Council	1
25	Dundee City Council	1
26	East Ayrshire Council	1
27	East Dunbartonshire Council	1
28	East Lothian Council	1
29	East Renfrewshire Council	1
30	Exeter City Council	1
31	Falkirk Council	1
32	Fife Council	2
33	Flintshire County Council	1
34	Glasgow City Council	1
35	Gloucester City Council	1
36	Gredigion County Council	1
37	Greenwich Borough Council	1
38	Gwynedd Council	1
39	H Blaenau Gwent County Borough Council	1

40	Hampshire County Council	1
41	Hull City Council	1
42	Inverclyde Council	1
43	Isle of Anglesey County Council	1
44	Kirklees Council	1
45	Lancaster City Council	1
46	Leeds City Council	1
47	Leicester City Council	1
48	Liverpool City Council	1
49	Manchester City Council	2
50	Midlothian Council	1
51	NHS National Services Scotland	1
52	North Ayrshire Council	1
53	North Lincolnshire Council	1
54	North Yorkshire County Council	2
55	Nottingham City Council	1
56	Orkney Islands Council	1
57	Perth & Kinross Council	7
58	Peterborough City Council	1
59	Preston City Council	1
60	Portsmouth City Council	2
61	Renfrewshire Council	1
62	Salford City Council	1
63	Sandwell Council	1
64	Scottish Borders Council	1
65	Sheffield City Council	1
66	Shetland Islands Council	5
67	Solihull Council	1
68	Staffordshire County Council	1
69	Staffordshire Moorlands District Council	1
70	Stirling Council	1
71	Sunderland City Council	1
72	Tamworth Borough Council	1
73	The Highland Council	1
74	The Moray Council	1
75	Wakefield City Council	1
76	Warwickshire County Council	1
77	West Dunbartonshire Council	1
78	West Lothian Council	5
79	Wyre Forest District Council	1
	Total	100

**List of FTSE100:**

	<b>Company</b>	<b>Numbers of samples</b>
1	Aberdeen Asset Management	1
2	Admiral Group	1

3	Aggreko	2
4	AMEC	1
5	Anglo American	1
6	Antofagasta	1
7	ARM Holdings	1
8	Associated British Foods	2
9	Astrazeneca	1
10	Aviva	1
11	BAE Systems	1
12	BG Group	1
13	BHP	1
14	BP	2
15	British American Tobacco	2
16	British Land Company	1
17	BskyB	1
18	BT Group	1
19	Bunzl	2
20	Burberry Group	1
21	Capita	1
22	Centrica	3
23	Compass Group	1
24	Croda International	1
25	Diageo	1
26	Easy Jet	1
27	G4S	1
28	GKN	1
29	GlaxoSmithKline	1
30	Hargreaves Lansdown	1
31	HSBC	1
32	IMI	1
33	Imperial Tobacco Group	1
34	Intercontinental Hotels Group	1
35	International Consolidated Airlines Group	2
36	Intertek Group	1
37	Johnson Matthey	1
38	Kingfisher	1
39	Land Securities Group	1
40	Lloyds Banking Group	2
41	London Stock Exchange	1
42	Marks & Spencer Group	1
43	Morrison (WM.) Supermarkets	1
44	Meggitt	2
45	Next	1
46	Pearson	1
47	Persimmon	1
48	Petrofac	1
49	Prudential	1

50	RSA Insurance Group	1
51	Reckit Benckiser	1
52	Reed Elsevier	1
53	Rexam	1
54	Rolls Royce Group	1
55	Royal Bank of Scotland Group	1
56	Royal Dutch Shell	1
57	Sabmiller	1
58	SAGE Group	1
59	Sainsbury (J)	1
60	Schroders	1
61	Severn Trent	1
62	Smith & Nephew	1
63	Smiths Group	1
64	SSE	1
65	Standard Chartered	1
66	Standard Life	2
67	Tate & Lyle	2
68	Tesco	1
69	Travis Perkins	1
70	TUI Travel	1
71	Tullow Oil	1
72	Unilever	1
73	United Utilities	1
74	Vedanta Resources	1
75	Vodafone Group	1
76	Weir Group	2
77	William Hills	2
	Total	91

