



The Impact of Environmental and Social Disclosure on Earnings Persistence

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ABSTRACT

This paper investigates the relationship between environmental and social disclosure with earnings persistence as a proxy of earnings quality. This research is based on the secondary data obtained from the final reports of the listed firms of Malaysia. The empirical analysis applied on 136 listed firms of Bursa Malaysia throughout 2011 to 2018 with the observation of 1088. The measure of earnings persistence is derived from the panel data based on the regression of the time series model. The results of our study indicate that environmental and social disclosures are positively correlated with earnings persistence. This means that the more the level of commitment a firm shows with environmental and social responsibility, the more persistent earnings it carries. Moreover, earnings persistence is the proxy of earnings quality, and it is desirable by every investor.

Keywords: Environmental Disclosure, Social Disclosure, Earnings

JEL Classification: O13

1. INTRODUCTION

Earnings persistence is directly related to the earnings quality and it is one of the important features that show the financial standing of the firm. However, it is often unnoticed by the user of the financial statement, but it possesses the feature of appraising the financial health of the firm. The main objective of earnings quality is to provide the true picture of earnings as well as the ability to predict future earnings. Therefore, the main factors associated with earnings persistence are firm age, firm size, ownership dispersion, market competition, risk aversion, audit quality, and more. These factors are affected by the monetary motive like, proprietary cost, litigation cost, transaction cost, disclosure cost, and so forth. Nonetheless, there are other factors that arise from non-financial aspect such as environmental and social aspects. However, they were omitted from the literature and largely influence the earnings quality of the firm.

It is assumed that firms are more willing to report their earnings that are desirable by the investors instead of their competitors. The reputation of the firm can be enhanced by initiating the activities related to corporate social responsibility. Stakeholders also play the role to improve the reputation of a brand or firm by restricting them to comply with societal responsibility requirement (Obeng, et al. 2020). These kinds of firms try to avoid negative events and opt the responsive action to neutralise the negativity from the environment (Guo et al., 2019). It is observed that those firms which are more open in communicating their activities related to community and environment are financially more stable and have low volatility. Moreover, the earnings quality of those firms is more desirable than other firms (Moesono et al., 2016).

There are several studies that contribute to accounting literature, but this study examines a unique relationship between environmental and social policy with earnings persistence. This study promotes

the reporting of corporate social responsibility by providing empirical evidence that shows that corporate social responsibility is positively associated with desirable earnings quality. Prior studies support the concept that stockbroker is interested in investing in a firm with a good reputation, valuable assets, and earnings growth with quality. On the other hand, social and environmental disclosures can also be measured by assessing the impact of the company's reputation on different business groups in terms of earnings persistence. In this study, we investigate the impact of environmental and social disclosure on the different stakeholders in terms of financial performance.

In Malaysia, the environmental and social responsibility is based on the phenomenon of ethical values and respect for the employees, shareholders, stakeholders and as a community in large. The disclosure of these principles is derived from the Corporate Social Responsibility (CSR) framework of Bursa Malaysia (Siregar and Maksum, 2018). The objective of this framework is to develop a sustainable environment for the society in large. The reporting of CSR supports the triple bottom line which emphasises the wellness of the socioeconomic environment.

The disclosure of CSR provides the information to the public for the action taken by the firm for the wellness of the community, the employees, the environment, the customers, and the usage of energy. The disclosure requirement of CSR in Malaysia consists of categories such as the accounting standard, regulatory requirement of the stock exchange, companies act and sometimes firms voluntarily disclose the CSR for their benefits. In other words, CSR disclosure is also defined as the provision of financial and non-financial activities a firm involves in, in terms of social and environmental responsibilities that are mentioned in annual reports or separate social reports (Alipour et al., 2019).

Existing literature related to CSR emphasises that the firm performance is positively influenced by social and environmental activities. For example, the return on asset and return on equity was proven to be positively associated with CSR in various studies (García-Sánchez and García-Meca, 2017). Therefore, in the current era, it is firms' primary strategic objective to involve in CSR activities to improve the performance and gain public sympathy. Performance is also defined by the earnings quality of the firm. However, the main components of earnings quality are accountability and transparency, which predict the future earnings persistence of the firm to the investors and stakeholders. This information is essential and relevant for the investors and stakeholders to make the specific decision related to the future performance of the firm (Hung et al., 2018). As the stability and the persistence of reported earnings are the fundamentals of earnings quality. Therefore, it is useful in predicting future cash flows and improve the ability to report the true earnings (García-Sánchez and García-Meca, 2017).

