RESEARCH ARTICLE



Sustainability reporting and corporate reputation of Malaysian IPO companies

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Abstract

The aim of this paper is to explore the relationship between sustainability reporting (SR) and corporate reputation (CR) in the context of initial public offering (IPO) companies in the developing market of Malaysia. This study utilises secondary data from 2007 to 2017 derived from the content analysis of the annual reports and Datastream of 139 sampled IPO companies listed on Bursa Malaysia. The study also employs ordinary least squares (OLS) regression. The result shows that CR has a positive association with SR quantity and quality and its dimensions, i.e., society, environmental, employee, and product. This result suggests that IPO companies can use SR practices to improve their CR. Most companies give little attention to SR issues. More research should be conducted to examine the SR by IPO companies due to the significant role that SR plays in improving the CR of Malaysian IPO companies. The findings can be used by financial institutions and regulatory bodies to encourage companies to be more responsible on SR issues. Businesses should incorporate social practices into their SR decisions. This paper underlines the importance of integrating social and organisational activities.

Keywords Sustainability reporting · Corporate reputation · IPOs · Malaysia

Introduction

Corporate reputation (CR) is significant and interesting due to its immense contribution to the long-term competitive advantages of businesses (Rose and Thomsen 2004).

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Building and maintaining a good reputation involves ongoing stakeholder engagement in business operations (Nassani et al. 2022; Gallego-lvarez et al. 2010). It also helps corporations improve their integration with their surroundings which is critical to the corporations' survival and continued profitability (Clarkson 1995, p. 110). Due to these benefits, some managers see CR as a significant component of company strategy, and its management is seen as crucial for business success (Carlisle and Faulkner 2005). SR can improve the CR of initial public offering (IPO) companies in Malaysia, as the disclosure of information through SR can help individual investors ascertain the company's interest. Thus, SR can be used by potential investors to help them with investment decision-making (De Klerk et al. 2015).

Traditionally, research on how strategy influences corporate performance has been conducted within the framework of the strategy structure performance model. In recent years, a subset of this paradigm has been employed to investigate the role of sustainability reporting (SR) in influencing organisational perceptions in the eyes of stakeholders in order to promote community performance. However, there is a paucity of exploratory studies regarding the potential relationships between the concepts of SR and CR. Most of the existing studies on this relationship are short-term studies



based on cross-sectional data from companies in the United States (US) and United Kingdom (UK) (Melo and Garrido-Morgado 2012), or of SR and CR role in negative situations (Bebbington et al. 2012).

The global financial crisis casts doubt on the future of SR and its impact on CR. The unstable business climate pushes enterprises away from SR since the expense of initiatives is prohibitive, which may undermine stakeholders' confidence and goodwill and, as a result, the organisation's reputation (Giannarakis and Sariannidis 2012, p. 580). Although a significant number of earlier studies have investigated the links between a company's strategy and its performance, very few studies have examined the influence of the external environment on this connection (Goll et al. 2007), indicating the need for longitudinal studies with multiple economic situations to gain a better understanding of the SR-CR link. The main objective of this research is to provide empirical data on the SR-CR link across time. Specifically, this research is conducted to determine if SR has a beneficial impact on the CR of Malaysian IPO companies during a 10-year period from 2007 to 2017. Very few SR studies have been done on IPO companies in emerging countries, including Malaysia (e.g., Luo et al. 2015). Moreover, the relationship between SR and CR in the context of IPO companies has not yet been studied. Therefore, the present study addresses the literature gap by considering this relationship.

Since SR can help establish a good company reputation over time, companies have allocated substantial resources to manage various stakeholders, such as poor neighbouring countries, environmentalists, and the local communities. The stakeholder viewpoint claims that SR activities are likely to lead to improved CR; hence, companies should consider not only the shareholders' interests but also the interests of all stakeholders (Freeman 1984). In other words, companies can enhance their CR by organising stakeholders' SR activities such as energy (e.g., renewable energy) (Chien et al. 2021) and society (e.g., charitable contributions) initiatives. CR may be a corporate asset for companies and shareholders seeking to improve connections with various stakeholder groups such as consumers, investors, the government, suppliers, and employees (Fombrun 1996).

Despite the development of SR in developed countries, scarce empirical evidence has been recorded. Thus, the evidence may be inadequate to address several issues and questions that remain unanswered concerning the effect of SR on CR (e.g., Bowerman and Sharma 2016). Due to the identified literature gaps, this study extends the previous research on IPO companies by considering several SR characteristics, namely society, environmental, employee, and product. How and if SR actions are connected to business reputation are fundamental questions that often call for empirical inquiry (Fombrun 1996). The objective of this study is to investigate the influence of SR

on the CR of Malaysian IPO companies. To address the first question regarding 'how', this research aims to connect SR activities with corporate reputation.

For the second question of 'if', one viewpoint contends that SR and CR are positively related (Brammer and Millington 2004) because SR activities, for instance charitable donations and environmentally friendly practices, enable companies to offset business losses that may have resulted from previous irresponsible actions. The other viewpoint is that SR actions are unrelated to business reputation (Bartley 2007). This is based on the assumption that business credibility may not be increased if the SR activities are designed primarily for profit. According to Waddock and Graves (1997), SR practices may degrade a company's reputation among its employees if the SR expenditure is expanded at the expense of lowering employee salaries. Given these opposing ideas, this research thoroughly investigates whether SR activities are related to business reputation with the aim of providing statistical empirical proof for the relationship.

