Boosting Propensity to Blow the Whistle: The Effect of Reporting Models and Retaliation: An Experimental Approach

by Mukhtaruddin Mukhtaruddin

Boosting Propensity to Blow the Whistle: The Effect of Reporting Models and Retaliation: An Experimental Approach

Kevin Henrico[1], Tertiarto Wahyudi[1], Mukhtaruddin[1*], and Sohibul Imam[2]

[1]*Accounting Department, Faculty of Economics, Universitas Sriwijaya, Indonesia*
[2]*Faculty of Business and Economics, Universitas Al Azhar, Indonesia*
Corresponding author; email: mukhtaruddin67@unsri.ac.id, yuditz@yahoo.com

ABSTRACT

This study aims to empirically examines the phenomenon about the influence of reporting models (structural and reward model), reporting channels (anonymous and non-anonymous), and retaliation on someone propensity to blow the whistle (PBW).The data obtained by true experimental research methods which participants act as senior accountant in the company. Subject in this study are 69 auditing students who received 4 different treatments. The results show that level of retaliation has negative influence on someone PBW. Non-anonymous reporting channel (NARC) and reward models (RM) are effective to encourage whistleblowing (WB) intention in conditions of low level of retaliation. However, anonymous reporting channel (RC) and structural model are effective to encourage WB intention in conditions of high level of retaliation.

Keywords: *Whistleblowing Reporting Models, Whistleblowing Reporting Channels, Retaliation, Whistleblowing Intention.*

I. INTRODUCTION

Nowadays, the existence of fraud in companies remains to be major problem in Indonesia. Fraud is increasingly prevalent in recent years both in the government sector and in private companies. Based on figure 1.1, a survey conducted by the Association of Certified Fraud Examiners (ACFE) in 2016, it was found that the most common cases of fraud were corruption as much as 67%, while for asset missappropriation as much as 31%, and for financial statement fraud at 2% [1].
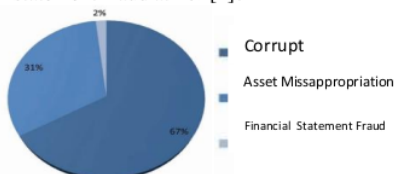
Source: Indonesia Chapter (2017)
Figure 1. The Most Type of Fraud in Indonesia

It is something that is done by the parties involved that are no in accordance with what should be done. Fraud that occur will definitely result in large losses. In order to achieve the company objectives, each company seeks to instill in all employees to behave honestly and report fraud if they know it. The source of the largest reporting came from internal parties namely company employees by 47.5%, amounting to 21.5% came from anonymous parties, and the rest came from outside parties [1]. WB system can be a platform that can solve

that problem. WB is one of response that arises because it is believed to help detect wrongdoings in a company.

WB is defined as real behavior carried out by someone not just intentions but also by actions that reflect someone character when he/she faced with company wrongdoings [2]. A whistleblower is someone who knows the wrongdoing in the company and intends to report to another party. Whistleblowers are someone who tries to correct wrongdoings that he/she found in their work place by raising their concern in public [3]. A whistleblowers have an important role in disclosing wrongdoings that occur public companies. Whistleblower has an vital role, especially in the faced of wrongdoings in the complex world of organization [4].

The WB phenomenon was initially known to the public after cases emerged in several large companies in the US such as Enron and WorldCom. It is known that fraud has occurred which has a major impact on the sustainability of the company resulting in losses of up to billions of dollars. In this case it also involved interference from Big4 public accounting firms. For example in the Enron case that triggered Sherron Watskin, the whistleblower dared to disclose fraud by making a written letter to Kenneth Lay, who was then Director, about intentional mistakes in accounting practices run by the company.

The emergence of several cases that had a major influence on the world economy, made the SEC of the US, issued a regulation, namely the Sarbanex Oxley Act of 2002 (SOX).The SOX regulates that every

1

public company implement a procedure for handling complaints. The policy on complaints systems is considered part of the internal control system in the company [5].

However, implementing a WB system in order to be effective and able to detect and prevent fraud in an organization is not an easy matter [6]. Employees often become aware of a wrongdoing, but there are several factors that influencing someone intention to report it such as WB reporting models, reporting channel, and retaliation [7]. Retaliation may take many forms, ranging from attempted coercion of the whistleblower to with-draw accusations of wrongdoing to the outright exclusion of the whistleblower from the organization. Retaliation seems to block WB action in the organization. The potential dilemma that a whistleblower has is a struggle between doing what is right and suffering the consequences, or just being silent and pretending that there is nothing [8]. Further pointing out the main reason for not reporting errors is that corrective action will not be taken, fearing the report will not be kept confidential, and fear of retaliation [9].

Several studies have been conducted to investigate the factors that influence of WB, including the type of WB reporting channel [10], [11], [12], [13] and retaliation [14], [15], [16]. The power of retaliation affects the tendency of people to report violations [14]. Retaliation had a negative impact on the interest in WB [15]. But other studies show different results, retaliation has not influence on WB intention [16]. Retaliation does not show a significant main effect on PBW. Several studies have also been conducted to see the effect of the WB reporting models [17]. The existence of an ARC can reduce the desire of employees to report violations through NARC [12]. Reward systems have a positive effect on disclosing company's wrongdoing [13]. But the research conducted by [11] shows that giving RM has no significant effect on WB intention.

There has been no consistency from the revious research caused this research to be still interesting and relevant to be studied. In addition, the opposite results of the variable above give the author attention to reexamine whether the reporting models and retaliation had an effect on the PBW.