**List of FTSE250:**

	<b>Company</b>	<b>Numbers of samples</b>
1	3I Group	1
2	Afren	1
3	African Barrick Gold	1
4	Alent	1
5	Alliance Trust	1
6	Amlin	1
7	Atkins (WS)	1
8	Balfour Beatty	1
9	Barrat Development	1
10	Berendsen	1
11	Berkeley Group Holding	1
12	Betfair Group	1
13	Booker Group	1
14	Bovis Homes Group	1

15	Brewin Dolphin Holding	1
16	Britvic	1
17	Brown (N) Group	1
18	BTG	1
19	Cable & Wireless Communications	1
20	Carpetright	1
21	Chemring Group	1
22	City of London Investment Trust	1
23	Close Bros Group	1
24	Cobham	1
25	Colt Group	1
26	Computacenter	1
27	Cranswick	1
28	CSR	1
29	Dairy Crest Group	1
30	Debenhams	1
31	Devro	1
32	Dialight	1
33	Dignity	1
34	Diploma	1
35	Dixon Retail	1
36	Direct Line Insurance Group	1
37	Domino Printing Sciences	1
38	Edinburgh Investment Trust	1
39	Electrocomponents	1
40	Enterprise Inns	1
41	Essentra	1
42	Eurasian Natural Resources Corporation	1
43	Evrax	1
44	F&C Asset Management	1
45	Fenner PLC	1
46	Firstgroup	1
47	Fisher (James) & Sons	1
48	Foreign & Colonial Investment Trust	1
49	Galliford Try	1
50	Grainger	1
51	Greggs	1
52	Hays	1
53	Henderson Group	1
54	Home Retail Group	1
55	Home Serve	1
56	Hunting	1
57	IG	1
58	Inchcape	1
59	Inmarsat	1
60	International Personal Finance	1
61	Intu Properties	1

62	Investec	1
63	Jardine Lloyd Thompson Group	1
64	Kazakhmys	1
65	Kcom	1
66	Lonmin	1
67	Michael Page International	1
68	MITIE Group	1
69	Millenium & Copthorne Hotels	1
70	Moneysupermarket.Com Group	1
71	National Express Group	1
72	Oxford Instruments	1
73	Pace	1
74	Perpetual Income & Growth Investment Trust	1
75	Premier Farnell	1
76	Premier Oil	1
77	Provident Financial	1
78	PZ Cussons	1
79	Qinetiq Group	1
80	Rank Group	1
81	Rathbone Bros Group	1
82	Rentokil Initial	1
83	RPC	1
84	Senior	1
85	Serco Group	1
86	Spectris	1
87	St. James's Place	1
88	St. Modwen's Properties	1
89	Supergroup	1
90	TalkTalk Telecom Group	1
91	Taylor Wimpey	1
92	Ted Baker	1
93	UBM	1
94	Victrex	1
95	Wetherspoon (JD)	1
96	WH Smith	1
97	Wood Group (John)	1
	Total	97

**Service provider companies:**

	<b>Company</b>	<b>Numbers of samples</b>
	Audit and Assurance	7
	Audit North West	1
	Audit North NHS	1
	Audit South West	7
	CEAC	1
	Chantrey Vellacot	3

	Grant Thornton	4
	Mersey Internal Audit Agency	2
	Moore Stephens	37
	Reeves	4
	Scott-Moncrieff	10
	South Coast Audit	3
	West Yorkshire Audit Consortium	1
	Total	81