Also, companies in developed nations have recognised the influence of SR on CR and have attempted to integrate it into all aspects of company strategy (Ali et al. 2010). This study's findings may be useful for local and international standard setters, regulators, professional bodies, and investors in countries that may have a similar profile as Malaysia. The findings can also enhance company managers' understanding of the importance of disclosing more SR information to improve their reputation. There is a dearth of literature on SR and CR in the context of IPO companies in general, and specifically in Malaysia, which justifies the need to fill the gap by conducting this study.

In the subsequent subsections, this research demonstrates the existing literature on the relationship between SR activities and CR, offer the hypotheses, describe the methodology and samples, report and debate the findings, and discuss the practical and theoretical consequences. In the last part, we discuss the future research directions and provide the concluding remarks.

Literature review and hypothesis development

According to stakeholder theory, a corporation should consider not only the interests of its shareholders but also the interests of other stakeholders (Freeman 1984). The stakeholder is described as a group or person who has the ability to influence or be impacted by the success of the corporate's goals (Freeman 1984: 46). The understanding of stakeholder theory is enhanced by applying the model on the correlation between SR and



CR. Stakeholder theory proposes that the influence of SR on CR is dependent on stakeholders' understanding of companies' motivations to carry out their SR activities (Wang and Qian 2011).

Numerous IPO studies have been conducted by researchers. Evidence suggests the underperformance of IPOs in several international markets (e.g., Carpentier and Suret 2018). In developing countries, there are instances of overperformance and underperformance of IPOs (e.g., Abu Bakar et al. 2019; Liu et al. 2022). For instance, in Malaysia, previous studies have found mixed evidence of overperformance and underperformance (e.g., Abu Bakar and Rosbi 2016). However, scarce research has investigated the relationship between IPO companies' corporate reputation and SR. Therefore, the current study investigates this link.

Shareholders, investors, consumers, employees, the natural environment, non-governmental organisations (NGOs), and any other parties whose absence from the company's essential operations might lead to its demise are examples of primary stakeholders. The extent to which a company is capable of managing its stakeholder relationships will determine its success (Nassani et al. 2022; Abdullah et al. 2021; Beurden and Gossling 2008). Since 1995, the World Business Council for Sustainable Growth defines SR as a company's commitment to embrace ethical conduct and contribute to economic growth by enhancing the overall quality of life of workforce and society.

The literature often investigates SR in depth and highlights the advantages and costs of social performance. An early viewpoint stresses and presupposes the classical economic concepts. For example, Friedman (1970, p. 230) contends that there is only one business community, which is to employ resources and participate in activities aimed at raising profits. He further argues that until the company's shareholders provide a clear directive, SR initiatives that do not increase corporate profitability should not be sponsored. Davies (1973) observes that management often focuses on performance and processes and may lack the knowledge required to make socially attractive judgements. Engaging in SR would divert the company's attention away from its principal mission.

The fact that resources are planned for SR, on the other hand, indicates that SR cannot be disregarded for economic reasons (Margolis et al. 2007). Furthermore, businesses mobilise community resources (e.g., local communities, customers) and ideally have a moral commitment to give back to the public as ethical citizens. Businesses may use SR to obtain a competitive edge over their rivals. According to McWilliams and Siegel (2000), corporations intending to increase profits might use company social activities to gain strategic advantages in the eyes of consumers. As the resource-based

viewpoint argues, SR regulatory effort is considered precious, valuable, and irreplaceable in the same way that any other scarce resource is (McWilliams et al. 2006). This concept is founded on the notion that corporations must participate in environmentally and socially responsible activities in order to ensure corporate sustainability and stay appealing to stakeholders (Zhang and Wn 2022; Carroll and Shabana 2010).

Proactive SR activities such as donating to charities and reducing harmful emissions outperform reactive activities such as regulatory compliance when a corporation interacts with its stakeholders (Sharma and Henriques 2005). That is, proactive SR refers to companies aiming to promote a programme and participate in SR activities before receiving unfavourable feedback from consumers (Du et al. 2007). Meanwhile, reactive SR refers to corporations participating in SR to defend company image or minimise other damages. They are enacted when the public is made aware of immoral activities (Murray and Vogel 1997). Companies are in a better position to acquire resources when they participate in SR activities early on, which is a pragmatic position that offers constant resources that may be redirected to solve social challenges as they occur. The primary aim of the study is to examine the impact of SR on the corporate reputation of Malaysian IPO companies. Agency theory provides support in explaining the relationships indicated in the framework. Most of the recent SR studies used legitimacy theory, which has not been used to explain the link between SR and CR. Therefore, this study also uses legitimacy theory. This study assumes that an important role of SR is to verify whether IPO companies are carrying out SR activities in the environment in which they exist which may bring about positive impacts.