This study is different from previous studies because this study uses samples with the expected criteria for sample obtained completely in accordance with the research to be conducted. This study aims to examine which models and reporting lines are more effective between structural model with anonymous reporting lines and reward model with non-anonymous reporting lines and the influence of retaliation. This study uses an experimental method to examine the effect of WB reporting lines (anonymity and non-anonymity) and reporting models (structural model and reward models) that are influenced by the retaliation of interest in reporting fraud. This research uses a semantic differential scale to measure WB intentions because this measurement is suitable for use in

attitudinal studies. The data gathered by semantic differential can give powerful picture of the respondent's attitude toward the subject being studied. Rather than using a likert scale like previous study that might range from very satisfied to very dissatisfied. Semantic differential scale are posed within the context of evaluating attitudes.

II. LITERATURE STUDY AND HYPOTHESIS DEVELOPMENT

Theory of Planned Behavior/TPB

The TPB predicted an individual's intention to engage in a behavior at a specific time and place. TPB was perfected by Ajzen in 1991. TPB uses three constructs as antecedents of intention, namely attitude towards the behavior, subjective norms, and the feelings about the ability to control everything that affects to do the behavior [18]. If someone perceives that the result of doing a behavior is positive, he/she will have a positive attitude towards that behavior, and vice versa.

WB is a behavior planned for a whistleblower because the WB action depends on the intention planned by the whistleblower whether to do a WB or not. TPB is one theory that supports WB. Someone decides to do a WB because of the interest to behave which is determined by three factors that have been mentioned in the TPB. The three factors are attitude which is a person's belief in good or bad reporting wrongdoings, subjective norms, namely the presence or absence of support and attention from the people around if reporting wrongdoings, and prescribed behavioral control which is the level of obstacles that will be faced when doing WB. Behavioral control is the most important factor to consider when encouraging WB [19]

Fraud

Fraud is an illegal or unlawful act carried out by a person or group where the action will harm another person or organization and is carried out with the aim of gaining personal gain. Fraud is also caused by three factors, namely pressure, opportunity, and rationalization [20]. First, pressure is one of the things that drives someone to do fraud. In general, someone is encouraged to commit fraud due to needs, financial problems, or even greed. Second, opportunity is a situation that opens a person to commit fraud. This can arise because the company's internal control is not optimal. A company must create good internal control so that all individuals in the company can be monitored and have little chance of fraud. The last, rationalization is an important element in encouraging fraud. There are attitudes, characters, or a set of ethical values that allow management or employees to act dishonestly, or an environment that is sufficiently pressing to trigger someone to rationalize dishonest actions. The attitude of rationalization will make the perpetrator seek justification for the actions taken.

Whistleblowing

WB is defined as real behavior carried out by someone not just intentions but also by actions that

reflect a someone character when he/she faced with company wrongdoings by reports wrongdoing to another or third party that have the power to be able to do something about it [21]. The whistleblower is faced with a dilemma between choosing to blow the whistle or not because it is not only promotes justice, but can also be considered disloyal. They can face positive or negative consequences as a resuls from their decision to blow the whistle. On the positive side, the whistleblower who has revealed wrongdoings will be considered as heroic person because he/she already upholding the truth. On the negative side, whistleblower will be considered as someone who is not loyal to the company. Whisleblower actions in stopping wrongdoings in the company will be considered as wrong action because it is considered adisloyalty [22]. If the employees still decide to report, he/she will receive retalitation as a result of the report he/she has done.

In the TPB, WB behavior that is displayed by a person arises because of the intention to behave, while behaving is determined by attitude, namely someone's belief about right whether or not to report fraud and its consequences, subjective norms, namely the level of support and attention of people around if reporting fraud, and perceived behavioral control, namely the level of obstacles to be faced if someone reports fraud and the importance of considering these constraints.

Structural Model

Structural model is a fraud reporting model that provides an official and legal reporting line directly to the the board of directors. The structural model encourages employees to become part of the company monitoring system because this model is based on understanding that WB is easier and more acceptable when company provide an authorized and visible channel for employees to report fraud to the board of directors. Direct reports to the board of directors will encourage effective WB because it can reduce the risk of information blocking and filtering by company executives [23].

Reward Model

RM is a fraud reporting model that provides monetary payments to those who report. WB can be influenced by several factors, one of which is giving rewards. Giving material or non-material rewards to employees who want to do a WB aims to motivate employees to reveal fraud that occur. RM has influence in encouraging individuals to report WB to another or third party that have the power to be able to do something about it [13]. The company motivates employees to be able to carry out their duties properly so they can achieve personal and corporate goals act honestly and report fraud to the authorities. Therefore, giving rewards to employees is intended to motivate employees to do WB.

Anonymous Reporting Channel

ARC is a WB reporting channel where the identity of the reporter will be hidden. Providing anonymous reporting lines is expected to provide security for reporters so that employees can report fraud without

fear. The effectiveness of anonymous reporting lines depends on the level of fraud and the employee's desire to report his/her findings to the right recipient [7]. The existence of this ARC will reduce the personal cost because the confidentiality of the reporter's identity will reduce the level of retaliation that will be received. Whistleblower have the need to feel safe both physically and mentally from any threat of retaliation. Therefore, ARC are provided to minimize the threat of retaliation for the whistleblower.

Retaliation Rate

Whistleblower can be threatened because of their report about fraud that have occurred. It is possible that whistleblower feel threaten and take revenge or often referred to as retaliation. Retaliation is a disturbance such as acts of intimidation, harassment, threats, and discrimination that occurs to someone because someone is acting in opposition, making a complaint, testifying, participating in a court process or law [15]. Predictors or correlates of retaliation against whistleblowers fall into one of four broad categories such as whistleblower characteristics, actions taken by the whistleblower in reporting organizational wrongdoings, situational or environmental variables related to organizations, and fraud characteristics [24],.

