

Accountants' whistle-blowing intentions: The impact of retaliation, age, and gender

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Abstract

Accounting practices and the role of auditors have been widely implicated in many corporate scandals. The accountants are likely to witness serious wrongdoings at their workplace, thus presenting them with a difficult choice of whether or not to whistle-blow. This study reports results of whistle-blowing intentions of the members of Certified Practising Accountants of Australia (CPA, Australia). The study provides data on a well-known obstacle (threat of retaliation) and demographic factors on accountants' propensity to blow the whistle (PBW). An online survey was used to collect data. The data was analysed using a 2x3x2 (retaliation, age and gender, respectively) between-subject design. The results show a complex interaction effect of retaliation, participants' age and gender on their PBW. Among the early career accountants, male accountants are more likely than female accountants to blow the whistle. Accountants in the mid-age group are not only likely to whistle-blow when there is retaliation but tend to be more willing to do so when that retaliation involves a direct personal loss than a loss to their associates. Accountants in the age group of 45 years or above, respond to retaliation differently depending on their gender. Specifically, female accountants' PBW in this age group tend to decline as the retaliation threat increases from weak to strong yet the change in retaliation threat has little impact on male accountants' PBW. These results and their implications are discussed.

Key words: Australian CPAs; demographic factors; retaliation; whistle-blowing;

I. Introduction

There is a growing interest in whistle-blowing and whistle-blower protection in Australia and New Zealand (Lewis, 2003)¹. For example, the Australian Stock Exchange Governance Council and Standards Australia encourage public interest disclosure (Lewis, 2003). There is also an association for whistleblowers in Australia. The association aims to expose wrongdoing without the fear of potential retaliation for doing so and states that:

“The goal of Whistleblowers Australia (WBA) is to help promote a society in which it is possible to speak out without reprisal about corruption, dangers to the public and environment, and other vital social issues, and to help those who speak out in this way to help themselves” (Whistleblowers Australia Inc., 2009).

Whistle-blowing involves the act of “informing on illegal and unethical practices in the work place” (Vinten, 1994, p. 3). Whilst employees are likely to be the first to witness cases of illegal and unethical practices, they will have to choose between speaking out (and facing retaliation) and remaining silent.

Whistle-blower protection legislation and establishing internal reporting channels are important ways to encourage them to do the right thing. As the fight against corruption has been internationalized (Transparency International, 2009), whistle-blowing and legislation to protect whistle-blowers have received an international focus (Applebaum, et al., 2006; De Maria, 2006; Miclei, et al., 2009).

Australian legislation focuses mainly on whistle-blowing by the public sector employees (Arnold, 2006). There are several state legislations to protect whistle-blowers in the public sector (Arnold, 2006), namely, Whistleblowers Protection Act 1993 in South Australia;

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Whistleblowers Protection Act 2001 in Victoria; Whistleblower Protection Act 1994 (Qld) in Queensland; Public Interest Disclosure Act 1994 in the ACT; Protected Disclosures Act 1994 in NSW; Official Corruption Commission Act 1988 in Western Australia.

New Zealand, which introduced legislation to protect whistle-blowers – Protected Disclosures Act 2000 (PDA 2000), undertook a review of its operation in 2003 (Scholtens, 2003) and amendments were introduced to improve the legislation in 2007 (Protected Disclosures Amendment Bill, 2007, No. 133-1). The accounting profession of New Zealand considers whistle-blowing an important means of fraud detection (ICANZ, 2003, p. 56, presently NZICA). One major concern is that current whistle-blower protection legislation focuses mainly on whistle-blowing in the public sector leaving the private sector employees outside their purview. For example, current whistle-blower protection legislation does not extend to private sector employees (e.g., Protected Disclosure Act, 2000 in New Zealand). Whilst Standards Australia's standard (AS 8004-2003) on *Whistleblowing Protection Programs For Entities* during 2003 provides encouragement to would-be whistle-blowers in both public and private sector, the standard is not mandatory and is unlikely to provide effective legal protection (Arnold, 2006).

The strong interest evident in relying on internal informers as an important mechanism to expose people engaged in serious wrongdoing may be due to several reasons. First, employees have an intimate knowledge of their organization and are likely to be the first to witness serious wrongdoing (Winfield, 1994). According to Slovin (2006), fraud is mainly detected via tips received from informers and internal audit becomes the second most common method of fraud detection. Secondly, an understanding of internal organizational

processes and technical activities is necessary to recognize serious wrongdoing, and employees possess this understanding. For example, Colin Jewell, who blew the whistle to warn about potential dangers of design faults in oil platforms, was an engineer with 20-years of experience in the oil industry (Winfield, 1994). Thirdly, serious wrongdoing may have a significant impact on employee welfare thus giving employees a powerful motive to blow the whistle. An increasing awareness of the possibility of whistle-blowing by employees may also deter potential perpetrators of serious wrongdoing. Finally, as the battle against corruption is internationalised and now also extends to the private sector, whistle-blowing can play an important part in promoting an understanding of how “collective action and collaboration need to be better recognised as essential principles in addressing corruption challenges in business” (Transparency International, 2009, p. xxx).

Accounting practices and the role of auditors have been widely implicated in many corporate scandals (Emerson, et al., 2007, p. 73; Clarke and Dean, 2007; Sikka, 2009) suggesting that accountants are likely to witness serious wrongdoings at their workplace. Specifically, Sikka (2009) questions the silence of the auditors in the recent collapses of many financial institutions, most of which had received unqualified audit reports. One of the worst accounting fraud cases in US history, i.e., WorldCom, has raised questions about what is normally taken as a positive attribute of employee behaviour, for example, being a team player. As Scharff (2005, p. 109) points out:

“Within WorldCom, there was a great deal of focus on teamwork and being team players. In hindsight, however, were many of the senior level managers being team players or was it a well-orchestrated scheme to perpetrate a fraud for the personal gain by a handful of executives?”

