

Factors Influencing Environmental Disclosure: A Case Study of Manufacturing Companies in Indonesia*

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Abstract

The main objective of this research is to examine the effect of organizational culture, environmental uncertainty, and manager's personnel value on environmental disclosure through the environmental organizational structure of manufacturing companies on the Indonesia Stock Exchange. This research uses the structuration and contingency theory. The sample in this study focused on the level of heads or managers or directors of manufacturing companies listed on the Indonesia Stock Exchange. The research data was obtained through an online questionnaire distributed to heads or managers. The total sample of this study is 161 manufacturing companies. The data comprising of 64 respondents was completed and can be processed. Empirical testing used Structural Equation Modeling (SEM) through Partial Least Square (PLS). The result shows that environmental uncertainty and management personnel value have a positive effect on the environmental organizational structure, as well as the environmental organizational structure has a positive effect on the environmental disclosure. However, organizational culture has no effect on the environmental organizational structure. This research can provide benefits for manufacturing companies. The limitation include the low level of response from the respondents. Also the results cannot be generalized due to its specific focus on the manufacturing companies.

Keywords: Organizational Culture, Environmental Uncertainty, Manager Personnel Values, Environmental Disclosure, Environmental Organizational Structure

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1. Introduction

Giannarakis et al. (2019) showed that corporate governance has an effect on the environmental disclosure.

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Al-Shaer (2018) showed that non-financial information, in this case, environmental information, has the ability to improve investment decisions. Du (2018) revealed that the disclosure of environmental information has a significant negative relationship with the discounting of foreign shares. This shows that disclosure of environmental information provides valuable and additional information to reduce the information asymmetry between domestic and foreign investors, thereby reducing the discount on foreign shares. Chandok & Singh (2017) concluded that the environmental disclosure of the website has a relationship with leverage, firm size and systematic risk. However, profitability and environmental disclosure has an inverse relationship.

Previous research has shown that there are differences in the theoretical interpretations of environmental disclosure with an emphasis on stakeholder theory that has been most commonly used in the study (Eljayash, 2017). Hassan & Guo (2017) described that companies that disclose environmental information in independent environmental reports tend to be able to provide a higher level of environmental information than companies that combine information on financial and environmental disclosures in their annual report. D'Amico et al. (2014)

revealed that between environmental disclosures, the presence of minority shareholders and large auditors has a negative and statistically significant relationship as well as the list of companies, including in foreign markets. Papagiannakis & Lioukas (2012) examined in Greece, the research demonstrated that the personnel values of the top managers influence responses indirectly, through the formation of their environmental attitudes, while the direct relationships are not significant. Subjective norms, which express stakeholder expectations, affect the environmental responsiveness of companies, with a stronger influence than attitude. Rao et al. (2012) conducting research in Australia revealed that there is a positive relationship between the level of environmental reporting and the proportion of independent and female directors on the board. However, there is a negative relationship between the level of environmental reporting and institutional investors and the board size.

Caprara & Steca (2007), Schwartz (2010), Ganapathy & Kabra (2017) argue that the personnel values are important for understanding human agency: they drive human judgment, decisions, and actions. Kotey & Meredith (1997) revealed that the values of personnel managers have an important influence on their perceptions and behavior in how to influence the responses and performance of the company's environment (Kotey & Meredith, 1997). Personnel values as well as attitudes have been associated with a clear impact on corporate social responsibility initiatives (Hemingway & MacLagan, 2004), environmental responsiveness initiatives (Hemingway & MacLagan, 2004), environmental responsiveness (Papagiannakis & Lioukas, 2012), the company's environmental performance (Aragon-correa & Hiz, 2016) and environmental aspects, of a particular company (Álvarez-Gil et al., 2007).

Previous studies on social accounting have examined firm characteristics, such as media attention (Deegan et al., 2002; Islam & Deegan, 2010); and the importance of stakeholders (Deegan & Blomquist, 2006; Liesen et al., 2015); as the main driver of the environmental disclosure. Adams (2002) and Husillos and Larrinaga (2011) described these characteristics as external factors, not internal factors, such as organizational structure and personnel commitment (Adams, 2002; Buhr, 2002; Adams & McNicholas, 2006; Contrafatto, 2014). Adams (2002) suggested that internal organizational processes and personnel attitudes towards environmental disclosure are the key factors for further investigation to better understand environmental disclosure. However, internal contextual factors receive far less attention than the external factors (Adams, 2002; Husillos & Larrinaga, 2011). Environmental disclosures that focus on external factors may explain reasons that are still "largely unclear why individuals do and do not support and develop

social accounting and accountability and how initiatives are developed or contested" (Gray et al., 2014).

Sewell (1992) revealed that the values of personnel managers that affect environmental disclosure should be analyzed in the context of organizational structure. This is because organizational structure is very important in understanding agency potential. Sewell (1992) described structures that empower agents to make themselves visible in various organizational contexts, namely practices, routines, commitments, and habits. This is because only with the support of this structure, agents can see their values, desires and intentions (Orlikowski, 2000; Sewell, 1992; Whittington, 2015). Whittington (2015) states that it is this determinant of the role of structure that makes Giddens (1984) refer to the mediating role of structure in actors: structure always underlines the agency of social action (Giddens, 1984). In this case, the effect of structural mediation on actor agency can represent structural constraints. The structure can determine the direction and intensity of agency effects (Archer, 2003; Giddens, 1984).