Conceptual Framework

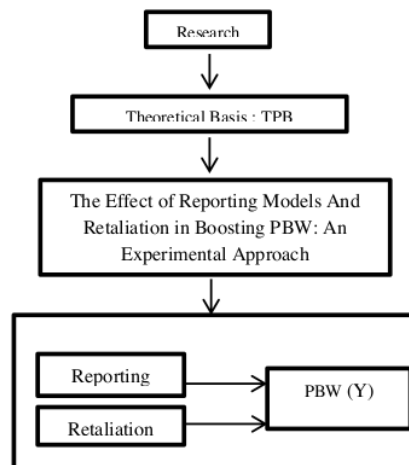The conceptual framework in this study is as follows:

Figure 2.1. Conceptual Framework

HypothesisDevelopment
The effect of Anonymous Reporting Channel and Models on PBW

Structural model is a fraud reporting model that provides an official and legal reporting line directly to the the board of directors. A direct path to the board of directors will encourage effective WB because it avoids the blocking and filtering of information by company executives [23]. The structural model encourages employees to become part of the company monitoring system because this model is based on understanding that WB is easier and more acceptable when company

provide an authorized and visible channel for employees to report fraud to the board of directors. But in reality this structural model is not effective in encouraging WB because individuals will be afraid of retaliation which may be got if they report wrongdoing.

Whistleblower needs for security and protection from physical and emotional retaliation, and guarantees that physical needs must be fulfilled. Therefore the existence of an anonymous reporting channel will fulfill whistleblower needs for security. Anonymous reporting channel make whistleblower report wrongdoings feel more comfortable and secure without fear because their identities are protected. In the study of [25], the results show that respondents' intention to report fraud is greater through the internal structural reporting channels.

H₁: The existence of the anonymous plot under the condition of the structural model more effective that NARC under the conditions of the model reward in encouraging individuals to report wrongdoings.

The Effect of Non-Anonymous Reporting Channel and Reward Models on PBW

RM provide effective monetary payments for WB and evidence shows that rewards are effective in motivating wrongdoing disclosure. This indicates that the reward model will improve the detection of wrongdoing or fraud. Study of [13] proven that RM has influence in encouraging individuals to report WB to another or third party that have the power to be able to do something about it.

Research of [25] has raised the issue of the significant effect of employment rewards as an incentive to report organizational wrongdoing to eliminate the negative consequences of retaliation on whistleblowers. In this situation, whistleblowers will not hide their identities if they want to receive awards for fraudulent reporting. Reward model seems to change the paradigm that the anonymous reporting channel in a structural model is the most effective channel to encourage someone to do WB. Based on the above studies, in the condition of reward models, individuals will be more daring to show their identity because they are motivated to get an award.

H₂: The existence of NARC under conditions of RM more effective than ARC under structural model conditions in encouraging individuals to report wrongdoings.

The Effect of Retaliation Rate on PBW

Retaliation is a form of consequence for whistleblowers to keep their mouths shut when they know of wrongdoing in an organization [24]. The purpose of retaliation itself is to pressure or threaten the whistleblower so he does not report fraud he found. If associated with the TPB, fear of retaliation can be a strong reason not to do WB or remain silent. They did not dare to do a WB because they were afraid of the impact they would receive. These considerations are separate reasons for someone whether they will remain silent or do WB. Likewise, it also relates to subjective norms which explain that behavior carried out by someone is behind the consideration of whether the

action or behavior can be accepted by outsiders or not. In addition, it is also influenced by whether the behavior will have a positive or negative impact on him. The existence of high retaliation power will make someone afraid to do WB. This means that the intention to do a WB will be low.

Several previous studies have examined the effect of retaliation on WB, but the study still shows inconsistent results. Study of [14] found that the power of retaliation can affect the tendency of people to report violations. Study of [15] also found that retaliation had a negative impact on the interest in WB. But other studies show different results, [16] concludes that retaliation has not influence on WB intention. Study of [17] also found that retaliation did not show a significant main effect on the PBW. Based on the description above, the researcher formulated the hypothesis as follows:

H₃ : Retaliation has a negative effect on Whistleblowing Intention.

The Effect of NARC and RM on the level of low retaliation to PBW

Retaliation is a threat to the WB of the behavior carried out. Whistleblower will certainly feel safe if a company creates a safe and protected atmosphere from retaliation. When retention in a company is low, employees do not feel afraid to report violations. In addition, the company also seeks to provide rewards to those who report fraud.

By giving a reward, it will provide a satisfaction for a whistleblower in disclosing fraud. Study of [26] and [13] have result that a person will be motivated to conduct a WB in a RM with a NARC. This is because someone does not mind showing their identity because they are motivated to get rewards when reporting fraud. NARC under the RM conditions are expected to be more effective when applied to companies or organizations that have low levels of retaliation.

H₄: RM with NARC will be more effective than structural models with ARC in encouraging individuals to report wrongdoings if on the low level of retaliation condition.

The Effect of ARC and Structural Modeling Channel on high levels of retaliation to PBW

The structural model encourages employees to report fraud to the board of directors. However, the reporting structure of the structural model is still not effective in encouraging WB because whistleblower are afraid of the retaliation of reported parties. Retaliation is the threat from the party who commits a violation to the reporting party or whistleblower because the actions that he/she has taken. Retaliation plays an important role in deciding to do WB.

The existence of an ARC will fulfill whistleblower need for safety. Study of [7] proved that when whistleblowers get retaliated after using NARC, the intention to report fraud using an ARC is stronger than using NARC. Research by [26] also proves that someone will be motivated to do WB in a structural model situation when on an anonymous reporting channel.