There are several ways in which managerial and accounting literature contributed by this study. Initially, there are lack of studies related to social and environmental policy discussing the impact on earnings persistence. Moreover, by using Malaysian firms' data, we can examine the association of social

and environmental policies with the main element of earnings quality that is called earnings persistence. We also investigate the notion that good corporate investors evaluate the firm value by analysing the firm's reputation, operating environment and earnings growth that ultimately result in high earnings quality. This study covers the social and environmental disclosure wholly instead of considering the impact of one or two areas such as customer satisfaction, environmental performance, and workplace quality.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

There are two principal categories that can define the corporate social and environmental disclosure. First category is based on the reflecting and liberating characteristics of environmental and social disclosure and how they are associated with the accountabilities of the firm. This activity requires a motivation derived by the democratic preoccupation aiming to achieve social and environmental responsibilities along with the rights of the community to scrutinise the organisational behavior and the disclosures (Lapointe-Antunes et al., 2019). The second category of corporate social and environmental disclosure is more of the management-oriented which focuses on the stakeholders to influence them by using the disclosure and in such a way that assures the legitimacy of either individual firm or industry at large (Aureli, 2017). This is also beneficial for the firm's reputation as it can communicate the positive information related to the impact on environment and society due to the step taken by the firm.

In this study, we use earnings persistence as a proxy of earnings quality as it is a general assumption that more persistent earnings mean more useful to evaluate the equity and equity is directly associated with firm performance (Kolozsvari and Macedo, 2016). However, the earnings are more attractive for investors if they maintain the constant growth (Yang, 2018). Therefore, those items that are non-recurring, non-operating, and unusual present in the statement of comprehensive income have more attention seekers during the financial analysis as these items show the inconsistent earnings which appears as a negative effect for investors. Earnings persistence is the measure of current earnings growth along with the sustainability of the future trend. For example, the sales revenue is extraordinarily high in the current period, but it would be persistent if it will sustain in the future. In accounting earnings, persistence covers a wide range of literature and are interchangeable with sustainable earnings to some extent. It is suggested that the earnings that have been achieved before the extraordinary item that is already identified on comprehensive income has a future sustainability aspect than it is considered a good quality earnings (Cheng and Liu, 2016). Therefore, a good earnings quality must possess the component of sustainability; otherwise it will be considered as a poor one. Previously, a researcher argues that the extent of quality earnings depends on the amount of earnings received from the recurring source (Gregory et al., 2016). Another argument related to earnings persistence is that one should keep in mind

while examining earnings persistence that it is the function of an accounting standard that varies according to the operating environment, implementation technique and reporting method of entity's business model.

There is a massive debate going on across the world related to the returns of environmental and social responsibilities. The corporate investors focus on the associated cost of these responsibilities concerning the returns in terms of financial aspects (Wang and Gao, 2016). Previously, several studies try to prove that financial performance and corporate social responsibility have a positive relationship (Wang et al., 2018). This is because the management used to exercise discretionary accounting to manipulate numbers to satisfy the desired target of investors.

However, social disclosure is a means of transparency to the investors and accountability to the regulators. Moreover, it is helpful for investors and stakeholders to make their decision in the right direction. It is assumed that corporate social and environmental disclosure is the activity of giving relevant information to the investors and stakeholders to make a strategic decision (Butar-Butar and Indarto, 2018). Since the relationship between corporate social responsibility and earnings persistence is concerned, the instrumental theory, legitimacy theory and signaling theory are essential to explain this relationship (Moesono et al., 2016).

The instrumental theory played the role of a bridge between firms and stakeholders. It helps reduce the information asymmetry between firm and stakeholders by providing the value relevant information to the stakeholders. It authorises the organisations to supply the relevant information to the stakeholders to reduce the uncertainty in the market. This theory initiates the self-motivation in the firm to engage in social and environmental development activities for the wellbeing of the community and take advantage of that to maximise the shareholders' wealth and augment the firm's profit. Moreover, corporate, and social disclosure is also considered as the tool to mitigate the adverse governmental pressure by improving reputation in the eyes of the community (Velayutham, 2018).