Previous researches have examined the issue of environmental disclosure such as by (Ifada et al., 2021; Nguyen et al., 2020; Nguyen, 2020). Ifada et al. (2021) investigated environmental performance, independent board of commissioners, and firm size on environmental disclosure in mining companies in Indonesia for the period between 2017 to 2019 by using secondary data. Nguyen et al. (2020) examined the business sector, firm size, corporate manager perceptions, profitability, financial leverage, community pressure, pressures from stakeholders, government pressure influencing environmental information disclosure on the Ho Chi Minh City Stock Exchange about 120 companies. Nguyen, (2020) examined the stakeholders pressure, corporate characteristics, coercive pressure of government agencies, environmental awareness of senior managers and accountant qualifications of environmental accounting. This research is different from previous researches. This is because this study investigates factors from the manager's side, organizational culture influences environmental disclosure through the environmental organizational structure of manufacturing companies with a survey.

The research focuses on investigating organizational culture, environmental uncertainty, manager's personnel value, environmental organizational structure and environmental disclosure in manufacturing companies in Indonesia. This research provides several contributions. The first contribution is to develop knowledge, especially management accounting related to environmental disclosures. Other contribution is related to the environmental disclosure made by the companies from the manager's perspective especially from manufacturing companies.

2. Literature Review

2.1. Structuration Theory

Structuration theory is a theory that rejects dualism (contradiction) and tries to find a linkage after a sharp clash between functional structures and phenomenological constructionism occurs. Reflexive activity monitoring is a chronic feature of day-to-day actions and involves the behavior of not only individuals but also of others. In other words, actors not only constantly monitor the flow of their activities and expect others to do the same for themselves; they also routinely monitor the social and physical aspects of the context in which they move. By rationalization of action actors – it also routinely maintain a continuous ‘theoretical understanding’ of the fundamentals of their activities. As already noted, having such an understanding should not be confused with discursive reasoning for a particular item of behavior, or even with the ability to determine that reason discursively. However, it is expected by competent agents of others and a major criterion of competence applied to everyday behavior - that actors will usually be able to explain most of what they do (Giddens, 1979, 1984). Structures are rules and resources, organized as characteristics of a social system. Structures exist only as ‘structural properties’. Meanwhile, the system is a reproducible relationship between actors or collectivities, organized regularly by the social practices. However, the concept of structuration is a provision that governs the continuity or transformation of structures, and therefore the reproduction of the system (Giddens, 1979). Structuration theory represents the perspective of entrepreneurs to understand how they actually use the resources provided by the entrepreneurial ecosystem (Scheidgen, 2021).

2.2. Contingency Theory

The contingency approach as a theory began in the mid-1960s and this approach developed very rapidly in the field of management accounting (Otley, 1980). Several studies related to management accounting claim that contingency theory is a very dominant paradigm (Cadez & Guilding, 2008). Contingency formulations were built in the organizational theory literature in the early mid-1960s, while contingency theory was in the accounting literature in the mid-1970s (Otley, 1980). Contingency Theory has a foundation deriving from the organizational theory which considers contextual variables only at the organizational level. There is a view that studies based on the contingency theory that are better at constructing and refining theories with the core of organizations (Chenhall, 2003). Contingency theory discusses valuable factors that helps in understanding organizational effectiveness by examining the relationships

and interactions between the organization, the environment, the structure and the design of the suitability of management control and accounting systems. Although this theory arises from organizational theory with new factors (variables), contingency theory has been criticized for its simplicity. Salawu et al. (2021) revealed that a company can create a good name as a result of its efforts and achieve social acceptance. This in turn will generate competitive advantage and will result in the creation of a smooth operating environment in addition to winning the interest of the investors who are so interested in maintaining an environmentally embracing contingency approach to environmental disclosure (Salawu et al., 2021).

2.3. Organizational Culture and Environmental Organization Structure

Organizational culture refers to shared assumptions, values and norms (Schein, 2003). Organizational culture is a source of sustainable competitive advantage (Barney, 1991) and empirical research shows that it is a key factor for organizational effectiveness (Denison & Mishra, 1995; Gordon, 1992). Specifically, Denison & Mishra (1995); Fey & Denison (2003) identify and validate four dimensions of organizational culture that are conducive to organizational effectiveness, namely adaptability, consistency, involvement and mission. Adaptability refers to the degree to which an organization has the ability to change behavior, structures and systems to survive after environmental changes. Consistency refers to the extent to which the members’ beliefs, values and expectations are consistently held. Involvement refers to the level of participation of organizational members in decision making. Mission refers to the existence of a shared definition of the organizational goals. Organizational culture influences organizational structure (Zheng et al., 2013; Islam et al., 2015). Thus the hypothesis proposed is as follows:

H1: Organizational culture effects on the Environmental Organization Structure.

2.4. Environmental Uncertainty and Environmental Organization Structure

Environmental uncertainties and information characteristics are required by the key decision makers. When environmental uncertainty is low, decision makers try to find information for coordination and control (Thompson, 1967). With increasing environmental uncertainty, decision makers seek additional information for planning. Previous research has dealt with the environmental uncertainty and organizational structure (Miller, 1988). Gordon and

Narayanan (1984) stated that environmental uncertainty is one of the variables influencing organizational structure. The underlying theory is the contingency theory, which explains the influence between environmental uncertainty and environmental organizational structure (Otley, 1980). Environmental uncertainty effects organizational structure (Lysonski et al., 1995). From this description, the following hypothesis is proposed:

H2: *Environmental uncertainty effects on the environmental organizational structure.*

2.5. Manager's Personnel Values and Environmental Organization Structure

The previous discussion shows that the influence of managers' personnel values on environmental disclosure must be analyzed in the context of the organizational structure, because structure is very important in understanding agency potential (Sewell, 1992). In this case, the influence of structural mediation on the agency of actors can represent structural boundaries, the structure can determine the direction and intensity of the agency effects (Archer, 2003; Giddens, 1984).

