

Factors Affecting Future Accountants and Auditors' Whistleblowing Intentions

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Abstract: Public trust towards accountants has changed due to renowned financial scandals by large companies. Before becoming accountants, they were once accounting students. Accounting students are the future accountants, auditors, and finance professionals, and they hope for a responsible group of professionals. Therefore, applying the Theory of Planned Behaviour, this study examines the factors influencing whistleblowing intention among final year accounting undergraduates. This study focuses on moral reasoning, retaliation, and negative emotions (guilt and shame) as factors for whistleblowing intention. The approach for this study is a cross-sectional study that will gather data utilising a questionnaire survey and a purposive sample design. Three hundred sets of questionnaires were distributed to final year accountancy undergraduate students, and 257 questionnaires managed to be collected, achieving a response rate of 85.66 per cent. The main finding suggests that moral reasoning and guilt have a significant positive relationship with whistleblowing intention. Meanwhile, retaliation and shame have a significant negative relationship with whistleblowing intention. Thus, this study helps fill the research gap in the Malaysian accounting profession and increases the awareness of the intention to whistle-blow among accounting students.

Keywords: Guilt, Moral Reasoning, Retaliation, Shame, Whistleblowing Intention

1. Introduction

Since the collapse of multinational companies such as Enron and WorldCom, whistleblowing has caught global attention. The failure of an accounting and audit firm, Arthur Andersen¹, has tarnished the reputation and image of the accounting profession. These corporate scandals had impacted substantial financial loss to individuals and institutional investors, eroding public confidence in financial markets.

¹ Arthur Andersen, Arthur Andersen LLP, had more than 85,000 people working in 84 countries in the 1990s. Over the course of the last decade, auditors in many regional branches, for major customers paying profitable consultancy costs, like Enron Corp. and WorldCom Inc, were unable to identify, overlook or accept financial wrongdoing. In 2002, the partnership was found guilty of a hindrance of justice for the destruction of documents in connection with the Enron audit. Retrieved from: <https://www.britannica.com/topic/Arthur-Andersen>

Whistleblowing acts were introduced on corporate wrongdoing, an essential measure organisations implement to rectify and prevent further significant damages. Although many companies have implemented whistleblowing mechanisms, not all employees intend to whistleblow illegal acts, especially those conducted by their immediate superiors.

Professional accountants are in an excellent position to discover any wrongdoing in an organisation because of their heavy involvement in their companies' planning and control processes (Chiasson, Johnson, & Byington, 1995; Liyanarachchi & Adler, 2010) and report fraudulent activities (Dammark et al., 2022; Otchere et al., 2022). This research will follow a cross-sectional method, utilising a questionnaire survey and a purposive sample design (Cruz, Shafer, & Strawser, 2000). The public is demanding more accountability from accountants and accounting professionals.

Most of the research on whistleblowing intentions was conducted among government personnel, auditors, and accountants. However, a lack of studies has focused on final year accounting students, as they are the future workforces in the profession. There is a need to research whistleblowers' characteristics, including the potential of whistleblowing. Furthermore, age seems to influence whistleblowing intention but not actual whistleblowing (Oelrich, 2021). Hence, this study aspired to examine the effect of moral reasoning, retaliation, and negative emotions (guilt and shame) on whistleblowing intention among final-year accountancy undergraduates.

The outcomes of this study give university administrators insight into whether ethics courses included in course structures are sufficient to mould students' ethical behaviours and equip them to deal with professional challenges. It will also aid in raising awareness among future professional accountants about the need for whistleblowing when they enter the workforce.

2. Literature review

This section reviews prior studies on factors influencing whistleblowing intention among professional accountants, focusing on moral reasoning, retaliation, and negative emotions (guilt and shame). The underpinning theory used in this study is the Theory of Planned Behaviour (TPB) by Ajzen (1991), which states that intention towards behaviour, subjective norms, and perceived behavioural control come together and shape an individual's intentions and behaviours. The subsections illustrate the research framework for this study that consists of a dependent variable, whistleblowing intention, and the independent variables are (1) moral reasoning, (2) retaliation, and (3) negative emotions (guilt and shame).