However, the relationship between social and environmental disclosure and earnings persistence is deeply analysed by the literature concerning the legitimacy theory. The contract between corporations and society carries the legitimacy theory deep in its roots (Patten, 2019). The certainty of a firm depends on its potential to deliver the desired benefits in terms of economic, social, and political to its parent group.

Besides, the legitimacy theory itself is not workable in an environment where the organisation operates on the bases of a social contract in which they gain the approval to carry out their business in return of socially desirable activities. In this scenario, the organisation signed a contract with the community in which they endorse their survival as a reward of socially desirable activities, they ensure for the wellbeing of community (Hoozée et al., 2019). The social contract is derived from the mutual consensus of society and the organisation, which

implied both the parties were granted permission by the society to operate their business according to the expectation of societal norms and intact with compliance requirement.

Lastly, the signaling theory is based on the concept that the organisational CSR disclosure is the activity that concerns with signaling the quality of management predominantly. In some studies, the researchers argue that CSR disclosure activity is conducted by the firm in order to signal the investors or the stakeholders to show them that the market value of your firm is in a good position (Artikis and Papanastopoulos 2016). Good social and environmental performance is the key that enhances the reputation of the firm with respect to the capital and debt market.

Wang et al. (2018) previously identified the negative relationship between the CSR disclosure and earnings management in oil and gas development sector. Whereas they also identify the positive relationship in CSR and earnings management in the food industry. The key difference identified behind this asymmetry is concerning with the motivation related to ethical values. Moreover, the role of ethical pattern and CSR has been revealed by Setiawan et al. (2019) to control the earnings management.

It has already been explained in many studies that the CSR related issues may affect the quality of earning. In this study, the relationship between corporate and social matters with the earnings persistence would be examined. Therefore, we assumed that business involved more in communicating information regarding their social and environmental activities have more stable earnings growth. Moreover, this kind of firm has less downside volatility and has more desirable earnings quality than ordinary firms. Thus, we hypothesise that:

H: Firms with CSR disclosure have a higher degree of persistent earnings as compared to others.

There are other factors that should be considered while examining the relationship between environmental and social policy and earnings persistence. For example, control variables must be added in the study to examine the relationship in various aspects. Brown-Liburd et al. (2018) were unable to find the significant relationship between earnings persistence and firm size. Other scholars argue that firm size does not affect the earnings quality. However, Cheng and Liu (2016) shows that firm size possesses a positive association with earnings persistence if measured by market share.

The symbol of audit quality is derived by Big4, as the literature accords the importance of audit quality to the Big4 firm. It is argued in some studies that Big4 auditors are more inclined towards the legal liabilities as any change in liability is examined deeply by the big4 auditor. Otherwise, auditors are less concerned about the legal liability. However, audit quality is one of the key factors that define the credibility of financial statements (Inaam and Khamoussi, 2016); (Fan et al., 2019); (Hadi and Campbell, 2020).

3. VARIABLES, DATA AND SAMPLE

EPER = It is a dependent variable that defines the earnings persistence and is based on the negative slope of Francis et al. (2004) regression model.

ESD = It is an explanatory variable that shows the content analysis of environmental and social disclosures.

FSIZE = it is a control variable that is simply a logarithm of total assets.

AUQU = It is a dummy variable that defines the audit quality of a firm. It would be 1 if the firm is audited by Big4 audit firm otherwise, it equals 0.

SALVAR = it is a control variable which manages the variation of sales $[(\text{sale}_t - \text{sale}_{t-1}) / \text{sale}_{t-1}]$

LEVR = it is a control variable obtained by dividing the debt by total asset.

INSE = it is a dummy variable assigned 1 for the sensitive industry and 0 for the non-sensitive industry.

