Meta Analysis Study: Theory of Planned Behavior in Whistleblowing Intention

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Abstract - Indonesia's Corruption Perception Index in 2022 had decreased significantly with a final score of 34 points and ranked Indonesia 110 out of 180 countries. It shows that corruption practices in Indonesia are high and the strategy for combating fraud is not effective. In practice, the fraud management strategies focus on improving internal control systems than preventive strategies such as whistleblowing system. This is due to the low intention of individuals to disclose fraud. Whistleblowers will encounter risks in organization, such as different prespective and norms in organization and the confidentiality and safety risk. Therefore, individuals need to carefully consider before deciding to become whistleblowers. This study is aimed to examine individual factors that influence whistleblowing intention by the theory of planned behavior using meta-analysis technique, a quantitative method to measure the strength of the relationship of variables from previous research. Fourteen of the 53 selected studies were analyzed according to the eligibility criteria, the results is the highest correlation is the attitude toward behavior, then the subjective norm, and the lowest is the perceived behavioral control. It indicates that organization needs to stimulate an increase individual’s intention to disclose fraud by whistleblowing system as prevention strategy to combat fraud.

Keywords: theory of planned behavior; whistleblowing system; corruption

1. Introduction

The report, released by Transparency International, experienced a significant 4 (four) point decline, the highest decline ever in the assessment since 2014 and placed Indonesia at 110th out of 180 countries. This shows that the level of corruption in Indonesia is still high and the Indonesian Government's response to corruption practices is still slow and even worsened due to the lack of tangible support from stakeholders in Indonesia. This fact also proves that fraud prevention strategies and programs are not fully effective. (Transparency International, 2023).

Some of the strategies proposed to counter fraud tend primarily to be repressive through the drop of sanctions from the organization to legal action. In Indonesia, an increase of 11.11% in investigation cases occurred in 2022 with 120 investigations and 149 corruption suspected arrests resulting in a state loss of Rs.144.2 Trillion and USD 61.9 Million. Another strategy in dealing with fraud is to improve the internal control system in response to the causes of corruption caused by the weaknesses of the internal system, with 29% of fraud due to the weakened internal system. (ACFE, 2022). However, in practice, the fraud prevention solution offered by the system improvement, among other things, the digital transformation of services through e-government does not immediately close the possibility of fraud in the organization. (Adam, I., & Fazekas, M., 2021).

Furthermore, improvements in the system of control and punishment of corruption in the form of repressive strategies (investigation and imposition of sanctions) do not have any effect on the perpetrators of fraud. (BPKP, 2020). This is supported by a Sweeney (2008) study that states that there are other more effective strategies to combat fraud than internal audit, external audit, or internal controlling systems, namely whistleblowing system strategies. Hoffman and Robert (2008) define a whistleblowing system as the disclosure of an employee's information about violations of the law, regulations, practical guidelines or professional statements, or related to misconduct, corruption, abuse of authority, or harm to public and workplace safety. A whistleblower has the challenges and dilemmas he feels before deciding whether to report fraud or shut his eyes. These doubts arise from the social perspective of viewing whistleblowers as traitors who violate the norms of organizational loyalty, but others view whistleblowers as a heroic protectors of values considered more important than loyalty to the organization. (Rothschild & Miethe, 1999). Whistleblowers play an important role in exposing unethical behaviour in organizations. (Jeon, 2017). This is in line with the ACFE study (2022) that states that organizations that have a whistleblowing system are able to detect fraud faster and reduce the total fraud losses by up to 50% compared to organizations which do not have a whistleblowing system. Therefore, the implementation of this
The whistleblowing system is vital in preventing fraud while responding to public demands for transparency and accountability in order to good corporate governance.

The whistleblowing system will not work effectively if the whistleblower does not have the intention to reveal fraud, due to a number of factors, including a lack of confidentiality and security guarantees for the whistleblower as well as a social perspective that assumes that the whistleblower is a traitor. Therefore, individuals need mature consideration before deciding to become whistleblowers. Individual behavior will be displayed when intentions have been awakened within the individual, this is in line with the Barr-Pulliam (2017) study that found that intentions relate to behaviors. Therefore, it is important to analyze the factors that influence the individual towards whistleblowing intentions.