This study employs the Theory of Planned Behaviour (TPB) to understand the factors influencing undergraduates' whistleblowing intention. Theory of Planned Behaviour, which was developed by Ajzen (1991), is a theory that links one's beliefs and behaviour. According to Ajzen (2002), intention is determined by three components: attitude toward a behaviour, subjective norm and perceived behavioural control. Therefore, it can be explained that the intention of individuals to whistleblowing is influenced by moral reasoning as a reflection of attitudes, retaliation as a reflection of subjective norms, and negative emotions as a reflection of perceived behavioural control. It can be seen as if individuals have a favourable view of the behaviour, face social pressure, and perform it. They will have an intention to perform a specific behaviour. The intention to perform will eventually lead them to perform actual behaviour. Prior studies have referred to TPB understanding whistleblowing intention (Fatoki, 2013; Chang et al., 2017; Kusnadi et al., 2018).

Hence, this study examines the influences of the four factors (moral reasoning, retaliation, guilt and shame) towards whistleblowing intention among the final year undergraduates.

2.1 Whistleblowing Intention

Whistleblowing intention is defined as disclosing unlawful and unethical acts in an organisation, by organisation members (Elias, 2008). However, there is no universally accepted meaning of the word “whistleblowing.” (Erkmen, Caliskan and Esen, 2014). There are two types of whistleblowing: internal and external disclosure (Miceli and Near, 1992:2012). When fraud is revealed within an organisation, it is referred to as internal disclosure. In contrast, external disclosure occurs when fraud is revealed outside of the organisation, such as exposure by legal regulators. The internal disclosure of fraud is highly preferred as it allows the company to address the wrongdoings to minimise such harmful effects (Barnett, 1992). It also prevents companies from receiving negative consequences such as public embarrassment, legal action against the organisation and reduced sales (Berry, 2004).

In ethical decision-making, whistleblowing is seen as a good outcome behaviour (Spreitzer and Sonenshein, 2004). Whistleblowing acts will yield tremendous benefits to the organisation and society at large, as a sign of showing that the organisation is exercising good corporate governance (Eaton and Akers, 2007). However, whistleblowing may also place an additional burden, especially on the newly recruited graduate accountants (Liyanarachchi and Newdick, 2009). Students are the potential future leaders in private and public sectors whose views on whistleblowing intentions are important (Fatoki, 2013). Thus, this study aims to respond to their intentions to whistleblow as they later join the workforce.

2.2. Moral Reasoning and Whistleblowing Intention

Humans, as social animals, will not choose an activity apart from moral and social standards. According to Kohlberg (1981), moral reasoning is a judgment about value, social and individual based on action. Moral reasoning is the causal producer of all moral judgments. Meanwhile, Velasquez (2012) argued that moral reasoning is a process for assessing human behaviour, organisations, and whether existing policies align with moral standards. Moral reasoning makes individuals act ethically, and whistleblowing is one of ethical behaviour. Individuals with lower levels of moral reasoning behave differently to those who have high moral reasoning when dealing with ethical dilemmas.

Zanaria (2013) showed that moral reasoning affects the auditor's actions to do whistleblowing. Auditors with higher moral reasoning tend to blow the whistle than the auditors with lower moral reasoning (Arnold and Ponemon, 1991; Brabeck, 1984; Ponemon and Gabhart, 1990; Liyanarachchi & Newdick (2009)). Similarly, Gundlach, Douglas and Martinko (2003) showed that moral reasoning and retaliation play a significant role in whistleblowing. Since the individual behaviour patterns are related to moral reasoning, this leads to the first hypothesis.

H1: There is a significant positive relationship between moral reasoning and whistleblowing intention.