Base to develop a hypothesis, the studies can be concluded that if it is at a high level of retaliation, someone is reported to be more likely to choose to report fraud through ARC under the structural model conditions so that whistleblower will feel safe because his identity is hidden. Thus, this study proposes the following hypothesis:

H_5: Structural models with ARC will be more effective than RM with NARC in encouraging individuals to report wrongdoings if on the high levels of retaliation condition.

III. RESEARCH METHODOLOGY

Research Design

This research is a research with experimental research methods. The type of experimental research used was a true experimental. Experimental research is a research design to investigate a phenomenon by engineering conditions or treatments through certain procedures and then observing the results of the treatment and interpreting them.

This study uses an experiment 2x2 between subject. The experimental design can be seen in table 3.1. The treatment given is a NARC on the RM and ARC on the structural model under a low or high level of retaliation condition. The treatment that will be given to participants is:

Group treatment 1: Reporting at a low level of retaliation, with ARC under structural model conditions.
Group treatment 2: Reporting at a low level of retaliation, with NARC under RM conditions.
Group treatment 3: Reporting at a high level of retaliation, with ARC under structural model conditions.
Group treatment 4: Reporters at a high level of retaliation, with NARC under RM conditions.

Table 3.1 Experimental Design

		Retaliation Rate	
		Low	High
Reporting Models	Structural and Anonymous	Group 1	Group 3
	Reward and Non-Anonymous	Group 2	Group 4

Subject

The population were accounting students at Sriwijaya University who had taken and passed audit courses. Accounting students selected as populations because students who have taken an audit course are more aware of their role in observing, participating or having knowledge about fraud in financial statements and experiencing ethical conflict situations. The sample used in this study are students who have had the criteria are (1) An accounting student at Sriwijaya University who has taken and passed audit course as its specialty, (2) Currently in 7th semester (Batch 2016), and (3) Campus domicile in Palembang. Based on criterias, the samples are 69 students.

Experiment Procedure

The data in this study were obtained from experimental research, that is data obtained by giving treatment through certain procedures and then observing the results of the treatment. Before the experimental process is carried out, the researcher prepares the experimental case sheet and the

experimental answer sheet. Participants are placed in a room supervised by an experimental instructor. In this study, 69 people will be given the same case with 4 different treatments randomly. Participants will work on the experimental case and answer the questions provided.

The procedure that was made was adopted from [27] which had been adapted to the conditions in this study. This experimental study designed participants to act as senior accountants in the company. As a senior accountant of a company, whether the participant will report violations committed by the company's CFO. The fraud committed by the CFO was aimed at achieving earnings forcast during the quarter.

The success of the state given by the researcher to the subject of the study was tested by manipulating checks. In this study only research subjects who passed the manipulation test can use the data by the researcher, so that the validity of the study can be believed.

Data Analysis Method

Homogeneity Test

The homogeneity test of variance was carried out using the Levene Test. The decision criteria taken that if the significance value produced is more than 0.05, it can be said that the variation of data is homogeneity. The homogeneity test used aims to determine the homogeneity of variance for each level of retaliation compared both at the level of low retaliation and at the level of high retaliation.

Hypothesis Testing

Analysis of Variance (ANOVA) Test

ANOVA test is a data processing procedure that is carried out to test the difference in average values of several groups. The relationship between one dependent variable with one or more independent variables can be tested using ANOVA, especially to determine the main influence and the effect of interaction of the independent variable on the dependent variable. ANOVA test will be used to (1) compare the effectiveness of ARC under structural model conditions and NARC under conditions of RM when they are at a high level of retaliation, (2) compare the effectiveness of ARC under structural model conditions and NARC under RM conditions if they are at a low level of retaliation. Furthermore, to find out the significance of the significant group mean, a post-hoc follow-up analysis was carried out so that the researcher could compare the mean of each group and be able to answer the hypothesis [28].

Operational Definition of Variables and Variable Measurement

Dependent Variable

The dependent variable is the willingness to WB intention, which is reporting fraud in a company by employees in the company. WB in this study refers to internal WB. Participants were asked to rate their intention to report fraud committed by the CFO on a semantic differential scale with the score between 0 to 10, because it is the most reliable way to get information on respondent's attitude and action towards PBW. Participant responses were measured

using a semantic differential scale, where in negative polar is very impossible and in positive polar is very possible. The higher the participant gives the assessment number, the higher tends to want to reveal the fraud that he found, on the contrary the lower the assessment number, the more likely he is not to disclose the frauds he finds.

The dependent variable was measured using self-assessment using semantic differential scale instruments because this measurement is suitable for use in attitudinal studies. The data gathered by semantic differential can give powerful picture of the respondent's attitude toward the subject being studied. Semantic differential scale are posed within the context of evaluating attitudes.

Independent Variable

Reporting Model

ARC is a reporting channel where the identity of the reporting fraud only interested parties can find out. ARC and NARC are manipulated by including statements regarding the reporting channel. This manipulation uses manipulation from research by [27] which was adopted from the research of [25]. Manipulation of structural model statements was adopted from the research of [25].

The NARC is a reporting channel that allows to know the identity of the whistleblower. RM is a mechanism where an organization will give an award to individuals who report fraud. Statement manipulation for structural models and reward models using manipulations used in [27] and manipulation of reward model was adopted from [13].

Retaliation Rate

The retaliation rate is the threat of retaliation that received by the whistleblower. Retaliation can be in the form of physical, mental, and office threats. This retaliation rate variable is manipulated by giving situations and questions related to the level of retaliation in the company. Case manipulation and questions for the level of retaliation were adopted from [14] study.