This highlights both the necessity of whistle-blowers to expose corporate wrongdoing and the difficulty associated with taking such actions. Yet in Australasia there is little research on whistle-blowing behaviour in an accounting context (e.g., Liyanarachchi and Newdick, 2009). Learning more about factors associated with whistle-blowing in an accounting context is vital to understand the complexity of whistle-blowing as a phenomenon, to re-think its reliability, and in turn, empower it as a mechanism for uncovering serious wrongdoing. More importantly, an understanding of whistle-blowing is vital if policy-makers are to provide effective protection for those accountants who may decide to act in the interest of the public and blow the whistle when they witness serious wrongdoing in their organisations. Accordingly, this study focused on whistle-blowing intentions of the members of Certified Practising Accountants of Australia (CPA Australia, hereafter CPA). Specifically it examined the way demographic factors can influence the association between retaliation strength and accountants' propensity to blow the whistle (hereafter, PBW). Although many accounting practitioners are likely to face situations that warrant whistle-blowing sometime during their careers, only a few may speak out. One explanation for this reluctance to blow the whistle is that such actions involve significant social and financial disadvantages to whistle-blowers. Accountants in various stages of their careers may respond to these disadvantages differently. For example, an accountant with a high-level of experience may find it easier to face the prospect of losing his/her job than a junior accountant who has yet to establish a good track-record as an accountant, *inter alia*, to secure future employment prospects. Thus highly experienced accountants may be more willing to speak out loud of wrongdoings they witness in their workplace than their junior counterparts. Similarly, male and female accountants are likely to respond to retaliation

threats differently. Indeed, studies show that older versus younger people and male versus female accountants respond to potential disadvantages associated with whistle-blowing differently (Conroy, et al., 2009; Kaplan, et al., 2009; Gilligan, 1982; Mayper, et al., 2005; Mesmer-Magnus and Viswesvaran, 2005; Keenan 1995; Sims and Keenan, 1998). Therefore, in addition to the threat of retaliation, a potential whistle-blower's age and gender are important to understand accountants' whistle-blowing behaviour.

This study aims to make several contributions. First, it extends the accounting literature on whistle-blowing (e.g., Conroy, et al., 2009; Emerson, et al., 2007; Kaplan and Schultz, 2007; Kaplan, et al., 2009; Liyanarachchi and Newdick, 2009) by examining the way accountants' age and gender moderate the relationship between retaliation strength and PBW. The results would be helpful for organisations and regulators to better understand the type of employees who are likely to speak out when they witness a serious wrongdoing and what needs to be done to promote whistle-blowing widely among all employees. Secondly, the study extends the international research into whistle-blowing (see Applebaum, et al., 2006; Miclei, et al., 2009) by providing data from Australasia. As little data is available in Australasia on whistle-blowing in an accounting context, this study provides initial data on a well-known obstacle (threat of retaliation) and demographic factors on accountants' whistle-blowing intentions. Data relating to the impact of age and gender and complex interaction effects of age, gender, and retaliation threat on whistle-blowing will be helpful in appreciating the difficulty of relying on any and all accountants to whistle-blow. Thirdly, data on whistle-blowing is beneficial to the accounting profession, which relies heavily on self-regulation of its affairs and making strong claims about its intention to serve the interests of the public. It

has been suggested that whistle-blowing is an important part of self-regulation (Winfield, 1994). According to Winfield (1994, p. 23): “Our best hope of regulating what goes on inside private and public sector enterprises is through the vigilance of individual employees”. A recent report by the Association of Chartered Certified Accountants (ACCA) asserts that: “In future, regulation will become less process driven, more risk based, further devolved, more consultative, and much more flexible, but focused” (ACCA, 2009, p. 8). Perhaps, in such a flexible setting there is a strong need for self-regulation and for employees to inform corporate wrongdoing through internal and/or external reporting channels.

The remainder of the paper is organized as follows. A review of the literature is presented and hypotheses are developed in the next section. The research method, task, sample selection and descriptive results of participants are provided in the third section. The results are presented and discussed in section four, and finally, conclusions, limitations and directions for future research are provided in section five.

II. Literature

Retaliation and whistle-blowing

Research suggests that potential retaliation against whistle-blowing is important in explaining one's decision to engage in whistle-blowing. There are many forms of retaliation which vary from one another in terms of their severity or strength. Potential whistle-blowers may evaluate not only the possible retaliation but also the strength of such measures when deciding to blow the whistle. Some examples of retaliatory measures are: downgrading, giving work without responsibility, giving more work and work that requires new skills or qualifications (Bok, 1980, p. 278); coercion or termination of employment (Parmerlee, et al., 1982; Mesmer-Magnus and Viswesvaran, 2005). Studies on the effects of retaliation on whistle-blowing show mixed results (Miceli and Near, 1988; 1989; Near and Jensen, 1983; Near, et al., 1995; Near, et al., 2004). Therefore, although an individual's decision to blow the whistle is likely to be affected by retaliation against such an act, this impact may be complex making it difficult to predict. For example, Keenan (1995) shows that managers' fear of retaliation has a strong influence on feeling obliged to blow the whistle. Despite the mixed nature of empirical results, the general pattern is that the harsher the retaliation, the less likely an individual is to blow the whistle. Accordingly, the strength of potential retaliation is likely to influence an individual's decision to blow the whistle.