The theory of planned behavior is a theory commonly used in previous research to analyze the influence of individuals on behaviour, reviewed from three variables including attitude toward behaviours, subjective norms and perceived behavioral controls proposed by Ajzen. (1991). Park et al (2009), May Amy (2020) and Owusu et al (2020) proved that the Theory of Planned Behavior was confirmed to be accurate in analyzing the intensity of individual whistleblowing. However, on the basis of the results of previous studies found a diversity of research results, among others the Owusu (2020) and Arkoful (2022) studies that stated that attitude toward behavior is the highest factor that the intensity of individuals to do whistleblowing, while based on triastuiti et al (2019) and Mansor et al (2020; 2022) research that perceived behavioral control is the highest predictor of intensity. Further other factors are subjective norms capable of driving intense whistleblower as revealed by Iskandar et al (2018) and Perdana et al. (2019).

The novelty of this research is the development of research methods in meta-analysis. We can According to Glass (1976) meta analysis is a statistical approach through the process of summarizing, integrating, and interpreting some of the results of previous research. Meta analysis is the statistical method aimed at synthesizing previous research results with similar themes in order to provide meaningful answers. (Cooper, 2010). Therefore, this research is intended to find out the influence of attitude toward behavior, subjective norms and perceived behavioral control on whistleblowing intentions. Meta-analysis can provide more cases from various industry sectors regarding individual behavior in whistle blowing intention.

1.1. The Development of Theory

The development of the Theory of Planned Behavior (TPB) is a useful framework for behavior analysis (Cohen et al, 2010). (Black, 2022). TPB integrates attitude toward behavior, subjective norms and perceived behavioral controls to form intentions that lead to behaviour. (Ajzen, 2020).

Attitude toward behavior is an evaluation of either positive or negative behaviors that encourages a person to behave according to the results of the evaluation. Individuals will behave when they have a strong attitude (the motivation to behave), whereas when the individual's attitude is rejected, it will be less intense to behave (Wang et al., 2018). Subjective norm is the conviction of a person to behave/not behave by considering two (two) aspects: normative expectation and motivation to obey. The belief in such behavior is influenced by the group or society's view that such behaviour is acceptable or unacceptable. (Othman et al, 2018). Perceived behavioral control is the conviction of a person to behave/not behave considering the ease and difficulty perceived by the individual. (Ajzen, 2015). The belief that the individual has control over the behavior carried out will encourage the individual to commit such an action, instead the motives of behaviour decrease when the individual does not have control over his actions.

1.2. Attitude toward behavior influences whistleblowing intention

Attitude toward behavior is a response to the results of an individual's evaluation, whether beneficial or detrimental, as well as the consequences when an individual behaves in a particular way. It depicts that when an individual believes that such behavior is capable of yielding benefits with low consequences, then the tendency to behave intentionally increases and vice versa. (Ajzen, 2015). Previous research found that attitudes are important predictors that influence behavior (Park et al (2009); Alleyne (2016); and Latan et al. (2018). Individual attitude stubbornness is assessed as an important factor in stimulating individual intentions, indicating that attitudes are positively linked to whistleblowing intentions as previous research by Carpenter et al (2005), Alleyne (2016); Fee et al (2016); Latan et al (2018), Tarjo et al (2019); Triastuiti et al(2019); (May Amy, 2020); Owusu (2020); Zakaria et al (2020); Arkoful (2022); and Sarikhani et al. (2022). Based on the study, the hypothesis was formulated as follows:

H1: Attitude toward behavior influences whistleblowing intentions.

1.3. Subjective norm influences whistleblowing intention

Belief gives rise to a normative behavioral intensity, a belief in thinking over reference in revealing fraud. The belief in such behavior is influenced by the group or society's view that such behaviour is acceptable or unacceptable. (Othman et al, 2018). Subjective norms have implications for strong motivation against the intention to commit ethical behavior, in this case the more pressure or expectation the individual feels from his environment as well as the positive norms applied to his
environment, the greater the individual shows the intensity of ethical conduct. Previous research found that norms as well as social environmental perspectives regarding fraud disclosure would affect the intention of individuals to commit whistleblowing (Alleyne (2016); Fee (2016); Yadav and Pathak, (2017); Liu et al (2018); Iskandar et al (2018); Danautama (2019); Perdana et al (2019)); Tarjo et al (2013); Triastuiti et al (2016); Zakaria et al (2020); Arkorful (2022); and Sarikhani et al (2022). There are professionally designed official channels, guarantees of confidentiality and security for whistleblowers, a culture of integrity within the organization, and top management support to influence the individual's intentions to do whistleblowing. (May Amy, 2020).

