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# The Moderating Role of Perceived Organisational Support in Breaking the Silence of Public Accountants

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## Abstract

This paper reports the results of a survey with public accountants in Barbados on their intention to report a superior's unethical behaviour. Specifically, it investigates to what extent perceived organisational support (POS) in audit organisations would moderate Barbadian public accountants' intentions to blow the whistle internally and externally.

Results indicate that internal whistle-blowing intentions are significantly influenced by all five individual antecedents (attitudes, perceived behavioural control, independence commitment, personal responsibility for reporting and personal cost of reporting), and the influence of the antecedents is intensified when the level of POS is high. However, further results indicate that external whistle-blowing intentions are significantly influenced by only three individual-level antecedents viz. attitudes, perceived behavioural control and personal cost of reporting, and their influence is intensified when the level of POS is low. The results suggest that POS is an important mechanism for controlling behaviour.

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## Keywords

Whistle-blowing  
Audit firms  
Individual-level antecedents  
Perceived organisational support  
Auditors  
Public accountants  
Barbados

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## Introduction

As in other organisations, public accountants may face work-related ethical issues and may also observe violations of workplace behaviour. Based on a survey of practicing audit staff in the US, Taylor et al. (2012) found the most common wrongdoings to be audit-related issues such as collecting insufficient audit evidence, inadequate documentation and review, truncating of small samples, false or premature sign-off and failure to do adequate research. Prior studies have also identified wrongdoings in audit organisations to include under-reporting of time (Ponemon 1992; Akers and Eaton 2003) and shredding of working papers (Kaplan and Whitecotton 2001).

It has been argued that whistle-blowing, which refers to “the disclosure by organisation members (former or current) of illegal, immoral or illegitimate

practices under the control of their employers, to persons or organisations that may be able to effect action” (Near and Miceli 1985, p. 4), is a particularly important mechanism in improving quality control in audit organisations (Taylor and Curtis 2010). Previous studies in the area establish that the intention to perform an act is influenced by various individual-level characteristics (Ajzen 1991; Graham 1986). Ajzen’s (1991) theory of planned behaviour proposes that an individual’s attitude towards the behaviour, subjective norms and perceived behavioural control are predictors of his/her behavioural intentions. Graham’s (1986) model of principled organisational dissent proposes personal cost of reporting, personal responsibility for reporting and the seriousness of the irregularity, as key variables influencing the reporting of the act. In the case of whistle-blowing, it is also contingent upon contextual or situational variables such as organisational climate and supervisor/co-worker support (Mesmer-Magnus and Viswesvaran 2005; Miceli et al. 2008; Kaptein 2011).

However, the literature has shown a general reluctance on the part of public accountants to report wrongdoing committed by colleagues (Finn and Lampe 1992; Kaplan 1995; Kaplan and Whitecotton 2001). This has been attributed to their belief that their organisations do not welcome reports of wrongdoing that challenges the organisational hierarchy (Mesmer-Magnus and Viswesvaran 2005), and their fear of retaliation through nullification, isolation, defamation, or expulsion (Dworkin and Baucus 1998). Berry (2004) and Kaptein (2011) argue that to stimulate employees to report wrongdoing, it is important to consider aspects of organisational culture. In fact, the latter highlights how different dimensions of organisational ethical culture affect different choices of actions or inactions in reporting wrongdoings in the organisation.

While organisational culture is important in influencing intended behaviour, it is equally important to consider individual-level characteristics. There is a dearth of research to date that looks at the moderating effects of individual-level characteristics and organisational culture, specifically perceived organisational support (POS), on public accountant’s intention to report wrongdoing. We propose that the main drivers in stimulating the intention to act are the individual-level characteristics with POS acting as the catalyst. Therefore, in this paper, we examine the moderating effects of POS and

individual-level characteristics on public accountants' intentions to whistle-blow internally and externally.

The current study empirically tests part of a conceptual model advanced by Alleyne et al. (2013). Their model proposed relationships between five independent variables (attitudes towards whistle-blowing, perceived behavioural control, independence commitment, personal responsibility for reporting and personal cost of reporting), three moderating variables (POS, team norms and perceived moral intensity) and two dependent variables (internal whistle-blowing intentions and external whistle-blowing intentions). In this paper, we only test the moderating impact of POS to reduce the complexity in their model.

Since the majority of research on public accountants' whistle-blowing intentions has been conducted in developed countries, particularly in the US and Canada (Miceli et al. 2009), and there are limited research in the context of emerging economies (e.g. Sims and Keenan 1999 in Jamaica; de Maria 2005 in Africa), we further contribute to the literature by surveying whistle-blowing intentions of public accountants in Barbados. In a small emerging economy with a population of about 300,000, reputation of the audit firm and the integrity of the employees are vital for the firm's survival (Alleyne et al. 2006). Therefore, it is in the best interest of audit organisations to establish an organisational culture that promotes ethical conduct and impedes unethical behaviour in the workplace (Kaptein 1998, 2011). More importantly, we argue that employees' perceptions of the levels of organisational support may influence their choice of response.

Whistle-blowing in audit firms may be done internally through an ethics partner, line manager and confidential hotline, and/or externally to the profession, regulator or media, though authorisation varies across country. For example, in the US, the government has implemented legislations (Sarbanes and Oxley Act 2002; Dodd-Frank Wall Street Reform and Consumer Protection Act 2010) to encourage and protect 'effective' whistle-blowers (Miceli and Near 2002). Generally, the accounting profession encourages its membership to whistle-blow internally, before considering external reporting (ACCA 2012). There is no legal protection for whistle-blowers in Barbados, with the two main mechanisms in place being the anti-

money laundering legislation and a crime stoppers hotline for reporting wrongdoing.

The remainder of the paper is organised as follows. The next section presents the development of the hypotheses, followed by the research method employed. This is then followed by the discussion of the results and ends with the concluding remarks.

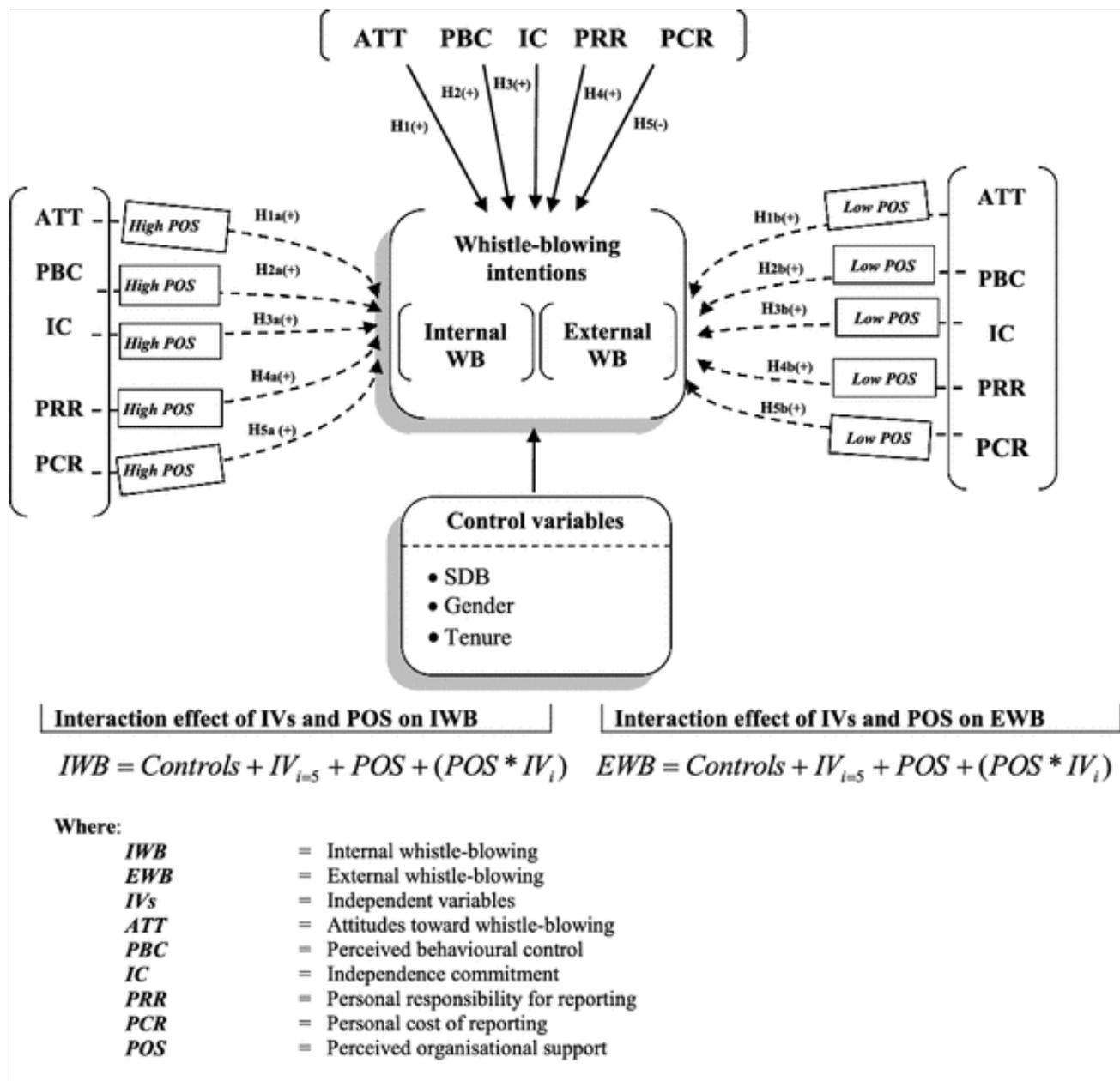
## Theory and Hypotheses Development

We adopted the conceptual model advanced by Alleyne et al. (2013) and in the following paragraphs, the theoretical development of the five individual antecedents and the moderating variable (POS), as well as the specific hypotheses for this study are outlined. Figure 1 presents the conceptual model to be tested in this study.

Fig. 1

The relationships between individual-level antecedents and the moderating effects of POS on internal and external whistle-blowing intentions

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## Theory of Planned Behaviour

Ajzen's (1991) theory of planned behaviour (TPB) has been widely used in studying a variety of behavioural intentions and behaviours, including whistle-blowing intentions (Park and Blenkinsopp 2009). Behavioural intention can be defined as the individual's assessment of the likelihood of choosing a given behavioural alternative (Ajzen 1991). Ajzen (1991) argued that there is a strong positive relationship between behavioural intention and actual behaviour. Prior studies have used whistle-blowing intentions as a proxy for actual whistle-blowing due to the inherent difficulty of gaining

access to actual whistle-blowers (e.g. Kaplan and Whitecotton 2001 ; Chiu 2003 ; Curtis 2006). In our study, whistle-blowing intention, the dependent variable, is the likelihood of the auditor actually engaging in the act of whistle-blowing. For the purposes of this study, we utilise two dimensions of TPB, i.e. attitude towards the behaviour and perceived behavioural control, which we discuss in more detail below.

