

## **FIRM-SPECIFIC ATTRIBUTES, OWNERSHIP, AND ONLINE VOLUNTARY DISCLOSURE: EVIDENCE FROM CONSUMER CYCLICAL AND NON-CYCLICAL INDUSTRY**

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### **ABSTRACT**

This study focuses on one of the developing countries, namely Indonesia to investigate the relationship of firm-specific attributes and ownership to Online Voluntary Disclosure (OVD). Theories relevant to voluntary disclosure such as agency, signaling, and stakeholder theory were used in this study. This study also uses companies that deal directly with the community as a sample, namely the consumer cyclical and consumer non-cyclical industry. This study used regression analysis to build an online disclosure index through a scope of OVD proxy. The results showed that firm size, profitability, and creditors pressure were strongly associated with online voluntary disclosure. This research has several contributions. The first contribution provides empirical evidence of the relationship between firm-specific attributes and ownership to OVD. The second contribution provides evidence and understanding of OVD in companies that deal directly with customers, namely, the consumer cyclical and consumer non-cyclical industry. This study also has limitations, such as only using the consumer cyclical and consumer non-cyclical industry as research samples. The limitation is also that it only uses 3 independent variables as determinants of OVD. Future research can investigate OVD by considering a wider range of samples and determinants.

**Keywords** : Firm-specific attributes; Ownership; Online Voluntary Disclosure; IFR

### **INTRODUCTION**

The internet began to be used as a communication medium for companies to disseminate their information around the 1990s (Dolinšek & Lutar-Skerbinjek, 2018). The Internet has advantages over traditional disclosures such as, cheaper, more timely, and interactive (Dolinšek & Lutar-Skerbinjek, 2018). Information can spread throughout the world and increase in frequency through the internet (Aly et al., 2010).

For developing countries, the internet is a potential means to provide information to the public and various stakeholder groups in a timely and rapid manner (Aly et al., 2010). Voluntary disclosure of information via the internet especially websites can be used to provide for investor needs (Boubaker et al., 2011). Many companies in the world disclose their business and finances online. Online disclosure is a type of voluntary disclosure. Such disclosure is called Online Voluntary Disclosure (OVD).

Theories relevant to voluntary disclosure such as, agency and signaling theory. The literature on non-online disclosure points to profitability and firm size as determining factors (Debreceny et al., 2002; Desoky, 2009). Meanwhile, research that focuses on literature review also shows similar results to non-online disclosures (Murdayanti & Khan, 2021; Sayadi & Falikhatun, 2023).

In recent years, we have known a number of evidences for the determinants of OVD. However,

the results of the study were carried out with the object of developed countries. There is still little OVD research with developing country objects.

Therefore, this study focus to one of the developing countries, namely Indonesia to investigate the relationship of firm-specific attributes and ownership to Online Voluntary Disclosure (OVD). This study also uses companies that deal directly with the community as a sample, namely the consumer cyclical and consumer non-cyclical industry. Companies in the industry can reach their customers through the company's website.

The rest of the papers are arranged as follows. The second part presents a literature review of Online Voluntary Disclosure. The third section describes sample selection, explanation of independent and dependent variables and research methodology. Empirical findings and discussions are presented in fourth section. The last section concludes the paper.

### **Online Voluntary Disclosure (OVD) and hypothesis development**

Appropriate hypotheses, research questions, methodologies can be devised using a literature review (Desoky, 2009). Desoky (2009) stated that in recent years, most studies on the relationship between online disclosure and firm characteristics and ownership structure use developed countries as research objects. Some

studies that use developed countries as objects such as, (Boubaker et al., 2011; Debreceny et al., 2002; Dolinšek et al., 2014; Ettredge et al., 2002).

Theories relevant to voluntary disclosure such as, agency and signaling theory. The literature on non-online disclosure points to profitability and firm size as determining factors (Ashbaugh et al., 1999; Desoky, 2009). Meanwhile, research that focuses on literature review also shows similar results to non-online disclosures (Murdayanti & Khan, 2021; Sayadi & Falikhatun, 2023). Therefore, this study uses 3 independent variables as determinants of OVD.