2.3 Retaliation and Whistleblowing

There are several definitions of retaliation which researchers defined. According to Kaplan Ateven, Kurt, Janet and Jian (2012), retaliation is a potential cost incurred due to whistleblowing and retaliation experienced by the whistleblower, which gives signals to the next whistleblower whether they will also experience retaliation. It is an unpleasant vengeful action received by the whistleblower (Rehg et al., 2008). According to Wainberg and Perreault (2016), people choose not to report misconduct because they fear potential retaliation against them.

Previous studies have shown inconsistent findings on the relationship between retaliation and whistleblowing. Prior studies showed that retaliation does not affect one's intention to whistleblow (Alshoubaki and Harris, 2022; Ayuningtyas, 2018; Istyanti, 2016; Dhamija, 2017). However, studies found that retaliation strength harms the individual propensity to blow the whistle (Manesh, 2024; Liyanarachchi and Newdick, 2009). According

to Arnold and Ponemon (2001), whistleblowers will analyse the retaliation strength level before deciding whether to whistle-blow. The reason is that retaliation strength will significantly affect the individual propensity to whistle-blow as they feel afraid and threatened when facing a strong retaliation. Individuals facing a weak retaliation are more likely to blow the whistle than individuals facing a strong retaliation. Hence, our second hypothesis.

H2: There is a significant negative relationship between the strength of retaliation with the whistleblowing intention.

2.4 Guilt and Whistleblowing

Guilt relates to a personal moral code. Guilt is described as the mental distress brought on by poor decision-making and conduct (Ferguson and Stegge, 1998). It is a negative assessment of an individual's unethical behaviour and a tendency to change it (Cohen et al., 2011). Guilt motivates people to correct and improve their mistakes by acting more ethically. Guilt is present when the individual does "wrongdoing", and if they know, someone else is doing it. Lickel, Schmader, Curtis, Scarnier and Ames (2005) stated that individuals sometimes feel ashamed and guilty about unethical actions by other individuals because of social relationships. Williamson (2025) found that guilt and shame result from a person's moral injury, influencing the tendency to behave.

Prior studies mentioned that individuals who feel guilty after making a mistake, commit fraud or misbehave have a greater tendency to whistle-blow (Leith and Baumeister, 1998; Larasati, 2015; Kusnadi et al., 2018). Therefore, the higher the guilty feeling a person has, the higher the individual's intention to conduct whistleblowing. It is because whistleblowing is a way to correct mistakes when an individual commits wrongdoings and knows wrongdoing occurs in an organisation. Therefore, people may choose to disclose the wrongdoing. The higher the guilty feeling, the higher the tendency to blow the whistle. Therefore, our third hypothesis.

H3: There is a significant positive relationship between guilt and whistleblowing intention.

2.5 Shame and Whistleblowing

Lewis (2000) stated that shame is described as negative emotions resulting from action taken that causes confusion and inability to speak. Schmader and Lickel (2006) revealed that individuals with a sense of shame tend to avoid action and hide their mistakes. Tangney et al. (2007) defined shame as part of emotions related to decision making to behave ethically. Shame is resentment that arises because the individual commits wrongdoing or unethical behaviour and always blames themselves (Leary, 2007). Han et al. (2014) stated that shame might affect an individual's psychology, ultimately influencing behaviour intentions.

Previous studies have shown inconsistent findings on the relationship between shame and whistleblowing. Tangney et al. (2007) revealed that individuals with feelings of shame would try to cover their mistakes by concealing their unethical actions and will not be likely to fix the mistakes, referred to as whistle-blow in this study. Tagney et al. (2014) claimed that shame is the difficulty of someone's behaviour to behave immorally. One of the previous studies by Larasati (2015) found that shame has a positive relationship with an individual's intention to whistle-blow. Therefore, individuals who feel shame after making a mistake have a lower tendency to blow the whistle because they feel worried about the consequences and retaliation. Our fourth hypothesis is as follows;

H4: There is a significant negative relationship between shame and whistleblowing intention.