## Appendix K: Hierarchical regression results

**Table A: Means, standard deviations and correlations among control, independent and dependent variables (Scenario 1)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>Controls</b>																
1	Age	3.00	.85	1.00												
2	Gender	1.81	.55	.07	1.00											
3	Exp.	2.04	.77	.57***	-.10	1.00										
4	Client	1.80	.92	-.23***	.05	-.24***	1.00									
5	Position	1.52	.98	-.09	.01	.15**	.01	1.00								
<b>Dependent</b>																
6	Intention	4.26	.57	.03	-.06	-.03	-.07	-.20*	1.00							
<b>Independents</b>																
7	Attitude	3.18	.57	.05	.00	.03	.08	-.15**	.37***	1.00						
8	IN	4.04	.69	.21***	.10	.07	-.20*	-.00	.44***	.38***	1.00					
9	DN	3.41	.78	-.04	.03	-.03	-.19*	.06	.40***	.33***	.62***	1.00				
10	PBC	3.95	.71	.05	.01	.03	-.13*	-.08	.28***	.20***	.21***	.17**	1.00			
11	SE	3.99	.78	.08	-.01	.01	-.01	-.16**	.51***	.44***	.40***	.39***	.27***	1.00		
12	OPC	4.31	.59	.21***	.10	-.06	.02	-.19**	.04	.03	.14*	.11	.12*	.27***	1.00	
13	AW	1.99	.45	-.07	.14*	-.28***	.12*	-.05	.07	.12*	.01	.14*	.12	.10	.09	1.00

Exp. = experience, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy, OPC = organizational-professional conflict, AW = awareness

\*p<.1, \*\*p<.05, \*\*\*p<.01

**Table B: Means, standard deviations and correlations among control, independent and dependent variables (Scenario 2)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>Controls</b>																
1	Age	3.00	.85	1.00												
2	Gender	1.81	.55	.07	1.00											
3	Exp.	2.04	.77	.57***	-.10	1.00										
4	Client	1.80	.92	-.23***	.05	-.24***	1.00									
5	Position	1.52	.98	-.09	.01	.15**	.01	1.00								
<b>Dependent</b>																
6	Intention	4.53	.60	.10	.07	.01	-.13*	-.20**	1.00							
<b>Independents</b>																
7	Attitude	3.36	.65	.15**	.18*	.12*	-.01	-.13*	.45***	1.00						
8	IN	3.99	.66	.11	.09	.04	-.06	-.02	.44***	.48***	1.00					
9	DN	3.61	.72	.02	.15**	-.03	-.14*	.06	.37***	.45***	.67***	1.00				
10	PBC	4.43	.58	.03	-.04	-.04	-.26***	-.03*	.57***	.19***	.14***	.25***	1.00			
11	SE	4.29	.71	.17**	-.03	.18*	-.12*	-.16**	.43***	.42***	.31***	.29***	.34***	1.00		
12	OPC	4.31	.59	.21***	.10	-.06	.02	-.19**	.08	-.01	.09	.10	.07	.24***	1.00	
13	AW	1.99	.45	-.07	.14*	-.28***	.12*	-.05	.05	.02	-.08	.10	-.10	.06	.09	1.00

Exp. = experience, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy, OPC = organizational-professional conflict, AW = awareness

\*p<.1, \*\*p<.05, \*\*\*p<.01

**Table C: Means, standard deviations and correlations among control, independent and dependent variables (Scenario 3)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>Controls</b>																
1	Age	3.03	.85	1.00												
2	Gender	1.73	.45	.11**	1.00											
3	Exp.	2.05	.77	.57***	-.09	1.00										
4	Client	1.66	.64	-.33***	.14*	-.38**	1.00									
5	Position	1.47	.88	-.05	.02	.16**	-.12	1.00								
<b>Dependent</b>																
6	Intention	4.58	.60	.20	.06	.07	-.11	-.06	1.00							
<b>Independents</b>																
7	Attitude	3.54	.59	.23***	.28***	.16**	.04	.06	.43***	1.00						
8	IN	4.29	.68	.31***	.14*	.13*	-.07	.04	.47***	.60***	1.00					
9	DN	4.02	.73	.16**	.08	.05	-.20**	.13*	.48***	.53***	.76***	1.00				
10	PBC	4.50	.65	.12	-.00	-.04	-.11	-.14*	.50***	.29***	.34***	.41***	1.00			
11	SE	4.41	.68	.19**	-.01	.13*	-.12*	-.06	.51***	.42***	.38***	.43***	.52***	1.00		
12	OPC	4.34	.58	.16**	.19**	-.13*	.05	-.22**	.05	.01	.18**	.19**	.11	.13*	1.00	
13	AW	1.99	.45	-.09	.14*	-.30***	.16**	.04	.05	-.04	-.11	.00	-.02	.04	.08	1.00