Based on the study, the hypothesis was formulated as follows:

H2: Perceived behavioral control influences whistleblowing intention

Perceived behavioral control refers to a person's belief in behavior/non-behavior, taking into account the ease and difficulties perceived by the individual, as well as the belief on control that he has when there are obstacles and obstacles in conduct. (Ajzen, 2015). Individuals will have an intensity to reveal fraud when there is a belief in the control they have. Previous research found that perceived behavioral control affects the intention of individuals to perform whistleblowing (Alleyne, 2016); Fee al (2016); Danautama (2019); Iskandar et al (2018); Triastuiti et al (2019), Mansor et al (2020; 2022); (May Amy, 2020); Zakaria et al (2020); Arkorful (2022); and Sarikhani et al. (2022). Based on the study, the hypothesis was formulated as follows:

H3: Perceived behavioral control influences whistleblowing intention.

2. Research Methods

This research uses analytical methods by reviewing various research articles with topics relevant to the purpose of the research. This research focuses on the results of journal articles that have been selected for analysis in order to draw a conclusion as a response to a question from the research. (Card, 2012). According to Glass (1976) meta analysis is a statistical approach through the process of summarizing, integrating, and interpreting some of the results of previous research, whereas according to Cooper (2010) meta-analysis is a method of statistics aimed at synthesizing previous research results with similar themes in order to provide meaningful answers.

Meta-analysis testing is carried out through several stages, including:

1. Article eligibility criteria
   Obtained from google scholar and scopus, with criteria namely: (a) articles are openly accessible; (b) there is no duplication of articles; (c) research is quantitative; (d) research articles contain the words “theory of planned behavior and whistleblowing intention” on the headline.

2. Selection Study
   Selection studies are conducted through 4 (four) steps namely identification, filtering, validity, and setting using Prisma Flow Diagram as follows

   ![Prisma Flow Diagram](image)


   Figure 1. Prism Flow Diagram

   Identification of the study is done through filters from google schoolar and Scopus with keywords according to the criteria set. Then, the phase of filtering is done by reading the title and abstract. In the abstract part, it is established that the research is quantitative and measures the variables studied, namely the theory of planned behavior and fraud. Then a validity test is performed on each article referring to the criteria by reading the article in full text.

3. Procedures and Measurements

The meta-analysis procedure in this study was conducted using Jamovi software. Meta-analysis is a quantitative method that aims to analyze specific measurements, such as assessing the strength of the relationship pattern, correlation, or influence between variables (effect size) (Shelby and Vaske, 2008). The magnitude of the correlation is categorized as a small effect size if the obtained effect size value is ≤ 0.02, a medium effect size if the obtained effect size value is ≥ 0.2 to < 0.80, and a large effect size if the obtained effect size value is ≥ 0.8 (McLeod, 2019). Alongside the effect size, a bias assessment is performed to determine whether there is publication bias present in the included studies. The research study is considered unbiased if the significance value of Egger's Regression is > 0.05.

3. Result and Discussion

In this section, the results of the research are described and at the same time given a comprehensive explanation. Results can be presented in numbers, graphs, tables, and others that make readers understand easily. This section emphasizes the new value of research that involves innovation, as
well as its implications. Discourse can be made in some sub-chapters.

The article searched by google schoolar and scopus containing the words “theory of planned behavior and whistleblowing intention” on the title page, 41 articles were obtained on google scholar and 15 articles on scopus. After that, the data is analyzed using the established eligibility criteria, i.e. the article is openly accessible, there is no publication of the article, and the research is quantitative. Fourteen of the 56 articles could be resumed at the eligibility stage for re-examination before being established, resulting in the 14 articles being used as research data. As for the study selection flowchart shown in Figure 2.