3. Research methodology

This study adopts a quantitative research method, using an online questionnaire survey. This method is selected because it can reach more comprehensive respondents and gather a more significant amount of data at a lower cost (Sivo, Saunders, Chang, & Jiang, 2006; Couper, 2000). According to Mathers, Fox, and Hunn (2009), this is cross-sectional research since data is collected just once to create a generalisation for the population at a specific period to describe an individual's behaviour or opinions.

A total of 300 closed-ended questions were sent through Google Form and emailed to UiTM final year accounting students to achieve a sample size of 257 participants. Chan et al. (2017) response rates of 85.33 per cent were used in this study. The questionnaires were distributed to accountancy undergraduates studying in Universiti Teknologi MARA (UiTM) who are currently in their final year. Final-year accounting students were chosen for this study as they're future accountants and auditors, and they are the most likely to encounter corporate frauds in their careers (Kenneth et al., 2011). UiTM was selected because it is one of the most prominent public universities in Malaysia. Two campuses, UiTM Selangor and Ui TM Sarawak, which represent peninsular and eastern Malaysia, have been deliberately chosen for the aim of this research using purposeful sampling.

3.1 Research Instrument

The questionnaire is divided into five major sections. The first section consists of moral reasoning using the measurement from the Defining Issues Test (DIT) developed by Welton et al. (1994). The second section measures retaliation using Istyanti (2016) retaliation instruments. The third section measures " *guilt and shame*" using Cohen et al. (2011) instruments; Guilt and Shame Proneness Scale (GASP). The fourth section applied Istyanti (2016) instruments to measure the whistleblowing intention. The final section is demographic information from the respondents.

Moral reasoning represents an individual's attempt to evaluate the most moral decisions among many options. Defining Issue Exam (DIT), an instrument developed by Welton et al. (1994), is the most suitable for measuring students' perceptions about accounting and the accounting profession (Welton et al., 1994). The instrument consists of 12 questions.

Retaliation is a consequence or coercion upon employees who become whistleblower or potential to become a whistleblower (Mesmer-Magnus and Viswesvaran, 2005). This research utilises Istyanti (2016) instruments, which have modified Liyanarachchi and Newdick instruments to measure retaliation (2009). The instrument consists of thirteen questions.

The desire to participate in whistleblower intention is referred to as the probability (willingness) of doing so. This study adopts the instrument from Istyanti (2016), which developed the measurement instruments by Schultz et al. (1993). The instrument consists of four questions to assess the respondent's perception of the seriousness of the case, the level of responsibility in reporting the case and the impact of the whistle blower's risk. Respondents were asked to assess the tendency to do whistleblowing with a five-point Likert scale for each question (1 = very low, 2 = low, 3 = neutral, 4 = high, 5 = very high). Each case scenario also assesses the level of the intention of the respondents in reporting wrongdoing. Assessment uses a Five-point Likert scale (1 = very unlikely, 2 = unlikely, 3 = neutral, 4 = likely, 5 = very likely).

Guilt is a negative evaluation of individual unethical behaviour and their tendency to fix their mistake (Cohen et al., 2011). Shame is resentment that arises when individuals commit a wrongdoing or unethical behaviour and always blame themselves (Leary, 2007). Measurements for variables guilt and shame used in this study applied the Guilt and Shame Proneness Scale (GASP) adopted from Cohen et al. (2011). Guilt and Shame Proneness Scale (GASP) consists of 16 questions. Guilt and Shame Proneness Scale (GASP) 16 questions measure both the two variables. For all four independent variables, participants are asked to evaluate them on a five Likert scale (1 = very unlikely, 2 = unlikely, 3 = neutral, 4 = likely, 5 = very likely).

The data were analysed using Statistical Package for Social Science (SPSS) using descriptive analysis and multiple linear regression analysis in determining the effect of moral reasoning, retaliation, and negative emotions on the whistleblowing intention of accounting undergraduates.