According to Bernstein (2000), enterprises should participate in proactive SR activities since stakeholders greatly favour proactive businesses. However, no study has been done on the link between SR and CR in the context of Malaysian IPO companies. Therefore, the current study fills this gap by considering such association. The following is hypothesised:

H₁:Emphasis> Sustainability reporting and its dimensions (society, environmental, employee, and product) are positively associated with company reputation among Malaysian IPO companies.

Research methods

This section describes the data and sample size as well as the variables' measurements and regression models employed in this study.



Data and sample size

This study uses the data of Malaysian IPO companies from 2007 to 2017. Bursa Malaysia launched the SR Framework for PLCs on 5 September 2006, but mandatory SR only came into full effect in 2007. Meanwhile, all PLCs are obligated to disclose their SR activities in their annual reports. The share return data from 2007 to the end of 2017 for the corporate reputation measure was collected from Datastream. This study does not include final years data, missing data, and data from financial companies. This study is descriptive as content analysis is conducted based on the selected annual reports using the SR index. This process is employed in this study to examine the current practices of SR among the Malaysian IPO companies pertaining to the quantity and quality of SR disclosure.

The focus of this study is on Bursa Malaysia's Main Market and ACE Market, which are the two main securities markets in Malaysia. The study sample excludes companies from finance, closed-ended funds, and real estate investment trusts sectors. IPO companies that do not have annual reports are also excluded. Eventually, the final sample of the study consists of 139 non-financial IPO companies. All the required information regarding these companies' SR was obtained from the website of Bursa Malaysia at www. bursamalaysia.com.my or the companies' own websites. The annual reports of these IPO companies were used to obtain data from 2007 to 2017.

Measurements of variables

In determining the final sample of this study, the following set of criteria was observed: (1) the company must be listed on Bursa Malaysia's Main Market or ACE Market, (2) the share return data on the Datastream database must be available from the year of listing, and (3) the company is not categorised as an infrastructure project company (IPC) and must not be from the finance, trust, or closed-ended funds sector. Eventually, 139 IPO companies make up the final sample with data covering the period of 2007–2017. There is a year-to-year variation in the number of companies according to the type of analysis and time window assumed.

Reputation is an asset that is valuable yet intangible. To prove its worth, reputation needs to be measured. However, it is difficult to measure due to its intangible characteristics and the emotional-cognitive element of the observer. Thus, to this day, there is still no unified tool for the measurement, with authors and individual institutions creating taxonomic lists with diverse numbers of variants. Although research on reputation began in the 1950s, reputation was never measured until the early 1980s. Fortune Magazine made the most famous move to date in the fall of 1983 (Ponzi et al. 2011), and the list

of America's most admired businesses was first published in 1984 (Fomrun and Gardberg 2000). For this purpose, business leaders and analysts ranked the reputation in their industries based on eight criteria, ranging from test value and quality of products and services to social responsibility (Abdullah et al. 2021; Ponzi et al. 2011).

In 1997, the list had grown into World Most Admired Corporations (Fomrun and Gardberg 2000). It is based on nine criteria measured in 51 different branches of industry: quality of services and products, innovation, people management, quality of management, use of company assets, financial soundness, global competitiveness, and long-run investment value. CR is measured according to five dimensions: share return, commitment to stakeholders, media exposure, brand value, and awards (Ghuslan et al. 2021). This study focuses on share return because the performance of IPO companies is measured based on share return (Ritter 1991; Abdullah et al. 2019; Ghuslan et al. 2021). Therefore, in this paper, the measurement of CR is based on share return that is given the value of 1 if the share return is above the industry average and 0 otherwise. The calculation is as follows:

Share return = $(price_t - price_{t-1})/price_{t-1}$

SR provides guidelines for PLCs on the implementation of their SR activities, which cover the society, environmental, employee, and product variables. These variables form the basis of the SR measurements in the current study and have been utilised in previous Malaysian-based studies (e.g., Abd Rahim 2016; Zainal et al. 2013; Sadou et al. 2017). The requirements of Bursa Malaysia are also taken into consideration in ensuring that the index contains items covering the variables mentioned earlier. As such, the modified index employed in this study consists of 24 items (Appendix Table 7) as employed in earlier studies on Malaysian annual reports (Sadou et al. 2017; Saleh et al. 2011). The 24 items are divided equally to the four categories of variables with six items each for society, environmental, employee, and product.

Previous studies have used different measurements for their content analysis with respect to the quantity and quality of disclosure. The quantity of disclosure entails the total number of words, pages, or sentences (e.g., Zainal et al. 2013). Some other studies have employed dichotomous variables for disclosure (given a score of 1) and non-disclosure (given a score of 0) for the quantity of SR (e.g., Abd Rahim 2016; Sadou et al. 2017). Researchers have also used various indexes to measure the quality of disclosure (e.g., Sadou et al. 2017). The score of 0 is for non-disclosure, 1 is for general qualitative disclosure, 2 is for qualitative disclosure with specific explanations, and 3 is for quantitative disclosure (e.g., Sadou et al. 2017; Saleh et al. 2011; Zainal et al. 2013). SR quality is measured using denoted weights for various types



of disclosures according to each item's perceived importance to different user categories, which in turn provides the highest level of measurement precision and enables the exploration of most of the SR information mentioned in the annual reports. Therefore, this study uses the quality of SR as a measurement.