## Attitude Towards Whistle-Blowing Intentions

TPB suggests the existence of a relationship between a given behavioural action and the individual's attitude towards the behaviour (assessment of the extent of approval or disapproval and the behavioural consequences) (Ajzen, 1991). Accordingly, a positive attitude will influence the intention to perform the act, while a negative attitude will constrain intention towards performing the act (e.g. Fishbein and Ajzen, 1975 ; Turrisi and Jaccard, 1992 ; Ajzen, 1991). Prior research has found attitudes to significantly influence ethical intentions, including intentions to whistle-blow (Flannery and May, 2000 ; Bobek and Hatfield, 2003 ; Carpenter and Reimers, 2005 ; Buchan, 2005 ; Fang, 2006 ; Park and Blenkinsopp, 2009). Within the auditing context, while Gibson and Frakes (1997) find no support for attitude influencing public accountants to report unethical action or wrongdoing, a later study by Buchan (2005) notes a supportive relationship. Hence, our first hypothesis is stated as follows:

$H_1$  Attitude towards whistle-blowing is positively associated with both internal and external whistle-blowing intentions.

## Perceived Behavioural Control (PBC) and Whistle-Blowing Intentions

PBC refers to the individual's perception of the level of ease or difficulty it would take to perform a specific behaviour, and is contingent on the presence or absence of opportunities and obstacles (Ajzen 1991). When the public accountant expects that (s)he can successfully overcome obstacles and perform a particular behaviour, the public accountant is more likely to act ethically (such as reporting) when faced with a dilemma (Beu et al. 2003 ; Alleyne et al. 2013). On the other hand, if the public accountant perceives that there is some difficulty in reporting maybe due to significant obstacles

(such as unethical and punitive senior management and no trusted channels), s(he) is unlikely to report. Thus, the greater the individual's PBC (i.e. ability to control the behaviour and overcome obstacles), the more likely (s)he will perform the behaviour in question (Ajzen 1991). Prior research has found support for PBC (self-efficacy)<sup>1</sup> in predicting ethical intentions (e.g. Flannery and May 2000). More specifically, Park and Blenkinsopp (2009) find PBC to be significantly and positively related to internal whistle-blowing intentions in the case of the police force in South Korea. For the purpose of this study, we argue that prior to taking action to report wrongdoing at the workplace, the public accountant is likely to assess how much control (s)he has over the situation and the possibility of succeeding in triggering a positive outcome (Bandura 1997). Thus, if the public accountant feels (s)he has greater control in overcoming obstacles such as unethical organisational pressures, then (s)he may blow the whistle. Stated as a hypothesis:

H<sub>2</sub> Perceived behavioural control is positively associated with both internal and external whistle-blowing intentions.

## Gendron et al.'s (2006) Notion of Independence Commitment

Gendron et al. (2006, p. 170) defined independence commitment as “the extent to which the individual accountant considers auditor independence as a key attribute of the profession, and believes that regulatory standards of auditor independence (issued by the profession and/or external regulatory agencies) should be rigorously binding and enforced in the public accounting domain”. As professionals, public accountants have a commitment to act with integrity, and independence commitment is deemed a key and visible expression of integrity. Thus, to act and to be seen as being independent is a salient feature of the audit profession and an important part of its code of  professional conduct. The public accountant who is imbued with independence values should be able to withstand pressures within and outside of the workplace. Hence, an important feature of professional and ethical conduct among public accountants is to have a high level of ethical commitment to independence.

## Independence Commitment and Whistle-Blowing

## Intentions

Public accountants who possess a strong commitment to ethical values within the profession (in the form of being independent) are more likely to have a strong sense of moral obligation to act in the interest of the profession by reporting any questionable acts (Hall et al. 2005). A public accountant should have the ability to uphold the ethical values of the accounting profession in a manner that s(he) can resist pressures from colleagues and bosses when deciding to report any misconduct. In other words, high level of independence commitment will lead public accountants to take action to report unethical behaviour, and hence, the next hypothesis is as follows:

H<sub>3</sub> Independence commitment is positively associated with both internal and external whistle-blowing intentions.

## Graham's (1986) Principled Organisational Dissent

Graham refers to principled organisational dissent (POD) as “a protest and/or effort to change the organisational status quo because of a conscientious objection to current policy” (1986, p. 1). Hence, when an employee observes circumstances in the workplace that somehow violates the values or principles that (s)he believes in, then POD may be manifested. In other words, the behaviour displayed is embodied by positive intentions based on personal principles. Dissenting allows for corrective feedback to monitor unethical and immoral behaviour, ineffectual organisational practices and policies, poor and unfavourable decision making and insensitivity to employees' workplace needs and desires, hence signalling employee dissatisfaction or organisational decline. Two types of dissent that will be considered in this study are perceived personal responsibility for reporting and perceived personal cost of reporting.

## Personal Responsibility for Reporting (PRR) and Whistle-Blowing Intentions

Drawing on the work of Graham's (1986) POD, Schultz et al. (1993) propose that PRR influences an individual's intention to act. Prior research has argued that responsibility for reporting an unethical act is related to personal ethical values, as well as feelings of socio-professional

responsibility (Curtis 2006). In the audit profession, reporting the wrongdoing to those who can rectify is considered part of the public accountant's responsibility (ISA 240 2010). The codes of professional conduct (e.g. AICPA and ICAEW) have stipulated that their memberships have collective responsibilities to the public, clients and colleagues, beyond the legal and regulatory responsibilities. Kaplan and Whitecotton (2001) and Schultz et al. (1993) find significant association between strong feelings of personal responsibility and the likelihood of blowing the whistle on questionable acts. Hence, the next hypothesis is as follows:

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$H_4$  Personal responsibility for reporting is positively associated with both internal and external whistle-blowing intentions.

## Personal Cost of Reporting (PCR) and Whistle-Blowing Intentions

Another important antecedent is the public accountant's assessment of the PCR. Drawing on Graham's (1986) POD work, Schultz et al. (1993) propose this variable, by arguing that it is the individual's perception of the risk of retaliation from the members in the organisation that could affect one's willingness to report wrongdoing. Curtis (2006) argues that the personal cost of reporting to the individual may come in the form of refusal of pay increases, unfair performance reviews, lack of peer support (e.g. ostracism), transfers to undesirable posts or jobs and possible firing. Further research has found support for a negative relationship between perceived PCR and reporting intentions (Arnold and Ponemon 1991; Schultz et al. 1993; Kaplan 1995; Kaplan and Whitecotton 2001). Thus, low PCR may lead to reporting, while high PCR may lead to no reporting. Hence, our next hypothesis is:

$H_5$  Personal cost of reporting is negatively associated with both internal and external whistle-blowing intentions.

## Eisenberger et al. (1986) Organisational Support Theory

Organisational support theory (OST) "supposes that to determine the organization's readiness to reward increased work effort and to meet socio-emotional needs, employees develop global beliefs concerning the extent to

which the organization values their contributions and cares about their well-being” (Rhoades and Eisenberger 2002, p. 698). According to Levison (1965), actions taken by agents of the organisation are often viewed as indications of the organisation’s intent rather than attributed solely to the agents’ personal motives. Such personification of the organisation may be attributed to the organisation’s legal, moral and financial responsibility as well as organisational policies, norms and culture. On the basis of the organisation’s personification, employees view their favourable or unfavourable treatment as an indication that the organisation favours or disfavors them. In this study, we focus on one aspect of OST, i.e. perceived organisational support.



## Perceived Organisational Support (POS)

Eisenberger et al. (1990, p. 51) describe POS as employees’ perception of “the extent to which the organisation values their contributions and cares about their well-being”. According to organisational support theory (OST), of which POS is based upon, employees will increase their efforts in assisting the organisation to attain its goals if they perceive that the organisation is willing and capable of giving a high level of support (Aselage and Eisenberger 2003). In this regard, organisational support may stimulate prosocial behaviour (i.e. concern for the well-being of the organisation without promise of reward) that may encourage public accountants to uphold organisational rules and ethics (Adebayo 2005). Thus, OST suggests that when employees feel valued by the organisation, higher levels of POS are achieved, which also has positive implications for organisational commitment and acting in the best interest of the organisation (Eisenberger et al. 1986, 1990, 2001; Rhoades and Eisenberger 2002).

In the case of audit firms, it is in the interest of the organisation to stimulate among its employees identification with the organisational ethics. An organisational culture of care with the right set of core values, which promote integrity, honesty, public interest and provision of support commitment, signals high expectation of ethics among staff in the workplace. Consequently, this fosters ‘rationalized loyalty’ and encourages staff to report any observed unethical behaviour (Gouldner 1960; Vandekerckhove and Commers 2004). Hence, intention of public accountants to behave ethically

is influenced by their perceptions of the firm's expressed values (e.g. ethical policies) and the socio-emotional resources such as respect, care and expected degree of support that they will receive from the organisation. Therefore, if the public accountant strongly believes that the unethical behaviour warrants reporting and the level of POS is high, the public accountant will more likely choose to report the wrongdoing using internal channels such as his/her direct line manager, the ethics committee or the ethics hotlines set up by the audit firm. In contrast, if the public accountant strongly believes that the unethical behaviour warrants reporting but the level of POS is low, then (s)he will opt for external channels such as regulators or the media.

As mentioned earlier, POS by itself may not stimulate intention to report wrongdoing, but together with individual-level characteristics, it enhances the likelihood to report and also the channel to opt.<sup>2</sup> Hence, we anticipate the intention to whistle-blow either internally or externally to be influenced by the interactive effects of POS and the individual-level antecedents. The following sections discuss in further detail our hypotheses on the relationships between POS and individual-level characteristics on the intention to whistle-blow either internally or externally.

## Moderating Effect of POS and Individual-Level Antecedents on Channel of Whistle-Blowing

### Attitude & POS

A public accountant imbued with a positive attitude towards reporting unethical behaviour at the workplace may consider the organisational support available before deciding which reporting channel to use. If there is a high level of POS, the public accountant may be more confident in utilising internal channels in upholding the ethical values of the organisation but if there is a low level of POS, public accountant imbued with positive attitude may opt for external channel if s(he) believes strongly that the wrongdoing should be reported. Hence, the interactive effect of positive attitude and high levels of POS may cause the public accountant to whistle-blow internally, while the interactive effect of positive attitude and low levels of POS may cause him/her to consider external whistle-blowing options. Hence, our first set of hypotheses is as follows:

$H_{1a}$  The relationship between attitudes toward whistle-blowing and internal whistle-blowing intention is significantly positive when POS is high.