Buhr (2002) examined two cases where changes championed by Corporate Social Responsibility Managers, consisting of new sustainability reporting initiatives, were not successfully communicated throughout the organization. The consequence of this lack of internal communication is that plans for improving the quality of environmental reporting have no effect. Contrafatto & Burns (2013) outlines that although "agency is the key", the structural element means that corporate social responsibility managers, are able to "gather some momentum. Different studies have demonstrated the relevance of organizational structure and the way in which it supports value-driven change." -values, managerial intentions of managerial personnel to introduce new social reporting practices (Adams, 2002; Adams & McNicholas, 2006; Buhr, 2002; Contrafatto & Burns, 2013). Manager's personnel values has a positive effect on the environmental organizational structure (Luque-Vílchez et al., 2019). Based on the description above, the hypothesis proposed is as follows:

H3: *Manager's Personnel Value effects on the Environmental Organizational Structure.*

2.6. Environmental Organization Structure and Environmental Disclosure

Giddens, (1984) revealed that the organizational structure of the environment and environmental uncertainty is a determinant of environmental disclosure. The notion of structural duality, as formulated by (Giddens, 1979, 1984,

1990), establishes that both institutions and structures are very important. to explain social life. The duality of structure refers to the combined effect of agency and structure. Ideas originating from the structure of duality have yielded results in areas such as socio-politics (Baek, 2010; Beck et al., 2010; Sewell, 1992), organizational studies (Orlikowski, 2000; Whittington, 2015), and accounting (Coad et al., 2014; Dillard & Pullman, 2017; Englund et al., 2017). Thus, all organizational structures have an influence on the environmental disclosure; the sustainability vision of the company (Adams & McNicholas, 2006a; Contrafatto & Burns, 2013); a commitment to the social environment of the company (Adams, 2002; Husillos & Larrinaga, 2011); authority functions of the environmental management within the company's organizational structure (Buhr, 2002; Contrafatto & Burns, 2013). Environmental organizational structure has a positive effect on the environmental disclosure (Luque-Vílchez et al., 2019). Thus the hypothesis proposed is as follows:

H4: *Environmental Organization Structure effects on environmental disclosure.*

The conceptual framework of this study is depicted in Figure 1.

3. Research Methods

3.1. Data

This study used primary data. The data was collected from 161 manufacturing companies by using questionnaires which were listed on the Indonesia Stock exchange via online questionnaires.

3.2. The Measurement of Variables

3.2.1. Organizational Culture

This organizational culture was adapted from (McDermott & Stock, 1999; Naor et al., 2008; Stock et al., 2007). This instrument consists of four dimensions, namely development culture, group culture, rational culture and hierarchical culture. This measure indicates how the organizational culture is, on a Seven-point scale from 1 "strongly disagrees" to 7 "strongly agrees".

3.2.2. Manager's Personnel Value

Manager Personnel Values are "concepts and beliefs; about desirable behavior; that transcend a given situation; guide evaluation of behavior and are ranked according to its relative importance" (Hemingway & Maclagan, 2004). The values chosen to measure the personnel values of managers in this study are those related to the goal of

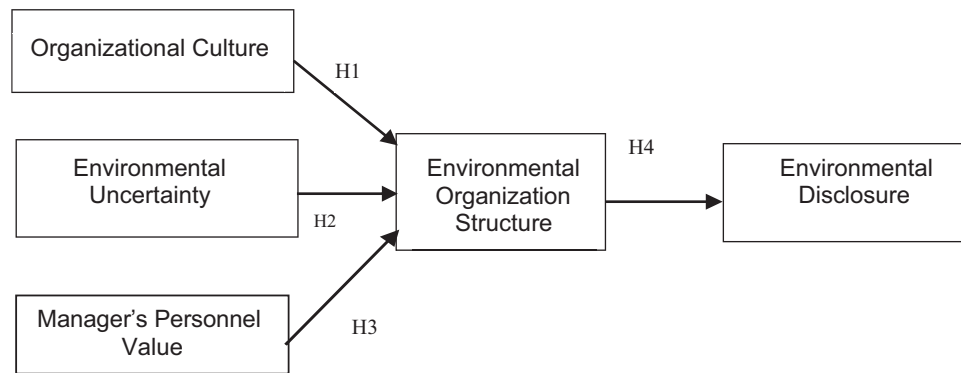


Figure 1: Conceptual Framework

universalism, which is defined as “understanding, respect, tolerance, and protection for the well-being of all people and for nature” (Schwartz, 2003). These values are the hallmark of self-transcendence (Bardi & Schwartz, 2003), namely the personnel’s concern for self-transcendence in society. This variable has also been used to explain responses to the environment (Papagiannakis & Lioukas, 2012), and environmental strategies (Fernández et al., 2006). We used the original questionnaire developed by (Schwartz, 2003), to measure the value of self-transcendence using a Questionnaire with a Likert scale (from 1: strongly disagree until 7: strongly agree) which measures universalism and virtue.

3.2.3. Environmental Uncertainty

Previous studies used the varying strengths of the external environment as an index to measure environmental uncertainty (Liao et al., 2011). Environmental uncertainty instruments by environmentalists (Liao et al., 2011) are more suitable and are thus adapted. This measure is a seven-point Likert scale consisting of five items (see attachment). These items reflect the size and variety of customers, suppliers and competition.