IV.   RESULTS AND DISCUSSSION

Data Collection Results

This section explains the data obtained and data that passes the manipulation check. The data obtained were 69 participants. After being seen, there were 8 participants who failed to answer the manipulation check, so that the participants who passed were 61 participants. The 61 participants included 16 participants in group 1, 14 participants in group 2, 15 participants in group 3, and 16 participants in group 4. Table 4.1 presents the sample criteria in the study:

Table 4.1 Research Sample Criteria

No	Description	Amount
1	Participant :	69
	Group 1: participants who received treatment 1	18
	Group 2: participants who received treatment 2	17
	Group 3: participants who received treatment 3	17
	Group 4: participants who received treatment 4	17
2	Participants who failed to answer the manipulation check :	8
	Group 1: participants who received treatment 1	2
	Group 2: participants who received treatment 2	3
	Group 3: participants who received treatment 3	2
	Group 4: participants who received treatment 4	1
3	Participants who passed the manipulation check :	61
	Group 1: participants who received treatment 1	16
	Group 2: participants who received treatment 2	14
	Group 3: participants who received treatment 3	15
	Group 4: participants who received treatment 4	16

Table 4.2 Descriptive Statistics GPA

Group	N	Minimum	Maximum	Mean
Group 1	16	2.97	3.93	3.28
Group 2	14	3.00	3.67	3.267
Group 3	15	2.98	3.68	3.26
Group 4	16	2.94	3.75	3.256

According to table 4.2 indicates that the respondents' distribution regarding to GPA mean for each group are well distributed.

Table 4.3 Homogenity Test Result

Levene Statistic	df1	df2	Sig.
1,962	3	57	0,130

Before conducting the ANOVA test, it is first tested and proven that the population variance is the same. To see the results of testing the same population assumptions can be seen in table 4.3. P-value as 0,130 is greater than the significance level (0,05), so it can be concluded that all population variances are the same.

Participant Characteristics

Table 4.4 Demographic Characteristics

Data	Level	Frequency	%
Gender	Male	22	36,07
	Female	39	63,93

The data obtained were 69 participants and 8 participants failed in answering the manipulation check, so that the data processed were 61 participants. All participants have taken and passed the audit specialty course.

Table 4.5 Result test of ANOVA

Dependent Variable : whistleblowing intention

r	Sum of Square	Df	F	Sig
Variable Control				
GPA	185,336	43	.628	.827
Gender	.249	1	.036	.855

Table 4.5 shows the test results of demographic variables namely GPA and gender. The GPA variable has a p-value as 0,827, greater than the significance value of 0,05. The gender variable has a p-value as 0,855, greater than the 0,05 significance level. These results indicate that the GPA and gender variables do not affect individual PBW.

Hypothesis testing

Main Effect Results and Interpretations

Table 4.6 ANOVA Test Result Tests of Between-Subjects Effects

Source	Sum of Square	Df	F	Sig.
Main Effect				
Retaliation	11,193	1	4,207	.045
Reporting Model and Reporting Channel	42,883	1	16,117	.000
Interacton Effect				
Retaliation* Reporting Model and Reporting Channel	72,041	1	27,075	.000
Error	151,667	57	27,075	.000
Corrected Total	281,091	60		

Table 4.6 presents the results of the main effect and interaction effect two treatments, namely retaliation and reporting models with reporting channels. The test between subject effects shows the following results:

1) Retaliation has a p-value as 0,045, judging from the average, low and high retaliation show different values. The average for low retaliation is 7,31 while high retaliation has an average of 6,41. These results indicate that a person's intention to WB at a low retaliation rate is different than at a high retaliation rate.

2) The combination of reporting models and reporting channels has p-value > 0,001. Judging from the average, structural model under ARC and RM under NARC show different values. The average for structural models with ARC is 7,72 while RM with NARC have an average of 5,96. These results indicate that someone's PBW with ARC under the structural model is more effective when compared to NARC under the RM.

Interaction Test Results and Interpretation

This section will present the results of interaction tests between variables in the 2x2 experimental design between subjects. Post Hoc test results show that:

1) The p-value between group 1 and group 2 as 0,104 is not significance level. Whereas from the average, group 1 has an average of 7,08 and group 2 has an average of 7,58. On average both have significance differences. These results indicate that H_2 is accepted and H_1 is rejected.

2) The p-value between group 3 and group 4 as 0,0001 is significance level. Whereas from the average, group 3 has an average of 8,40 while group 4 has an average of 4,54. From these results indicate that H_5 is accepted.

Table 4.7 Mean (Standard Deviation) and Number of Participants per Cell

		Retaliation Rate		Mean
		Low	High	
Reporting Model and Reporting Channels	Structural and Anonymous	7,08 (2,153) 16	8,40 (1,001) 15	7,72
	Reward dan Non-Anonymous	7,58 (1,373) 14	4,54 (1,704) 16	5,96
Retaliation Rate		7,31	6,41	

- Structural and ARC on The Low Level of Retaliation Condition
- Structural and ARC on The High Level of Retaliation Condition
- RM dan NARC on The Low Level of Retaliation Condition
- RM dan NARC on The High level of Retaliation Condition
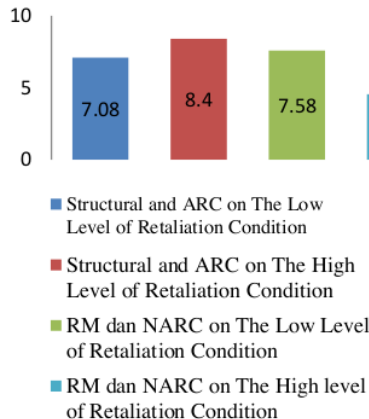
Figure 4.1. Whistleblowing Intention

Table 4.8 ANOVA Test Result (Comparison)

Source	Mean Diff (I-J)	SE	Sig.
Group 1-Group 2	-0,497	0,332	0,104
Group 3-Group 4	3,857	0,430	0,000

Result Discussion

The Effect of Reporting Models and Reporting Channels on PBW

The combination of the reporting model and the reporting path has a prob-value 0,001 (less than 0,005), so the reporting model and the reporting channels affect the person's PBW. Judging from the average, structural model under ARC and RM under NARC showed significantly different values. The average for structural models with ARC is 7,72 while RM with NARC have an average of 5,96. These results indicate that someone's PBW with ARC under the structural models is higher when compared to NARC under RM. It is means that H_1 is accepted, so that H_2 is rejected.