$H_{1b}$  The relationship between attitudes toward whistle-blowing and external whistle-blowing intention is significantly positive when POS is low.

### Perceived Behavioural Control & POS

When deciding whether to report wrongdoing at the workplace, the public accountant will consider how much control (s)he has over the situation in producing a positive outcome. If the public accountant feels (s)he has greater control in overcoming obstacles (such as unethical organisational pressures) and a high level of POS exists, then (s)he may select internal channels of whistle-blowing. On the contrary, if the public accountant feels that (s)he has greater control in overcoming obstacles, but there is a low level of POS, then (s)he may opt to blow the whistle externally. Hence, the next set of hypotheses is stated as follows:

$H_{2a}$  The relationship between perceived behavioural control and internal whistle-blowing intention is significantly positive when POS is high.

$H_{2b}$  The relationship between perceived behavioural control and external whistle-blowing intention is significantly positive when POS is low.

### Independence Commitment & POS

Independence commitment is a core value for public accountants as they are expected to take action to report unethical behaviour. A public accountant with a strong sense of independence commitment is more likely to choose internal channel to report if there is a high level of POS. On the other hand, public accountants with strong sense of independence commitments are more likely to choose to report externally when the level of POS is low. This leads us to the following set of hypotheses:

$H_{3a}$  The relationship between independence commitment and internal whistle-blowing intention is significantly positive when POS is high.

$H_{3b}$  The relationship between independence commitment and external

whistle-blowing intention is significantly positive when POS is low.

### Personal Responsibility for Reporting & POS

The reporting of a violation or wrongdoing committed by a colleague<sup>3</sup> within the audit firm is a morally derived feeling of responsibility, as non-disclosure may result in losses for the organisation, the public and the profession.

Reporting internally may help protect the firm's reputation and the profession's credibility, while reporting externally may increase loss of reputation and revenue for the audit firm and motivate members of the public to become suspicious of public accountants. We further argue that strong feelings of personal responsibility of reporting, augmented by high level of POS, are more likely to drive public accountants to blow the whistle internally. On the contrary, a public accountant with strong feelings of personal responsibility of reporting will choose to report externally when the level of POS is low. Thus, our next hypotheses are as follows:

H<sub>4a</sub> The relationship between personal responsibility for reporting and internal whistle-blowing intention is significantly positive when POS is high.

H<sub>4b</sub> The relationship between personal responsibility for reporting and external whistle-blowing intention is significantly positive when POS is low.

### Personal Cost of Reporting & POS

Research has shown that individuals with high PCR are less likely to blow the whistle (Kaplan and Whitecotton 2001; Curtis 2006). However, Curtis (2006, p. 194) argues that although high personal cost may hinder reporting of wrongdoing, this may be moderated by "belief in the existence of support and protection for dissidents, such as the belief that professionalism demands reporting behaviour". Hence, a public accountant with high PCR in an organisation that has high POS may most likely choose the internal channel to report wrongdoing as s(he) feels that it is the right thing to do and trusts that the organisation will be supportive of her/his action in protecting the reputation of the organisation by seeking to resolve the problem internally rather than going externally. In contrast, if the support and protection system is perceived by the individual to be low, s(he) is more likely to blow the whistle externally due to the lack of trust in the organisation in supporting the individual's action. Therefore, the next set of hypotheses is as follows:

H<sub>5a</sub> The relationship between personal cost of reporting and internal whistle-blowing intention is significantly positive when POS is high.

H<sub>5b</sub> The relationship between personal cost of reporting and external whistle-blowing intention is significantly positive when POS is low.

Table 1 presents a summary of our hypotheses, theoretical underpinnings and the expected relationships on the moderating effects of POS and various individual-level factors, on intentions to whistle-blow either internally or externally.

Table 1

Summary of theoretical underpinning, variables, hypotheses & expected relationship w whistle-blowing intentions

Theoretical underpinnings	Main effect variables (a)	Main effect hypotheses (expected relationship with whistle-blowing)	Moderating variable (b)	Moderating hypotheses (expected relationship of a × b with whistle-blowing)	
				Internal	External
				High POS	Low POS
Theory of planned behaviour (Ajzen 1991)	Attitudes	H <sub>1</sub> (+)	Perceived organisational support (POS)	H <sub>1a</sub> (+)	H <sub>1b</sub> (+)
	Perceived behavioural control	H <sub>2</sub> (+)		H <sub>2a</sub> (+)	H <sub>2b</sub> (+)
Notion of independence (Gendron et al. 2006)	Independence commitment	H <sub>3</sub> (+)		H <sub>3a</sub> (+)	H <sub>3b</sub> (+)
Principled organisational dissent (Graham 1986)	Perceived personal responsibility for reporting	H <sub>4</sub> (+)		H <sub>4a</sub> (+)	H <sub>4b</sub> (+)
	Perceived personal cost of reporting	H <sub>5</sub> (-)		H <sub>5a</sub> (+)	H <sub>5b</sub> (+)

Theoretical underpinnings	Moderating variable	
Organisational support theory (Eisenberger et al. 1986)	Perceived organisational support (POS)	

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## Research Methods

### Sample and Data Collection

The respondents in our survey comprised public accountants working in Barbados. The sample was drawn from a list of membership provided by the ICAB<sup>4</sup> and the sample size was determined based on Green's (1991) suggestion for regression analysis requiring a minimum of 114.<sup>5</sup> We contacted the audit partners of the four large accounting firms (with 295 audit staff), 14 small and medium size firms (with 89 audit staff), as well as 117 sole practitioners, to gain access to their staff.<sup>6</sup> We disseminated a total of 500 packages across the audit firms. Each respondent was given a package containing a cover letter, the general instructions letter and survey questionnaire, an informed consent form and a self-addressed envelope for returning the questionnaires.

A total of 268 completed questionnaires were received of which 42 were unusable due to missing data and outliers, resulting in a final usable sample of 226 (45.2 %) responses for analysis.<sup>7</sup> Of the 226 completed responses, 79 % were from the large firms (60.7 % response rate) and 21 % from medium and smaller firms (53 % response rate). Statistical tests showed that there were no significant differences between responses of public accountants from the large and small firms. The possibility of non-response bias was also checked by comparing early and late respondents using Armstrong and Overton's (1977) approach, and t-tests indicated no statistically significant differences on any of the independent and dependent variables.

Table 2 presents a summary of the demographic profile of respondents. As

can be seen, out of 226 respondents, 54.9 % were female, and the mean age was 31 (standard deviation (SD) = 9.69) years. In terms of position, 74.3 % of the sample comprised audit seniors and junior audit staff. As for qualifications, 78.3 % held Bachelor's degrees, while 74.3 % of the sample had professional qualifications, with 50 % of the sample completing the ACCA's professional qualification.

Table 2

Summary of respondents' profile

Variables	Mean	Std.
(A) Continuous variables		
Age	30.8 years	9.7 years
Years of working experience	7.8 years	4.9 years
(B) Other variables		
	Frequency	(%)
Gender		
Male	102	45
Female	124	55
Total	226	100.0
Organisational position		
Partners	9	4.0
Audit Managers	49	21.7
Audit Seniors	61	27.0
Junior Staff	107	47.3
Total	226	100.0
(C) Qualification		
Academic qualifications (education) <sup>a</sup>		
Secondary	18	8.0
Diploma	12	5.3
Bachelor's degree	177	78.3
Master's degree	7	3.1

Other	12	5.3
Total	226	100.0
Professional qualifications		
ACCA	113	50.0
ACA	3	1.3
CGA	32	14.2
CPA	11	4.9
CMA	1	0.4
Other	8	3.5
Unqualified <sup>b</sup>	58	25.7
Total	226	100.0
Std standard deviation		
<sup>a</sup> Highest qualification attained		
<sup>b</sup> Currently pursuing professional exams		

## Development of the Research Instrument

The research instrument for this study consists of two parts.<sup>8</sup> The first part requests respondents' demographic information, such as gender, age, highest academic qualification, professional working experience, tenure and organisational position. The second part presents the scenario and the related questions. Given the difficulties in gaining access to subjects and observing actual ethical or unethical behaviours, the scenario approach, commonly used in the areas of accounting and marketing research (Silver and Valentine 2000; Sweeney and Roberts 1997), is adopted. This involves a description of a hypothetical situation and the subject is required to respond by placing himself or herself as an actor in the situation (Ferris et al. 1997). Since we are interested in understanding public accountants' whistle-blowing intentions, this approach is helpful as it "helps to standardize the social stimulus across respondents and at the same time makes the decision-making situation more real" (Alexander and Becker 1978, p. 103). The scenario used

in this study (see Appendix) is adapted from the scenario used in the study by Rau and Weber (2004) that highlights a violation of the principle related to “Integrity” in the IFAC’s Code of Ethics. The scenario describes an illegal act, which involves the issue of observing the shredding of audit documentation by a senior member in the audit firm.<sup>9</sup>

Respondents are required to answer a series of questions related to the scenario. We adapt scales by Park and Blenkinsopp (2009) to measure the dependent variables, internal and external whistle-blowing intentions. Each whistle-blowing intention construct (internal and external) is measured using four statements (see Table 3). Respondents are asked whether they would report the shredding act within (to 4 specific internal targets) or outside (to 4 specific external targets) the organisation. These statements are measured on a 7-point Likert scale, ranging from 1 (not at all) to 7 (very much). Items are averaged to form a composite score. Higher scores indicate higher intentions to whistle-blow.

Table 3

Descriptive statistics for the dependent variables—whistle-blowing (reporting) intentions

Dependent variables	Mean	SD
Internal whistle-blowing (IWB)		
Report it to the appropriate persons within the firm	5.06	1.64
Use the reporting channels inside of the firm	5.08	1.57
Let upper level of management know about it	4.79	1.67
Tell my supervisor about it	4.90	1.70
Overall average	4.96	1.47
Cronbach’s alpha = .91		
External whistle-blowing (EWB)		
Report it to the appropriate authorities outside of the firm	3.87	1.43
Use the reporting channels outside of the firm	3.70	1.40
Provide information to outside agencies	3.26	1.38

Inform the public about it	2.98	1.46
Overall average	3.45	1.22
Cronbach's alpha = .88		
SD standard deviation		

Using Park and Blenkinsopp's (2009) scale, Attitude is measured by asking how true the respondent think with regard to the following five salient consequences of a public accountant reporting the wrongdoing or questionable acts of the audit organisation in the scenario [i.e. (1) preventing harm to the audit organisation, (2) controlling unethical behaviour, (3) enhancing public interest, (4) performing duty as an audit employee and (5) achieving moral satisfaction] (see Table 4 A). Respondents are also required to evaluate the importance of each of the five consequences by responding to the question, "If you reported the shredding action, how important do you think the following consequences would be to you?", based on a seven-point Likert-type scale. The scale measuring consequences of reporting ranged from 1 (not very true) to 7 (very true), and the scale measuring the importance attached ranged from 1 (not very important) to 7 (very important). The overall attitude score is derived by multiplying each salient consequence by its related importance and then averaging them. Higher scores indicate more positive Attitude.