Our sample data is collected from the companies' websites for both requirements, the earnings per share and other variables. This data set includes the companies listed on the stock exchange of Bursa Malaysia and comprises of non-financial companies from 2011 to 2018. These firms belong to different business sectors except the financial sector (because it has different regulatory bodies and compliance requirement) and fulfil the criteria required by our research. We do not include the data of the firms whose core information is missing, for example, total sale or total expense, or reluctant to provide transparent information. Malaysian stock exchange consists of more than 900 companies. We select 136 qualified listed companies that belong to the different business sectors with the number of observations of 1088.

Descriptive analysis of EPS and time series regression model.

3.1. Variable Description

3.1.1. Dependent variable

Previous studies measured the earnings persistence by using negative slope coefficient estimate, $\alpha_{f,y}$, from an autoregressive model of order one, for annual earnings per share. We follow the same method as:

$$EPS_{f,y} = \alpha_{f,y} + EPS_{f,y-1} + \varepsilon_{f,y}$$

EPS is the net income before preferred dividend paid divided by the number of outstanding shares whereas f denotes the firm and y denotes the time.

It is assumed that larger values are less persistent as compared to the smaller values in terms of earnings. One of the main features of earnings quality is earnings persistence which is based on the sustainable income values (Guo et al., 2019). Financial performance of the firm is mainly measured by the periodic earnings of the firm concerning the accounting prospect. The current period earnings show the degree of earning persistence in

future and would be the important measure of earnings quality. If the accruals of the firm are low persistent in the current period, then it shows that it is inversely persistent to the future earnings persistence and ultimately, it results in adverse earnings quality. Earnings persistence is usually measured in literature by time series regression, such as autoregression and integrated moving average to evaluate the earning persistency. However, time series model requires a long history of earnings to analyse the earning persistent effectively.

3.1.2. Explanatory variable

Several techniques that can be used to measure the social and environmental disclosure concerning the reference of past research analysis. Mostly studies' outcome is based on indexing and weighting scale derived from the content analysis method. The simplest technique of content analysis method is based on the demonstration of the annual report by the firm and identify the event either mentioned in it or not. Previous research analysed the annual reports and other regulatory documents to view environmental disclosure. Most of them rely on such kind of data derived from the measure of environmental disclosure which is based on content analysis index of Wiseman (1982). The psychology of Wiseman index approaches the quantitative disclosure because it focuses on the financial consequences and the associated effects on the corporate environment. Concerning this methodology, there is an asymmetry exist as the poor environmental performer may release the higher level of disclosure as compared to the good performer because they have greater regulatory bounding to discuss material financial information in their regulatory reports.

4. RESEARCH ANALYSIS

Tables 1 and 2 below carries the descriptive statistics of continuous variables used in our study. The mean value of our main variable earnings persistence (EPER) is -0.771 , which is closest to the mean value found by Francis et al. (2004). Concerning the explanatory variable, we divided the environmental and social disclosure (ESD) into two categories, namely social disclosure

Table 1: Descriptive analysis of EPS

	Min	Max	Mean	Std. dev
EPS _y	-56.02	34.56	2.875	4.98
EPS _{y-1}	-56.02	34.56	2.579	5.82
Time series model (regression)				
EPS	Coef.	t	P> t	Std. err.
EPS _{y-1}	0.581	2.71	0.008	0.217
Const	1.082	1.54	0.131	0.714

Adj. R² = 32.21%

Table 2: Descriptive analysis of continuous variables

Variable	Min	Max	Mean	Std. Dev
EPER	-1.32	-0.391	-0.771	0.923
ESD	4	160	74.541	39.612
SDIC	0	64	38.484	15.137
EDIC	0	96	49.152	30.117
LEVR	-0.058	4.841	0.009	0.183
FSIZE	2.719	12.101	8.411	1.873
SALVAR	0.008	24.316	1.101	1.527

(SDIC) and environmental disclosure (EDIC). The mean value of both disclosures is 38.484 and 49.152, respectively. Other control variables, LEVR, FSIZA and SALVAR, have the mean value 0.009, 8.411 and 1.101, respectively.

Whereas Table 3 carries the descriptive statistics of dummy variables which are audit quality and industry sensitivity. Audit quality is defined by the audit activity conducted by the Big4 audit firm. In our sample, 29 out of 136 firms were audited by the Big4 audit firms. Moreover, in our sample, 96 out of 136 firms belongs to the sensitive industry.