Age, gender, and whistle-blowing

Previous studies show mixed results for the association between people's age and gender and their whistle-blowing intentions. Some studies show that age is a strong predictor of ethical attitudes and ethical behaviour where older employees making stricter ethical judgements

than their younger counterparts (Serwinek, 1992; Conroy, et al., 2009). With respect to the whistle-blowing behaviour, Soeken and Soeken (1987, cited in Winfield, 1994) show that most whistle-blowers are around 40 years of age. Similarly, Glazer and Glazer (1986, cited in Winfield, 1994) show that whistle-blowers have long histories of successful employment and they are trusted leaders of their organizations. As track records of successful employment and gaining positions to be trusted by others are very much time related features, older employees rather than their younger counterparts are more likely to fall into such categories. In contrast, Sims and Keenan (1998) failed to find age to be a significant predictor of external whistle-blowing.

Additionally, research generally shows that females have a greater awareness of ethical situations than males (Gilligan, 1982; Mayper, et al., 2005; Mesmer-Magnus and Viswesvaran, 2005) and females tend to make stricter ethical judgements than males (Hoffman, 1998; Ritter, 2006). However, some studies have failed to find a significant gender effect on ethical behaviour (West, et al., 2004; Coate and Frey, 2000).

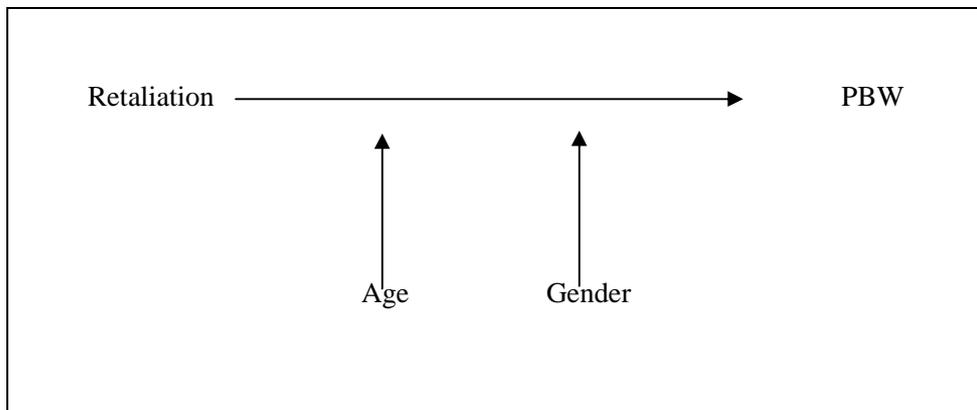
Studies examining whistle-blowing behaviour have shown similarly mixed results for gender. Soeken and Soeken (1987) who analysed 87 whistle-blowing cases in the US, found that whistle-blowers were often males (cited in Winfield, 1994). Studies into the participants' intention to whistle-blow provided empirical results which showed that males were more willing than females to whistle-blow (Keenan, 1995; Miceli, et al., 1991; Miceli and Near, 1988). Sims and Keenan (1998) showed that females were less likely than males to choose an external whistle-blowing option. Similarly, Kaplan et al. (2009) found that

females were more likely than males to report a fraudulent act when they had the opportunity to report through an anonymous reporting channel.

These mixed findings have lead Hoffman (1998) to contend that ethical behaviour (e.g., whistle-blowing) is situation specific. In particular, Hoffman believes that age and gender have a complex effect on whistle-blowing intentions. As one example, the threat of retaliation, an element present in most whistle-blowing situations, is likely to have an interactive effect with age and gender.

The results of Sims and Keenan (1998) and Kaplan, et al., (2009) suggest that females dislike and seek to avoid the public exposure resulting from whistle-blowing. Females tend to assess the risk of whistle-blowing through a non-anonymous channel as higher than males (Kaplan, et al., 2009). Given the risk of potential retaliation against the whistle blowers, Near and Miceli (1985) suggested that males were more likely than females to blow the whistle. If males and females or younger versus older employees perceive and respond to retaliation differently, then demographic factors are likely to moderate the retaliation and PBW relationships. These conceptual relationships are diagrammatically depicted in Figure 1.

Figure 1: Key variables and their conceptual relationships



Based on the conceptual relationships depicted in Figure 1, and the literature discussed previously, the following research hypotheses are stated:

H₁: There is a significant negative association between retaliation strength and an accountant's PBW.

H₂: An accountant's age does significantly influence the relationship between retaliation strength and an accountant's PBW, in that as the retaliation threat increases from weak to strong an older accountant will be more willing to whistle-blow than a younger accountant.

H₃: An accountant's gender does significantly influence the relationship between retaliation strength and an accountant's PBW, in that as the retaliation threat increases from weak to strong a male accountant will be more willing to whistle-blow than a female accountant.

III. Method and experimental task

A quasi-experiment was administered using the online world-wide-web facilities available at one of the researchers' universities. The experimental task consisted of a research instrument developed by Arnold and Ponemon (1991) to measure participants' PBW. Additional questions were included in the research instrument to collect data about participants' awareness of legal protection available for whistle-blowers, the availability of internal reporting systems in their organisations, participants' gender and age (Appendix A shows a copy of the survey instrument).

Measurement of variables

The participants' PBW was the dependent variable. Three whistle-blowing scenarios were used, and each participant was asked to indicate the likelihood that the individual in each of the scenarios would blow the whistle. Three scenarios allowed for sufficient variability in the dependent variable, thus allowing for a more consistent and reliable observations on participants' PBW. The whistle-blowing scenarios were presented in a third-person context. This approach is adopted in studies in this area of research (Ponemon and Gabhart, 1990; Arnold and Ponemon, 1991) and is recommended by Rest (1986) when using hypothetical ethical scenarios.