Table 4

Scale items and means for Attitudes toward whistle-blowing &amp; PBC

(A) Attitudes			
Items	Beliefs about the consequences (b) <sup>a</sup> Mean (SD)	Evaluation of the consequences (e) Mean (SD)	(b × e) Mean(SD)
Prevention of harm to the firm	5.77 (1.46)	6.02 (1.00)	35.17
Control of unethical behaviour	6.19 (0.97)	6.08 (0.97)	38.01
Enhances public interest	5.61 (1.34)	5.47 (1.38)	31.61

One's duty as an employee	5.65 (1.25)	5.84 (1.19)	33.82
Morally appropriate	6.41 (0.97)	6.01 (1.25)	39.06
Average	5.92 (0.80)	5.88 (0.856)	35.30
Overall average			5.04 (1.22)
Cronbach's alpha = .82 <sup>a</sup>			
Attitude: Sum of (b × e) = 177.49			
<b>(B) Perceived behavioural control (PBC)</b>			
Items	Belief in control factors (bcf) <sup>a</sup> Mean (SD)	Evaluation of control factors (ecf) Mean (SD)	(bcf × ecf) Mean (SD)
The audit firm's hindering reporting (or ignoring it)	6.21 (1.01)	5.13 (1.66)	32.11
Difficulties to be faced in the process of reporting	5.99 (1.04)	4.85 (1.81)	29.31
Reporting likely to be ineffective in ending the wrongdoing	6.02 (1.06)	5.56 (1.69)	33.90
Retaliation by the audit firm	5.91 (1.09)	5.47 (1.51)	32.58
Average	6.03 (0.79)	5.25 (1.40)	32.03
Overall average			4.57 (1.43)
Cronbach's alpha = .81 <sup>a</sup>			
PBC: Sum of (bcf × ecf) = 127.90			
SD standard deviation			

Using Park and Blenkinsopp's (2009) scale, PBC is measured using eight items; four related to control factors and the remaining four related to perceived power. The control factors contain four statements that tap into the perceived difficulties that the individual is likely to encounter in the process of reporting, such as (a) the audit organisation hindering or ignoring the

reporting, (b) difficulties likely to be faced when reporting, (c) reporting would not make a difference and (d) retaliation by the audit organisation (see Table 4B). The control factors are rated on a seven-point Likert-type scale ranging from 1 (not likely) to 7 (very likely). The perceived power items (based on an evaluation of each control factor) are rated on a scale ranging from 1 (not very important) to 7 (very important). Thus, PBC is derived by multiplying each perceived control factor by its related perceived power. The resulting product scores are combined to form the composite average score for PBC. Similar to Park and Blenkinsopp (2009, p. 551), the survey asks respondents to determine the difficulties in whistle-blowing, with lower responses indicating higher PBC, as respondents find it easier to gauge difficulty rather than ease of reporting. However, for data analysis, responses are recoded so that higher scores indicate higher PBC.

Table 5 A presents the descriptive statistics for Independence commitment which is measured using four items adapted from Gendron et al. (2006). A sample item for this scale is “I believe that independence is one of the main foundations of the accounting and auditing profession”. Respondents are asked to reflect on their current organisation and in the context of the scenario, assess their level of Independence commitment. The responses for each individual item are measured using a 7-point Likert-type scale to rate each statement from 1 (completely disagree) to 7 (completely agree) and averaged to form an overall score, with higher scores indicating higher levels of Independence Commitment.

Table 5

Descriptive statistics for independence commitment, PCR, PRR & POS

Items	Mean	SD
(A) Independence commitment		
I believe that independence is one of the main foundations of the accounting and auditing profession	5.08	1.49
I believe that the profession's independence requirements need to be strictly enforced in every sphere of activities in which public accounting firms are involved	4.97	1.42
I think the profession would be more highly regarded if the profession's independence requirements for auditors in public practice were more rigorous	4.83	1.414

I think that stakeholders in general (e.g. business community) would benefit if the profession's independence requirements in public practice were more rigorous	4.86	1.474
Overall average independence commitment	4.93	1.29
Cronbach's alpha = .91		
(B) PCR and PRR		
Personal cost of reporting (PCR)	3.26	1.61
Personal responsibility for reporting (PRR)	4.76	1.44
(C) POS		
My organisation cares about my opinions	5.01	1.60
My organisation really cares about my well-being	4.95	1.56
My organisation strongly considers my goals and values	5.02	1.52
Help is available from my organisation when I have a problem	5.30	1.49
My organisation would forgive an honest mistake on my part	5.03	1.42
If given the opportunity, my organisation would take advantage of me <sup>a</sup>	4.29	1.80
My organisation shows very little concern for me <sup>a</sup>	5.23	1.67
My organisation is willing to help me if I need a special favour	4.66	1.45
My organisation values my integrity <sup>b</sup>	5.81	1.25
Overall average perceived organisational support	5.03	1.08
Cronbach's alpha = .87		
SD standard deviation		
<sup>a</sup> Items reverse-scored		
<sup>b</sup> Additional item put into the original scale		

Table 5 B presents the descriptive statistics for PRR and PCR. Both items are adapted from Schultz et al.'s (1993) single-item scales. The former asks respondents to assess their personal responsibility (i.e. duty or obligation) in reporting the shredding action, while the latter asks respondents to assess their personal costs (i.e. trouble, risk, discomfort) as a public accountant in

reporting the shredding action. Each item is measured using a 7-point Likert scale, ranging from 1 (very low) to 7 (very high). On these two items, higher series indicate higher PRR and higher PCR.

Table 5C presents the descriptive statistics for POS which is measured using Eisenberger et al.'s (1997) 8-item short version of Eisenberger et al.'s (1990) scale. Based on comments arising from the pilot stage, an additional question is introduced to test the perceived level of ethical support that is valued by the organisation. Thus, a revised 9-item scale is used. Respondents are asked to reflect on their current organisation and in the context of the scenario, indicating the extent of their agreement on each of the nine items on a 7-point Likert-type scale, ranging from 1 (completely disagree) to 7 (completely agree). Scores across the nine items are averaged to form one composite POS score with higher scores indicating higher POS.

Given that this research uses self-reported data and respondents may tend to bias such reports by providing socially desirable responses, we test for social desirability bias (SDB), which may exist in research on ethical and whistleblowing behaviour (Paulhus 1984; Shafer 2008). Similar to prior research which measures and controls for SDB, we utilise Paulhus' (1989) 20-item impression management (IM) scale (e.g. Shafer 2008). The IM scale ranges from a low score of 0 to a high score of 20, where high scores are reflective of those respondents who are prone to exaggerate responses. Thus, higher scores indicate a greater propensity for participants to bias their responses in a socially desirable fashion.

The research instrument is piloted and refined through three stages: (1) interviewing four audit practitioners, (2) questioning four university students of auditing and (3) gaining feedback from three academics with practical auditing experience. To check for the presence of common method variance (Podsakoff et al. 2003), we use Harman's (1976) single factor test to explore the variables of interest. Using principal component factor analysis, all factors loaded consistently within the specific constructs of interest. These findings indicate that common method variance may not have been an influential factor on the results of the study. Furthermore, all multi-item scales have Cronbach's alphas above 0.81, thus indicating high internal reliabilities.

## Method of Analysis

Since we are interested in the interactive effects of POS and the five individual-level independent predictor variables ( $POS * IV_{i=5}$ ), i.e. Attitude, PBC, Independence Commitment, PRR and PCR, on the dependent variables IWB = internal whistle-blowing and EWB = external whistle-blowing, we use hierarchical multiple regression analysis as it allows the ordering of the variables to be entered into the analysis (Cohen and Cohen 1983; Baron and Kenny 1986). Consistent with prior research in the ethics literature, hierarchical multiple regression analysis is used to test for the moderating effects (e.g. Flannery and May, 2000; Adebayo, 2005; Chiu 2003; Barnett and Vaicys 2000).<sup>10</sup> We zero-centred the predictor and POS variables before running the regression analysis (Aiken and West 1991). We also control for the possible influences of demographic and other variables (SDB, gender and tenure), given their theoretical and empirical influences from the literature (Flannery and May 2000; Mesmer-Magnus and Viswesvaran 2005).

The test incorporates SDB, gender and tenure as control variables in step 1; the five independent variables ( $IV_{i=5}$ ) in step 2 (main effects); POS in step 3 (the moderator); and the interactions ( $POS * IV_i$ ) in step 4 (the moderating effect). Thus, the regression equation is as follows:

$$WB = Controls + IV_{i=5} + POS + (POS * IV_i).$$

ModGraph-1 programme by Jose (2008) was used to plot the interaction graphs, based on information from SPSS output. To test whether the simple slopes of POS (i.e. low, medium and high levels of POS) differ significantly from zero, ModGraph-1 is used to calculate the simple slopes (betas, standard errors, t-values and p-values).

## Results

### Descriptive Analysis

Table 6 presents the mean, standard deviations and Pearson correlation coefficients for the variables in the study. The results in the correlation matrix, and the fact that the variance inflation factors (VIF) do not exceed 2

in the regression models, indicate no major concern with multicollinearity.<sup>11</sup> The mean for the dependent variables indicates a higher preference by respondents for IWB (4.96) rather than EWB (3.45).