This study conducted a descriptive analysis to describe the characteristics of the sample. The target 'respondents' demographic profile is analysed using the frequency and percentage test. Moreover, the variables of the study will be interpreted by mean and standard deviation. The mean and standard deviation value of each item in the questionnaire uses the measurement of the 5-point Likert scale (Teh, Othman, Sulaiman and Mohamed-Ibrahim, and Razha-Rashid 2016).

The study then conducted a validity test to determine the degree of validity of a research instrument (Ghozali, 2016) using Pearson Product Moment Correlations. The test can be done by looking at the value of the significance or comparing the value r with r table product moment. Normality test is used to determine whether the Independent Variables (IV) and Dependent Variables (DV) is normally distributed. In this study, it is to examine if the IV = moral reasoning, retaliation and negative emotions (guilt and shame) and DV = whistleblowing intention chosen are normally distributed. The purpose of this test is to identify the correct type of statistical testing to be performed, either parametric or non-parametric. Data are tested using the skewness/kurtosis test, according to Kline (2005).

A reliability test is a tool used to determine the consistency and reliability of data, which is done through a statistical test Cronbach's Alpha for each construct. If the value of the Cronbach's Alpha > 0.60, the constructs are reliable, and thus it is deemed a reliable questionnaire (Hair, 2010). It is vital to ensure that the data is reliable so that results are reliable, fair, and free from bias (Sekaran and Bougie, 2013). Most importantly, the data can provide reliable findings that can answer the objectives of this study.

The correlation test using Pearson Correlation Coefficient measures the strength of the linear relationship between Independent Variables and Dependent Variables (Salleh and Yunus, 2015), determining whether a multicollinearity problem exists. Multicollinearity problems exist when an IV is highly correlated with another IV. According to Hair, Black, Babin and Anderson (2009) suggested avoiding multicollinearity problems, and the correlation value should not exceed 0.9.

Lastly, multiple regression analyses were conducted to determine the effect of moral reasoning, retaliation, and negative emotions on accounting undergraduates' whistleblowing intention by running multiple regression analysis, referring to Ahmad et al. (2011).

4. Findings

Three hundred sets of questionnaire surveys were distributed and self-administered, and 257 sets managed to be collected, achieving a response rate of 85.66 per cent. Out of 257 respondents, 215 of them are females, comprising 83.66%. The remaining 16.34% are males, which represent 42 of them. As for the respondent's age group, the most significant number of respondents, with 120 of them, is 23-24, representing 46.69%. There are 86 of them from the age group of 25 and above, representing 33.46%. There are few respondents from the age group below 20, which are 12 respondents. As for 'respondents' ethnicity, 200 respondents are Malay, representing 77.82% of the total number of respondents. The other 57 respondents are Bumiputera, representing 22.18% of the total number of respondents. Most of the Universiti Teknologi MARA accounting undergraduates are Malay. Respondents enrolled in ethics-related courses were also polled in this study. Two hundred forty-two respondents have taken ethics-related courses throughout their semesters, while 15 of them have not taken ethics-related courses. Hence, the above table clarifies that most of the respondents, 94.16 per cent of them have taken ethics-related courses. The demographic profile of 257 respondents is summarised in Table 1.

Table 1

Demographic Profile

<i>Characteristics</i>	<i>Items</i>	<i>Frequency</i>	<i>(%)</i>
<i>Gender</i>	Male	42	16.34
	Female	215	83.66
<i>Age</i>	Below 20	12	4.67
	20 - 22	39	15.18
	23 - 24	120	46.69
	25 and above	86	33.46
<i>Ethnicity</i>	Malay	200	77.82
	Bumiputera	57	22.18
<i>Taking Ethics related course</i>	Yes	242	94.16
	No	15	5.84

4.1 Reliability Test

Table 2 displays the reliability of the data. The variable with the highest alpha value, 0.820, is Retaliation. The construct was considered highly reliable if the value of Cronbach Alpha was higher than 0.60. Shame scored the lowest alpha value of 0.619 but is still acceptable. A minimum Cronbach's alpha value of 0.6 is satisfactory (Rahimnia and Hassanzadeh, 2013). Overall, all the variables' alpha value exceeds the minimum alpha value of 0.6. Thus, this indicates that the internal consistency reliability of the variables used in this study is considered good.