For each hypothetical case, participants were asked to assess the likelihood of the individual described in the scenario blowing the whistle. Participants indicated the PBW on a seven point Likert-type scale for each scenario. The Cronbach's alpha statistic for the three whistle-blowing scenarios is 0.817, thus the reliability of the PBW measure could be considered adequate. Therefore, a composite score for PBW was calculated by adding the

responses of the three scenarios and this score was used in the data analysis. Accordingly, the theoretical range for participants' PBW responses was 1 to 21.

Retaliation was a manipulated variable. Retaliation was classified into either strong (penalty) or weak (affiliation) retaliation (Arnold and Poneman, 1991; Greenberger, et al., 1987). Penalty or strong retaliation refers to disciplinary consequences in the form of threats to person or property, lawsuits, job termination, or imprisonments and thus, is a stronger form of retaliation. Affiliation refers to the form of relationships a whistle-blower has with others inside or outside the organization, and other individuals are subject to retaliation rather than the whistle-blower. Thus affiliation is a weaker form of retaliation when compared to the penalty-type retaliation for the whistle-blower (Arnold and Poneman, 1991). Recent research shows that these two types of retaliation lead to different whistle-blowing responses (Liyanarachchi and Newdick, 2009). Two versions of the experimental task were created, one involving the strong retaliation (penalty) and the other involving the weak retaliation (affiliation) condition. A single version was randomly assigned to randomly-drawn samples of male and female accountants. Accountants' gender and age were obtained from participants' responses to demographic questions in the survey, hence these were measured variables.

Sample and responses

Two samples of male and female accountants, 1000 from each gender group, were randomly selected from the members' list of the Certified Practising Accountants (CPA) of Australia. A very large sample size was used due to a very low level of responses experienced by the

CPA office in past surveys. The over-sampling is often necessary to achieve a reasonable number of responses (Fink, 1995, p. 54). Participants were randomly assigned into one of the two retaliation conditions (weak or strong retaliation). A letter of invitation including the appropriate web-link to the survey was emailed to all participants through the CPA office. A reminder of the survey was sent to all participants after two weeks of sending the initial invitation. The initial invitations to participate in the survey were emailed in early February 2009 and the survey was closed on 30 April 2009.

A total of 98 responses were received. Although the response rate is low (5% response rate) this is in line with the past experience of CPA Australia in conducting surveys using its membership database. Perhaps a low response rate is indicating the difficulty of obtaining responses for highly sensitive issues concerning both would-be whistle-blowers and their organizations (Winfield, 1990; 1994). Given the low response rate experienced in this study, two measures were used to examine the presence of a non-response bias. First, a comparison of early versus late responses was carried out to examine any non-response bias (Armstrong and Overton, 1977). The date of reminder email was used to obtain early versus late cut-off point. As suggested by the Mann-Whitney U test results, this comparison did not show a significant difference in participants' PBW responses. Second, following the approach used in a recent study (McManus and Subramanian, 2009) the first and last 25% of responses were compared as a way to better identify early and late responses. Again, the Mann-Whitney test results showed no statistically significant difference between early and late responses. Although there is a large portion of the sample who did not respond to the survey, the results of early versus late comparisons indicate that non-respondents' PBW responses

are unlikely to be significantly different from those of the respondents (Armstrong and Overton, 1977).

Forty eight and 50 responses were received from the participants who responded under the weak and strong retaliation conditions respectively. Fifty responses were from male accountants (51%) and 39 from female accountants (40%), while 9 participants (9%) did not want to be identified by gender. Although CPA members are located in many countries, most responses received were from Australian CPA members (71% of total responses). Twenty four responses were received from CPA members in other countries such as New Zealand (1), Malaysia (6), Singapore (10), Hong Kong (3), China (1), UK (2), and Japan (1). Of the 24 responses from CPA members in other countries, 15 and 9 responses were from male and female respectively. Three participants did not indicate the country. For both male and female respondents, the average age is between 35 to 39 years. The Mann-Whitney test results did not show a significant difference in PBW responses between the CPA members in Australia and those in other countries. Separate comparisons for male only and female were also made and participants' PBW did not show significant country effect. Accordingly, PBW responses of members in Australia and other countries were combined for purposes of the data analysis.

Participants' responses were classified into three age groups; 25 to 34 years (36 respondents), 35 to 44 years (31 respondents), and 45 years or above (22 respondents). The rationale for forming the 3-age groups comes from previous studies that provide profiles of actual whistle-blowers (e.g., Glazer and Glazer, 1986; Soeken and Soeken, 1987; both cited

in Winfield, 1994). These studies show whistle-blowers often are around 40 years old and have about seven years work experience. The formation of the 35 to 44 year age group was necessary to identify participants who are most likely to fall into the profile of a whistle-blower. This approach also allowed the formation of three groups with reasonably similar numbers of respondents (n = 36, n = 31, n = 22 for the three age-groups respectively). The participants' responses to the hypothetical whistle-blowing scenarios were analysed using a three-way between-subjects ANOVA, with two levels of retaliation (weak, strong), three levels of age (25 to 34 years, 35 to 44 years, 45 years or above), and two levels of gender (male, female)².