Table 6

Descriptive statistics and correlation matrix

Variables	M	Std.	1	2	3	4	5	6	7	
Controls										
1	SDB	8.23	4.18	(-)						
2	Gender	1.55	0.50	0.18**	(-)					
3	Tenure	7.84	4.93	0.07	-0.22**	(-)				
Dependent										
4	IWB	4.96	1.47	0.05	0.03	-0.11	[0.91]			
5	EWB	3.45	1.22	0.07	0.12	-0.07	0.44**	[0.88]		
Independent										
6	ATT	5.04	1.22	0.07	0.03	-0.15*	0.14*	0.07	[0.82]	
7	PBC	4.57	1.43	0.02	-0.02	-0.03	0.13*	0.11	0.67**	[0.82]
8	IC	4.93	1.29	0.12	0.07	-0.12	0.26**	0.07	0.61**	0
9	PRR <sup>a</sup>	4.76	1.44	0.19**	0.01	-0.06	0.30**	0.08	0.64**	0
10	PCR <sup>a</sup>	3.26	1.61	-0.05	0.09	-0.02	-0.16*	0.09	-0.16*	-0
Interactive										
11	POS	5.03	1.08	0.02	0.02	0.01	0.07	-0.31**	0.30**	0
Alpha reliabilities for multi-item scales are shown in brackets in the diagonals. (-) p variables for which reliabilities cannot be completed										
M mean; Std standard deviation										
** p < .01; * p < .05										
<sup>a</sup> Single-item scale										

1 = Social desirability bias (SDB); 2 = Gender; 3 = Tenure; 4 = Internal whistle-blow whistle-blowing intentions (EWB); 6 = Attitudes toward whistle-blowing (ATT); 7 = 8 = Independence commitment (IC); 9 = Personal responsibility for reporting (PRR); (PCR); 11 = Perceived organisational support (POS)

## Hierarchical Regression Analysis

Table 7 presents the results of the hierarchical regression analysis used to test the hypotheses in this study. As can be seen in Table 7 (Step 2), Attitude is positively and significantly associated with only internal whistle-blowing ( $\beta = .180, p < .05$ ), but not external whistle-blowing, thus our  $H_1$  is only partially supported.<sup>12</sup> The variable, PBC, is found to be positively and significantly associated with both channels of whistle-blowing (IWB— $\beta = .179, p < .05$  and EWB— $\beta = .137, p < .05$ ), thus fully supporting  $H_2$ . IC and PRR are both found to be significantly and positively related to internal whistle-blowing (IC— $\beta = .233, p < .01$  and PRR— $\beta = .265, p > .01$ ), but not external whistle-blowing, thus partially supporting  $H_3$  and  $H_4$ . PCR is found to be significantly and negatively related to only internal whistle-blowing intentions ( $\beta = .169, p < .05$ ), hence, partially supporting  $H_5$ .

Table 7

Results of hierarchical regression analysis

Step	Variable	Attitude			Perceived behavioural control (PBC)		
		$\beta$	$R^2$	$\Delta R^2$	$\beta$	$R^2$	$\Delta R^2$
Internal Whistle-blowing intentions							
1	SDB	0.012	0.013 	0.013	0.012	0.013 	0.013
	Gender	0.014			0.014		
	Tenure	-0.112			-0.112		
2	IV	0.180*	0.045*	0.032*	0.179*	0.045*	0.032*
3	POS	0.010	0.045	0.000	0.028	0.046	0.001
4	POS x IV	0.373**	0.177**	0.132**	0.299**	0.134**	0.088**
External whistle-blowing intentions							

1	SDB	0.085			0.085		
	Gender	0.078	0.021	0.021	0.078	0.021	0.021
	Tenure	-0.062			-0.062		
2	IV	0.075	0.026	0.005	0.137*	0.040*	0.019*
3	POS	-0.310**	0.112**	0.086**	-0.300**	0.125**	0.085**
4	POS x IV	-0.151*	0.134*	0.021*	-0.169*	0.153*	0.028*

N = 226, SDB social desirability bias, POS perceived organisational support, IV inde

\*\* p < .01; \* p < .05

## Interactive Effects

Table 7 (Step 4) and Modgraph plots (Figs. 2, 3, 4, 5, 6, 7, 8, 9) show the results of the interactive effects.<sup>13</sup> In terms of the interactive effects of Attitude and POS, results indicate the relationship between attitude and internal whistle-blowing is positively intensified when POS is high (simple slope  $\beta = .691$ ,  $t = 5.88$ ,  $p < .01$ ), and similarly, the relationship between attitude and external whistle-blowing is positively intensified when POS is low (simple slope  $\beta = .310$ ,  $t = 3.34$ ,  $p < .01$ ) as displayed in Figs. 2 and 3, respectively. Thus, our hypotheses  $H_{1a}$  and  $H_{1b}$  are fully supported. The results suggest that those with strong attitudes to report wrongdoing tend to prefer internal channels when there is higher organisational support and protection, but will opt for external channels when organisational support is deemed to be low.