Table 2

Reliability Test

Constructs	Number of items	Cronbach's alpha value	Explanation
Moral Reasoning	12	0.788	Reliable
Retaliation	13	0.820	Reliable
Guilt	8	0.677	Reliable
Shame	8	0.619	Reliable
Whistleblowing Intention	4	0.764	Reliable

Source: Developed for the research

4.2 Normality Test

Table 3 presents the results of the normality test using skewness and kurtosis values to assess whether the data follows a normal distribution. The acceptable threshold for normality is ± 3.00 for skewness and kurtosis. The highest skewness was observed in S5 (1.906), while the lowest skewness was found in MR5 (-1.698). For kurtosis, the highest value was recorded in MR9 (2.731), and the lowest value in S4 (-1.758). Since all values are within the acceptable range of ± 3.00 , the data meets the normality assumption, and a Multiple Linear Regression (MLR) analysis can be performed.

Table 3

Normality Test

Constructs	Highest Skewness	Highest Kurtosis	Lowest Skewness	Lowest Kurtosis	Normality Assumption
Moral Reasoning	MR9 (-1.61)	MR (2.731)	MR5 (-1.698)	MR5 (2.148)	Normal
Retaliation	R7 (1.607)	R7 (1.545)	R13 (-0.267)	R3 (-0.572)	Normal
Guilt	G4 (-1.636)	G4 (1.989)	G5 (-1.189)	G5 (0.37)	Normal
Shame	S5 (1.906)	S5 (2.195)	S4 (0.357)	S4 (-1.758)	Normal
Whistleblowing Intention	WI3 (-0.735)	WI3 (-0.562)	WI1 (-0.609)	WI1 (-0.894)	Normal

4.3 Pearson Correlation Coefficient

Table 4 illustrates the correlation between the variables using Pearson Correlation Coefficient analysis. Correlation analysis was conducted to determine the strength of the relationship between the independent variables. The variables whistleblowing intention (WI) and moral reasoning (MR) show a positive and high correlation of 0.837, showing a strong correlation between WI and MR. Retaliation (R) shows a negative and high correlation of -0.717 with whistleblowing intention (WI), which indicates those variables are negatively related and have a high correlation. Guilt (G) shows a positive and high correlation of 0.734 with whistleblowing intention. However, shame (S) shows a negative and negligible -0.243 correlation (significant at 0.05) with whistleblowing intention. The significant correlation level is at ± 0.70 to ± 0.90 .

Table 4

Pearson Correlation Coefficient Matrix

Variables	Whistleblowing Intention	Moral Reasoning	Retaliation	Guilt	Shame
Whistleblowing Intention	1				
Moral Reasoning	0.837**	1			
	0				
Retaliation	-0.717**	-0.610**	1		
	0	0			
Guilt	0.734**	0.622**	-0.560**	1	
	0	0	0		
Shame	-0.243**	-0.233**	0.127*	-0.135*	1
	0	0	0.042	0.031	

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

For this study, the strongest correlation exists between MR and WI, while the weakest correlation was found between S and WI with the correlation values of 0.837 and -0.243, respectively. The variables are significantly correlated as the p-value is less than 0.05. Besides, the IVs studied do not involve any multicollinearity problem as the correlation value is less than 0.90.

4.4 Multiple Linear Regression (MLR)

The following three tables show whether the predictors, which are moral reasoning, retaliation, guilt, and shame, as a group, have influenced the whistleblowing intention.