For 14 selected studies are detailed in the following table 1.

### Table 1. Results of Research Study Selection

<table>
<thead>
<tr>
<th>No.</th>
<th>Authors and Year of Publication, Article Title</th>
<th>ATB</th>
<th>SN</th>
<th>PBC</th>
<th>Sample Size (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Arkorful, V.E (2022) Unravelling electricity theft whistleblowing antecedents using the theory of planned behavior and norm activation model. (Energy Policy, 160, 112680)</td>
<td>0.475</td>
<td>0.135</td>
<td>0.107</td>
<td>471</td>
</tr>
<tr>
<td>2.</td>
<td>Tuan Mansor, T.M., Ariff, A.M., Hashim, H.A., Ngah, A.H (2022) Whistleblowing intentions among external auditors: an application of the moderated multicomponent model of the theory of planned behaviour (Meditari Accountancy Research, 30(5), 1309-1333)</td>
<td>-0.059</td>
<td>0.038</td>
<td>0.171</td>
<td>274</td>
</tr>
<tr>
<td>3.</td>
<td>Sarikhani, M., Ebrahimi, F (2022) Whistleblowing by accountants: an integration of the fraud pentagon and the extended theory of planned behavior (Meditari Accountancy Research, 30(6), 1740-1763)</td>
<td>0.181</td>
<td>0.383</td>
<td>0.249</td>
<td>300</td>
</tr>
<tr>
<td>6.</td>
<td>Tuan Mansor, T.M., Mohamad Ariff, A., Hashim, H.A (2020) Whistleblowing by auditors: the role of professional commitment and independence commitment (Managerial Auditing Journal, 35(8), 1033-1055.)</td>
<td>-0.12</td>
<td>0.099</td>
<td>0.253</td>
<td>274</td>
</tr>
<tr>
<td>7.</td>
<td>Zakaria, M. (2020) Adopting the planned behavioural theory in predicting whistleblowing intentions among indonesian public officials (Management and Accounting Review, 19(3), 25-47)</td>
<td>0.627</td>
<td>0.148</td>
<td>0.027</td>
<td>152</td>
</tr>
<tr>
<td>8.</td>
<td>Danutama (2019) Implementasi Theory Planned Behavior pada Perilaku Whistleblowing dengan Faktor Demografi sebagai Variabel Moderasi (Studi Empiris Mahasiswa Akuntansi pada Universitas di Surakarta) (Doctoral dissertation, Universitas Muhammadiyah Surakarta)</td>
<td>0.58</td>
<td>0.112</td>
<td>0.683</td>
<td>212</td>
</tr>
<tr>
<td>9.</td>
<td>Tarjo, Tarjo; Suwito, Anang; Aprillia, Ifa Diah; Ramadan, Greska Redielano (2019) Theory of planned behavior and whistleblowing intention (Jurnal Keuangan dan Perbankan, 23(1), 43-57)</td>
<td>0.791</td>
<td>0.765</td>
<td>0.723</td>
<td>112</td>
</tr>
<tr>
<td>10.</td>
<td>Triastuti, Akyuning; Jati, Sutopo Patria; Warsono, Hardi (2019)</td>
<td>0.948</td>
<td>0.745</td>
<td>0.708</td>
<td>85</td>
</tr>
</tbody>
</table>

Figure 2. Prism Flow Diagram of Study Selection Results
The results of the attitude toward behavior variable correlation test using JAMOVI software on the coefficient data and the number of samples of 14 studies show the following results:

