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A longitudinal study of corporate social responsibility activities and brand equity in Malaysia

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Abstract
Purpose: This paper investigates the trend of corporate social responsibility (CSR) activities and brand equity over three years (2016-2018).
Design/methodology/approach: A checklist was constructed to examine the CSR practices reported by Malaysian top 100 brands (public listed companies) annual reports. The extend of CSR was measured on a dichotomous basis (0,1), while the brand equity values of public listed companies (PLCs) were gathered from the Brand Finance Group.
Findings: The results showed significant differences between the types of the business sector and CSR activities and brand equity. The results also revealed significant differences between the categories of CSR-related activities such as community, workplace, and marketplace-related CSR.
Research limitations/implications: Future studies should extend the time span and checklists for studying the differences of CSR-related activities and brand equity. Concentrate more on the quality of CSR-related activities rather than CSR disclosure could be an added value in the future.
Practical implications: The managers of PLCs need to consistently or improve their investments on CSR-related activities and better formulate CSR-related activities to address these key stakeholders' needs.
Originality/value: This paper is one of the few investigating the differences between the groups of year and business sector with CSR activities and brand equity.

Keywords: Malaysia, Corporate Social Responsibility Activities, Brand Equity, Public Listed Companies, Stakeholder Theory

Introduction

In the modern and competitive market place, corporate social responsibility (CSR) activity is one of the most significant issues that has gained greater attention in terms of stakeholders' expectations and requirements because CSR-related activities contribute to building a positive brand image (Harjoto and Salas, 2017; Lau, 2019) as well as creating a stronger brand. Many past studies such as those carried out by Nakamura (2016), Kang and Namkung (2017), Cowan and Guzman (2018) and Salehi (2018) have claimed that CSR-related activities benefit businesses by enhancing brand equity and therefore build a good brand reputation which can be turned into a competitive advantage (Rhoua et al., 2016). Aaker (1996) defines brand equity as assets associated with a brand name that increases the value of an organization's product or service. Brand equity can be studied in three different areas: consumer, company, and financial (Baalbaki and Guzman, 2016). Thus, many firms have taken steps to introduce or strengthen CSR-related activities such as employee benefits, environmental protection, community services, and marketplace practices (Rhoua et al., 2016; Curraz-Perez, 2018; Rahman et al., 2019, Lv et al., 2019; Gangi et al., 2019), to convince and attract loyal customers (Rhoua et al., 2016; Ahmad Sharabati, 2018) and to strengthen trust in their brands (Bajic and Yurtoglu, 2018; Ford and Stohl, 2019). More than 80 percent of companies in Fortune 500 (Fatma et al., 2015), listed companies (Eldomiaty et al., 2016; Harjoto and Salas, 2017; Cowan and Guzman, 2018; Yim et al., 2019) and small and medium enterprises (Lopez-Perez et al., 2017) have improved their reputation and brand equity values because of the positive impact of CSR-related activities.

Many past studies have proven that overall CSR-related activities and specific CSR-related activities significantly influence brand equity among organizations in both developed and developing countries (Wang et al., 2015; Fatma et al., 2015; Bhattacharya and Kaursar, 2016; Woo and Jin, 2016; Singh Dara Singh and Islam, 2017; Lv et al., 2019). Nevertheless, there remain many underexplored aspects of comparing the differences of various CSR activities and financial-based brand equity in developing countries such as Malaysia (Choongo, 2017; Heinberg et al., 2018; Yang and Basile, 2019; Lau, 2019). Hence, it motivated the authors to conduct this current study. The purpose of this study is to investigate the differences between the categories of CSR-related activities and brand equity; the authors have specifically tested using financial-based brand equity. This paper focuses on the financial perspective rather than the customer's mindset because CSR-related activities tend to involve long-term efforts. A company often reaps the benefits of such investments over a longer period of time. Similarly, brand equity assessment should be forward-looking because the outcomes of CSR-related activities are usually long-term. The findings will provide useful support and evidence for the management of PLCs in Malaysia, as well as companies in other developing countries. It will help them engage in more CSR-related activities as a core element of their strategic and brand management. Indirectly, the stakeholders will also gain more benefits from CSR-related activities undertaken by these companies.