Apart from the independent variables mentioned earlier, several control variables are used in this study. These control variables are director ownership, CEO duality, organisation property, company age, and financial crisis. This is done so that this study regulates the possible associations that SR and its dimensions have with the CR of IPO companies. A definition of each control variable is presented in this section. The selection of possible control variables relies on previous evidence in Malaysian and non-Malaysian contexts (e.g., Chang and Kwon 2020; Ibrahim and Ismail 2012; Liu et al. 2014; Rashid 2018; Shahid et al. 2018; Singla 2019), and some studies pertaining to CR as presented in this section. The CR, SR, and control variables measurements of the current study are explained in Table 1:

Regression model

An empirical model is used to examine the connection between SR and CR. This study uses a multiple regression technique based on the ordinary least squares (OLS) technique. This study's projected findings are applied using this model to ensure their comparability to those of other studies. The regression model below represents the relationship between SR and CR:

$$CR_{it} = \beta 0 + \beta 1 \text{ SR}_{it} + \beta 2 \text{ SOS}_{it} + \beta 3 \text{ ENG}_{it}$$
$$+ \beta 4 \text{ EMP}_{it} + \beta 5 \text{ PRO}_{it} + \beta 6 \text{ DO}_{it} + \beta 7 \text{ CEO}_{it}$$
$$+ \beta 8 \text{ OP}_{it} + \beta 9 \text{ CAGE}_{it} + \beta 10 \text{ FC}_{it} + \varepsilon$$



Descriptive analysis

Table 2 presents the descriptive statistics for all the variables for the full sample of 139 IPO companies, which represent the findings for the first objective. CR is measured using share return from 2007 to 2017. Table 2 shows that the CR mean for the full sample is 12.142 with a maximum of 17.432 and minimum of 3.43 for the study period. This finding is similar to the finding of another Malaysian-based study carried out by Abdullah and Abdul Aziz (2013), which reported a mean of 3.75.

The SR dimensions are grouped into four themes, i.e. society (SOC), environmental (ENVI), employee (EMP), and product (PRO). While previous studies used the purposive sampling technique that aimed at large-sized companies, the current study applies it on IPO companies selected from various industry types. For the quantity (QT) of SR (SR QT), the mean index score is 0.182. With respect to the separate themes of the SR variables, the mean values of SOC QT, ENVI QT, EMP QT, and PRO QY are 0.269, 0.182, 0.295, and 0.079, respectively.

In terms of quality (QL), the SR dimensions are also grouped into the same four themes as for quantity, i.e., society (SOC), environmental (ENVI), employee (EMP), and product (PRO). The quality of SR (SR QL) has a mean index score of 0.320. With regard to the separate themes of the SR variables, the mean values of SOC QL, ENVI QL, EMP QL, and PRO QL are 0.459, 0.253, 0.450, and 0.120, respectively.

The control variables consist of director ownership (DO), chief executive officer duality (CEO), organisation property (OP), company age (CAGE), and financial crisis (FC). The

Table 1 Measurements of variables

Variable name	Measurement
Dependent variable	
Corporate reputation	Share returns = $(\text{price}_t - \text{price}_{t-1})/\text{price}_{t-1}$ 1 if the share returns is above the industry average and 0 otherwise
Independent variable	
Sustainability reporting	Quantity of SR i.e. unweighted measure of 0 and 1 Quality of SR i.e. a weighted measure of 0, 1, 2, and 3
Control variables	
Director ownership	The percentage of director holding as the appropriate measure of director ownership
CEO duality	This variable using a dummy variable, which takes a value of 1 if the CEO and chairman are the same person and 0 otherwise
Organisation property	The percentage of common shares owned by executive directors
Company age	Company age is measured by the logarithm of the number of years the company has since its founding
Financial crisis	1 indicates company after financial crisis and 0 before financial crisis



Table 2 Descriptive analysis

Variable	Obs	Mean	Std. dev	Min	Max	Skewness	Kurtosis
CR	139	12.142	1.954	3.43	17.432	-0.135	5.979
SOC QT	139	0.269	0.194	0.000	0.800	0.351	2.392
ENVI QT	139	0.182	0.214	0.000	0.800	1.014	3.061
EMP QT	139	0.295	0.227	0.000	0.800	0.162	1.917
PRO QT	139	0.079	0.142	0.000	0.700	2.214	7.535
SR QT	139	0.182	0.150	0.000	0.675	0.677	3.049
SOC QL	139	0.459	0.400	0.000	1.800	0.929	3.359
ENVI QL	139	0.253	0.317	0.000	1.300	1.254	3.835
EMP QL	139	0.450	0.373	0.000	1.400	0.431	2.232
PRO QL	139	0.120	0.233	0.000	1.400	2.683	9.246
SR QL	139	0.320	0.242	0.000	1.150	1.060	4.289
DO	139	7.351	1.961	2.000	13.000	0.688	3.564
CEO	139	0.408	0.131	0.111	0.833	0.540	3.582
OP	139	7.555	10.929	0.000	54.670	1.824	6.231
CAGE	139	16.435	11.924	1.000	69.000	1.073	4.958
FC	139	0.840	0.368	0.000	1.000	-1.852	4.429