<table>
<thead>
<tr>
<th>No.</th>
<th>Authors and Year of Publication, Article Title</th>
<th>Research Data</th>
<th>Sample Size (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Iskandar, Azzwar; Saragih, Rahmaluddin (2018) Pengaruh Sikap ke Arah Perilaku, Norma Subjektif, dan Persepsi Kontrol Atas Perilaku Terhadap Niat dan Perilaku Whistleblowing (Jurnal Tata Kelola &amp; Akuntabilitas Keuangan Negara, 4, 63-84)</td>
<td>0.091</td>
<td>199</td>
</tr>
<tr>
<td>12</td>
<td>Perdana, Ari Andika; Hasan, Amir; Rasuli, M (2018) Pengaruh Sikap, Norma Subyektif, Persepsi Kontrol Perilaku dan Etika terhadap Whistleblowing Intention dan Perilaku Whistleblowing (Studi Empiris di BPKP Perwakilan Riau dan Sumatera Barat) (Jurnal Akuntansi Keuangan Dan Bisnis, 11(1), 89-98)</td>
<td>0.603</td>
<td>89</td>
</tr>
<tr>
<td>13</td>
<td>Fee (2016) Pemoderasian Locus Of Control Dalam Pengaruh Audit Tenure Pada Kualitas Audit (E-Jurnal Ekonomi dan Bisnis Universitas Udayana, 5, 1543-1568)</td>
<td>0.276</td>
<td>116</td>
</tr>
<tr>
<td>14</td>
<td>Park, H., Blenkinsopp, J (2009) Whistleblowing as planned behavior - A survey of south korean police officers (Journal of business ethics, 85, 545-556)</td>
<td>0.039</td>
<td>296</td>
</tr>
</tbody>
</table>

The results of the attitude toward behavior variable correlation test using JAMOVI software on the coefficient data and the number of samples of 14 studies show the following results:

Table 2. Results of the Attitude Toward Behavior Variable Correlation Test

<table>
<thead>
<tr>
<th>Estimate</th>
<th>se</th>
<th>Z</th>
<th>p</th>
<th>Cl Lower Bound</th>
<th>Cl Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.481</td>
<td>0.136</td>
<td>3.54</td>
<td>&lt; .001</td>
<td>0.215</td>
</tr>
</tbody>
</table>

Source: JAMOVI software

Based on the table it is known that the estimate correlation result of 0.481 with a P value <0.001. The value of 0.481 is between ≥ 0.2 to < 0.80, so it belongs to the medium effect size category with a value of P < 0.001, this indicates that there is a significant relationship between attitude toward behavior and whistleblowing intention. The results of the correlation test for the subjective norm variable, conducted using JAMOVI software, based on the coefficient data and the sample size of the 14 studies, are presented in Table 3:

Table 3. Results of Subjective Norm Variable Correlation Test

<table>
<thead>
<tr>
<th>Estimate</th>
<th>se</th>
<th>Z</th>
<th>p</th>
<th>Cl Lower Bound</th>
<th>Cl Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.345</td>
<td>0.0802</td>
<td>3.98</td>
<td>&lt; .001</td>
<td>0.162</td>
</tr>
</tbody>
</table>

Source: JAMOVI software

Based on the table it is known that the estimate correlation result of 0.345 with a P value <0.001. The value of 0.345 is between ≥ 0.2 to < 0.80, so it belongs to the category of medium effect size with a value of P < 0.001, this indicates that there is a significant relationship between subjective norm and whistleblowing intention.

The results of the correlation test for the perceived behavioral control variable, conducted using JAMOVI software, based on the coefficient data and the sample size of the ten studies, are presented in Table 4:

Table 4. Results of Perceived Behavioral Control Variable Correlation Test

<table>
<thead>
<tr>
<th>Estimate</th>
<th>se</th>
<th>Z</th>
<th>p</th>
<th>Cl Lower Bound</th>
<th>Cl Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.336</td>
<td>0.0859</td>
<td>3.92</td>
<td>&lt; .001</td>
<td>0.168</td>
</tr>
</tbody>
</table>

Source: JAMOVI software

Based on the table it is known that the estimate correlation result of 0.336 with a P value <0.001. The value of 0.336 is between ≥ 0.2 to < 0.80, so it is included in the category of medium effect size with a value of P < 0.001, this indicates that there is a significant relationship between perceived behavioral control and whistleblowing intention.

In the risk bias measurement of the study used p values on Begg and Mazumdbar Rank with a result of 0.188 on the attitude toward behavior variables,
0.079 on the subjective norm variable, and 0.066 on the perceived behavioral control variable.