Fig. 2

Plot of interaction effect of ATT & POS on IWB

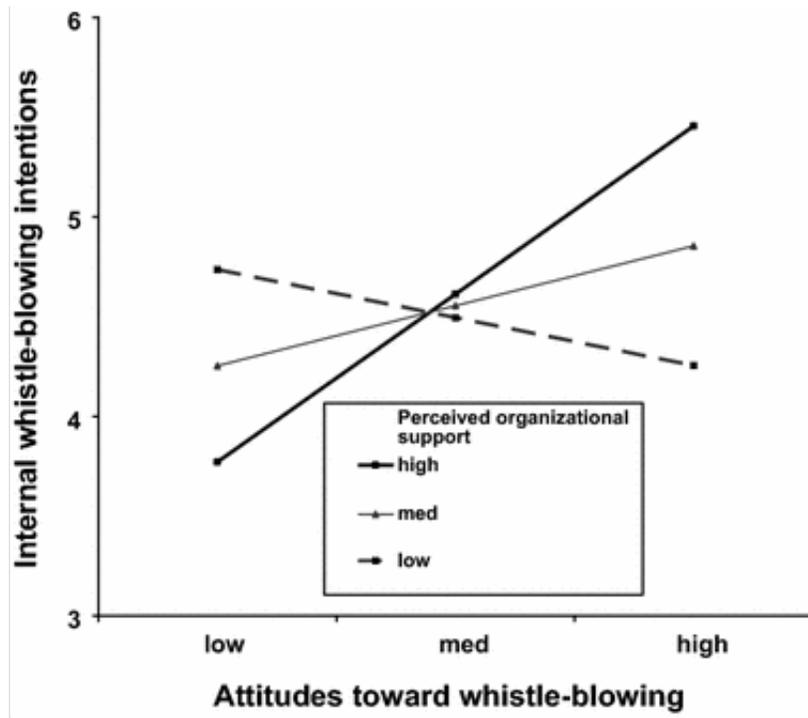


Fig. 3  
Plot of interaction effect of ATT & POS on EWB

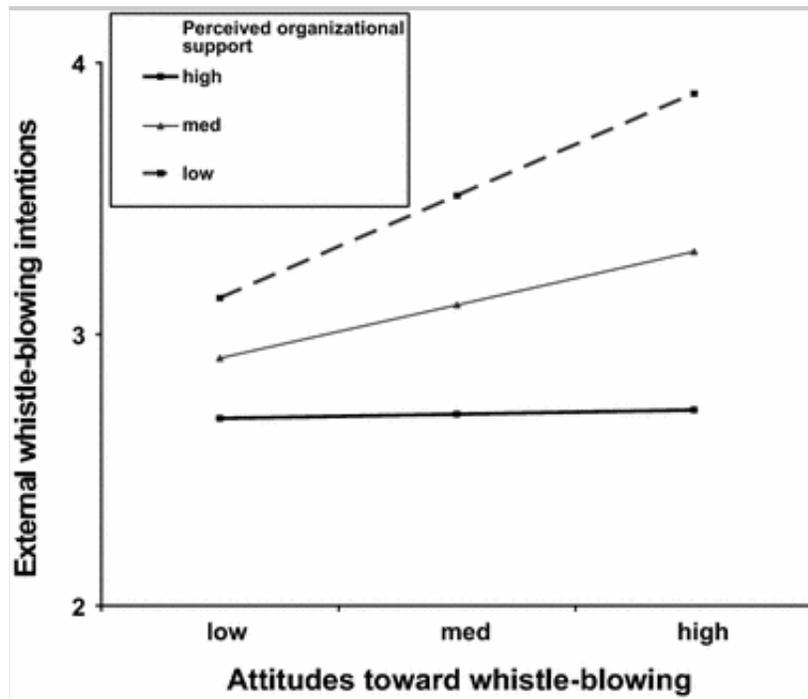


Fig. 4  
Plot of interaction effect of PBC & POS on IWB

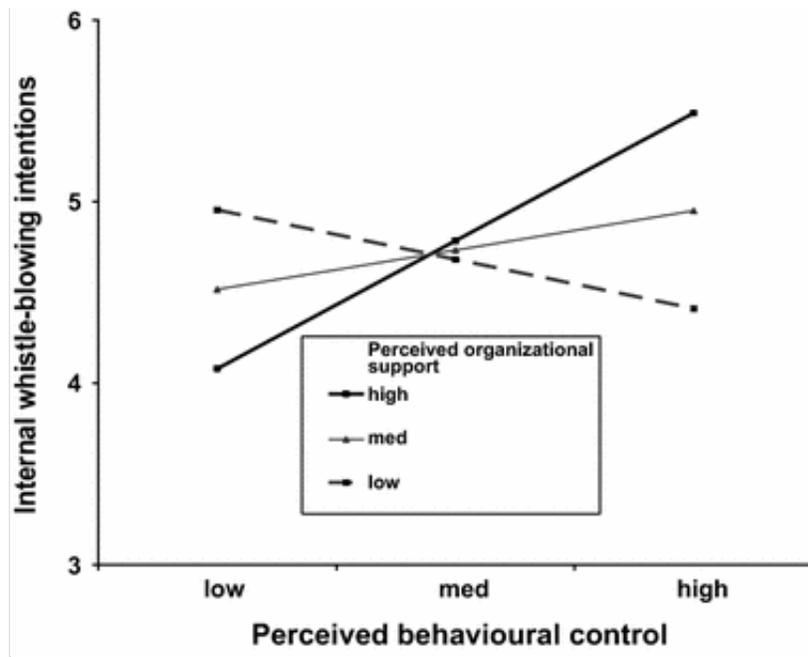


Fig. 5  
Plot of interaction effect of PBC & POS on EWB

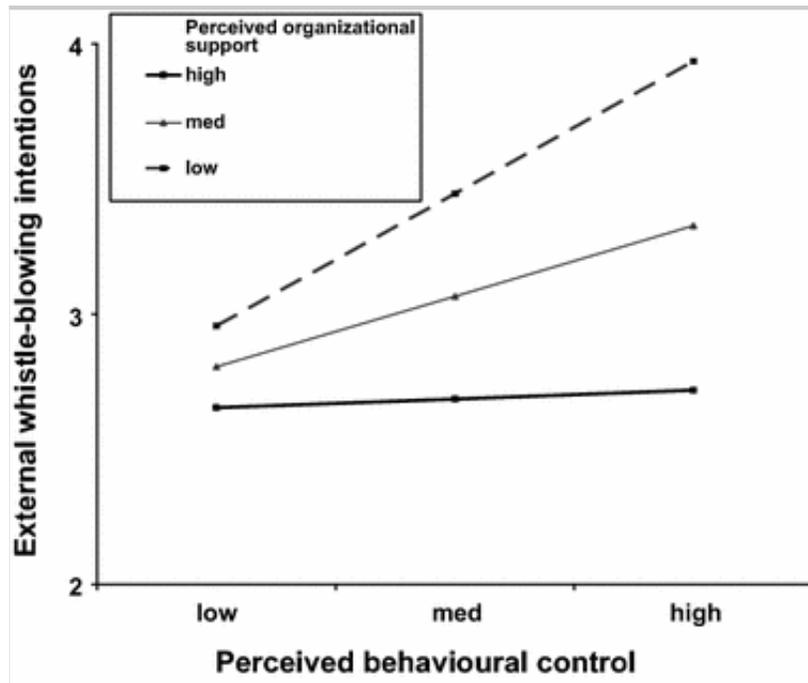


Fig. 6  
Plot of interaction effect of IC & POS on IWB

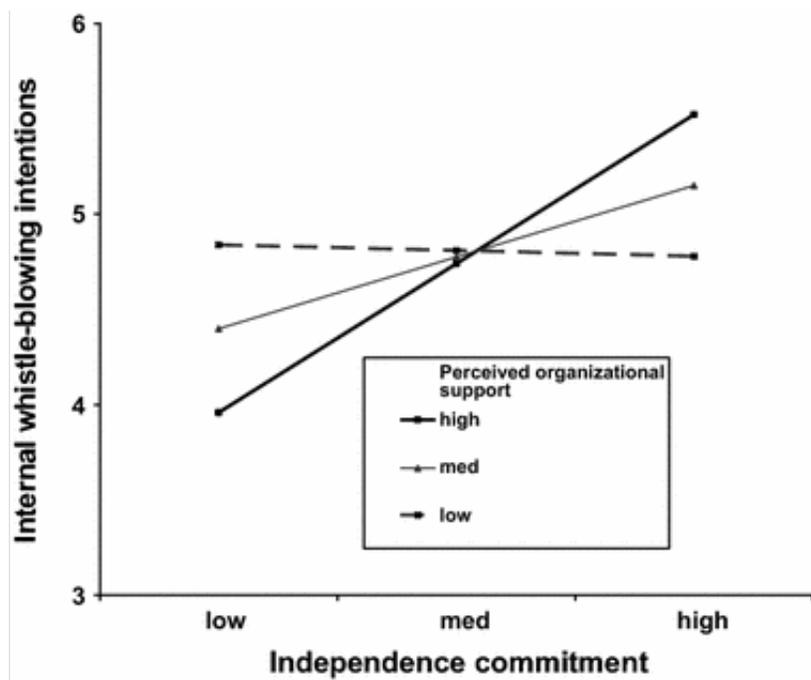


Fig. 7  
Plot of interaction effect of PRR & POS on IWB

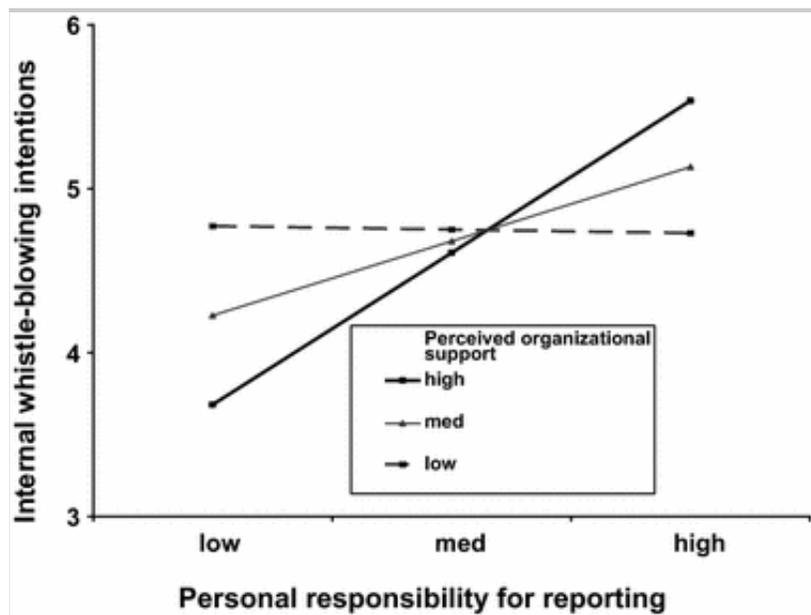


Fig. 8  
Plot of interaction effect of PCR & POS on IWB

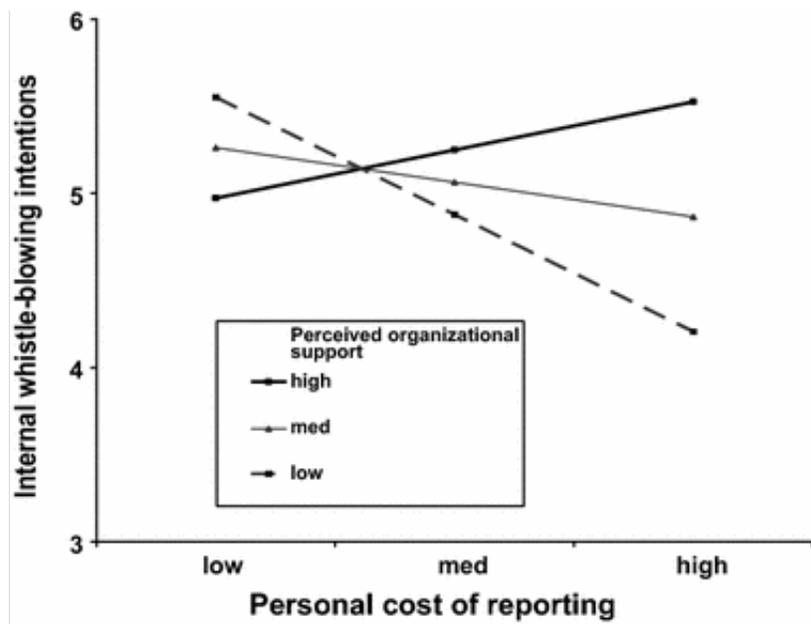
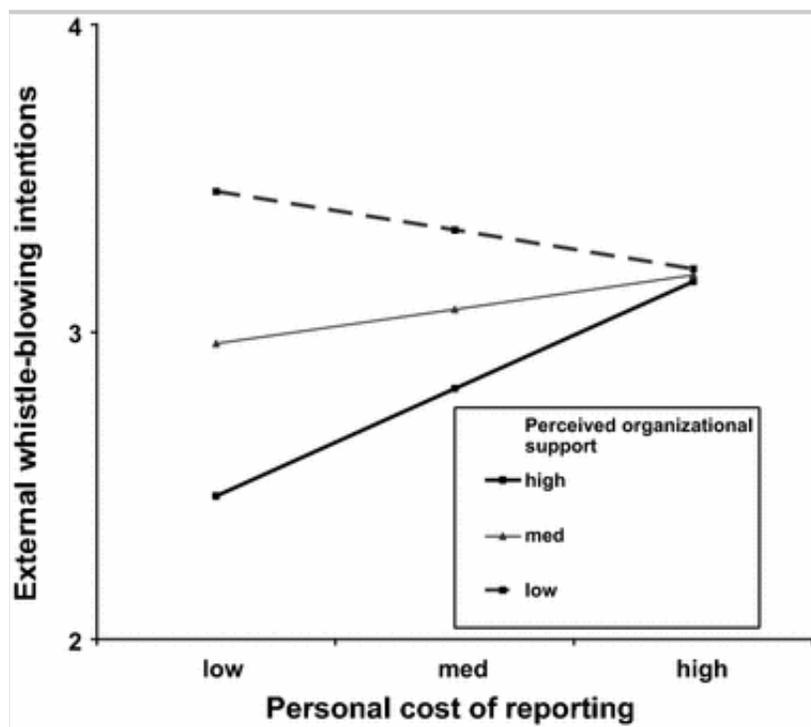


Fig. 9  
Plot of interaction effect of PCR & POS on EWB



Similarly, the results in Table 7 (Step 4) show the significant interactive effects of PBC and POS, thus indicating that the relationship between PBC and internal whistle-blowing is positively intensified when POS is high (simple slope  $\beta = .491$ ,  $t = 5.02$ ,  $p < .01$ ), while the relationship between PBC and external whistle-blowing intentions is positively intensified when POS is

low (simple slope  $\beta = .341$ ,  $t = 3.94$ ,  $p < .01$ ). Thus, hypotheses  $H_{2a}$  and  $H_{2b}$  are fully supported. The results suggest that public accountants may be consequentialists, i.e. they will evaluate the consequences of their actions when making decisions on the choice of channel in reporting wrongdoing. The presence of effective organisational support and protection should give public accountants the opportunity to anticipate the expected outcomes, and hence, they are more likely to choose internal channels. On the other hand, when there is low organisational support and protection, public accountants would choose external channels. Figures 4 and 5 illustrate the interaction between PBC and whistle-blowing intentions moderated by levels of POS.

The results in Table 7 (Step 4) show the significant interactive effects of independence commitment and POS, thus indicating that the relationship between independence commitment and internal whistle-blowing is positively intensified when POS is high (simple slope  $\beta = .607$ ,  $t = 5.29$ ,  $p < .01$ ), thus supporting  $H_{3a}$ . The relationship between independence commitment and external whistle-blowing, moderated by low POS, is found to be insignificant, thus rejecting  $H_{3b}$ . The results suggest that public accountants with commitment to independence will most likely choose the internal channel to report wrongdoing if there is high organisational support and protection. This is an important finding and may explain why wrongdoing within the audit profession seems not to be highly publicised.

As for the interactive effects of PRR and POS, results indicate PRR and internal whistle-blowing to be positively intensified when POS is high (simple slope  $\beta = .643$ ,  $t = 6.03$ ,  $p < .01$ ), hence supporting  $H_{4a}$ . However, POS does not significantly influence the relationship between PRR and external whistle-blowing, thus rejecting  $H_{4b}$ . The results suggest that those with high levels of PRR will rationally choose internal channels especially when there is high organisational support. Figures 6 and 7 show the interactions between the two independent variables viz. Independence Commitment and PRR, on internal whistle-blowing intention moderated by high levels of POS.

In the case of the interactive term PCR and POS, the result in Fig. 8 indicates the relationship between personal cost of reporting and internal whistle-blowing intentions to be positively intensified when POS is high (simple

slope  $\beta = .172$ ,  $t = .207$ ,  $p < .05$ ), thus supporting our  $H_{5a}$ . Note that the simple slope in Fig. 8 also indicates the relationship between personal cost of reporting and internal whistle-blowing intentions to be negatively intensified when POS is low (simple slope  $\beta = -.418$ ,  $t = -4.95$ ,  $p < .01$ ), thus further supporting our earlier  $H_5$ . This is an important finding as it suggests that Barbadian public accountants in general would not blow the whistle when there is high PCR ( $H_5$ ), but in the presence of high POS, there is strong likelihood for them to whistle-blow internally.