The effectiveness of ARC depends on the level of risks and the employee's desire to report his/her findings to the right recipient. ARC maybe favoured by people who are fearful of the risks of being identified. ARC can provide a sense of security to encourage someone to not hesitate to report the wrongdoings because the reporting identity is hidden. In TPB, someone will consider the impact that will faced when do WB. Every individual has a need for security, both physical and emotional security. In relation with the need for security, the company must provide security and protection guarantees to all company employees who report wrongdoings. Whistleblower needs for security and protection from retaliation such as acts of intimidation, harassment, threats, and discrimination that occurs to someone when someone is acting in opposition, making a complaint, testifying,

participating in a court process or law, and guarantees that physical needs must be fulfilled. These risks often make a person think twice about reporting or even reluctant to report wrongdoings that he/she encounters. A person tends not to be motivated to do WB because he/she thinks that his/her security will be threatened.

The results of this study in line with [25]. This study adopted manipulation case of reporting model and reporting channels statements from [25] study. The existence of structural reporting model and an RAC will fulfill whistleblower needs for security thus make individuals will be more willing to reveal violations because the identity of the reporter is kept secret and only interested parties can find out. ARC make the identity of whistleblower protected, so whistleblower may feel more comfortable and secure without fear after report wrongdoings.

The Effect of Retaliation Rate on PBW

Retaliation has a prob-value of 0,045 (less than 0,05), then H_3 is accepted. Retaliation has a negative effect on intention to do WB. Judging from the averages, low and high retaliations show different values. The average for low retaliation is 7,31 while high retaliation has an average of 6,41. These results indicate that a person's PBW at a low retaliation rate is different than at a high retaliation rate. Someone tends to report fraud at a lower retaliation rate. The results of this study shows the effect of retaliation, WB intention and TPB is true.This is because someone will feel safer and not afraid to report fraud.

If associated with the TPB, someone is more likely to report any wrongdoings as a whistleblower if he/she knows that te consequence of his/her actions is rewarded by another people. Otherwise, if he/she knows that the action will bring negatives things like retaliation, he/she may also does a negative reaction towards the WB action. Individuals who reveal wrongdoings in their company will be faced with retaliation. Fear of retaliation can be a strong reason so they decide remain silent because retaliation of whistleblowers appear from the negative perception of the act of "betrayal".They were afraid of the impact they would receive. Retaliation may be a coercion to silence the whistleblower or stop the WB action. Predictors or correlates of retaliation against whistleblowers fall into one of broad categories such as actions taken by whistleblower in reporting the company wrongdoings. They will faced with responsible choices to perform WB action and accept threats, pressures and indications others that can endanger themselves, family, relatives and his/her friends or instead prefer silence and do not want take any action. These considerations might be driven to keep the whistleblower silent, and prevent the whistleblower from taking other actions.

Normative beliefs refer to how someone understands the expectations of others that are important to them with respect to BW. In carrying out an action, a person will consider whether the action or behavior is acceptable to others or not. The existence of high retaliation power will make someone afraid report

wrongdoings because such as acts of retaliation that occurs to someone when someone is acting in opposition, making a complaint, testifying, participating in a court process or law. The results of this study are in line with the results of [15]. Study of [15] also classifies retaliation into conditions of concern about strong retaliation (penalty) and concerns about weak retaliation (affiliation). From this results, it can be concluded that to encourage someone to report a fraud, the company can reduce the level of retaliation by providing disciplinary action to those who take retaliation.

The Effect of ARC and Structural Models on PBW In Conditions of High Levels of Retaliation

H_5 compares group 3 and group 4. Group 3 is the treatment of high retaliation with ARC under the structural model conditions. Group 4 is the treatment at high retaliation rates with NARC under RM. The p-value between group 3 and group 4 as 0,001 is significant level. Whereas if seen from the average, group 3 has an average of 8,40 while group 4 has an average of 4,54. From these results indicate that hypothesis 5 is accepted. Under conditions of high retaliation, structural models with ARC are more effective than RM with NARC in encouraging someone to report wrongdoings.

Employees who are aware of indications of wrongdoings feel that they need to report the wrongdoings but they can't do it because the risk be faced. Therefore, they need a model and reporting channels that provides the necessary they needs. The structural model encourages employees to report fraud to the someone who has the power to handle it. However, the reporting structure that relies on the structural model is not effective in encouraging WB because whistleblower are afraid of the retaliation of reported parties. Retaliation plays an important role in deciding to do WB. Because of that, the existence of an anonymous reporting channel will fulfill whistleblower need for safety. Combination between structural reporting model and anonymous reporting channels make someone decide to do WB. The structural reporting system has clear governance directly to the top management of the company so that top management can deal effectively with reports of wrongdoings while anonymous reporting channels may protecting the reporter's identity. The existence of anonymous reporting channels make individuals will be more willing to reveal wrongdoings because the identity of the reporter is kept secret and only interested parties can find out.