This table displays the descriptive statistics of the continuous dependent, independent, and control variables of the IPO companies used in this study. CR, corporate reputation, is measured using share return taking the value of 1 if the share return is above the industry average and 0 otherwise; QT, quantity; QL, quality; SR, sustainability reporting; SOC, society; ENVI, environmental; EMP, employee; PRO, product; DO, director ownership, i.e., the percentage of director holding; CEO, CEO duality measured using a dummy variable taking the value of 1 if the CEO and chairman are the same person and 0 otherwise; OP, organisation property, the common shares owned by executive directors; CAGE, company age, measured using the logarithm of the number of years since the company was founded; FC, financial crisis, with 1 indicating after a financial crisis and 0 before a financial crisis; n=139.

descriptive statistics show that DO has a large range where the minimum is 2.000 and the maximum is 13.000. For CEO, the mean for the companies under observation is 0.408, with a minimum of 0.111 and a maximum of 0.833. For OP, the mean is 7.555, with a minimum of 0.000 and a maximum of 54.670. For CAGE, the mean is 16.435, with a minimum of 1.000 and a maximum of 69.000. Finally, for FC, which is a

dummy variable, the mean for the companies is 0.840, with a minimum of 0.000 and a maximum of 1.000.

Correlation analysis

The direction, strength, and significance of the relationships among the variables in this study are determined using

Table 3 Correlation analysis for SR quantity

Variables	CR	SOC QT	ENVI QT	EMP QT	PRO QT	SR QT	DO	CEO	OP	CAGE	FC
CR	1.000										
SOC QT	0.265**	1.000									
ENVI QT	0.192*	0.245**	1.000								
EMP QT	0.163	0.304***	0.477***	1.000							
PRO QT	0.324***	0.294***	0.450***	0.328***	1.000						
SR QT	0.363***	0.550***	0.681***	0.621***	0.596***	1.000					
DO	0.410***	0.150	0.081	0.094	0.037	0.129	1.000				
CEO	-0.207**	-0.135	0.043	-0.016	0.015	-0.111	-0.259**	1.000			
OP	-0.159	-0.118	0.001	-0.057	-0.047	0.007	-0.141	-0.054	1.000		
CAGE	0.242**	0.127	0.125	0.115	-0.028	0.106	0.238**	-0.138	-0.049	1.000	
FC	-0.153*	-0.135	-0.008	-0.112	-0.049	0.022	-0.103	-0.111	0.086	-0.075	1.000

^{***}Correlation is significant at the 0.01 level (two-tailed); **correlation is significant at the 0.05 level (two-tailed); *correlation is significant at the 0.10 level (two-tailed).



correlation analysis. The Pearson correlation coefficients between the independent variables, dependent variable, and control variables are shown in Table 3. There are high correlations among the disclosure scores, as discussed in detail below.

In terms of multicollinearity, the correlation matrix proves that no serious multicollinearity issue exists among the variables because all the correlation values are less than 0.80 (Hair et al. 2010). As such, multicollinearity is not a problem in the present study. Tables 3 and 4 show that the SR quantity and quality for society (SOC), environmental (ENVI), employee (EMP), and product (PRO) have significant and positive correlations with CR at the significance levels of 1% (p < 0.01), 5% (p < 0.05), and 10% (p < 0.10). Meanwhile, two control variables, namely DO and CAGE, have positive and significant correlations with CR. On the contrary, CEO, OP, and FC have negative and significant correlations with CR. A possible explanation for the continued decline in SR in the societal and environmental dimensions in Malaysia is the lack of legislation on SR and the perception of businesses that they are not benefiting from the investor or society (Teoh and Thong 1984; Chien et al. 2022). In the environmental aspect, companies emphasise their SR efforts on a variety of problems, such as energy consumption which entails efficient energy usage, reduction of climate change due to energy consumption and emission, and conservation of natural resources (Sun et al. 2022).

Regression analysis

Multiple regressions are performed to test the hypothesis of the study, but before doing that, three basic assumptions important to OLS regression are measured. These include the examination of collinearity among the independent variables, normality (Table 2), and heteroskedasticity for the model. To verify the collinearity issue, the variance inflation factors (VIF) are computed. In all the cases shown in Tables 5 and 6, the VIF values are less than 10 signifying the non-existence of any multicollinearity issue. Statistically, the data used for the regression analysis is considered to be normally distributed in terms of skewness and the kurtosis. The Breusch-Pagan tests used to test heteroscedasticity in this study show *p*-values of less than 5%, indicating a large amount of heteroscedasticity in the model using OLS, as shown in Tables 5 and 6.

This section presents the regression test results for the study's data, along with the empirical and theoretical discussions of the findings as well as comparisons to the results of earlier studies, particularly those in the context of Malaysia. A multiple regression model representing SR and CR is used to test the hypothesis of the present study. The first regression is based on OLS regression. The findings on the investigations of the hypothesis for the model are reported below. Tables 5 and 6 show the findings of the analysis for the model linking SR and its dimensions (measured by quantity and quality) and CR (measured by share return).