3.2.4. Environmental Organizational Structure

Environmental organizational structure through corporate environmental practices (Adams, 2002; Adams & McNicholas, 2006; Buhr, 2002; Contrafatto & Burns, 2013). Environmental practices that are more developed in an organization will require higher environmental commitments, dynamics, habits, and routines in this organization. The questionnaire items use a seven-point Likert scale 1 (Very undeveloped) to a scale of 7 (Highly developed).

3.2.5. Environmental Disclosure

This study uses seven categories related to the environmental disclosure from (Clarkson et al., 2008). These

instruments are related to the environmental disclosure using a 7 Likert scale, a scale of 1 “Very not applied” to a scale of 7 “Highly applied”.

3.3. Method of Analysis Data

The data analysis used the Partial Least Square (PLS) method, and equation model of Structural Equation Modeling (SEM) based on component. The analysis of the outer model with loading factor, AVE, communality >0.5, discriminant with cross loading >0.5; reliability with Cronbach alpha >0.60, and composite reliability >0.7. The last analysis is hypothesis testing with the probability value <0.05. The following equation of this study:

$$SOL = \alpha + \beta_1 BO + \beta_2 KPL + \beta_3 NPM + \varepsilon$$

$$PL = \alpha + \beta_1 SOL + \varepsilon$$

Note: BO: Organizational Culture; KPL: Environmental Uncertainty; NPM: Manager’s Personnel Values; SOL: Environmental Organization Structure; PL: Environmental Disclosure.

4. Results

4.1. Respondent Profile

Data in Table 1 shows that in terms of gender, the respondents are dominated by men, as many as 43 people (67.2%), and women as many as 21 people or 32.8%. Furthermore, based on the age of the respondents, there were 53 people aged between 30 to 40 years (82.8%), 10 people aged between 41 to 50 years (15.6%) and >51 years as many as 1 person (1.6%). Further, in terms of educational background, 53 participants hold a bachelor degree (82.8%) and 11 participants hold a master degree (17.2%). The last part of the respondent’s profile is related to the division. Most of them work in the financial division as many as 20 people (31.25%).

Table 1: Respondent Profile ($N = 64$)

Description		Total	Percentage (%)
Gender	Male	43	67.2
	Female	21	32.8
Age	30–40 year	53	82.8
	41–50 year	10	15.6
	>51 year	1	1.6
Level Education	Bachelor	53	82.8
	Master	11	17.2
Division	Financial	20	31.25
	Human Resources	7	10.94
	General	5	7.81
	Marketing	3	4.69
	Production	12	18.75
	Environmental	9	14.06
	Other	8	12.5

Table 2: Descriptive Statistic

Variables	N	Min	Max	Mean	Std Deviation
Organizational Culture	64	1	7	5.73	1.35
Environmental Organizational Structure	64	1	7	5.46	1.34
Environmental Uncertainty	64	1	7	5.63	1.15
Manager's Personnel Value	64	2	7	5.88	1.05
Environmental Disclosure	64	1	7	5.53	1.33

Those working in the production are 12 people (18.75%), those in the environment are 9 people (14.06%), those in the Human resources division are 7 people (10.94%); those in the general division are 5 people (7.81%); those in the marketing division are 3 people (4.69%) and participants working in other divisions are 8 people (12.5%). See Table 1 below.

4.2. Descriptive Statistics

Table 2 shows the descriptive statistic of the variables. The minimal value is one, the highest value from the

Table 3: The Model of Fitness Analysis

Model Fit Indices	
No	Criteria
1	Average path coefficient (APC) = 0.368, $P = 0.001$
2	Average R -square (ARS) = 0.408, $P = 0.001$
3	Average block VIF (AFIF) = 1.236, Good if < 5

maximum value is seven. The highest mean variable is 5.88 and the highest standard deviation is 1.35.

4.3. The Analysis of the Inner Model

Table 3 shows the analysis of the inner model. The inner model analysis include the model fit, the path coefficient, and R^2 . The analysis of model fit aims to examine if the model fits with the data (Figure 2).

In testing the hypotheses above, the coefficient parameters and significant values generated with the bias confidence interval are corrected for 95% and 90% of the independent variables, respectively. From Figure 2 and Table 4, we can see the results for all the hypotheses proposed in this study. All of the proposed hypotheses show a positive effect. From the results of the analysis, this test reveals that the coefficient (β) for the BO \rightarrow SOL relationship is 0.03 with a p value = 0.42. This means that Hypothesis 1 (H1) is not accepted or rejected.

Furthermore, it can be seen that the value of the coefficient (β) on the effect of MPA \rightarrow SOL is 0.22, p is 0.10. This means that hypothesis 2 (H2) is fully supported. Hypothesis 2 (H2) is accepted. Environmental uncertainty has a positive and significant effect on the organizational structure of the environment which supports previous research (Miller, 1988, 1991, Gordon & Narayanan, 1984).

This is in line with the influence of Manager's Personnel Values and Environmental Organizational Structure NPM \rightarrow SOL (H3) where the coefficient value (β) is 0.36 with p value < 0.01. Therefore hypothesis 3 (H3) is accepted. The results of this study support previous research (Adams, 2002; Adams & McNicholas, 2006; Buhr, 2002; Contrafatto, 2014).

Likewise, the last hypothesis SOL \rightarrow PL (H4) which reveals the effect of Environmental Organization Structure has a positive and significant effect on Environmental Disclosure. The coefficient value (β) is 0.83 with p value < 0.01. This means that hypothesis 4 (H4) indicates that the hypothesis is accepted. The results of this study support previous research (Buhr, 2002; Contrafatto & Burns, 2013).