However, the hypothesised relationship between PCR and external whistle-blowing (see Fig. 9), when POS is low, is found to be insignificant (simple slope  $\beta = -.078$ ,  $t = -1.11$ ,  $p > .05$ ), hence  $H_{5b}$  is rejected. Interestingly, the simple slope in Fig. 9 indicates the relationship between personal cost of reporting and external whistle-blowing intentions to be positively intensified when POS is high (simple slope  $\beta = .217$ ,  $t = 2.83$ ,  $p < .01$ ), a result similar to  $H_{5a}$ . This is another important finding as it suggests that Barbadian public accountants with high PCR are also willing to blow the whistle externally if there is high POS. However, based on the results of the coefficients, there is a higher tendency to whistle-blow externally (simple slope  $\beta = .217$ ,  $p < .01$ ) than internally (simple slope  $\beta = .172$ ,  $p < .05$ ) in the presence of high POS. A possible explanation for the difference in the choice of channel may be driven by the individual's perception that external channel is more trustworthy and less riskier. However, this issue needs further probing to better understand the reason.

## Concluding Remarks

The results of our findings highlight the importance of POS within audit organisations in relation to stimulating appropriate behaviour. Public accountants in Barbados demonstrate more willingness to engage in reporting wrongdoing internally if they believe there is full support from their organisation's ethical mechanisms. Such support may be manifested in the culture of the organisation through not only encouraging ethical behaviour but also showing that the wrongdoing will not be tolerated and that no form of retaliation will be taken against the reporters of wrongdoing. Audit organisations can thus implement appropriate institutional arrangements (regulative, normative and culture-cognitive isomorphisms) that will

influence the acceptable ethical behaviour and norms (DiMaggio and Powell 1983). This finding is consistent with Blau's (1964) social exchange theory and Gouldner's (1960) norm of reciprocity, which suggest that if employees feel that the organisation will support them, they are more likely to show loyalty and commitment by doing what is necessary to protect it from reputational damage.

Another important finding is that the mean scores in this study tended to be around the middle of the scale of 1 to 7 for internal reporting, but on the lower side for external reporting, suggesting a general reluctance by Barbadian public accountants to whistle-blow externally. This may be attributed to the influence of their culture of being family-oriented, hierarchical and one of seeking security, which may be a direct result of the remnants of African heritage, colonial past and religious values. Barbadians can be considered as more oriented to "being" rather than "doing", which suggests a need to be a part of one's personal and professional ties. In addition, Barbadians accept unequal distribution of power as appropriate.<sup>14</sup> Similarly, Stoddart (1995) argued that institutions such as religious and educational bodies encourage obedience which reinforced the beliefs and practices required to maintain the status quo in society. However, in the case of high PCR, Barbadians have a higher tendency to whistle-blow externally than internally in the presence of high POS as they feel more secure with the external channel.

A number of policy implications can be drawn from the findings. Since Barbadian public accountants prefer internal reporting, befitting the country's culture, audit organisations should enhance their internal reporting channels by implementing organisational support such as anonymous hotlines, having an open-door policy, availability of ethics and risk managers for reporting the wrongdoing, and setting clearly defined procedures within the organisation. The creation of a supportive ethical culture within the organisation as well as purposive ethics training may encourage public accountants to blow the whistle internally. An investment in organisational support for internal reporting is necessary, as it responds to the moral needs of Barbadian public accountants. High levels of perceived organisational support and organisational commitment should encourage the public accountants to do all that is possible in avoiding harm to the organisation, profession and society.

However, having perceived organisational support alone may be insufficient, as long as personal cost remains high and the code of ethics stays silent on enforcing and protecting the public accountants' rights in reporting wrongdoing. The profession stands to benefit from supporting ethical behaviour rather than enabling wrongdoing, which may be costly to the audit organisation in the long term.

Audit organisations need to ensure that the recruitment process selects individuals who are ethically sensitive, have the capacity to stand up for their beliefs and be able to report questionable acts committed by colleagues. For example, the recruitment process can include the use of personality and integrity testing, which should assist in improving the quality of potential entrants to the profession. In addition, human resource departments in audit organisations can use training programmes designed to sensitise staff on the steps required to resolve ethical conflicts, and raise the level of moral development, enhance professional attitudes and increase personal responsibility for reporting.

Audit organisations need to implement measures and appropriate interventions that help improve attitudes towards whistle-blowing, the level of control over reporting and personal responsibility in an effort to reduce fear of reprisals. Senior management in audit organisations must ensure that the right values (e.g. morality, openness and ethics) are entrenched within the organisation, so that audit staff can feel that there is a personal responsibility to report. There should be procedures and policies to prevent retaliation, possibly through an independent committee outside of the organisation for staff to make their reports. These interventions can assist in creating an ethical environment, which can only lead to the enhancement of the organisation's image and reputation.

There are several limitations to this research. This study focused primarily on public accountants to determine their willingness to report on senior colleagues. Although every attempt was made to make the sample representative of the population, there is still potential for sampling error. This study also sought to measure whistle-blowing intentions and not actual behaviours, and did not examine the influence of national culture on whistle-blowing intentions, given that some cultures, such as in the US,

sensationalise the phenomenon. Future research may empirically consider looking at the impact of groups on the whistle-blowing process in actual field settings since most of the research on whistle-blowing has been conducted using questionnaires, experiments and student samples. In addition, rich information can be obtained from using qualitative methodologies such as focus groups.

AQ4

## Appendix

### Scenario Used in this Study

You are a junior auditor, working for an auditing firm and you are conducting an annual audit of a highly valued client, a machinery manufacturer that was about to go public. During the audit, you discovered that the manufacturing company had received a large loan from the local savings and loan association. It was illegal for a savings and loan association to make a loan to a manufacturing firm; they were restricted by law to mortgages based on residential real estate. You took the working papers and a copy of the ledger showing the loan to the engagement partner. The engagement partner, Tom Jones, listened to you, and then told you, “Leave the papers with me. I will take care of this privately”. You later learn that Tom has shredded the papers and has taken no further action. If one was to shred the papers, this would be in direct violation of the principle of “Integrity” of the IFAC’s Code of Ethics.

Adapted and modified from Rau and Weber (2004).

## References

ACCA. (2012). Global guidance on ethical matters for members in business. Glasgow: ACCA.

Adebayo, D. O. (2005). Ethical attitudes and prosocial behaviour in the Nigeria police: Moderator effects of perceived organizational support and public recognition. *Policing: An International Journal of Police Strategies and Management*, 28(4), 684–705.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.

Akers, M. D., & Eaton, T. V. (2003). Underreporting of chargeable time: The impact of gender and characteristics of underreporters. *Journal of Managerial Issues*, 15, 82–96.

Alexander, C. S., & Becker, H. J. (1978). The use of vignettes in survey research. *Public Opinion Quarterly*, 42, 93–104.

Alleyne, P., Devonish, D., & Alleyne, P. G. (2006). Perceptions of auditor independence in Barbados. *Managerial Auditing Journal*, 21(6), 621–635.

Alleyne, P., Hudaib, M., & Pike, R. (2013). Towards a conceptual model of whistleblowing intentions among external auditors. *The British Accounting Review*, 45(1), 10–23.

Armstrong, J. S., & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402.

Arnold, D., & Ponemon, L. (1991). Internal auditors' perceptions of whistle-blowing and the influence of moral reasoning. *Auditing: A Journal of Practice & Theory*, 10(2), 1–15.

Aselage, J., & Eisenberger, R. (2003). Perceived organizational support and psychological contracts: A theoretical integration. *Journal of Organizational Behavior*, 24(5), 491–509.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review*, 84(2), 191–215.

Bandura, A. (1997). *Self efficacy: The exercise of control*. New York: Freeman.

Barnett, T., & Vaicys, C. (2000). The moderating effect of individuals' perceptions of ethical work climate on ethical judgments and behavioural intentions. *Journal of Business Ethics*, 27, 351–362.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.

Beckford, G. (2001). Plantation society. In C. Barrow & R. Reddock (Eds.), *Caribbean sociology: Introductory readings* (pp. 139–150). Kingston: Ian Randle Publishers.

Berry, B. (2004). Organizational culture: A framework and strategies for facilitating employee whistleblowing. *Employee Responsibilities and Rights Journal*, 16, 1–11.

Beu, D. S., Buckley, M. R., & Harvey, M. G. (2003). Ethical decision making: A multidimensional construct. *Business Ethics: A European Review*, 12(1), 88–107.

Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.

Bobek, D., & Hatfield, R. (2003). An investigation of the theory of planned behaviour and the role of moral obligation in tax compliance. *Behavioural Research in Accounting*, 15(1), 13–38.

Buchan, H. F. (2005). Ethical decision-making in the public accounting profession: An extension of Ajzen's theory of planned behaviour. *Journal of Business Ethics*, 61(2), 165–181.

Carpenter, T. D., & Reimers, J. L. (2005). Unethical and fraudulent financial reporting: Applying the theory of planned behavior. *Journal of Business Ethics*, 60(2), 115–129.

Chiu, R. K. (2003). Ethical judgment and whistle-blowing intention: Examining the moderating role of locus of control. *Journal of Business*

Ethics, 43(1/2), 65–74.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cronbach, L. J. (1987).  Statistical tests for moderator variables: Flaws in analyses recently proposed. *Psychological Bulletin*, 102(3), 414–417.

Curtis, M. (2006). Are audit-related ethical decisions dependent upon mood? *Journal of Business Ethics*, 68(2), 191–209.

de Maria, W. (2005). Whistleblower protection: Is Africa ready? *Public Administration and Development*, 25, 217–226.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.

Dodd-Frank Wall Street Reform and Consumer Protection Act. (2010). *Dodd-Frank Wall Street Reform and Consumer Protection Act*, Washington, DC: US Congress. Available at <http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf>.

Dworkin, T. M., & Baucus, M. S. (1998). Internal vs external whistleblowers: A comparison of whistleblowing processes. *Journal of Business Ethics*, 17, 1281–1298.

Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology*, 86(1), 42–51.

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, 82(5), 812–820.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and

innovation. *Journal of Applied Psychology*, 75(1), 51–59.

Eisenberger, R., Hungtinton, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507.

Fang, M. (2006). Examining ethical intentions of individual-employees of Taiwanese from the theory of planned behaviour. *The Business Review*, 6(1), 257–263.

Ferris, G. R., Dulebohn, J. H., Frink, D. D., George-Falvy, J., Mitchell, T. R., & Matthews, L. M. (1997). Job and organizational characteristics, accountability and employee influence. *Journal of Managerial Issues*, 9(2), 162–175.