IV. Results and discussion

Table 1 shows means for participants' PBW by age, gender and the two levels of retaliation. The overall means for participants' age suggest that the older accountants are more likely to whistle blow than the younger accountants (Table 1: 15.46 > 15.20 > 11.74 for the 3-age groups). Also, male accountants tend to look at whistle-blowing slightly more favourably than the female accountants (Table 1: 14.96 > 13.31). The PBW means for weak and strong retaliation groups indicate little impact of retaliation on whistle-blowing decisions (Table 1: 14.25 and 14.02, respectively). The ANOVA results are presented in Table 2. The adjusted R-squared (R^2) is 18%, suggesting that the three independent variables could provide a reasonable explanation (i.e., 18%) for the variation in accountants' PBW.

Table 1: Means for participants' PBW

	Overall Means	Age		
		25 to 34 years (n = 36)	35 to 44 years (n = 31)	45 years or above (n = 22)
		Retaliation	Retaliation	Retaliation

		Weak (n = 18)	Strong (n = 18)	Weak (n = 17)	Strong (n = 14)	Weak (n = 9)	Strong (n = 13)
Gender:							
Male (n = 50)	14.96	13.00	14.00	16.00	16.43	14.50	15.80
Female (n = 39)	13.31	10.83	9.14	11.50	16.86	19.67	11.88
Retaliation:							
Weak retaliation (n = 44)	14.25						
Strong retaliation (n = 45)	14.02						
Age	14.13	11.74		15.20		15.46	

Table 2: Impact of retaliation, age and gender on PBW

Source	df	Mean Sq.	F	Sig.	Eta Sq.
Retaliation	1	1.06	0.06	0.812	0.001
Age	2	126.23	6.74	0.002	0.149
Gender	1	53.04	2.83	0.096	0.035
Retaliation*Age	2	57.80	3.09	0.051	0.074
Retaliation*Gender	1	25.66	1.37	0.245	0.017
Age*Gender	2	26.11	1.40	0.254	0.035
Retaliation*Age*Gender	2	75.95	4.06	0.021	0.095
Intercept	1	15,713.70	839.02	0.000	0.916
Corrected model	11	51.66	2.76	0.005	0.283
Error	77	18.73			
Adjusted R squared = 0.18					

The ANOVA results did not show a significant main effect of retaliation (Table 2: $F < 1.0$). Accordingly, the hypothesis that there is a significant negative association between retaliation and PBW (i.e., H_1) can be rejected. The moderating influence of age on the relationship between retaliation and PBW is marginally supported (Table 2: $F = 3.09$; $P =$

0.05; partial eta squared = 0.07). Therefore, H_2 receives support. H_3 can be rejected, as the results showed no significant effect of participants' gender on the relationship between retaliation and PBW.

These results should be interpreted with caution. This is because the results showed a significant three-way interaction among participants' gender, age and retaliation (Table 2: $F = 4.06$; $p < 0.05$; partial eta squared = 9.5%). Therefore a complex relationship appears to exist among retaliation, age, gender, and PBW. Interpreting main effects (e.g., age or gender) and lower order interaction effects (e.g., retaliation and age or retaliation and gender) therefore is problematic (Meyers, et al., 2006; Tabachnick and Fidell, 2007).

The results were further analysed in two separate ways to help explain the complex interaction effect of retaliation, age, and gender on participants' PBW. First, the association between retaliation and age on PBW for males (Figure 2) and females (Figure 3) were depicted separately. Figure 2 suggests that male accountants' PBW under weak versus strong retaliation did not depend on their age. That is, although accountants in the 25 years to 44 age group tend to be more willing to blow the whistle [when compared with the younger (25 to 34 age group) and older (45 years or above age group) accountants], the effect of retaliation (weak versus strong) for each age group is more or less similar (see Figure 2). However, this is not the case with female accountants (see Figure 3). For female accountants, there is a generally positive association between age and PBW when weak retaliation for whistle-blowing exists (see Figure 3). However, when there is strong retaliation, female accountants who are in the age group of 35 to 44 years tend to be more

willing to blow the whistle than accountants in younger (25 to 34 years) and older age groups (45 years or above).