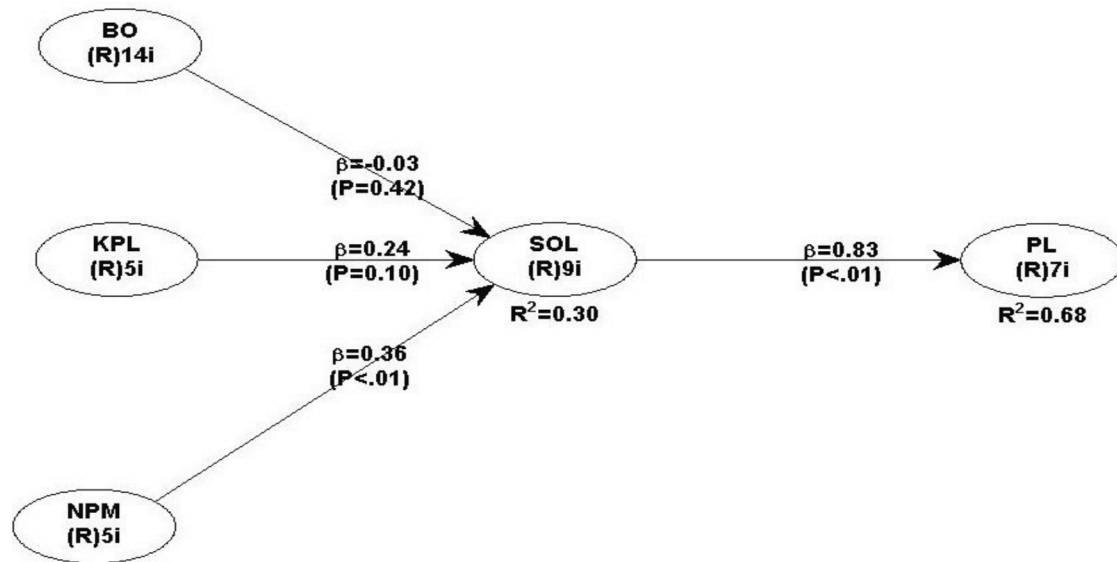


Figure 2: Results from Partial Least Square
 Source: Processed Data.

Note: BO = Organizational Culture; KPL = Environmental Uncertainty; NPM = Manager's Personnel Values; SOL = Environmental Organization Structure; PL = Environmental Disclosure.

Table 4: Result of Hypothesis

Hypothesis	Coefficient	p-value	Result
BO → SOL (H1)	0.03	0.42	Not Supported
KPL → SOL (H2)	0.24	0.10	Supported
NPM → SOL (H3)	0.36	0.01	Supported
SOL → PL (H4)	0.83	0.01	Supported

Note: BO: Organizational Culture; KPL: Environmental Uncertainty; NPM: Manager's Personnel Values; SOL: Environmental Organization Structure; PL: Environmental Disclosure.

4.4. Discussion

4.4.1. Organizational Culture and Environmental Organization Structure

The first hypothesis proposes that “Organizational Culture influences the Environmental Organization Structure”. Based on empirical evidence, it can be concluded that H1 is rejected. This hypothesis neither supports previous research nor does it support contingency theory. This finding does not support previous studies from (Zheng et al., 2013; Islam et al., 2015).

4.4.2. Environmental Uncertainty and Environmental Organization Structure

Hypothesis two (H2) states that the environmental uncertainty influences the environmental organizational

structure which is empirically proven. Therefore hypothesis 2 is accepted. The result of research supports previous research related to environmental uncertainty and organizational structure (Miller, 1988). Gordon & Narayanan (1984) stated that environmental uncertainty is one of the variables influencing the organizational structure. This research also supports the contingency theory. The underlying theory is the contingency theory, which explains the relationship between environmental uncertainty and environmental organizational structure (Otley, 1980). Environmental uncertainty effects organizational structure (Gordon & Narayanan, 1984; Lysonski et al., 1995).

4.4.3. Manager's Personnel Values and Environmental Organization Structure

Hypothesis 3 (H3) states that “Manager's Personnel Values has an influence on the Environmental Organization Structure”. Based on the evidence from this study it can be concluded that H3 is accepted. Whittington (2015) describes the transformation of manager personnel values into actual changes in the social interactions. The mediating effect of structure on agency can reveal structures that determine the direction and intensity of an agency's influence (Archer, 2003; Giddens, 1984). The findings of this study support the structural theory.

This study supports the previous research (Adams, 2002; Buhr, 2002; Contrafatto & Burns, 2013). Adams (2002) conducted a research by means of the interviews with seven large multinational companies in the chemical and

pharmaceutical sector in the UK and Germany to identify internal contextual factors that influence the nature and extent of reporting. Buhr (2002) revealed that the dimensions of dominance and the nature of the agent-structure interaction are used to understand the initiation process. For the two companies studied, environmental reporting appears to be largely a tool for increasing organizational transparency regarding environmental performance. However, environmental reports also serve another purpose. Both cases demonstrate the company's refusal to produce environmental reports that must be addressed (Contrafatto, 2014). This finding supports previous research by (Luque-Vílchez et al., 2019) which showed that manager's personnel values has a positive effect on the environmental organizational structure.

4.4.4. Environmental Organization Structure and Environmental Disclosure

Hypothesis four (H4) states that the environmental organizational structure has an effect on the Environmental Disclosure. The results of this study, shows empirical evidence which states that this fourth hypothesis is accepted. This hypothesis supports the structuration theory. Giddens (1984) guides the hypothesis about the role played by managers' personnel values and environmental organizational structure and environmental uncertainty as a determinant of the quality of environmental disclosure. Environmental organizational structure has a positive and significant effect on environmental disclosure (Buhr, 2002; Contrafatto & Burns, 2013). This study supports previous research by (Luque-Vílchez et al., 2019) which showed that environmental organizational structure has a positive effect on environmental disclosure.