This results in line with [26]. Study of [26] also uses the same research method with this research which classifies reporting model into stuructural model and RM, and reporting channels into ARC and NARC. The intention to report wrongdoings using an ARC is stronger than using NARC when whistleblowers get retaliated after using NARC. Someone is more likely to choose to report fraud through ARC under the structural model conditions so that whistleblower will feel safe because his identity is protected. Structural

reporting model and ARC be favoured by people who are fearful of the risks of being identified.

NARC and RM on PBW In Conditions of Low Levels of Retaliation

H₄ compares group 1 and group 2. Group 1 is the treatment of low retaliation with ARC under the structural model. Group 2 is the treatment at low retaliation rates with NARC under RM. The p-value between group 1 and group 2 as 0,104 is not significant level. Whereas if seen from the average, group 1 has an average of 7,08 and group 2 has an average of 7,58. Based on the results, it can be concluded that H₄ is accepted. This result means that in conditions of low levels of retaliation, RM with NARC will be more effective than structural models with ARC in encouraging individuals to report wrongdoings.

Someone does an action based on the belief about the presence or absence of factors that facilitate and obstruct the individual in carrying out a particular action. This is according to the TPB which states that an individual will avoid an action if the action is deemed inappropriate and is not supported by those around him/her. Whistleblower needs for protection from retaliation and guarantee that they needs must be fulfilled. In low level of retaliation, its means that company will fulfill whistleblower needs for security. The company guarantees protection against reporters from all forms of threats, intimidation, punishment or unpleasant actions from any party. Whistleblower may be more willing to reveal wrongdoings because the whistleblower will certainly feel safe if a company protects them from retaliation. When retaliation in a company is low, employees do not feel afraid to report violations. In addition, the company also seeks to provide rewards to those who report wrongdoings.The company gives monetary incentives, promotions, prospects of being hired elsewhere for people who report wrongdoings. People are motivated to perform certain behaviors because they are associated with the existence of an reward.

This results in line with research conducted by [13]. This study uses manipulation of reward model that was adopted in [13] research. Someone does not mind showing their identity because they are motivated to get rewards when reporting fraud. It will increase employee loyalty to the company and give a special sense of satisfaction to the whistleblower. Reward will motivate employees to report fraud if they know that a colleague is cheating to immediately report it, and can also minimize fraud.

V. CONCLUSION AND SUGGESTIONS
Conclusion

The effectiveness of reporting model (structural and reward model) and reporting channels (anonymous and non-anonymous) depends on the effect of each reporting model and reporting channel when someone reporting wrongdoings. Level of retaliation has negative influence on PBW. NARC and RM are effective on PBW in conditions of low level of retaliation. However, in conditions of high level of

retaliation, ARC and structural model are effective on PBW.

Limitations & Suggestions

Limitations in this research are the research method in this study was experimental research method. Experimental research is difficult to generalize in real situation. This is caused by experimental research conditions that are very controlled (artificial), so the situation is not like in real situation (artificiality of experiments).

The suggestions for further research are proposed to add congenital factors like religious and moral competence in experimental case because congenital factors might influence decision, in this case their PBW in order to provide more information or knowledge regarding WB intention.

Implications

Company may pay more attention about the level of retaliation because it will affect reporting models and reporting channels that will be used by whistleblower to report wrongdoings and also the importance of protection for whistleblower to reduce the level of retaliation and encourage someone to report if they know there are a wrongdoings.

AUTHORS CONTRIBUTION

Kevin Henrico, Tertiarto Wahyudi and Mukhtaruddin conceived of the presented research idea, developed the theory and performed the computations. Kevin Henrico collected data and data tabulation. All authors involved in verifying the analytical methods and supervised the findings of this work. All authors discussed the results and contributed to the final manuscript.

REFERENCES

[1] Association of Certified Fraud Examiners Indonesia Chapter. (2017). Survey Fraud Indonesia 2016. In *ACFE Indonesia Chapter*.

[2] Bjørkelo, B., Einarsen, S., & Matthiesen, S. B. (2010). Predicting Proactive Behaviour at Work: Exploring The Role of Personality as An Antecedent of Whistleblowing Behaviour. *Journal of Occupational and Organizational Psychology*, *83*(2), 371–394. https://doi.org/10.1348/096317910X486385

[3] Jubb, P. B. (2000). Auditors as Whistleblowers. *International Journal of Auditing*, *4*(2), 153–167. https://doi.org/10.1111/1099-1123.00310

[4] Andrade, J. A. (2014). Reconceptualising Whistleblowing in a Complex World. *Journal of Business Ethics*, *128*(2), 321–335. https://doi.org/10.1007/s10551-014-2105-z

[5] Brennan, N., & Kelly, J. (2007). A Study of Whistleblowing among Trainee Auditors. *British Accounting Review*, *39*(1), 61–87.

[6] Akbar, T., Yonnedi, E., & Suhernita. (2016). Pengaruh Saluran Pelaporan Pelanggaran Dan Personal Cost Terhadap Minat Untuk Melaporkan Kecurangan Pada Pengadaan Barang/Jasa Pemerintah. *Simposium Nasional Akuntansi XIX Lampung*, 1–25.