We have used three different models to conduct panel regression, where the first model is used for ESD as an explanatory variable. Rest of the regression are used in two dimensions, namely social disclosure SDIC and environmental disclosure EDIC.

1.
$$EPER_{f,y} = \beta_0 + \beta_{1f,y}ESD + \beta_{2f,y}SALVAR + \beta_{3f,y}LEVAR + \beta_{4f,y}AUQU + \beta_{5f,y}FSIZA + \beta_{6f,y}INSE + \varepsilon_{f,y}$$
2.
$$EPER_{f,y} = \rho_0 + \rho_{1f,y}SDIC + \rho_{2f,y}SALVAR + \rho_{3f,y}LEVAR + \rho_{4f,y}AUQU + \rho_{5f,y}FSIZA + \rho_{6f,y}INSE + \delta_{f,y}$$
3.
$$EPER_{f,y} = \gamma_0 + \rho_{1f,y}EDIC + \gamma_{2f,y}SALVAR + \gamma_{3f,y}LEVAR + \gamma_{4f,y}AUQU + \gamma_{5f,y}FSIZA + \gamma_{6f,y}INSE + \mu_{f,y}$$

4.1. Heteroscedasticity Test

Table 4 above which relates to heteroscedasticity test shows that our models are suffering from heteroscedasticity issue as a large Chi-square means that heteroscedasticity is present; all three models have $P > \text{Chi-square} = 0.000$, $P > \text{Chi-square} = 0.009$ and $P > \text{Chi-square} = 0.005$ respectively. Therefore, the White and MacDonald (1980) model is used to estimate the three models to correct the situation.

Multicollinearity test needs to be conducted where more than one independent variable is highly correlated. It can also damage the results of regression analysis. The model carries more than one independent variable; therefore, it is important to examine whether multicollinearity exists.

Table 3: Descriptive analysis of dummy variables

Variable	Companies	Observations	Percentage
AUQU, 1	29	232	21.30
AUQU, 0	107	856	78.70
Total	136	1088	100.00
INSE, 1	96	827	76.01
INSE, 0	40	261	23.99
Total	136	1088	100.00

Table 4: Heteroscedasticity for model 1, 2 and 3

White's test	Statistic	df	P > Chi ²
Model 1	36.01	19	0.000
Model 2	26.86	19	0.009
Model 3	22.98	19	0.005

The severity of multicollinearity is identified by the degree of variance inflation factor (VIF). Table 5 indicates that multicollinearity in all three models are acceptable as the VIF values of all our variables are less than two and tolerance is held above 0.3.

4.2. Regression Results

Below Table 6 shows the regression results of earnings persistence with the relationship between environmental and social disclosure. The explanatory power of all three models is significantly low as 17.01%, 23.01% and 18.13%. Nevertheless, these results are comparatively high when compared to previous studies as the R² did not reach 23% in all models in any study before. However, the estimation of social and environmental disclosure (ESD) is derived by the negative coefficient which indicates that they are positively correlated with earnings persistence as previous studies also mentioned this approach in their research (Laksmana and Yang, 2009). With respect to the results obtained in the below table, we conclude the relationship of earnings persistence with environmental and social disclosure is positively significant at 5% level. This relationship is also found with LEVR and INSE in model 1 and model 2, with a significant level of 1%. In model 3, the same relationship exists with LEVR, INSE and FSIZE with a significant level of 1%. The rest of the variables have positive relationship with earnings persistence but not significant. This indicates that other variables do not influence the earnings persistence.

The relationship of environmental and social disclosure ESD as a combine and its two dimensions Social disclosure SDIC and environmental disclosure EDIC with earnings persistence are significant at the level of 5% and 1% respectively. This indicates that firms with a high level of social and environmental disclosure obtain the benefits in terms of earnings persistence demanded by