Exp. = experience, IN = injunctive norm, DN = descriptive norm, PBC = perceived behavioural control, SE = self-efficacy, OPC = organizational-professional conflict, AW = awareness

\*p<.1, \*\*p<.05, \*\*\*p<.01

**Table D: Statistical results using Standard Multiple Regression versus Hierarchical Regression Analysis**

<b>Part A: Results for exploring relationship between independent variables and dependent variable</b>						
<b>Dependent variable: Intention to whistle-blow</b>						
Model and Scenario	Scenario 1		Scenario 2		Scenario 3	
	Standard Multiple Regression	Hierarchical Regression	Standard Multiple Regression	Hierarchical Regression	Standard Multiple Regression	Hierarchical Regression
Model 1	Injunctive norm* Perceived behavioural control* Self-efficacy***	Employment position**	Attitude** Injunctive norm*** Perceived behavioural conflict*** Self-efficacy*** Awareness*	Employment position**	Injunctive norm*** Perceived behavioural conflict*** Self-efficacy**	Age*
Model 2	Injunctive norm* Perceived behavioural control* Self-efficacy*** Organizational-professional conflict *	Injunctive norm** Self-efficacy*** Employment position*	Injunctive norm*** Perceived behavioural conflict*** Self-efficacy*** Organizational-professional conflict* Employment position**	Injunctive norm*** Perceived behavioural conflict*** Self-efficacy*** Employment position*	Injunctive norm*** Perceived behavioural conflict*** Self-efficacy**	Perceived behavioural conflict** Self-efficacy**
<p>Standard Multiple Regression:</p> <ul style="list-style-type: none"> <li>- Model 1: all independent variables were analysed.</li> <li>- Model 2: all independent variables and demographic variables (control variables) were analysed.</li> </ul> <p>Hierarchical multiple Regression:</p> <ul style="list-style-type: none"> <li>- Model 1: Demographic variables (control variables) were analysed as the first block of variables.</li> <li>- Model 2: Demographic variables (control variables) and independent variables (the second block of variables) were analysed.</li> </ul>						

**Part B: Results for exploring moderating effect of moral intensity on the relationship between independent variables and dependent variable**  
**Dependent variable: Intention to whistle-blow**

Model and Scenario	Scenario 1		Scenario 2		Scenario 3	
	Standard Multiple Regression	Hierarchical Regression	Standard Multiple Regression	Hierarchical Regression	Standard Multiple Regression	Hierarchical Regression
Model 1	Injunctive norm** Self-efficacy*** Employment position*	-	Injunctive norm*** Perceived behavioural control*** Self-efficacy*** Employment position*	Employment position**	Attitude* Injunctive norm*** Perceived behavioural control** Self-efficacy**	Age*
Model 2	Injunctive norm** Self-efficacy*** Employment position*	Injunctive norm* Self-efficacy***	Injunctive norm** Perceived behavioural control*** Self-efficacy*** Employment position*	Employment position** Injunctive norm** Perceived behavioural control*** Self-efficacy***	Injunctive norm*** Perceived behavioural control** Self-efficacy**	Perceived behavioural control** Self-efficacy**
Model 3	Perceived behavioural control** Self-efficacy***	Self-efficacy***	Injunctive norm** Perceived behavioural control*** Self-efficacy***	Injunctive norm** Perceived behavioural control*** Self-efficacy***	Attitude* Injunctive norm** Perceived behavioural control*** Self-efficacy** Injunctive norm X Moral intensity*** Descriptive norm X Moral intensity *	Perceived behavioural control*** Self-efficacy** Injunctive norm X Moral intensity*

Standard Multiple Regression:

Model 1: Independent variables and demographic variables were analysed.

Model 2: Independent variables, demographic variables and moderating variable were analysed.

Model 3: independent variables, demographic variables, moderating variable and interaction between independent variables and moderating variable were analysed:

Hierarchical Multiple Regression:

Model 1: Demographic variables (first block of variables) were analysed.