#### **Firm size**

Desoky (2009) states that large companies are assumed to disclose more information than small companies. Agency theory, which has been used extensively in disclosure research, suggests that large companies generally have high agency costs (Jensen & Meckling, 1976; Watts & Zimmerman, 1990). Such high agency fees can be reduced by voluntary disclosure. Large companies generally have many products and complex distributions that require online media such as websites (Aly et al., 2010). The argument suggests that larger companies are more likely to do OVD.

Several studies have found a positive relationship between firm size and OVD (Abdi et al., 2018; Ettredge et al., 2002; Mohamed & Basuony, 2014; Mokhtar, 2017). A positive relationship between firm size and OVD is also found in Slovenia (Dolinšek & Lutar-Skerbinjek, 2018) and France (Boubaker et al., 2011). Positive results were also found by Aly et al. (2010) and Ahmed et al. (2017) with a sample of companies in Egypt. Similar results were also found with studies in Uganda (Bananuka & Nkundabanyanga, 2022).

H1. There is a positive relationship between firm size and the extent of online voluntary disclosure.

#### **Profitability**

The effect of profitability on disclosure can be explained using signaling theory. Based on signaling theory, profitable companies tend to use the internet as their communication medium. Signaling theory also shows that when companies with high profitability will convey more information as signals to investors (Oyelere et al., 2003).

OVD is one way to raise capital by conveying information to stakeholders. Profitability tends to increase the disclosure of company information online. Desoky (2009) states that companies with high profitability ratios will submit more information online (OVD).

Some previous research evidence suggests a positive relationship between profitability and disclosure in general (Desoky, 2009). A positive relationship between profitability and OVD was found by Aly et al. (2010) and Ahmed et al. (2017)

with studies in Egypt. Mokhtar (2017) also found empirical evidence of a positive relationship between profitability and OVD.

H2. There is a positive relationship between profitability and the extent of online voluntary disclosure.

#### **Ownership (Creditors pressure)**

This study uses stakeholder theory to explain the relationship between creditors pressure and OVD. High levels of disclosure can reduce the cost of corporate agency debt (Boubaker et al., 2011). Voluntary disclosure can help resolve conflicts between creditors and shareholders (Jensen & Meckling, 1976).

The results showed a positive relationship between creditors pressure and OVD (Ettredge et al., 2002). Positive relationships are also found in the Egyptian context (Aly et al., 2010). However, Boubaker et al. (2011) states that some authors found a negative relationship between creditors pressure and voluntary disclosure.

H3. There is a negative relationship between creditors and the extent of online voluntary disclosure.

#### **Control variables (Firm age and Growth)**

Based on signaling theory, profitable companies tend to use the internet as their communication medium. Signaling theory can also be used to explain the relationship between firm age and disclosure because older companies generally have good reporting systems (Dolinšek & Lutar-Skerbinjek, 2018). Companies that experience good growth and have been established for a long time are more likely to disclose information voluntarily through the website (OVD). Bananuka & Nkundabanyanga (2022) found a positive relationship between firm age and OVD in Uganda.

## **RESEARCH METHODS**

This section contains a complete and detailed description of the steps undertaken in conducting of research. In addition, the research step also needs to be shown in the form of flowchart of research or framework step in complete and detailed including reflected algorithm, rule, modeling, design and others related to system design aspect.

The population of this study consisted of companies listed on the IDX. OVD data was collected from September 2022 – October 2022 through each company's website. The financial data required as an independent variable is obtained from the annual report for 2022. This short period is consistent with previous research given the dynamic nature of the internet (Basuony et al., 2022).

The final sample of this study consisted of 81 companies from the consumer cyclical and non-cyclical (table 1). This study uses companies that deal directly with the community as a sample,

namely the consumer cyclical and consumer non-cyclical industry. Companies in the industry can reach their customers through the company's website.