[7] Kaplan, S. E., Pany, K., Samuels, J., & Zhang, J. (2012). An Examination of Anonymous and Non-Anonymous Fraud Reporting Channels. *Advances in International*

Accounting, *28*(1), 88–95. https://doi.org/10.1016/j.adiac.2012.02.008

[8] Rehg, M. T., Miceli, M. P., Near, J. P., & Scotter, J. R. Van. (2008). Antecedents and Outcomes of Retaliation Against Whistleblowers : Gender Differences and Power Relationships. *Organization Science*, *19*(2), 221–240. https://doi.org/10.1287/orsc.1070.0310

[9] Dinc, M. S., Kuzey, C., Gungormus, A. H., & Atalay, B. (2018). Exploring Predictors of Internal, External and Anonymous Whistleblowing Intentions: A Quantitative Analysis of Accounting Professionals. *International Journal of Applied Statistics and Econometrics*, *1*(1), 18–29. https://doi.org/10.26384/IJASE1803

[10] Putri, C. M. (2018). Does Type of Fraudulent Act Have an Impact On Whistleblowing Intention? *Journal of Accounting and Investment*, *19*(2), 210–225. https://doi.org/10.18196/jai.1902102

[11] Aliyah, S., & Marisan, I. (2017). Analisis Faktor-Faktor Yang Mempengaruhi Minat Pegawai Melakukan Tindakan Whistle-Blowing Dengan Reward Model Sebagai Variabel Moderating. *Jurnal Dinamika Ekonomi & Bisnis (JDEB)*, *14*(1), 96–117.

[12] Kaplan, S. E., & Schultz, J. J. (2007). Intentions to Report Questionable Acts: An Examination of The Influence of Anonymous Reporting Channel, Internal Audit Quality, and Setting. *Journal of Business Ethics*, *71*(2), 109–124. https://doi.org/10.1007/s10551-006-0021-6

[13] Xu, Y., & Ziegenfuss, D. E. (2008). Reward Systems , Moral Reasoning , and Internal Auditors ' Reporting Wrongdoing. *Journal of Business and Psychology*, *22*(4), 323–331. https://doi.org/10.1007/s10869-008-9072-2

[14] Liyanarachchi, G & Newdick, C. (2009). The Impact of Moral Reasoning and Retaliation on Whistle-Blowing : New Zealand Evidence. *Journal of Business Ethics*, *89*(1), 37–57. https://doi.org/10.1007/s10551-008-9983-x

[15] Manafe, M. W. (2015). Pengaruh Penalaran Moral, Retaliasi Dan Gender Terhadap Kecenderungan Whistleblowing Internal. *Jurnal Ilmiah Wahana Akuntansi*, *18*(2), 113–125.

[16] Efendi, A., & Nuraini. (2019). Pengaruh Perlindungan Hukum, Orientasi Etika Idealisme, Orientasi Etika Relativisme dan Retaliasi Terhadap Intensi Whistleblowing. *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi (JIMEKA)*, *4*(3), 504–519.

[17] Liyanarachchi, G. A., & Adler, R. (2011). Accountants' Whistleblowing Intentions: The Impact of Retaliation, Age, and Gender. *Australian Accounting Review*, *21*(2), 1–36.

[18] Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

[19] Zakaria, M., Abd Razak, S. N. A., & Yusoff, M. S. A. (2016). The Theory of Planned Behaviour as a Framework for Whistle-Blowing Intentions. *Review of European Studies*, *8*(3), 221. https://doi.org/10.5539/res.v8n3p221

[20] Schnatterly, K., Gangloff, K. A., & Tuschke, A. (2018). CEO Wrongdoing: A Review of Pressure, Opportunity, and Rationalization. *Journal of Management*, *44*(6), 2405–2432. https://doi.org/10.1177/0149206318771177

[21] Park, H., Blenkinsopp, J., Oktem, M. K., & Omurgonulsen, U. (2008). Cultural Orientation and Attitudes Toward Different Forms of Whistleblowing: A Comparison of South Korea, Turkey, and the U.K. *Journal of Business Ethics*, *82*(4), 929–939. https://doi.org/10.1007/s10551-007-9603-1

[22] Robinson, S. N., Robertson, J. C., & Curtis, M. B. (2012). The Effects of Contextual and Wrongdoing Attributes on Organizational Employees' Whistleblowing Intentions Following Fraud. *Journal of Business Ethics*, *106*(2), 213–227. https://doi.org/10.1007/s10551-011-0990-y

[23] Moberly, R. E. (2006). Sarbanes-Oxley's Structural Model To Encourage Corporate Whistleblowers. *Brigham Young University Law Review*, *1*(5), 1107–1180.

[24] Mesmer-Magnus, J. R., & Viswesvaran, C. (2005). Whistleblowing in Organizations: An Examination of Correlates of Whistleblowing Intentions, Actions, and Retaliation. *Journal of Business Ethics*, *62*(3), 277–297. https://doi.org/10.1007/s10551-005-0849-1

[25] Kaplan, S., Pany, K., Samuels, J., & Zhang, J. (2009). An Examination of The Association Between Gender and Reporting Intentions for Fraudulent Financial Reporting. *Journal of Business Ethics*, *87*(1), 15–30. https://doi.org/10.1007/s10551-008-9866-1

[26] Putri, C. M. (2016). Pengaruh Jalur Pelaporan dan Tingkat Religiusitas terhadap Niat Seseorang Melakukan Whistleblowing. *Journal of Accounting and Investment*, *17*(1), 42–52. https://doi.org/10.18196/jai.2016.0043

[27] Putri, C. M. (2012). Pengujian Keefektifan Jalur Pelaporan pada Structural Model dan Reward Model Dalam Mendorong Whistleblowing : Pendekatan Eksperimen. *Simposium Nasional Akuntansi*, *15*(97), 1–24.

[28] Ghozali, I. (2011). *Aplikasi Analisis Multivariate Dengan Program IBM*. Semarang: Badan Penerbit Universitas Diponegoro.

Boosting Propensity to Blow the Whistle: The Effect of Reporting Models and Retaliation: An Experimental Approach