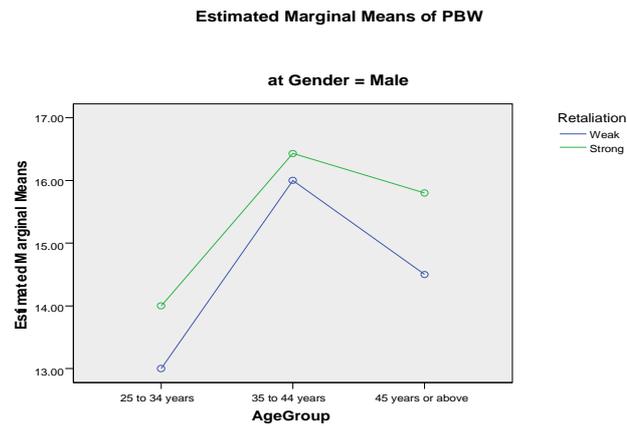


Figure 2

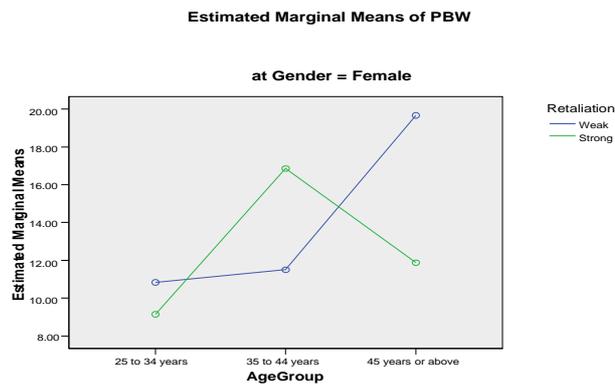


Figure 3

As a second way to analyse the complex three-way interaction effect, the advice of Tabachnick and Fidell (2007, p.185-187) was followed. In particular, further separate analyses of the results were conducted – i.e., by participants' age group and gender. The results of these tests are as follows. The univariate analysis for the age group 25 to 34 years shows that participants' gender is significantly associated with their PBW; male accountants are more likely than female accountants to blow the whistle (mean PBW 13.5 > 9.9; $F = 4.87$; $p < 0.05$; partial eta squared = 13%). A similar analysis for the 35 to 44 years age group shows a significant association between retaliation and participants' PBW. However, contrary to expectations, participants were less likely to blow the whistle when there was weak as opposed to strong retaliation (mean PBW 13.9 < 16.6; $F = 4.26$; $p = 0.049$; partial eta squared = 13.6%). The univariate analysis for the oldest age group in the survey, 45 years and above, shows a significant retaliation and gender interaction effect ($F = 4.93$; $p < 0.05$; partial eta squared = 21.5%) suggesting that retaliation has different impact on male and female accountants in this age group. Figure 4 shows that female accountants' PBW in this age group tends to decline as the retaliation threat increases from weak to strong. The change in retaliation threat however has little impact on male accountants' PBW (Figure 4).

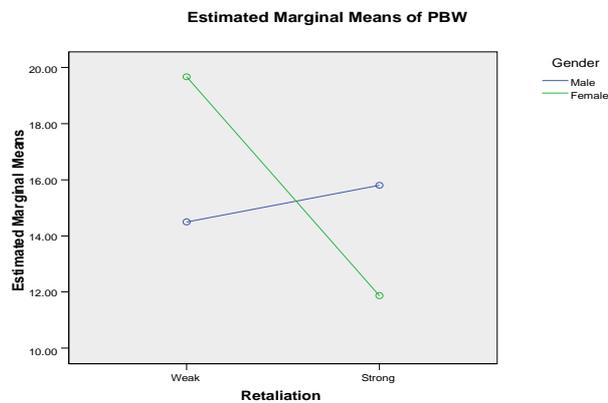


Figure 4

V. Discussion and findings

The results reported in this study suggest that demographic factors such as age and gender are important in understanding the relationship between retaliation and PBW. Male and female accountants in our sample tend to respond to retaliation threat differently depending on their age. Accountants who are at the early stages of their career may approach whistleblowing differently compared to their colleagues who are older and possibly have a well-established career in accounting. A gender effect is present in that male accountants are more willing to whistle-blow when they are at early stages of their career than female accountants. This is consistent with results reported in Sims and Keenan (1998). The results also are in line with those related to choosing a reporting channel by female and male MBA students, where females judged the personal cost of reporting to internal auditors (non-anonymous) as higher than their male counterparts (Kaplan, et al., 2009).

Although there is a significant association between retaliation and PBW in the age 35 to 44 years age group, this is contrary to the expected sign. That is, accountants in this age group are more willing to blow the whistle when retaliation is strong than weak. This result was unexpected. Two plausible reasons are offered. One reason may be that the accountants in the middle-age group are more altruistic; they are more willing to whistle-blow when there is a personal loss than when someone else is incurring a loss. This may possibly also be due to their confidence of continuing with their own career regardless of retaliation. Profiles of actual whistle-blowers (those who ignored retaliation) also fit into this middle-age group, thus adding further support to this line of reasoning. Another likely reason may be that retaliation (e.g., losing one's job) invokes emotions, especially anger. Research in behavioural economics – *the trust game with revenge conducted by a group of Swiss researchers led by Ernst Fehr* – shows that when anger is invoked, people's desire for revenge becomes powerful and they tend to do things even if their actions cost them something (Ariely, 2009, p. 83). Yet it is not clear why this pattern of behaviour is apparent only in the 35 to 44 years age group but not in others. Future research may focus on this issue to better understand whistle-blowing by accountants in this age group, as they best fit the profile of actual whistle-blowers (Glazer and Glazer, 1986; Soeken and Soeken, 1987; both cited in Winfield, 1994).

A joint effect of retaliation and gender in the 45 years and above age group suggests that gender plays an important role in whistle-blowing decisions of accountants with established careers. Male accountants in that age group are more likely than female accountants to whistle-blow when there is a strong threat of retaliation. This result needs to be interpreted

with some caution, as many high-profile whistle-blowers are females – e.g., Sherron Watkins, Enron; Cynthia Cooper, WorldCom; and Coleen Rowley, FBI (McPhail and Walters, 2009). Again, a simple comparison of male and female whistle-blowing behaviour is unlikely to reveal a significant effect for gender. Thus examining joint effects of retaliation, gender, and age may be necessary to unravel whistle-blowing tendencies among older accountants as well.

Many accountants who participated in the study (57%) are unaware of the availability of whistle-blower protection legislation. About 86% of the respondents think that it is important or very important to have legislative protection for whistle-blowers when they are considering whether or not to whistle-blow. Many organisations (60%) do not appear to have an internal reporting process in place for reporting wrongdoing, but 63% of the respondents think it is important or very important to have an internal reporting channel. The non-parametric test results of participants' responses to additional questions included in the survey showed that male accountants are significantly more aware than are female accountants of the legal protection available for whistle-blowers ($p < 0.05$). Those accountants in the 35 and 44 age group also were more aware than others of the presence of whistle-blower protection legislation ($p = 0.063$). The accountants in that age group also placed a higher level of importance on legal protection for whistle-blowers than did those in the 25 and 34 year age group ($p < 0.05$). Perhaps these results could indicate that accountants in the middle-age bracket have given some thought to whistle-blowing, thus providing an explanation for their greater willingness to whistle-blow than their colleagues in other age groups.