3.1. Attitude toward behavior influences whistleblowing intention

The meta-analysis results showed that there was a significant influence of attitude toward behavior on whistleblowing intentions with a value of 0.481 and a significance of <0.001. It shows that the attitude towards whistleblowing intentions explains two main things, namely how much the individual believes in the consequences caused when the individual commits a whispering intention and the subjective assessment of such consequences. The higher the tendency that by revealing fraud is able to benefit both among other things the feeling of satisfaction has saved the organization from the loss of fraud and the absence of negative consequences caused by becoming a whistleblower, the higher the intensity to do whistleblowing. This is in line with a previous study by Tarjo et al (2019); Triastuiti et al (2013); (May Amy, 2020); Owusu (2020); Zakaria et al (2020); Arkoful (2022); and Sarikhani et al (222) that stated that attitude toward behavior influences whistleblowing intentions. Based on this description, then the first hypothesis that there is an influence of attitude toward behavior on whistleblowing intention is accepted.

3.2. Subjective norm influences whistleblowing intention

The meta-analysis results showed that there was a significant influence of subjective norms on whistleblowing intentions with a value of 0.345 and a significance of <0.001. It shows that the intention of an individual to reveal fraud increases when an individual believes that the people in his or her environment and the norms in it, whether it be the work, family, and other social environment, support fraud prevention through whistleblowing systems. There are professional-designed official channels, guarantees of confidentiality and security for whistleblowers, a culture of integrity within the organization, and top management support to influence the individual's intentions to do whistleblowing. (May Amy, 2020). This is in line with previous studies with the highest value of influence on the subjective norm variable by Fee (2016); Iskandar et al (2018); Danautama (2019); Perdana et al (2019), Tarjo et al (2013); Triastuiti et al (2016); Zakaria et al (2020); Arkoful (2022); and Sarikhani et al (222) which stated that the subject norm influences whistleblowing intentions. Based on this description, then the second hypothesis that there is an influence of subjective norms on whistleblowing intentions is accepted.

3.3. Perceived behavioral control influences whistleblowing intention

The meta-analysis results showed that there was a significant influence of perceived behavioral control on whistleblowing intentions with a value of 0.336 and a significance of <0.001. It shows that the individual's intention to be a whistleblower increases when the individual believes he has the control and the opportunity to support him in revealing fraud. This is in line with previous research studies by Fee et al (2016); Danautama (2019); Iskandar et al (2018); Triastuiti et al (2019), Mansor et al (2020; 2022); (May Amy, 2020); Zakaria et al(2020); Arkoful (2022); and Sarikhani et al(222) that stated perceived behavioral control influenced whistleblowing intentions. Based on this description, then the third hypothesis that there is an influence of perceived behavioral control on whistleblowing intention is accepted.

The comparison of the correlation test values of the three known variables of the study is entirely between ≥ 0.2 to < 0.80, so it is included in the medium effect size category with a coefficient value of < 0.05. As for the highest correlations on the variable attitude toward behavior, then the subjective norm variable, and the lowest on the perceived behavioral control variable. It is understood that in an attempt to deal with fraud through the preventive approach of whistleblowing system, it is necessary to stimulate the increased intention of the individual to reveal fraud.

4. Conclusion

Fourteen of the 53 selected studies were tested through meta-analysis according to previously established eligibility criteria. The research was conducted using JAMOVI software with coefficient data and the number of samples of the study selected. Based on the results of the meta-analysis of whistleblowing systems using the theory of planned behavior, it is known that the correlation values of each variable, namely attitude toward behaviour, subjective norm and perceived behavioral control, are between ≥ 0.2 to < 0.80, so they are in the medium effect size category with a coefficient value of < 0.05. It describes that each variable has a significant influence on the whistleblowing intention and can be used as a predictor in analyzing the WhistleBlowing Intention. As for the highest correlation on the variable attitude toward behavior, then the subjective norm variable, and the lowest on the perceived behavioral control variable.

Attitude toward behavior as the most important factor in increasing whistleblowing intention can be realized from the positive perspective of the individual that revealing fraud is a positive and beneficial thing as well as convinced with no consequences by becoming a whistleblower. Further related perceived behavioral control can be realized through the development of integrity to increase the awareness of individuals to reveal fraud as well as ease in the process of fraud detection.

Reference