The results in Tables 5 and 6 on the quantity and quality measures reveal surprising findings concerning SR. The tables show that SR has a positive and significant relationship with CR (t = 4.60, 3.52; p-value = 0.000, 0.001). In detail, the SOC dimension has a positive and significant relationship with CR (t = 0.98, 1.00; p-value = 0.033, 0.032). ENVI has a positive and significant link with CR (t = 0.16, 0.22; p-value = 0.087, 0.083). EMP has a positive and significant link with CR (t = 0.25, 0.01; p-value = 0.071, 0.099). Lastly, PRO has a positive and significant relationship with CR (t = 3.46, 3.28; p-value = 0.001, 0.001). Thus, hypothesis H₁ which

Table 4 Correlation analysis for SR quality

Variables	CR	SOC QL	ENVI QL	EMP QL	PRO QL	SR QL	DO	CEO	OP	CAGE	FC
CR	1.000										
SOC QL	0.264**	1.000									
ENVI QL	0.236**	0.300***	1.000								
EMP QL	0.204**	0.388***	0.451***	1.000							
PRO QL	0.325***	0.289***	0.512***	0.333***	1.000						
SR QL	0.342***	0.730***	0.748***	0.772***	0.655***	1.000					
DO	0.410***	0.110	0.055	0.116	-0.005	0.107	1.000				
CEO	-0.207**	-0.165	0.039	-0.030	-0.010	-0.069	-0.259**	1.000			
OP	-0.159	-0.094	-0.041	-0.069	-0.060	-0.093	-0.141	-0.054	1.000		
CAGE	0.242**	0.114	0.149	0.101	-0.028	0.128	0.238**	-0.138	-0.049	1.000	
FC	-0.153*	-0.129	-0.033	-0.087	-0.052	-0.110	-0.103	-0.111	0.086	-0.075	1.000

^{***}Correlation is significant at the 0.01 level (two-tailed); **correlation is significant at the 0.05 level (two-tailed); *correlation is significant at the 0.10 level (two-tailed).



 Table 5
 Regression results for SR quantity

Table 6 Regression results for SR quality

	SR quan	tity					SR Quali	ity			
Variables	Coef	Std. err	T.stat	Sig	VIF	Variables	Coef	Std. err	T.stat	Sig	VIF
SR QT	4.481	0.973	4.60	0.000	0.944	SR QL	2.181	0.619	3.52	0.001	1.06
DO	0.258	0.079	3.27	0.001	1.190	DO	0.285	0.081	3.53	0.001	1.18
CEO	-1.762	1.146	-1.54	0.127	1.120	CEO	-1.820	1.183	-1.54	0.126	1.12
OP	-0.018	0.013	-1.37	0.174	0.965	OP	-0.014	0.014	-1.01	0.313	1.04
CAGE	0.012	0.012	0.98	0.331	0.901	CAGE	0.014	0.013	1.05	0.294	1.11
FC	-0.211	0.421	-0.50	0.617	1.200	FC	-0.156	0.435	-0.36	0.720	1.21
Constant	9.735	1.017	9.57	0.000		Constant	9.759	1.055	9.25	0.000	
Mean VIF					1.130	Mean VIF					1.13
OLS heteroskedas- ticity					0.477	OLS heteroskedas- ticity					0.039
n					139	n					139
R^{2} (%)					0.3611	R^{2} (%)					0.319
Adjusted R^2 (%)					0.3193	Adjusted R^2 (%)					0.275
F-value					8.620	F-value					7.160
<i>p</i> -value					0.000	<i>p</i> -value					0.000
	SR quantity dimensions						SR quality dimensions				
Variables	Coef	Std. err	T.stat	Sig	VIF	Variables	Coef	Std. err	T.stat	Sig	
SOC QT	0.809	0.825	0.98	0.033	1.24	SOC QL	0.409	0.410	1.00	0.032	1.30
ENVI QT	0.131	0.831	0.16	0.087	1.53	ENVI QL	0.127	0.574	0.22	0.083	1.61
EMP QT	0.191	0.748	0.25	0.071	1.39	EMP QL	0.004	0.455	0.01	0.099	1.40
PRO QT	4.074	1.179	3.46	0.001	1.36	PRO QL	2.431	0.740	3.28	0.001	1.45
DO	0.278	0.080	3.48	0.001	1.19	DO	0.300	0.080	3.77	0.000	1.19
CEO	-2.002	1.180	-1.70	0.092	1.15	CEO	-1.745	1.184	-1.47	0.143	1.17
OP	-0.014	0.013	-1.05	0.298	1.05	OP	-0.013	0.013	-0.97	0.336	1.05
CAGE	0.018	0.013	1.44	0.153	1.13	CAGE	0.018	0.013	1.4	0.165	1.14
FC	-0.165	0.433	-0.38	0.704	1.23	FC	-0.148	0.429	-0.35	0.731	1.22
Constant	9.990	1.061	9.41	0.000		Constant	9.724	1.054	9.23	0.000	
Mean VIF					1.23	Mean VIF					1.26
OLS heteroskedas- ticity					0.082	OLS heteroskedas- ticity					0.192
n					139	n					139
R^{2} (%)					0.355	R^{2} (%)					0.360
Adjusted R^2 (%)					0.295	Adjusted R^2 (%)					0.301
F-value					5.950	F-value					6.080
<i>p</i> -value					0.000	p-value					0.000

predicts that SR and its dimensions are positively related with CR is supported for the society, environmental, employee, and product dimensions. Malaysian regulators could benefit from these findings in their endeavour to reform employee SR to improve its quality. Overall, this study has accomplished its aim by identifying the dimensions that answer the research questions, showing that all of the SR variables provide support to the stated hypothesis. Additionally, the findings can also be used to define efficient SR.