Model 2: Demographic variables (first block), independent variables and moderating variable (second block) were analysed.

Model 3: Demographic variables (first block), independent variables and moderating variable (second block) and interaction between independent variables and moderating variable (third block) were analysed.

Only variables that have significant influence are listed in the table.

\* $p < .1$ ; \*\* $p < .05$ ; \*\*\* $p < .01$

**Table E: Hierarchical regression results for whistle-blowing intentions**

Model & Variables		Scenario 1			Scenario 2			Scenario 3		
		B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
Model One	Cons.	18.51	1.18		18.45	1.25		17.33	1.52	
	Age	.06	.30	.02	.20	.32	.07	.58	.34	.21*
	Gender	-.24	.38	-.06	.29	.40	.07	.26	.52	.05
	Work experience	-.12	.33	-.04	-.09	.35	-.03	-.22	.38	-.07
	Client categories	-.18	.23	-.07	-.32	.24	-.12	-.33	.39	-.09
	Employment position	-.44	.21	-.19**	-.46	.22	-.19**	-.14	.27	-.05
	R <sup>2</sup>	.05			.07			.05		
	F-value	1.22			1.69			1.22		
Model Two	Cons.	10.24	2.02		4.19	2.30		6.05	2.44	
	Age	-.10	.26	-.00	.01	.25	.01	.15	.29	.05
	Gender	-.30	.31	-.07	.25	.31	.06	.06	.45	.01
	Work experience	-.12	.29	-.04	-.07	.29	-.02	-.06	.33	-.02
	Client categories	.01	.20	.00	-.06	.19	-.02	-.15	.34	-.04
	Employment position	-.35	.18	-.15*	-.30	.18	-.12*	-.17	.23	-.06
	ATT	.05	.09	.05	.11	.08	.11	.11	.11	.11
	IN	.12	.06	.22**	.16	.06	.27***	.10	.08	.17
	DN	.09	.07	.12	-.03	.08	-.03	.09	.11	.11
	PBC	.19	.12	.12	.54	.16	.26***	.45	.17	.25**
	SE	.24	.07	.33***	.30	.07	.35***	.20	.09	.23**
	OPC	-.13	.08	-.13	-.08	.08	-.08	-.09	.09	-.09
	AW	.10	.08	.01	.07	.08	.06	.08	.09	.08
	R <sup>2</sup>	.40			.50			.43		
	$\Delta R^2$	.35			.43			.38		
F-value	6.35			9.44			6.46			
$\Delta F$	9.59			14.07			9.70			

\*p<.1; \*\*p<.05; \*\*\*p<.01

**Table F: Moderated hierarchical regression analysis results of the main effects and moderating effects of internal auditors' whistle-blowing intentions (Scenario 1)**

<b>Scenario 1</b>						
<b>Dependent variable:</b>	Intention to blow the whistle					
	Model 1		Model 2		Model 3	
<b>Control variables:</b>	B	p	B	p	B	p
Age	.21	.52	-.01	.99	.07	.84
Gender	-.41	.41	-.27	.52	-.03	.95
Working experience	-.01	.97	-.09	.79	-.14	.69
Client categories	.29	.44	.18	.59	.25	.46
Employment position	-.41	.11	-.34	.12	-.29	.20
<b>Independent variables:</b>						
Attitude			.01	.96	.00	.98
Injunctive norm			.10	.10*	.09	.16
Descriptive norm			.13	.13	.14	.12
Perceived behavioural control			.06	.68	.12	.41
Self-efficacy			.27	.00***	.22	.00***
Organisational-professional conflict			-.12	.33	-.14	.29
Awareness			-.05	.59	-.07	.46
<b>Moderator:</b>						
Moral intensity (MI)			-.01	.90	.02	.81
<b>Cross-product term:</b>						
Attitudes x MI					.00	.98
Injunctive norm x MI					-.04	.16
Descriptive norm x MI					-.00	.93
Perceived behavioural control x MI					.04	.39
Self-efficacy x MI					-.02	.61
Organisational-professional conflict x MI					.04	.34
Awareness x MI					.02	.54
Constant	17.33		17.96		17.36	
R <sup>2</sup>	.04		.39		.42	
Δ R <sup>2</sup>	.04		.35		.03	
F-value	.95		5.01		3.41	
Δ F	.95		7.27		.67	