Finn, D. W., & Lampe, J. (1992). A study of whistle-blowing among auditors. *Professional Ethics*, 1(3/4), 137–168.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley Publishing Company.

Flannery, B., & May, D. (2000). Environmental ethical decision-making in the US metal-finishing industry. *Academy of Management Journal*, 43(4), 642–662.

Gendron, Y., Suddaby, R., & Lam, H. (2006). An examination of the ethical commitment of professional accountants to auditor independence. *Journal of Business Ethics*, 64(2), 169–193.

Gibson, A. M., & Frakes, A. H. (1997). Truth or consequences: A study of critical issues and decision-making in accounting. *Journal of Business Ethics*, 16(2), 161–171.

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25(2), 161–178.

Graham, J. W. (1986). Principled organizational dissent: A theoretical essay. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 8, pp. 1–52). Greenwich, CT: JAI Press.

Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research*, 26(3), 499–510.

Hair, J. F, Jr, Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Hall, M., Smith, D., & Langfield-Smith, K. (2005). Accountants' commitment to their profession: Multiple dimensions of professional commitment and opportunities for future research. *Behavioral Research in Accounting*, 17(1), 89–109.

Harman, H. H. (1976). *Modern factor analysis* (3rd ed.). Chicago: University of Chicago Press.

ISA 240 (2010). *International Standard on Auditing (UK and Ireland) 240. The auditor's responsibilities relating to fraud in an audit of financial statements*. London: Financial Reporting Council.

Jose, P. E. (2008). *ModGraph-I: A programme to compute cell means for the graphical display of moderational analyses: The internet version (version 2.0)*. Wellington, New Zealand: Victoria University of Wellington. Available at: <http://www.victoria.ac.nz/psyc/staff/paul-jose-files/modgraph/modgraph.php>.

Kaplan, S. E. (1995). An examination of auditors' reporting intentions upon discovery of procedures prematurely signed off. *Auditing: A Journal of Practice & Theory*, 14(2), 90–104.

Kaplan, S. E., & Whitecotton, S. M. (2001). An examination of the auditors' reporting intentions when another auditor is offered client employment. *Auditing: A Journal of Practice & Theory*, 20(1), 45–63.

Kaptein, M. (1998). *Ethics management: Auditing and developing the ethical content of organizations*. Dordrecht: Springer.

Kaptein, M. (2011). From inaction to external whistle-blowing: The influence of ethical culture of organisations on employee responses to observed wrongdoing. *Journal of Business Ethics*, 98, 513–530.

Levinson, H. (1965). Reciprocation: The relationship between man and organization. *Administrative Science Quarterly*, 9, 370–390.

Mesmer-Magnus, J., & Viswesvaran, C. (2005). Whistle-blowing in organizations: An examination of correlates of whistle-blowing intentions, actions and retaliation. *Journal of Business Ethics*, 62(3), 277–297.

Miceli, M. P., & Near, J. P. (2002). What makes whistle-blowers effective? Three field studies. *Human Relations*, 55(4), 455–479.

Miceli, M. P., Near, J. P., & Dworkin, T. M. (2008). *Whistle-blowing in organizations*. New York: Taylor & Francis.

Miceli, M. P., Near, J. P., & Dworkin, T. M. (2009). A word to the wise: How managers and policy-makers can encourage employees to report wrongdoing. *Journal of Business Ethics*, 86(3), 379–396.

Near, J. P., & Miceli, M. P. (1985). Organizational dissidence: The case of whistle-blowing. *Journal of Business Ethics*, 4(1), 1–16.

Park, H., & Blenkinsopp, J. (2009). Whistle-blowing as planned behavior—A survey of South Korean police officers. *Journal of Business Ethics*, 85(4), 545–556.

Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology*, 46(3), 598–609.

Paulhus, D. L. (1989). The balanced inventory of desirable responding (BIDR-6). Preliminary unpublished scale. Vancouver, BC: University of

British Colombia.

Podsakoff, P. M., Mackenzie, S. B., Russell, S. S., & Mohr, D. C. (2003). Common method biases in behavioural research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.

Ponemon, L. (1992). Auditor underreporting of time and moral reasoning: An experimental lab study. *Contemporary Accounting Research*, 9, 171–189.

Rau, S. E., & Weber, J. (2004). The impact of the Enron mega-event on auditors' moral reasoning. *The Journal of Accounting & Finance Research*, 12(6), 106–119.

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87(4), 698–714.

Sarbanes, P. and Oxley, M. (SOX) (2002). Sarbanes-Oxley Act of 2002. Washington, D.C.: US Congress.

Schultz, J. J, Jr, Johnson, D. A., Morris, D., & Dyrnes, S. (1993). An investigation of the reporting of questionable acts in an international setting. *Journal of Accounting Research*, 31, 75–103.

Shafer, W. E. (2008). Ethical climate in Chinese CPA firms. *Accounting, Organizations and Society*, 33(7), 825–835.

Silver, L. S., & Valentine, S. R. (2000). College students' perceptions of moral intensity in sales situations. *Journal of Education for Business*, 75(6), 309–314.

Sims, R. L., & Keenan, J. P. (1999). A cross-cultural comparison of managers' whistleblowing tendencies. *International Journal of Values-Based Management*, 12(2), 137–151.

Stoddart, B. (1995). Cricket, social formation and cultural continuity in

Barbados: A preliminary ethnohistory. In H. Beckles & B. Stoddart (Eds.), *Liberation cricket: West Indies cricket culture* (pp. 61–85). Manchester: Manchester University Press.

Sweeney, B., Arnold, D., & Pierce, B. (2010). The impact of perceived ethical culture of the firm and demographic variables on auditors' ethical evaluations and intention to act decisions. *Journal of Business Ethics*, 93(40), 531–551.

Sweeney, B., Pierce, B., & Arnold, D. F. (2013). The impact of perceived ethical intensity on audit-quality-threatening behaviours. *Accounting and Business Research*, 43, 112–137.

Sweeney, J. T., & Roberts, R. W. (1997). Cognitive moral development and auditor independence. *Accounting, Organizations and Society*, 22(3), 337–352.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Allyn and Bacon.

Taylor, E. Z., & Curtis, M. B. (2010). An examination of the layers of workplace influences in ethical judgments: Whistle-blowing likelihood and perseverance in public accounting. *Journal of Business Ethics*, 93(1), 21–37.

Taylor, E. Z., Curtis, M. B., & Chui, L. (2012). Staff auditors' observations of questionable peer behaviour: The view from the other side. *The CPA Journal*, 82(6), 66–71.

Turrisi, R., & Jaccard, J. (1992). Cognitive and attitudinal factors in the analysis of alternatives to drunk driving. *Journal of Studies on Alcohol*, 53(5), 405–414.

Vandekerckhove, W., & Commers, M. R. (2004). Whistle blowing and rational loyalty. *Journal of Business Ethics*, 53(1–2), 225–233.

<sup>1</sup> Although Bandura (1977) uses the term self-efficacy (SE), conceptually there is not much

difference, as both refers to people's beliefs that they are capable of performing a given behaviour. However, operationally, they are assessed differently, as PBC is based on how much the behaviour is under the person's control, while SE is based on the likelihood that the person is able to overcome obstacles in order to perform the behaviour.

<sup>2</sup> There has been a stream of ethics literature which has also used organisational factors such as perceived ethical culture as antecedents to behavioural intention (e.g. Sweeney et al. 2010, 2013). We believe that POS as a potential moderator can serve to influence individual factors highlighted in the literature. There has been only one study using POS in ethics research (Adebayo 2005), and our study is the first to utilise POS in the whistle-blowing context and among external auditors.

<sup>3</sup> We focus more on reporting misconduct committed by individuals at higher levels in the organisational hierarchy (e.g. audit manager or partner), rather than lower level staff such as junior staff. Prior research has shown that it is more difficult to report on higher level staff than peers on one's level, given the high perceived personal cost of reporting (Miceli et al. 2008).

<sup>4</sup> As of 31st March 2012, there were 194 out of ICAB's total membership of 689 qualified accountants holding practicing certificates to audit.

<sup>5</sup> The minimum sample size requirements may be calculated by the formula  $50 + 8m$ , where  $m$  is the number of predictors (e.g. in this study, there are 10 predictors), thus yielding a sample size of 130. The formula  $104 + m$  should be used to test individual predictors, where  $m$  is the number of predictors, resulting in a sample size of 114.

<sup>6</sup> Audit firms operating in Barbados include the major international accounting firms of Ernst and Young, KPMG, PricewaterhouseCoopers and Deloitte and Touche. In addition, there are several smaller firms of varying sizes (e.g. Pannell Kerr Forster and Porter Hetu International), as well as many sole practitioners.

<sup>7</sup> It is possible that the sheer size of the research instrument may have lowered the actual response rate in the end.

<sup>8</sup> A copy of the questionnaire is available from the authors.

<sup>9</sup> This study was part of a larger research project. The project included two other scenarios (adapted from prior studies) related to an external auditor's tendency to report unethical behaviour involving several audit issues of varying intensity. Scenario 2 dealt with the staff's discovery of the audit partner's agreement to the client's unacceptable allowance of doubtful accounts (Sims and Keenan 1999). Scenario 3 involved the audit senior having knowledge that the audit manager was considering employment with the client (Kaplan and Whitecotton 2001; Curtis 2006). Preliminary testing showed that there was no significant variability in the responses to the three scenarios. Given that any scenario could have been chosen, it was felt that the facts in the scenario in this study closely mirrored the Enron case.

<sup>10</sup> Since the study had several single-item constructs (i.e. personal responsibility for reporting and personal costs of reporting), structural equation modelling (SEM) was not used. Hair et al. (2009) argued that “single-item measures can create identification problems in SEM; thus, we suggest their use be limited. Given the nature of SEM, latent constructs represented by multiple items are the preferred approach” (p. 717).

<sup>11</sup> Tabachnick and Fidell (2007) noted that statistical problems created by multicollinearity occur when correlations are  $\geq 0.90$ . In addition, variance inflation factors (VIFs) in excess of 10 indicate potential multicollinearity.

<sup>12</sup> Each of the hypotheses for the main effects (H1 to H5) will be fully supported only if there is a significant relationship between the individual independent variable and both types of whistle-blowing.

<sup>13</sup> Table 7 shows the general results for the main effects and interactions from the moderation regression analyses. However, for significant interactions, simple slope analysis statistics are reported in this section.

<sup>14</sup> Beckford (2001) argued that “modern Caribbean society displays structural forms that are a direct legacy of the slave plantation system” (p.139). A plantation society is a political order, dominated by plantation owners. In other words, a plantation society is one in which the power is in the hands of the planter class (owners), who are directly responsible for making top down decisions.