Table 5

Model Summary

Model	R	R-square	Adjusted R-square	Standard error of Estimate
1	0.902	0.813	0.81	1.023

Predictors: MR, R, G, S

Table 5 is the model summary that depicts the strength of the relationship between the model and dependent variable represented by the R-square value of 0.813. The R-square value of 0.813 indicates that the model can explain 81.3% of the determinants influencing whistleblowing intentions among Universiti Teknologi MARA (UiTM) accounting undergraduates. The remaining 18.7% of the influence on whistleblowing intentions are explained by other factors not measured in this study.

Table 6 shows the analysis of variance (ANOVA), which illustrated how well the variables predict the whistleblowing intention. The data sets out the F-value for this research study. The F-value of this study is valued at 273.773 with p-value < .0001 (less than 0.5). This finding is meaningful as it explains that the DV has a significant relationship with at least one of the four IVs. Hence, this has proven that the research model fits this study.

Table 6

Analysis of Variance (ANOVA)

	Sum of Square	Df	Mean Square	F	Sig
Regression	1145.789	4	2866.447	273.773	0.000
Residual	263.666	252	1.046		
Total	1409.455	256			

Dependent Variables: WI

Independent Variables: MR, R, G, S

Table 7

Coefficients

	Unstandardised Coefficients		Standardised Coefficients	t	Sig	Collinearity Statistics	
	B	Std Error				Tolerance	VIF
MR	0.176	0.014	0.499	12.895	0.000	0.496	2.017
R	-0.079	0.011	-0.251	-6.981	0.000	0.575	1.740
G	0.146	0.019	0.275	7.556	0.000	0.561	1.783
S	-0.24	0.012	-0.058	-2.06	0.040	0.945	1.058

Dependent Variables: WI

Regression analysis tests the hypothesis developed by measuring how multiple IVs are related to a single DV. There are a few critical assumptions of regression analysis. Firstly, data is normally distributed. Secondly, linearity exists between all variables. Thirdly, the absence of multicollinearity problem exists between variables. Fourthly, the data have equal variances (i.e., homoscedasticity). This study adopts regression analysis because there are more than two IVs and one DV. R² generated indicates how well the variables studied can explain the changes in the dependent variables.

Table 7 shows the relationship between independent variables, which are moral reasoning (MR), retaliation (R), guilt (G), and shame (S) and dependent variables which is whistleblowing intention (WI). The table shows that the VIF values of all variables are less than 5, which indicates that all the data in the variables have no collinearity. There is no similarity between the variables (O'Brien, 2007). It describes the significance of the relationships between multiple IVs with a single DV. The hypotheses developed are then tested to prove whether they are supported, as shown in Table 4.7. As the general rule applies, when p-value < 0.05, H_x is accepted. The hypothesis is hence supported.

Table 8

Summary of Findings

	Hypothesis	Standardized Coefficients	Sig	Result
H ₁	The level of moral reasoning has a positive effect on the whistleblowing intention.	0.499	< 0.0001	Accept
H ₂	Retaliation strength has a negative effect on the whistleblowing intention.	-0.251	< 0.0001	Accept
H ₃	Guilt has a positive effect on the whistleblowing intention.	0.275	< 0.0001	Accept
H ₄	Shame has a negative effect on the whistleblowing intention.	-0.058	< 0.0001	Accept

5. Discussion

This study aims to examine the effect of moral reasoning, retaliation, and negative emotions (guilt and shame) on whistleblowing intention among Universiti Teknologi MARA (UiTM) final-year accountancy undergraduates. This study has contributed in a way that it has

explored the motivators of WI. It is empirically evident that MR and G positively affect students' whistleblowing intentions. On the other hand, R and S have a negative effect on their whistleblowing intention.

The main finding suggests that moral reasoning (MR) and guilt (G) have a significant positive relationship with whistleblowing intention (WI). This result is in line with the findings found in several past studies such as by Gundlach et al. (2003), Dalimunthe (2015), Larasati (2015) and Liyanarachchi et al. (2009). Undergraduates with high levels of moral reasoning are likely to conduct whistleblowing compared to undergraduates with low moral reasoning. People with high moral reasoning are more sceptical and aware of what is happening around them. With those characteristics, they could find it more accessible and bolder to conduct whistleblowing.

