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Finding the Link between Corporate Financial Performance and E-Waste Reporting

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Abstract
Purpose: The paper aims to examine the performance (ROA and ROE) of public listed companies (PLCs) in regards to the e-waste reporting for the year of 2018.
Design/methodology/approach: In order to attain the objectives of the study, an empirical analysis of 59 PLCs has been performed. The method that has been adopted is the collection and analysis of data relating to e-waste reporting of each company. The data of all the variables has been collected and obtained from Thompson Reuters database before testing for analysis.
Findings: The study found that there is no significant relationship between ROA, ROE, and e-waste reporting.
Research limitations/implications: Most of the data are available for short periods as not all the companies are mandatory to report on e-waste management. New researches could reexamine in five years and investigate other factors such as board characteristics.
Practical implications: The paper is anticipated to contribute to the policy makers in implementing or enhancing the related policy in protecting the environment of Malaysia. In addition, the management of the company also has paid extra attention pertaining the environmental issues besides their financial issues.
Originality/value: This paper represents a new and independent review of public listed companies in the reporting of e-waste. In addition, e-waste management and data are closely related to many SDGs, such as SDG 8, SDG 3, SDG 6, and SDG 14.

Keywords: E-Waste Reporting, Public Listed Companies, Companies' Performance, Return on Asset (ROA), Return on Equity (ROE).

Introduction

What is e-waste? According to Step (2014), it stands for electronic waste where the term is used to cover items of any types of electrical and electronic equipment that have been discarded as waste without the intention to re-use. E-waste includes a wide range of products, which includes lamps, phones, computers, keyboards, tablets, cellphones, and many more. This type of waste is among rapid growing wastes in the world due to the rapid innovation of technology and electronic device. Hence, managing this waste has become one of the challenges to every country. According to Balde, Wang, Kuehr, and Huisman (2015), around 41.8m metric tons of e-waste were generated globally and only 15.5 percent was formally treated.

E-Waste Management and Statistics

According to Suja et al. (2014), in Malaysia, hazardous waste management programs had begun in 1989. However, the effective implementation of policies and strategies is required to

minimize the environmental and health risks caused by this type of wastes. As per stated in Environmental Quality (Scheduled Wastes) Regulations 2005, e-waste is categorized as a scheduled waste. All the management and control of the wastes in Malaysia are regulated under this regulation. In fact, worldwide e-waste is monitored by a body so called The Global E-Waste Monitor. This is a collaborative effort between the International Telecommunication Union (ITU) and the Sustainable Cycles (SCYCLE). The programme is currently co-hosted by the United Nations University (UNU) and the United Nations Institute for Training and Research (UNITAR), and the International Solid Waste Association (ISWA).

The Global E-Waste monitor reported that Malaysia generated totaling 364 kilotonnes of e-waste in 2019 where the amount keeps increasing by 84 kilotonnes (84,000,000 kilograms) from 2016 even though there is National e-waste legislation, policy, and regulation in place. A record 53.6 million metric tonnes (Mt) of e-waste was worldwide in 2019, up 9.2 Mt in five years. Forti, Balde, Kuehr, and Bel (2020) also predict global e-waste will reach 74 Mt by 2030, fueled by higher electric and electronic consumption rates, shorter lifecycles and limited repair options.

The Impact of E-Waste

Data shows that increasing amount of e-waste worldwide with improper disposal and unsafe treatment in landfills give a huge challenge to the environment, human health, and also to the achievement of the Sustainability Development Goals that aimed to protect the environment for all by 2030. According to Purushothaman Inamdar Muthunarayanan (2020), this type of waste is highly complex to handle due to its composition that is made up of multiple components which may contain toxic substances and heavy metals including cadmium, lead, and sulphur that will contribute to human health and environment if not handled properly. The management of e-waste is a very different with the conventional waste management policies (Khetriwal, Kraeuchi, & Widmer, 2009). However, companies may gain some returns from the waste if it is properly managed. This is because it contains valuable materials such as gold, silver, platinum, and palladium (Suja, Abdul Rahman, Yusof, & Masdar, 2014).