5. Conclusion

The first hypothesis of this study shows the insignificant relationship between organizational culture and environmental organizational structure. The second hypothesis reveals that the environmental uncertainty has a positive and significant effect on the environmental organizational structure. The higher the environmental uncertainty, the higher will be the organizational structure of the environment. This is in line with the third and fourth hypotheses which reveal that the manager's personnel values affect the environmental organizational structure. The higher the manager's personnel values, the higher the environmental organizational structure is. The environmental organizational structure affects environmental disclosure, which shows a positive and significant effect.

This study has several limitations. The first weakness is this research only focused on manufacturing companies

listed on the Indonesian Stock Exchange. Not many research participants were involved. Second, this study cannot be generalized, because it only focuses on manufacturing companies. This study has an R square (R^2) of 68%, which means that there are other factors that can affect environmental disclosure.

This study has several suggestions for future research. The first suggestion is that further research can employ qualitative methods for example case studies with more detailed interviews on this topic or other type of qualitative methods. Future research should focus on one sector and be more specific, for example a focus on the financial or mining sector. The next suggestion is that further researchers can test other variables that have not been tested in this study, for example corporate governance, organizational commitment, and other factors.

References

- Adams, C. A. (2002). Internal organisational factors influencing corporate social and ethical reporting. *Accounting, Auditing & Accountability Journal*, 15(2), 223–250. <https://doi.org/10.1108/09513570210418905>
- Adams, C. A., & Mcnicholas, P. (2006a). *Making a difference organisational change*. <https://doi.org/10.1108/09513570710748553>
- Adams, C. A., & Mcnicholas, P. (2006b). Making a difference Sustainability reporting, accountability and organisational change. *Accounting, Auditing & Accountability Journal*, 20(3), 382–402. <https://doi.org/10.1108/09513570710748553>
- Al-Shaer, H. (2018). Do environmental-related disclosures help enhance investment recommendations?: UK-based evidence. *Journal of Financial Reporting and Accounting*, 16(1), 217–244. <https://doi.org/10.1108/JFRA-03-2016-0020>
- Álvarez-Gil, M. J., Berrone, P., Husillos, F. J., & Lado, N. (2007). Reverse logistics, stakeholders' influence, organizational slack, and managers' posture. *Journal of Business Research*, 60(5), 463–473. <https://doi.org/10.1016/j.jbusres.2006.12.004>
- Aragon-correa, J. A., & Hiz, D. I. L. (2016). The Influence of Technology Differences on Corporate Environmental Patents: A Resource-Based Versus an Institutional View of Green Innovations. *Business Strategy and the Environment*, 25, 421–434. <https://doi.org/10.2307/256942>
- Archer, M. S. (2003). *Structure, Agency and the Internal Conversation* (Issue June). Cambridge, UK: Cambridge University Press.
- Baek, Y. M. (2010). To Buy or Not to Buy: Who are Political Consumers? What do they Think and How Do they Participate? *Political Studies*, 58, 1065–1086. <https://doi.org/10.1111/j.1467-9248.2010.00832.x>
- Bardi, A., & Schwartz, S. H. (2003). Values and Behavior: Strength and Structure of Relations. *Personality and Social*