**Table 1.** Sample of Consumer cyclical and non-cyclical

Sectors	Number of Companies	Percent
Consumer cyclical	33	40.74%
Consumer non-cyclical	48	59.26%
Total	81	100.00%

**Dependent variable (OVD disclosure index)**

This study adopts the method of unweighted disclosure index. All items are treated equally, i.e., a score of 1 if the item is disclosed, and 0 vice versa. This study used a disclosure index from Lai et al. (2010) consisting of 4 disclosure score items. This disclosure index is often called the scope of OVD because it assesses how broad the range of information a company discloses. The index of the scope of OVD can be seen in appendix 2.

**Independent variable**

This study uses several independent variables such as firm size, profitability, and creditors pressure. Firm size is a variable that shows the size of the company measured by (Ln)Size. Profitability in this study is measured using return on assets (ROA). While creditor pressure is measured using the leverage ratio (debt to equity ratio).

**Control variables (Firm age and Growth)**

This study used several control variables such as firm age and growth. Firm age is measured using the age of the company since its establishment. Meanwhile, growth is measured by:

$$Sales_t - sales_{t-1} / Sales_{t-1}$$

**Research model**

**Table 2.** Descriptive statistics.

Variable	OObs	Mean	Std. dev.	Min	Max
SCO_IFR	81	1,666667	0,74162	0	3
LnSIZE	81	28,8891	1,68423	24,82295	32,66889
DER	81	147,2166	216,038	1	1496,31
ROA	81	4,551235	8,272929	-20,82	29,1
FAGE	81	15,80247	11,96497	0	40
GROWTH	81	0,234973	0,370414	-0,7236	1,688783

**Table 3.** Correlation analysis result.

SCO_IFR	LnSIZE	DER	ROA	FAGE	GROWTH
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This study used regression analysis to build an online disclosure index through a scope of OVD proxy. The model of this study is as follows:

$$NPM = B_0 + B_1SCO\_IFR + B_2LnSize + B_3DER + B_4ROA + B_5FAGE + B_6GROWTH + U$$

**RESULTS AND DISCUSSIONS**

**Descriptive statistics**

This section describes the results of descriptive statistics of all research variables used. The dependent variable (SCO\_IFR) indicates a minimum value of 0 and a maximum value of 3. The independent variable (LnSIZE) shows a minimum value of 24.82295 and a maximum value of 32.66889. The creditor pressure (DER) variable shows a minimum value of 1 and a maximum value of 1496.31. The variable profitability (ROA) shows a minimum value of -20.82 and a maximum value of 29.1. Meanwhile, the control firm age (FAGE) variable shows a minimum value of 0 and a maximum value of 40 and growth (GROWTH) shows a minimum value of -0.7236 and a maximum value of 1.688783. The results of descriptive statistics for all variables can be seen in full in table 2.

**Correlation analysis**

To build a model and ensure it is free from the multicollinearity problem, this study conducted a correlation analysis test. The results of correlation analysis show that there is no value above 0.7. This value shows that there is no high correlation because according to Pallant (2020) a high correlation occurs above 0.7 (>0.7).

**Multivariate analysis**

Multiple linear regression analysis using samples from the consumer cyclical and non-cyclical industry. Before that, the multicollinearity problem was resolved with a tolerance value of >0.10 and a VIF of <10 (see appendix 2). Table 4 presents the regression results of OVD.

SCO_IFR	1					
LnSIZE	0,4282	1				
DER	-0,203	-0,1619	1			
ROA	-0,0842	0,4931	-0,3482	1		
FAGE	-0,1146	0,0202	0,1087	0,0543	1	
GROWTH	-0,0956	0,0569	0,0649	0,1746	-0,2978	1

**Table 4.** Regression results of OVD

Variables	B-coefficient	t-value	Sig
LnSIZE	0,273	5,890	0,000
DER	-0,001	-2,480	0,015
ROA	-0,041	-4,020	0,000
Fage	-0,006	-0,950	0,344
GROWTH	-0,125	-0,620	0,535