Thus, the findings for SR and its dimensions are supported by agency theory, which states that an increase in

managers' shareholdings to reform SR issues and drive information disclosure could possibly increase SR thus leading to improved corporate performance (De Klerk et al. 2015). The argument of agency theory by Bowerman and Sharma (2016) is that companies have to gain some benefits from SR in order to justify and continue the advances of SR which will then increase share price performance. The results of this study are also in the line with Bernstein (2000), which states that enterprises should participate in proactive SR activities since stakeholders greatly favour proactive businesses. Investors typically emphasise on company transparency, particularly pertaining to non-financial



information. Directors are the main party responsible for addressing agency problems via SR (Alazzani et al. 2019). Agency problems and agency costs can be alleviated by minimising information asymmetry via corporate disclosure (Healy and Palepu 2001). Nonetheless, due to the motivation to retain company reputation, key shareholders are likely to capitalise on the economic, social, and environmental behaviour of their company (Prado-Lorenzo et al. 2009). Hence, key shareholders tend to boost market communications on SR matters due to their particular interest in the long-run survivability of their company (Anderson and Reeb 2003). They are well aware that investor confidence and market efficiency are determined by accurate information disclosure concerning corporate performance (Jamali 2008). Legitimacy theory predicts gradual improvements to the SR dimensions based on changes in the Malaysian business landscape (Anas et al. 2015). The majority of studies on social and environmental disclosure are based on legitimacy theory (Aerts and Cormier 2009). This theory asserts that higher SR is a means to offset potential threats to the company's legitimacy and other changes in the business milieu (Gray et al. 1995). It also proposes that companies will endeavour to ensure that their activities and performance are publicly acceptable in line with the growing public awareness and concern. These findings are supported by earlier studies that found a negative link between the SR dimensions and corporate financial performance (e.g., Wan Ahamed et al. 2014; Murray et al. 2006; Verbeeten et al. 2016) in addition to those that found a positive connection (e.g., Kang and Kim 2019; Kuvaas 2019; Saleh et al. 2011).

Discussion and conclusion

This study aims to explore the impact of SR on the CR of Malaysian IPO companies. The correlation between SR and CR is established using regression analysis. A key finding is that the society, environmental, employee, and product dimensions are positively and significantly related to the CR of IPO companies. This study also uses director ownership, CEO duality, organisation property, company age, and financial crisis as the control variables.

The analysis results demonstrate that companies emphasise on sustainability and corporate reputation improvements by providing greater SR in their annual reports. This is consistent with the results of past studies which indicate that SR is significantly and positively correlated with corporate reputation. The positive correlations between SR dimensions (society, environmental, employee, and product) and CR suggest the possibility

of boosting companies' external reputation. Additionally, companies can improve the aspects of employee morale and investor relations (Waddock and Graves 1997). In terms of limitations of the study, the SR measurement does not have any real implications on CR. It should be noted that the SR measurement depends on the content analysis of the disclosures on the society, environmental, employee, and product dimensions. A more fitting measurement would be the amount of donation or investment on SR made by the company. Nonetheless, the Malaysian law does not necessitate the disclosure of SR investment cost in the annual report of companies, thus rendering content analysis a more practical alternative. This study is also inadequate in terms of the timeframe and number of IPO companies covered. The correlation may not be properly justified due to the inclusion of a low number of companies and a short timeframe covered in the study.

The results indicate that there is a large gap among the Malaysian IPO companies with some companies adopting a low level of SR in their annual reports, indicating that Malaysian IPO companies do not realise the full benefits of annual reports. The disclosure level of IPO companies depends on the amount of information disclosed and the attention given to society, environmental, employee, and product issues.

The current study contributes to three theories (stakeholder theory, agency theory, and legitimacy theory) by enhancing the existing understanding on SR and its impact on the CR of IPO companies in the Malaysian context. The management and shareholders of IPO companies might benefit from the findings of this study in their endeavour to enhance the SR quality. The findings could enhance their understanding of the importance of applying best practices in SR to improve company quality, transparency, reliability, and reputation. SR is one that looks after the best interest of the stakeholders of listed companies. Meanwhile, the relevant regulatory bodies are responsible for ensuring that companies listed on Bursa Malaysia conform to the SR requirements. These regulatory bodies must also be aware of the attributes of short-term and long-term IPO success due to the ongoing changes to the SR policies made by the government as well as Bursa Malaysia's listing requirements.