\*p<.1; \*\*p<.05; \*\*\*p<.01

**Table G: Moderated hierarchical regression analysis results of the main effects and moderating effects of internal auditors' whistle-blowing intentions (Scenario 2)**

<b>Scenario 2</b>						
<b>Dependent variable:</b>	Intention to blow the whistle					
	Model 1		Model 2		Model 3	
<b>Control variables:</b>	B	p	B	p	B	p
Age	.39	.26	-.04	.89	.04	.89
Gender	.12	.82	-.09	.83	-.07	.87
Working experience	-.10	.80	-.04	.90	-.10	.78
Client categories	-.06	.89	-.05	.87	-.03	.94
Employment position	-.60	.03**	-.42	.05**	-.40	.07
<b>Independent variables:</b>						
Attitude			.12	.23	.14	.16
Injunctive norm			.17	.01**	.14	.03**
Descriptive norm			-.00	.98	.01	.93
Perceived behavioural control			.54	.00***	.56	.00***
Self-efficacy			.29	.00***	.27	.00***
Organisational-professional conflict			-.05	.69	-.04	.74
Awareness			.09	.32	.10	.26
<b>Moderator:</b>						
Moral intensity (MI)			.06	.32	.05	.48
<b>Cross-product term:</b>						
Attitudes x MI					.02	.47
Injunctive norm x MI					-.02	.33
Descriptive norm x MI					.04	.17
Perceived behavioural control x MI					-.06	.31
Self-efficacy x MI					-.02	.44
Organisational-professional conflict x MI					.02	.57
Awareness x MI					-.03	.23
Constant	17.82		19.10		18.90	
R <sup>2</sup>	.07		.53		.55	
Δ R <sup>2</sup>	.07		.46		.03	
F-value	1.55		8.66		5.78	
Δ F	1.55		12.30		.74	

\*p<.1; \*\*p<.05; \*\*\*p<.01

**Table H: Moderated hierarchical regression analysis results of the main effects and moderating effects of internal auditors' whistle-blowing intentions (Scenario 3)**

<b>Scenario 3</b>						
<b>Dependent variable:</b>	<b>Intention to blow the whistle</b>					
	<b>Model 1</b>		<b>Model 2</b>		<b>Model 3</b>	
<b>Control variables:</b>	<b>B</b>	<b>p</b>	<b>B</b>	<b>p</b>	<b>B</b>	<b>p</b>
Age	.58	.09*	.12	.68	.15	.63
Gender	.26	.62	.06	.89	.21	.65
Working experience	-.22	.56	-.08	.83	-.09	.80
Client categories	-.33	.41	-.20	.56	-.17	.64
Employment position	-.14	.59	-.14	.52	-.11	.64
<b>Independent variables:</b>						
Attitude			.10	.35	.10	.40
Injunctive norm			.08	.29	.08	.32
Descriptive norm			.09	.40	.08	.49
Perceived behavioural control			.42	.02**	.50	.00***
Self-efficacy			.19	.03**	.18	.04**
Organisational-professional conflict			-.09	.47	-.13	.30
Awareness			.06	.51	.05	.60
<b>Moderator:</b>						
Moral intensity (MI)			.08	.20	.04	.57
<b>Cross-product term:</b>						
Attitudes x MI					.04	.44
Injunctive norm x MI					-.05	.08*
Descriptive norm x MI					.02	.60
Perceived behavioural control x MI					.01	.85
Self-efficacy x MI					-.02	.59
Organisational-professional conflict x MI					.03	.48
Awareness x MI					.01	.65
Constant	17.33		18.53		18.18	
R <sup>2</sup>	.05		.44		.47	
Δ R <sup>2</sup>	.05		.39		.03	
F-value	1.22		6.08		4.09	
Δ F	1.22		8.68		.67	

\*p<.1, \*\*p<.05,\*\*\*p<.01