Table 5: Multicollinearity test variance inflation factor

Model 1		
Variables	VIF	Tolerance
ESD	1.72	0.612
FSIZE	1.61	0.624
INSE	1.47	0.689
SALVAR	1.31	0.768
AUQU	1.05	0.914
LEVR	1.00	0.957
Model 2		
Variables	VIF	Tolerance
SDIC	1.34	0.764
FSIZE	1.29	0.798
INSE	1.22	0.815
SALVAR	1.13	0.857
AUQU	1.09	0.973
LEVR	1.00	0.991
Model 3		
Variables	VIF	Tolerance
EDIC	1.61	0.661
FSIZE	1.52	0.678
INSE	1.36	0.719
SALVAR	1.22	0.854
AUQU	1.09	0.876
LEVR	1.00	0.998

Table 6: Relationship of earnings persistence with social and environmental disclosure as a combine and individual

Model 1						
Variables	Coefficient	Std. err	t	P> t	90% cnf.	Interval
ESD	-0.041	0.035	-0.261	0.031**	-0.017	0.073
SALVAR	-0.021	0.031	-1.07	0.229	-0.074	0.111
LEVR	-0.124	0.041	-3.80	0.000*	-0.153	-0.097
INSE	-0.754	0.009	-2.90	0.002*	-0.007	1.191
FSIZE	-0.196	0.079	-0.99	0.140	-0.164	-0.044
AUQU	-0.115	0.077	-0.11	0.663	-0.109	0.113
Constant	0.072	0.387	-2.99	0.003	-0.641	-0.309

Obs=1088, Adj R²=17.01%, Prob >F=0.003

Model 2						
Variables	Coefficient	Std. err	t	P> t	90% cnf.	Interval
SDIC	-0.019	0.009	-2.54	0.009*	-0.032	-0.005
SALVAR	0.096	0.061	1.61	0.116	-0.025	0.213
LEVR	0.374	0.151	2.53	0.015*	0.081	0.667
INSE	-1.346	0.258	-1.97	0.006*	-0.168	0.181
FSIZE	-0.111	0.665	-1.03	0.131	-0.069	0.121
AUQU	-0.554	0.225	-1.13	0.106	-0.419	0.124
Constant	0.177	0.035	-2.58	0.005	-0.553	-0.083

Obs=1088, Adj R²=23.01%, Prob >F=0.000

Model 3						
Variables	Coefficient	Std. err	t	P> t	90% cnf.	Interval
EDIC	-0.121	0.098	-1.99	0.051**	-0.121	0.000
SALVAR	0.057	0.034	1.36	0.113	-0.608	1.103
LEVR	0.093	0.943	2.46	0.005*	0.718	1.236
INSE	-0.057	0.131	2.03	0.008*	-0.125	0.097
FSIZE	0.561	0.911	2.79	0.003*	0.805	1.097
AUQU	-0.107	0.111	-1.26	0.103	-0.039	0.148
Constant	-2.908	1.135	-2.91	0.002	-0.388	0.009

Obs=1088, Adj R²=18.13%, Prob >F=0.000. *, **significance at 1% and 5% respectively

the investors. These results also show the consistency with our hypothesis.

5. CONCLUSION

This paper contributes to the literature by using the sample data from the Malaysian listed companies to the period of 2011 to 2018. All firms are non-financial and belong to the stock exchange of Bursa Malaysia. This paper empirically contributes in the field of earnings quality by using earnings persistence as a proxy (Baginski and Rakow, 2012). It has been studied by many past researchers globally, but there is very little evidence with respect to the Malaysian economy.

The objective of this study is to investigate the effects of environmental and social disclosure on the image of a firm in terms of earnings quality. Concerning our objective, we investigated the relationship between earnings persistence with the environmental and social disclosure by the listed firms of Malaysia in their annual reports. The results obtained in this study is positively correlated with our hypothesis, which stated that a high level of environmental and social information disclosed by the firm positively affects the earnings quality. This outcome reflects the positive behaviour of Malaysian firms as they are committed to their responsibilities in terms of environment and society. However, these companies avoid unethical or unanticipated events to keep themselves benefited from employees and customer loyalty (Laksmna and Yang, 2009). Therefore, they can manage to maintain their earnings persistency

to keep the investors aligned with their desires. The limitation of this study is that the sample data is investigated with a short period of time as it would be more productive if we consider investigating before and after the adoption of international financial reporting standard (IFRS). Moreover, it should be further examined that why the desirable and persistent earnings are dependent on the good quality of social and environmental disclosure.

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