In terms of guilt, the findings of this research indicated that the more guilty the students felt, the more likely they were to blow the whistle. This outcome aligns with past studies by Larasati (2015) and Kusnadi et al. (2018), which found that R positively affects whistleblowing. This study supports the theory by Leith and Baumeister (1998), which stated that a person who experienced guilt is more likely to act ethically. This action may be due to their sense of morality that leads them to forgo benefits to themselves or suffer costs to deliver benefits to the party they have wronged.

Meanwhile, retaliation (R) and shame (S) have a significant negative relationship with whistleblowing intention (WI). The findings are similar to past studies by Mesmer-Magnus et al. (2005) and Liyanarachchi et al. (2009). The results from this study suggested that UiTM final year undergraduates are more likely to whistleblow when they face weak retaliation. This finding indicates that they will analyse the strength of retaliation before they whistleblow. Retaliation may vary in severity or strength and may impact the intention to whistle-blower.

Shame has a different impact on the undergraduates' decision to act ethically. The higher the shame felt by UiTM final year accountancy undergraduates, the lower their intention to conduct whistleblowing. This finding supports the theory that shame causes confusion and an inability to speak (Lewis, 2000). Hence, this may be explained by undergraduates who feel ashamed after making a mistake and thus will not whistle-blow as they are worried about the consequences and retaliation.

These findings help solve the theoretical model gap in whistleblower research. As accounting students have a higher possibility of encountering unethical conduct in exercising their profession, the findings of this study are essential to improve the ethics courses in the higher education accounting curriculum.

Academics may utilise this research to educate young accounting professionals on the importance of blowing the whistle when necessary. It is also a starting point by upper management and audit committees to exercise whistleblowing as a potentially effective management tool and regulator in setting corporate governance regulations.

The wheel of whistleblowing also provides guidelines for organisations and public policymakers. There is a need to strengthen the Whistleblower Protection Act 2010 to protect the public when they encounter fraud by those in power. Several areas need to be reformed and improved under the Act, such as whistleblower protection, and more comprehensive whistleblowing mechanisms need to be created.

Despite the study's theoretical and practical advances, its intrinsic constraints limit its application to whistleblowing situations. Firstly, a sample of accounting undergraduates from a public university in Malaysia is drawn to represent the population. This limits the generalisation of the findings to the population of Malaysian accounting students. Secondly, as the study utilised self-reported data, the result may be a socially desirable bias. Some respondents may have answered the questions based on expectations about the third party's values and intentions. In other words, they would provide what they believe to be the correct and ethical response. The respondents in this study are undergraduates who do not have work experience and do not face ethical dilemmas related to whistleblowing. Future research is expected to expand the research sample and reach a larger area for generalisation.

However, the limitations mentioned above are well-acknowledged and do not affect the significance of the findings. This section serves as a reference for future researchers who wish to explore the whistleblowing issue further in another context.

Future researchers may invite undergraduates from other disciplines and universities to participate in a similar study to address the problems above. A broader group of individuals with a higher possibility of facing whistleblowing dilemmas, such as trainee accountants, senior accounting professionals and public sector employees, may be targeted. This study used a survey instrument to investigate WI among undergraduates. Due to the lack of experience, employing such a research instrument might increase the difficulty of capturing the real-life whistleblowing dilemma. More qualitative research instruments such as scenario-based vignettes and case studies would provide more reliable findings with potentially higher quality data sources (Brennan and Kelly, 2006).

6. Author Contributions

Anve De Brenda is the first author and conducted the research with the guidance of Associate Professor Dr. Sharifah Norzehan Syed Yusuf. Dr. Farah Aida Ahmad Nadzri and Dr. Salwa Zolkafli helped transform the thesis into an article. Dr. Maslinawati Mohamad edited and proofread the manuscript.

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