Accountants in the early stages of their career are, in contrast, less likely to whistle-blow. This is both a cause of concern and understandable because they are likely to be the most vulnerable should retaliation eventuate for speaking out against either powerful personnel or the organisation itself. Accordingly, more needs to be done to better understand reasons for this reluctance and find ways to empower early career accountants to speak-out if they witness wrong-doing. Although ethics education is being recognised as an essential part of developing accounting professionals, providing real-life whistle blowing examples from more-established accountants may also be necessary to convince early career accountants to do the right thing. In this respect, the results of McNamus and Subramanian (2009) are important, which suggest that early career accountants' evaluations of the seriousness of an unethical act are influenced by their perceptions of the ethical conduct of their peers and senior colleagues. The use of mentoring programmes to expose accountants in the early stages of their career to other accountants' perspectives, for example those in the middle-age group, may be helpful in fostering ethical attitudes and dispositions among junior accountants. Without such interventions there is the possibility of early career accountants subscribing to *groupthink*. Aspects of groupthink have been identified as possible explanations for the fraudulent activities perpetrated at WorldCom over an unusually long period of time (Scharff, 2005; McPhail and Walters, 2009).

Whilst some accountants are aware of the legal protection afforded whistle blowers and consider the importance thereof, others appear to be less so. Strengthening legislation to provide adequate support for would-be whistle blowers and increasing awareness of the

availability of such legislation are important to promote whistle-blowing. Making an internal reporting channel available may be another way to encourage whistle blowing and signal to accountants that wrong-doing is dealt with seriously by their organisation. This may be more useful for accountants who find it difficult to report wrong-doing to external channels due to issues of organisational loyalty and the negative publicity associated with such exposure. The American Institute of Certified Public Accountants (AICPA) has urged all organisations to consider establishing a whistle-blower hotline (Slovin, 2006). Indeed, a survey shows that about 39% of US employees who are aware of serious wrongdoing would report it only if they could remain anonymous (Slovin, 2006). And, as mentioned previously, 63% of our respondents think it is important to have an internal reporting channel to expose wrongdoing. Female accountants who tend to be less likely to whistle-blow under a strong retaliation threat may also find internal reporting channels beneficial.

VI. Concluding comments

In sum the results of the survey are as follows. First, among the early career accountants, male accountants are more likely than female accountants to blow the whistle. Secondly, accountants in the middle-age group are not only likely to whistle-blow when there is retaliation but tend to be more willing to do so when that retaliation involves a direct personal loss than a loss to their associates. Finally, accountants in the age group of 45 years and above, respond to retaliation differently depending on their gender. Specifically, female accountants' PBW in this age group tends to decline as the retaliation threat increases from weak to strong. In contrast, the change in retaliation threat has little impact on male accountants' PBW.

Based on the results of this study several conclusions can be reached. First, accountants' demographic factors such as age and gender are important to understanding whistle-blowing under a threat of retaliation. Therefore whistle-blowing studies may benefit by simultaneously examining the effects of retaliation along with participants' demographic factors. The failure to incorporate retaliation threat into hypothetical whistle-blowing scenarios examined in previous studies (Sims and Keenan, 1998; Kaplan, et al., 2009) may provide one explanation for the mixed results on the effect of participants' gender and age on their whistle-blowing decisions. Secondly, any and all accountants are unlikely to engage in whistle-blowing, and in particular, those accountants who are more likely to blow the whistle than others appear to come from whistle-blower profiles reported in previous studies. This may suggest altruistic behaviour tends to manifest more during a certain stage of one's career/life. A third conclusion is that any attempt to promote a greater awareness of the merit of whistle-blowing and encourage accountants to whistle-blow will likely require the establishment of internal reporting channels as well as legislation to protect whistle blowers.

This study's results come with some limitations. One limitation is the low response rate achieved in the data collection process, although this may be mitigated by the absence of a non-response bias. Another limitation is that, as this study used a survey approach, the participants are not given an opportunity to explain in detail what they think about whistle-blowing and their views about potential retaliation against whistle-blowers. A third limitation is the fact that the results show the likelihood of whistle-blowing as opposed to

actually blowing the whistle. Although intention to whistle blow is necessary to actually whistle blow, willingness alone may not guarantee whistle-blowing.

Notwithstanding these limitations, the results reported in this study are important to organizations and policy makers who want to benefit from employees' greater knowledge about what is going on within organisations and thus want to promote whistle-blowing by employees. The accountants' willingness to whistle-blow cannot be taken for granted, as the study's results show that only some accountants are willing to speak out about organisational wrong-doing. For a variety of reasons, accountants who are between 35 and 44 years of age are likely to be the ones most likely to whistle-blow. This description fits with the profiles of actual whistle-blowers. Accounting firms are likely to benefit by organising their work-teams to include some personnel from that age group. This may also be important when considering the assignment of supervisory roles within accounting firms.

Notes:

1. See De Maria (2006) for a critical examination of whistleblower legislation in four common law countries - Australia, New Zealand, South Africa and the UK.