Objectives of the Study

Waste management is the responsible of all the human being in the world as in our daily life. We cannot avoid of wasting and this includes food waste, liquid waste, organic waste, and also e-waste. However, organizations have been seen as the main party who made waste every year and even the relationship between companies' good environmental practices and financial performance becomes an interesting topic to be discussed and had grab the public attention recently. The aim is to prevent the negative impact towards the environment and the priority is also to promote reuse, recycling, other kinds of recovery and, finally, disposal (Gharfalkar, Court, Campbell, Ali, & Hillieret, 2015).

Furthermore, e-waste is among the fast-growing waste in worldwide due to rapid changes of innovation in ICT. Hence, the waste management of this category should not be set aside. More research on the impact of environmental proactivity on firm performance is needed in order to provide a solid base for the industry practitioner regarding how to achieve different objective in one time namely operational, environmental, and financial performance (Sambasivan, Bah, & Ho, 2013).

Thus, this study is anticipated to discover the factors influencing e-waste reporting among public listed companies in Malaysia. All the information gathered from secondary data sources to carry out the study regarding the relationship between the dependent variable and independent variables. This study is anticipated to contribute to the all related parties such as

regulators, board of directors, users, and many more. This study is also anticipated to suggest the solution to the loopholes in e-waste management system in Malaysia.
This study specifically intends:
1. To identify whether ROA influences the e-waste reporting in Malaysia.
2. To identify whether ROE influences the e-waste reporting in Malaysia.

Literature Review

E-Waste and Performance of Company

Firms' performance, bring the meaning of effectiveness and efficiency of individual firm that will give a value to the company. It is important to company to manage well their financial and non-financial activities in ensuring the sustainability of their company. Most of the companies especially the public companies not only focus on the operating profit but they also try to maintain a positive relationship among all the stakeholders involved in their business (Kurniawati & Dianawati, 2020). Gupta and Gupta (2020) discussed that business firms are not socially and environmentally responsible because their activities cause environmental degradation, climate change, pollution, and even poverty in the environments and communities they operate in. How firms hold up to their responsibilities can be seen from their annual report or other environmental reporting. Thus, irresponsible companies might reduce their long-term value.
E-waste reporting is subset of sustainability reporting which is an organization's disclosure of the economic, environmental, and social impacts caused by its everyday activities (Sheldon & Jenkins, 2020). Gupta and Gupta (2020) reported that there are connection between financial performance and sustainability reporting in India. The management of the company is driven to pay extra attention towards the environment as this part attracts foreign investor to their company and they believe that sustainability will make them stay competitive in their industry (Gupta & Gupta, 2020). Aifuwa (2020) revealed that sustainability reporting positively affects firm performance. Environmental performance and reporting is a never ending argument in recent discussion. Hence, the relationship between environmental and financial performance of company is an important issue for environmental policy making (Jamil & Rodiel, 2020).

ROA and E-Waste

ROA and ROE are widely used and calculated to measure the performance of companies in many prior studies (Pham & Tran, 2020) and had become factors contributing the environmental reporting. The company with the higher ROA value indicates that it is performing well. The study done by Bartolacci, Paolini, Quaranta, and Soverchia (2018) among 880 Italian companies found that ROA has significant effect towards environmental performance. According to Aigbedo (2020), the data of 468 companies among 32 countries showed that ROA was not statistically significant towards environmental performance. This might be because companies focus more on financial performance rather than environmental performance. Their finding is consistent with Zou, Zeng, Lin, and Xie (2015) and Borhan and Hooks (2016). Hence the first hypothesis of this article is;

Hypothesis 1 (H_1): *There is a significant relationship between ROA and e-waste reporting*