- Psychology Bulletin*, 29(10), 1207–1220. <https://doi.org/10.1177/0146167203254602>
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Beck, A. C., Campbell, D., & Shrives, P. J. (2010). Content analysis in environmental reporting research: Enrichment and rehearsal of the method in a British-German context. *British Accounting Review*, 42(3), 207–222. <https://doi.org/10.1016/j.bar.2010.05.002>
- Buhr, N. (2002). A Structuration View On the initiation of Environmental Reports. *Critical Perspectives on Accounting*, 14, 17–38. <https://doi.org/10.1006/cpac.2000.0441>
- Cadez, S., & Guilding, C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 33(7–8), 836–863. <https://doi.org/10.1016/j.aos.2008.01.003>
- Caprara, G. V., & Steca, P. (2007). Prosocial Agency: The Contribution of Values and Self Efficacy Beliefs to Prosocial Behavior Across Ages. *Journal of Social and Clinical Psychology*, 26(2), 218–239.
- Chandok, R. I. S., & Singh, S. (2017). Empirical study on determinants of environmental disclosure: Approach of selected conglomerates. *Managerial Auditing Journal*, 32(4–5), 332–355. <https://doi.org/10.1108/MAJ-03-2016-1344>
- Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency based research and directions for the future. *Accounting, Organizations & Society*, 28, 127–168. <https://doi.org/10.1063/1.5024417>
- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4–5), 303–327. <https://doi.org/10.1016/j.aos.2007.05.003>
- Coad, A., Jack, L., Othman, A., & Kholeif, R. (2014). *Structuration Theory: Reflections on its Further Potential for Management Accounting Research*, 2011.
- Contrafatto, M. (2014). Accounting , Organizations and Society The institutionalization of social and environmental reporting: An Italian narrative. *Accounting, Organizations & Society*, 39(6), 414–432. <https://doi.org/10.1016/j.aos.2014.01.002>
- Contrafatto, M., & Burns, J. (2013). Social and environmental accounting, organisational change and management accounting: A processual view. *Management Accounting Research*, 24(4), 349–365. <https://doi.org/10.1016/j.mar.2013.10.004>
- D’Amico, E., Coluccia, D., Fontana, S., & Solimene, S. (2014). Factors Influencing Corporate Environmental Disclosure. *Business Strategy and the Environment*, 25(3), 178–192. <https://doi.org/10.1002/bse.1865>
- Deegan, C., & Blomquist, C. (2006). Stakeholder in X uence on corporate reporting: An exploration of the interaction between WWF-Australia and the Australian minerals industry. *Accounting, Organizations and Society*, 31, 343–372. <https://doi.org/10.1016/j.aos.2005.04.001>
- Deegan, C., Rankin, M., & Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983–1997: A test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 15(3), 312–343. <https://doi.org/10.1108/09513570210435861>
- Denison, D. R., & Mishra, A. K. (1995). Toward a Theory of Organizational Culture and Effectiveness. *Organization Science*, 6(2), 204–223.
- Dillard, J., & Pullman, M. (2017). Cattle, Land, People, and Accountability Systems: The Makings of a Values-based Organisation. *Social and Environmental Accountability Journal*, 0(0), 1–26. <https://doi.org/10.1080/0969160X.2017.1284600>
- Du, X. (2018). A Tale of Two Segmented Markets in China: The Informative Value of Corporate Environmental Information Disclosure for Foreign Investors. *International Journal of Accounting*, 53(2), 136–159. <https://doi.org/10.1016/j.intacc.2018.05.001>
- Eljayash, K. (2017). Environmental disclosure studies in Middle East and Northern Africa in shadow of theoretical context. *World Journal of Entrepreneurship, Management and Sustainable Development*, 13(4), 334–349. <https://doi.org/10.1108/wjemsd-02-2017-0007>
- Englund, H., Gerdin, J., & Burns, J. (2017). Critical Perspectives on Accounting A structuration theory perspective on the interplay between strategy and accounting: Unpacking social continuity and transformation. *Critical Perspectives on Accounting*, 2016. <https://doi.org/10.1016/j.cpa.2017.03.007>
- Fernández, E., Junquera, B., & Ordiz, M. (2006). Managers’ Profile in Environmental Strategy: A Review of the Literature. *Corporate Social Responsibility and Environmental Management*, 13, 261–274.
- Fey, C. F., & Denison, D. R. (2003). Organizational Culture and Effectiveness: Can American Theory be Applied in Russia. *Organization Science*, 14(6), 686–706.
- Ganapathy, E., & Kabra, K. C. (2017). The Impact of Corporate Governance Attributes on Environmental Disclosures: Evidence from India. *International Journal of Corporate Governance*, 10(1), 24–43. <https://doi.org/10.1177/0974686217701464>
- Giannarakis, G., Andronikidis, A., & Sariannidis, N. (2019). Determinants of environmental disclosure: investigating new and conventional corporate governance characteristics. *Annals of Operations Research*, 294(1–2), 87–105. <https://doi.org/10.1007/s10479-019-03323-x>
- Giddens, A. (1979). *Central Problems in Social Theory Action, Structure and Contradiction in Social Analysis*. London, UK: Macmillan Education Ltd.
- Giddens, A. (1984). *The Constitution of Society*. Cambridge, UK: Polity Press.