2. An ANOVA was conducted using age as an independent variable (without dividing into groups). Results showed a significant positive association between age and PBW. The results of a post hoc test (LSD) showed that participants between 25 and 29 years were significantly less likely to whistle-blow than those in other age groups ($p < 0.05$) except those in 30 and 34 years of age. In this last case, although participants between 30 and 34 had a higher PBW than those between 25 and 29 years, the difference was statistically not significant at the 0.05 level ($p = 0.079$). As expected, there was a strong correlation between participants' experience and age ($r = 0.44$; $p < 0.01$). However, the results of an ANOVA did not show a significant positive association between experience and PBW ($F = 1.19$; $p = 0.321$). Therefore, participants' age appears to be more important than the level of experience to understand their willingness to blow the whistle.

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Appendix A: A RESEARCH QUESTIONNAIRE ON WHISTLE-BLOWING (Version used for Strong Retaliation)

Part 1 - Three Scenarios

Important:

In this section, you are given three scenarios. At the end of each scenario you will be asked to state the likelihood of the individual described in the scenario blowing the whistle. Whistle blowing 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 affect action.

Scenario 1 - Fake invoices

Tim is an internal auditor for a firm that carries out contract work for a government department. Tim recently completed an audit of a subsidiary business unit (ABC plant) which is completing contracts involving large values for various agencies. The billings of the subsidiary have been audited previously and no major problems were detected. During the present audit, Tim discovered, within the subsidiary's billing system, a series of bogus (inflated or falsified) invoices to customers that have already been paid. Tim reported this finding to the director of internal audit. The director said that he would report it to the Chief Financial Officer. After a few days, Tim asked the director what became of his findings but the director told him to forget about it, Tim demanded further action.

The director of internal audit tells Tim the next day that if he discloses the findings, he (Tim) will lose his job.

Using the following scale, please indicate the likelihood that you think Tim would blow the whistle (report the wrongdoing). Circle the number.

Very unlikely			Unsure			Very likely
1	2	3	4	5	6	7

Scenario 2 - Mysterious Bank Account

Chris is an internal auditor for a public sector organisation in New Zealand. Each quarter Chris analyses the organisation’s performance to ensure it is meeting its desired goals. Upon analysing the latest reports, Chris finds an unusual and large decrease in the cash-flow statement for the quarter. Chris conducts an investigation and at first it appears that a purchase of equipment in the last quarter is to explain for the decrease in cash. However, Chris thinks he would have remembered a significant purchase like this and conducts a paper trail on the asset purchase. Chris finds out that no such purchase took place and that the paper trail led to a deposit of a significant amount of cash into an unknown bank account. Furthermore, Chris finds multiple one-off payments to this account. Chris brings the matter to the attention of the director of the internal audit, but nothing comes of it. The lack of response leads Chris to believe something unethical is occurring and asks the director to take action.

The director of internal audit tells Chris that if he discloses the information he will be most unlikely to receive a promotion at his current work place or find work in another public organisation, as he will be perceived as untrustworthy.

Using the following scale, please indicate the likelihood that you think Chris would blow the whistle (report the wrongdoing). Circle the number.

Very unlikely			Unsure			Very likely
1	2	3	4	5	6	7

Scenario 3 - Misclassification

Jarred is an internal auditor for the local city council. Jarred's job is to conduct audits on all the services provided by the local council for the community, including the council's most valued and treasured facility, the local pool. Jarred begins analysing and reviewing the accounts for the local community pool. When analysing the accounts he notices that the pool has, for the last 5 years, had a significant increase in sales each year. He finds this strange, as pool prices have remained the same and the number of people visiting the pool each year has not varied significantly. Jarred discovers that the pool has been disclosing higher profits than what was actually earned to avoid the pool being closed down due to poor performance. Jarred reports this to the internal audit director of the local council. Nothing comes of Jarred's findings so he tells the internal audit director at the council that he will report his findings to the Chief Executive of the council.

The director of internal audit informs Jarred that if he does, he will lose his pay bonus for the year along with the use of a car and his apartment, which are owned by the council.

Using the following scale, please indicate the likelihood that you think Jarred would blow the whistle (report the wrongdoing). Circle the number.

Very unlikely			Unsure			Very likely
1	2	3	4	5	6	7

Part 2 – Further questions & demographic data

(i) Some countries have introduced legislation to provide protection for whistle blowers (e.g., Protected Disclosure Act 2000 of New Zealand). Are you aware of any legal protection available for whistle-blowers in the country in which you work? Yes/No

(ii) How important is the presence of legal protection when you consider whether or not to whistle blow?

Very Little	Little	Moderate	High	Very High

(iii) Some organizations have introduced internal reporting systems to encourage whistle-blowing. Does your organisation have such an internal reporting system? Yes/No

(iv) How important is the presence of an internal reporting system in your organisation when you consider whether or not to whistle blow?

Very Little	Little	Moderate	High	Very High

(v) How important is it for you to do your work according to existing rules?

Very Little	Little	Moderate	High	Very High

(vi) How important is it for you to do your work according to existing norms and values?

Very Little	Little	Moderate	High	Very High

(vii) How important is it for you to do your work in a polite way?

Very Little	Little	Moderate	High	Very High

(viii) How important is it for you to do your work in a responsible way?

Very Little	Little	Moderate	High	Very High

(ix) You are: _____Male _____Female

(x) Your age (years):

20 to 24	25 to 29	30 to 34	35 to 39	40 to 44
45 to 49	50 to 54	55 to 59	60 to 64	65 or above

(xi) Currently you are employed in a: _____Big-4 Firm _____Non-Big-4 firm

(xii) Currently you are employed in _____Australia
_____New Zealand
_____Other (please specify)

(xiii) Your experience in accounting or auditing including the current position:

1 to 3 years	4 to 5 years	6 to 7 years	8 to 9 years	10 years or more

End of questionnaire
Thank you for your cooperation