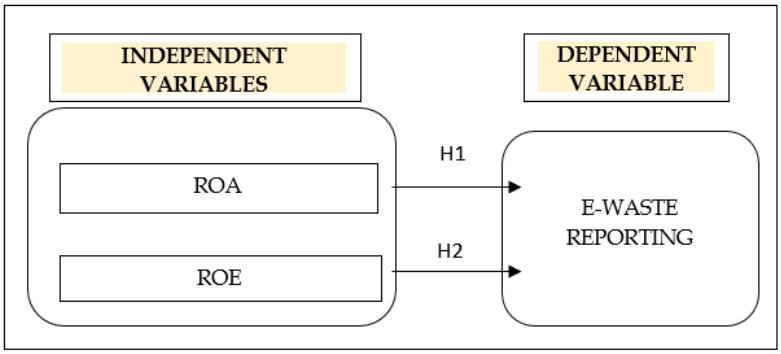
ROE and E-Waste

ROE is a representation of profitability that is shared with shareholders and it is a useful tool for investors to measure the managerial performance of the firm (Kurniawati & Dianawati, 2020). According to the study that has been done by Buallay, Fadel, Al-Ajmi, and Saudagaran (2020), ROA and ROE have insignificant relationships towards the ESG. However, Kasbun,

Teh, and Ong (2016) found that there is a relationship between sustainability and ROA and ROE among the sample of 200 PLCs for the period of 2006 to 2013. This is consistent with findings of Nnamani et al. (2017) that there is a connection between the financial performance and sustainability reporting among manufacturing companies in Nigeria. On the other hand, Bachoo, Tan, and Wilson (2012) found a negative significant correlation with both ROA and ROE. According to Ng, Teh, Ooi, Ong, and Soh (2019), the significant and the negative relationship between quality of environmental information and all other financial indicators of their study due to the factor of additional cost incurred during preparing the environmental reporting. It is anticipated that public is always concerned about activities carried out by the companies and public will have a good taught about the companies' corporate image. Indirectly, this will build their trust towards the companies (Ng et. al., 2019). Therefore, the second hypothesis of this article is;

Hypothesis 2 (H_2): *There is a significant relationship between ROE and e-waste reporting*

Figure 1: Theoretical Framework



Method

The population of this study is Malaysian Public Listed Companies that are listed in the Main Market of Bursa Malaysia Berhad which contain 789 listed companies as at March, 2020. This study used stratified sampling technique. All the 789 companies have been checked on their Environmental, Social, and Governance (ESG) report, however out of 789 companies, there are only 59 companies that provide ESG report and hence, all these 59 companies were selected as the sample of this article. The measurement of the dependent variable, e-waste was extracted from the ESG report on the part of Environment (E-waste reduction) report. On this section, the score of e-waste reduction for every company was reported where the evaluation was made based on the initiative of the company to recycle, reuse, reduce, substitute, treat or phase out e-waste. It includes any initiatives which the company has put in place to reduce e-waste. Companies that score high in this section is considered to have a positive polarity where the higher the value of e-waste reduction, the better performance of company managing their waste.

As for the independent variables, this article focuses on two different types of firm performance measurement which are Return on Asset (ROA) and Return on Equity (ROE). ROA is commonly used by market analysts as a measure of firm performance. It measures the efficiency of company using their asset in generating their income. On the other hand, ROE measures the performance of the company relative to the shareholder investment. All the data including independent and dependent variables are collected through the Thompson Reuters's database.

Findings

Descriptive Result

Table 1 below illustrates the descriptive statistics of the full sample. The total sample consists of 59 companies. As shown below, some values are missing for some of the variable. The descriptive result revealed that for e-waste, it is ranged from 0.00% to 97.3%; ROA from 0.00% to 0.68%; and ROE from -0.02 to 3.02%.