**Table 5.** Additional test result.

Variables	Consumer cyclical			Consumer non-cyclical		
	B-coefficient	t-value	Sig	B-coefficient	t-value	Sig
LnSIZE	0,391	4,600	0,000	0,195	3,560	0,001
DER	-0,001	-1,500	0,145	-0,001	-1,570	0,124
ROA	-0,034	-1,980	0,058	-0,037	-3,080	0,004
Fage	-0,004	-0,420	0,676	-0,004	-0,570	0,574
GROWTH	0,141	0,470	0,642	-0,375	-1,500	0,142

H1, firm size and OVD. The results show that the OVD in the consumer cyclical and non-cyclical industry depends on the size of the company. Significant positive influence of company size on OVD at the level of 0.000. So, these results support H1. These results also show that large companies in the consumer cyclical and non-cyclical industry perform OVD more broadly than smaller firms. Large companies can disclose widely because they have more resources than small companies.

These results are in line with the agency theory that broad disclosure can reduce agency costs (Jensen & Meckling, 1976). Broader disclosure can also reduce information asymmetry. The results of this study are consistent with previous studies that found a positive and significant relationship between firm size and OVD (Abdi et al., 2018; Ahmed et al., 2017; Aly et al., 2010; Ashbaugh et al., 1999; Bananuka & Nkundabanyanga, 2022; Boubaker et al., 2011; Desoky, 2009; Dolinšek & Lutar-Skerbinjek, 2018; Ettredge et al., 2002; Mohamed & Basuony, 2014; Mokhtar, 2017).

H2, profitability and OVD. The results show that OVD in the consumer cyclical and non-

cyclical industry depends on profitability. Significant effect of ROA on OVD at the level of 0.000. Profitability tends to increase the disclosure of company information online. The results of this study are consistent with previous studies that found a significant relationship between profitability and OVD (Ahmed et al., 2017; Aly et al., 2010; Desoky, 2009; Mokhtar, 2017).

H3, creditors and OVD. The results show that OVD in the consumer cyclical and non-cyclical industry is affected by creditor pressure. Significant negative effect of creditor pressure on OVD at the level of 0.015. So, this result supports H3. These results are consistent with previous research that found a negative relationship between creditors pressure and voluntary disclosure (Boubaker et al., 2011).

#### Additional tests

This study conducted additional tests to enrich the research results. Additional tests are performed by separating samples between the consumer cyclical and non-cyclical industries. In consumer cyclical samples, significant results were found in the effect of firm size (LnSIZE) and profitability (ROA) on OVD. Furthermore, in

consumer cyclical samples, significant results were also found in the effect of firm size (LnSIZE) and profitability (ROA) on OVD. The complete additional test results can be seen in table 5.

#### Robustness test

The next step, researchers conduct robustness tests to ensure the research model is robust. The robustness test is performed by substituting the measurement for the dependent variable (scope of OVD). The robustness test results of our study are strong with a significant influence on the influence of 2 independent variables on OVD, namely, firm size and profitability. The full results of the robustness test can be seen in appendix 3.

#### CONCLUSION

In recent years, we have known a number of evidences for the determinants of OVD. However, the results of the study were carried out with the object of developed countries. There is still little OVD research with developing country objects. Therefore, this study focuses on one of the developing countries, namely Indonesia to investigate the relationship of firm-specific attributes and ownership to Online Voluntary Disclosure (OVD).

Theories relevant to voluntary disclosure such as agency, signaling, and stakeholder theory were used in this study. This study also uses companies that deal directly with the community as a sample, namely the consumer cyclical and consumer non-cyclical industry. Companies in the industry can reach their customers through the company's website.

The results showed that firm size, profitability, and creditors pressure were strongly associated with online voluntary disclosure. This research has several contributions. The first contribution provides empirical evidence of the relationship between firm-specific attributes and ownership to OVD. The second contribution provides evidence and understanding of OVD in companies that deal directly with customers, namely, the consumer cyclical and consumer non-cyclical industry. This study also has limitations, such as only using the consumer cyclical and consumer non-cyclical industry as research samples. The limitation is also that it only uses 3 independent variables as determinants of OVD. Future research can investigate OVD by considering a wider range of samples and determinants.

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