- Giddens, A. (1990). *The Consequences of Modernity*. Cambridge, UK: Polity Press.
- Gordon, G. G. (1992). Predicting Corporate Performance from Organizational Culture. *Journal of Management Studies*, 29(6), 1–17. <https://doi.org/10.1111/j.1467-6486.1992.tb00689.x>
- Gordon, L. A., & Narayanan, V. K. (1984). Management accounting systems, perceived environmental uncertainty and organization structure: An empirical investigation. *Accounting, Organizations and Society*, 9(1), 33–47. [https://doi.org/10.1016/0361-3682\(84\)90028-X](https://doi.org/10.1016/0361-3682(84)90028-X)
- Gray, R., Adams, C. A., & Owen, D. (2014). *Accountability, Social Responsibility and Sustainability Accounting for Society and the Environment*. New York: Pearson Education, Inc.
- Hassan, A., & Guo, X. (2017). The relationships between reporting format, environmental disclosure and environmental performance An empirical study. *Journal of Applied Accounting Research*, 18(4), 425–444. <https://doi.org/10.1108/JAAR-06-2015-0056>
- Hemingway, C. A., & MacLagan, P. W. (2004). Managers' Personal Values as Drivers of Corporate Social Responsibility. *Journal Business Ethics*, 50(1), 33–44.
- Husillos, J., & Larrinaga, C. (2011). The Emergence of Triple Bottom Line Reporting in Spain The emergence of triple bottom line reporting in Spain Javier Husillos Carlos Larrinaga-González María José Álvarez-Gil. *Revista Española de Financiación y Contabilidad*, 60(150), 195–219. <https://doi.org/10.1080/02102412.2011.10779701>
- Ifada, L. M., Indriastuti, M., Ibrani, E. Y., & Setiawanta, Y. (2021). Environmental Performance and Environmental Disclosure: The Role of Financial Performance. *Journal of Asian Finance, Economics and Business*, 8(4), 349–362. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0349>
- Islam, M. A., & Deegan, C. (2010). Media pressures and corporate disclosure of social responsibility performance information: A study of two global clothing and sports retail companies. *Accounting and Business Research*, 40(2), 131–148. <https://doi.org/10.1080/00014788.2010.9663388>
- Islam, M. Z., Jasimuddin, S. M., & Hasan, I. (2015). Organizational culture, structure, technology infrastructure and knowledge sharing: Empirical evidence from MNCs based in Malaysia. *Vine*, 45(1), 67–88. <https://doi.org/10.1108/VINE-05-2014-0037>
- Kotey, B., & Meredith, G. G. (1997). Relationships among Owner / Manager Personal Values, Business Strategies, and Enterprise Performance. *Journal of Small Business Management*, 35(April), 37–64.
- Liao, C., Chuang, S., & To, P. (2011). How knowledge management mediates the relationship between environment and organizational structure. *Journal of Business Research*, 64(7), 728–736. <https://doi.org/10.1016/j.jbusres.2010.08.001>
- Liesen, A., Hoepner, A. G., Patten, D. M., & Figge, F. (2015). Does Stakeholder pressure influence corporate GHG emissions reporting? Empirical Evidence from Europe. *Accounting, Auditing & Accountability Journal*, 28(7), 1074–1074.
- Luque-Vílchez, M., Mesa-Pérez, E., Husillos, J., & Larrinaga, C. (2019). The influence of pro-environmental managers' personal values on environmental disclosure: The mediating role of the environmental organizational structure. *Sustainability Accounting, Management and Policy Journal*, 10(1), 41–61. <https://doi.org/10.1108/SAMPJ-01-2018-0016>
- Lyonski, S., Levas, M., & Lavenka, N. (1995). Environmental uncertainty and organizational structure: a product management perspective. *Journal of Product and Brand Management*, 4(3), 7–18.
- McDermott, C. M., & Stock, G. N. (1999). Organizational culture and advanced manufacturing technology implementation. *Journal of Operations Management*, 17(5), 521–533. [https://doi.org/10.1016/S0272-6963\(99\)00008-X](https://doi.org/10.1016/S0272-6963(99)00008-X)
- Miller, D. (1988). Relating Porter's Business Strategies to Environment and Structure: Analysis and Performance Implications. *Academy of Management Journal*, 31(2), 280–308. <https://doi.org/10.2307/256549>
- Naor, M., Goldstein, S. M., Linderman, K. W., & Schroeder, R. G. (2008). The role of culture as driver of quality management and performance: Infrastructure versus core quality practices. *Decision Sciences*, 39(4), 671–702. <https://doi.org/10.1111/j.1540-5915.2008.00208.x>
- Nguyen, T. K. T. (2020). Studying Factors Affecting Environmental Accounting Implementation in Mining Enterprises in Vietnam. *Journal of Asian Finance, Economics and Business*, 7(5), 131–144. <https://doi.org/10.13106/jafeb.2020.vol7.no5.131>
- Nguyen, T. L. H., Nguyen, T. T. H., Nguyen, T. T. H., Le, T. H. A., & Nguyen, V. C. (2020). The determinants of environmental information disclosure in vietnam listed companies. *Journal of Asian Finance, Economics and Business*, 7(2), 21–31. <https://doi.org/10.13106/jafeb.2020.vol7.no2.21>
- Orlikowski, W. J. (2000). Using Technology and Constituting Structures; A Practice Lens for Studying Technology in Organizations. *Organization Science*, 11(4), 404–428.
- Otley, D. T. (1980). The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society*, 5(4), 413–428. [https://doi.org/10.1016/0361-3682\(80\)90040-9](https://doi.org/10.1016/0361-3682(80)90040-9)
- Papagiannakis, G., & Lioukas, S. (2012). Values, attitudes and perceptions of managers as predictors of corporate environmental responsiveness. *Journal of Environmental Management*, 100, 41–51. <https://doi.org/10.1016/j.jenvman.2012.01.023>
- Rao, K. K., Tilt, C. A., & Lester, L. H. (2012). Corporate governance and environmental reporting: an Australian study. *Corporate Governance: The International Journal of Business in Society*, 12(2), 143–163. <https://doi.org/10.1108/14720701211214052>
- Salawu, M. A., Mamman, S., Dahiru, M. T., Ado, G., & Yunusa, N. (2021). Firm-specific Attributes and Environmental Disclosure of Listed Oil and Gas Firms in Nigeria. *Global Journal of Accounting*, 7(1), 1–14.

- Scheidgen, K. (2021). Degrees of integration: how a fragmented entrepreneurial ecosystem promotes different types of entrepreneurs. *Entrepreneurship and Regional Development*, 33(1–2), 54–79. <https://doi.org/10.1080/08985626.2020.1734263>
- Schein, E. H. (2003). *Organizational Culture and Leadership*. San Francisco, CA: Josey-Bass Publishers.
- Schwartz. (2003). *A proposal for measuring value orientations across nations, Package of the European Social Survey*. Available at: Www.Europeansocialsurvey.Org/Docs/Methodology/Core_ess_questionnaire/ESS_core_questionnaire_human_values.Pdf.
- Schwartz, S. H. (2010). Basic Values: How They Motivate and Inhibit Prosocial Behavior. In *Prosocial Motives, Emotions and Behaviour: The Better Angels of Our Nature* (pp. 221–241). American Psychological Association. <https://doi.org/10.1037/12061-012>
- Sewell, W. H. (1992). A Theory of Structure: Duality, Agency, and Transformation. *American Journal of Sociology*, 98(1), 1–29.
- Stock, G. N., McFadden, K. L., & Gowen, C. R. (2007). Organizational culture, critical success factors, and the reduction of hospital errors. *International Journal of Production Economics*, 106(2), 368–392. <https://doi.org/10.1016/j.ijpe.2006.07.005>
- Thompson, V. A. (1967). *Bureaucracy and Innovation*. New York: McGraw Hill.
- Whittington, R. (2015). *Giddens, structuration theory and strategy as practice*. Cambridge Press. <https://doi.org/10.1017/CCO9781139681032.009>
- Zheng, W., Yang, B., & McLean, G. N. (2013). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63(7), 763–771. <https://doi.org/10.1016/j.jbusres.2009.06.005>