Table 1: Descriptive analysis

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	59	0.00	0.68	0.0784	0.1110
ROE	59	-0.02	3.02	0.2211	0.4487
E-WASTE	59	0.00	97.30	57.0780	23.1962

Normality Test

The normality of the sample is construed from the values of the Skewness and Kurtosis tests. According to Sekaran (2003), values that fall within the range of -2 to +2 for the Skewness test, and -3 to +3 for the Kurtosis test are considered within the normal range. As since in Table 2, the normality of the sample is not normally distributed. This could occur due to low sample size and the frequency distribution does not result in a normal curve (Altman & Bland, 1995; Krithikadatta & Valarmathi, 2012).

Table 2: Normality test

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
E-WASTE	0.426	0.311	-0.806	0.613
ROA	3.884	0.311	17.474	0.613
ROE	5.050	0.311	28.236	0.613

Correlation Analysis

Correlation is a measurable estimation of the relationship between two variables. Correlation could be characterized as a measurable estimation of the relationship between two variables (Marthur, 2007). As the collected samples are not normally distributed the nonparametric statistic technique, Spearman's correlation is employed to examine the relationship between the independent variables and the dependent variable. As shown in Table 3 below, the relationship between e-waste and ROA (r = -0.126) was insignificant, same goes with the relationship between e-waste and ROE (r = 0.130) was insignificant both at the 0.01 level. The findings of this study are consistent with Buallay (2020) and Aigbedo (2020) study.

Table 3: Correlation analysis

		ROA	ROE	E-WASTE
ROA	Correlation	1	.638**	-0.126
	Sig.		0.000	0.389
ROE	Correlation		1	0.130
	Sig.			0.164
E-WASTE	Correlation			1
	Sig.			

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Discussion and Conclusion

There are a few conclusions can be made throughout this study. First and foremost, about the number of companies that reported their waste management especially regarding the e-waste can be considered as low. The value is only 59 out of 789 companies or 7.5% and this value can be considered as low as per expected. There might be because of few reasons such as, there is no mandatory requirement and also lack of awareness among the public listed companies regarding e-waste management. All companies should strive to manage and reuse their electric and electronic devices. In addition, Aifuwa (2020) observed that environmental and social disclosures were low among firms in developing climes. Because of the nature of voluntary report, Aifuwa (2020) anticipated that developing nations would not be achieving sustainable development goals as per set by the United Nation before the year 2030. However, if the report on sustainability issue is made mandatory, then it can be said that the nation is on the right track towards sustainable development.

Secondly, from the total sample, the average score for the e-waste reporting is 57%, and thus it is shows that among all of these companies obtained a moderate score of e-waste reporting. As for the relationship, this article found that there is no significant relationship between ROA, ROE, and e-waste reporting. Thus, both hypotheses of this article are not supported and cannot be accepted. It is inconsistent with the findings by Bartolacci et al. (2018) that found the positive relationship between ROA and environmental reporting. However, the findings of hypothesis two (H_2) is consistent with the study that has been done by Buallay et al. (2020). It can be summarized that there might be other factors that affect the e-waste reporting among public listed companies such as board characteristics, regulatory policy, size of the company, and etc. The small size of sample is also one of the factors that contribute to the insignificant relationship between the independent variables and the dependent variable. Hence, it is suggested to increase the number of sample for future research and the year of observation should be more than one year for a better findings in e-waste reporting.

The results of this study are important for all parties especially among PLCs in supporting their decisions regarding environmental issue and performance issue. Both are vital to the companies' sustainability. Besides that, the findings also are useful to the policy makers to implement or enhance the related policy in protecting the environment of Malaysia. The policy has to be strengthened as the impact of e-waste not only affect the landfill, but it also contributes to the negative effect of health as well. Authors would like to recommend for future research to be conducted within different area such as between e-waste and board characteristics, make comparisons on e-waste management between Malaysian and other countries, and also further study can be done by investigating the awareness among the top management of the PLCs.

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