Employees are highly significant in the attainment of sustainability, particularly in improving corporate reputation, considering their substantial role as decision makers that determine the long-term success of their companies. The findings of this study enrich the existing body of knowledge on the relationship between SR and CR among IPO companies. This study examines the effect of the SR dimensions on the CR of Malaysian IPO companies. Many studies have tested the correlation between SR practices and the financial performance



of Malaysian companies (e.g., Saleh et al. 2011; Wan Ahamed et al. 2014), yet there is scarce research on the correlation between SR and the CR of Malaysian IPO companies. The findings of this study indicate that SR practices improve CR by showing that SR and its dimensions are positively linked to CR.

The findings of this study can be taken as a wake-up call to support reform towards improving IPO companies' management. The study reveals that some existing SR practices still require improvements for the betterment of the performance of IPO companies. Malaysian regulators could benefit from these findings in their endeavour to carry out a reform process on SR to improve its quality. Additionally, the findings can also be used to define efficient SR. This study generally highlights the crucial role of SR in Malaysian IPO companies in developing SR further in the country, which in turn warrants a more rigorous analysis. The findings of this study show that SR initiatives could, to a certain extent, improve the performance of IPO companies. Company objectives, including profit maximisation and company reputation, can therefore be realised via vigorous engagement in SR initiatives by company managers. Thus, this study's findings can be used by companies in their engagement in SR activities and their disclosures. Government agencies also provide support in the forms of regulations and laws enforced on Malaysian PLCs to drive their active engagement in SR.

This study specifically provides information on the SR dimensions that significantly affect CR; therefore, the managers of IPO companies could consider these SR dimensions in their endeavour to improve corporate reputation. This study hence paves the way for future research on the motivations of Malaysian companies to conduct SR. The link between Malaysian corporations and the industry also affects the changes in SR standards. The standards which are typically identified externally can be altered to fit the local context and hence boost the intrinsic motivation of companies to perform SR involving the society, environmental, employee, and product dimensions. The results of the study suggest the need for more efforts on the part of policymakers and multi-stakeholder initiatives to enhance the quality of SR in Malaysia, i.e., by positively channelling various pressure sources from their respective contexts to SR initiatives including ownership structures and local cultural traditions. Despite the growing interest in SR, very few studies have explored

the effect of SR on the CR of IPO companies. Based on the notions of stakeholder theory and the fact that SR functions as an internal actor that makes organisational decisions, this study is one of the few that demonstrate the contributions of the SR dimensions towards enhancing CR performance.

This study excludes all financial IPO companies, real estate companies, closed-end funds companies, and infrastructure companies due to the different regulations that apply to them. Hence, the findings of this study are not generalizable to the aforementioned omitted IPOs. In addition, the sample size under the SR regime is small. The SR and CR data of IPO companies in this study only cover the years between 2007 and 2017, which again renders the findings to be non-generalizable to other periods. Thus, any generalizations of the findings to other periods must be observed with caution. This study has policy implications including to Bursa Malaysia and the Securities Commission of Malaysia, as the findings provide valuable insights into the importance of explaining the behaviour of SR and corporate reputation in the case of Malaysian IPO companies.

Despite the significance of investment forecasting analysis and the decision-making process for investors, prospective investors, and market analysts, very few studies have been carried out on IPO market performance predictions. As such, this study suggests that further research be conducted on the said area. Since the scope of this study is limited to the Malaysian context, the findings merely serve as guidance for future research in the context of other countries. For example, the findings of this study may be dissimilar to the studies on advanced countries such as the UK, the US, and other European nations, but could be similar with the studies on developing countries. The items in the study's disclosure index only represent items that could be disclosed by the IPO companies as suggested in the existing literature. Thus, certain items that may be important for a certain company might not have been included in the newly developed disclosure index. Hence, future studies should explore SR information more thoroughly to assess the quantity and quality of the disclosure of these items by conducting a comprehensive review on the SR dimensions in Malaysia and other countries. Overall, the SR review in this study underlines the important trends for future research.



Appendix

Table 7 List of SR items

Theme I: Society, SR items	
1	Donations program
2	Educational program
3	Health projects
4	Development society programs and activities
5	Sports program
6	Charity program
Theme II: Environmental, SR items	
1	Pollution control
2	Conservation of natural resources
3	Award for environmental programs
4	Waste management
5	Water management
6	Renewable energy
Theme III: Employee, SR items	
1	Employee health and safety
2	Employee trainings
3	Safety award
4	Improve employee working conditions
5	Employees' awards
6	Employee welfare fund
Theme IV: Product, SR items	
1	Products development
2	Product safety
3	Green product
4	Product quality
5	Product awards
6	Consumer satisfaction



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Data availability All the required information regarding SR is gathered from the IPOs found in Bursa Malaysia's website at www.bursamalay sia.com.my or the companies' websites. The annual reports of the IPOs listed on Bursa Malaysia are used to obtain the data from 2007 to 2017. All data and outputs are available and can be shared whenever required.

Declarations

Ethics approval This article does not contain any involvement from human and animals.

Consent to participate Not applicable.

Consent for publication The authors do not have any consent issue to publish this research paper.

Competing interests The authors declare no competing interests.

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