Literature Review

Brand equity

Tiwari (2010) refers brand equity as a set of customers' perceptions, behaviours and knowledge that creates the demand and/or price for a branded product. In customer perspective, brand equity can be measured in four dimensions such as brand awareness, brand loyalty, perceived quality and brand associations (Aaker, 1996). Additionally, brand equity can also be studied from other different perspectives like company and financial (Baalbaki and Guzman, 2016). From the shareholder's point of view, a brand's value relies on the financial returns that the brand will generate over its useful life; this can be potentially monetized as brand value (Tiwari, 2010). Moreover, brand equity is better demonstrated as a single brand value because it is more useful and convenient for accounting purposes (Pakseresht, 2010).

In recent years we have seen a growing interest on the corporate sectors for responsible investment in major elements like environmental, social and governance. Due to this, many recent studies like Salehi et al. (2018), Gangli et al. (2019), Rahman et al. (2019) and El Zein et al. (2020) have focused on capturing the role of CSR on brand equity. In a meta-analysis of CSR on corporate financial performance, Vishwanathan et al. (2020) identify studies that examine CSR's effects on corporate financial performance. Across these studies, CSR has positively related to corporate financial performance. The majority of past studies measured brand equity based on Keller's and Aaker's approaches, however, this study aims to discover the differences of categories of CSR-related activities on the financial approach of brand equity rather than customer-based brand equity due to the growing interest of firms in responsive investment and a dearth of longitudinal studies on the impact of CSR activities on financial-based brand equity in Malaysia (Lau, 2019).

Theoretical review and hypotheses development

In general, CSR is the way companies integrate social, environmental, and economic concerns into their values, culture, decision making, strategies and operations in an accountable manner and thereby create better practices within the firm, create wealth and address their social responsibilities (Jamali, 2006; Shahin and Zairi, 2007). Past literature has divided CSR into two general dimensions: external CSR-related activities and internal CSR-related activities encompassing a firm's economics, legal, ethical and voluntary activities in terms of social responsibility (Carrol, 1991). This study has incorporated CSR's internal and external dimensions where the stakeholder's dimensions are used to categorized CSR-related activities (employees, shareholders, customers, suppliers, and natural environments). Thus, the current research has adopted the Stakeholder Theory to study the differences in CSR activities on financial-based brand equity in Malaysia for the years 2016-2018. In Malaysia, CSR-related activities attracted considerable attention when Bursa Malaysia set out the framework for disclosing CSR-related activities for PLCs on September 5, 2006. The purpose was to regulate companies in identifying CSR-related activities in the four dimensions of environment, community, workplace, and marketplace.

According to Evans and Kantrowitz (2002), the term environmental activities often refer to Earth's overall situation or the health condition of people living in the environment. Based on this framework, organizations started implementing waste management strategies, renewable energy, biodiversity, and wildlife conservation. They focused more on green practices to reduce pollution and waste, which could destroy the environment. Meanwhile, the community is the place in which the business operation is performing. Therefore, the community-related CSR acknowledges employee volunteerism, school adoptions, and internship programs, contributes to underprivileged community members and provides scholarships (Feng et al., 2017). On another note, workplace-oriented CSR refers to various issues such as labor relations, personal and professional conflict issues, health and safety, and discrimination and harassment that employees and employers might face while at work (Fox and Stallworth, 2009). To reduce these concerns, many organizations have introduced common workplace CSR activities such as promoting employees' safety and health, maternity and paternity leave, and employee training (Torres et al., 2012). Furthermore, marketplace activities should focus more on the company's customer service targets and ways to persuade suppliers and service providers to implement ethical procurement practices, using local suppliers when and where possible, and environmentally friendly materials (Gangi et al., 2019).

Stakeholder Theory tells us that an organization is bound to serve the shareholders' needs and the needs of different people or firms and is wholly responsible for creating good relationships (Jones, 2005). With regards to brand equity, the stakeholder concept gives a much clearer picture of sources of brand value and equity. This will eventually provide an essential tool for managing stakeholder relationships (Jones, 2005). Clarke and Clegg (1998) conclude that these responsibilities, practiced by many organizations, are strongly related to the concept of corporate citizenship, which validates the Stakeholder Theory. Several past studies (Deanna Wang, 2010; Feng et al., 2017) have identified that stakeholders play a crucial role and significantly impact CSR activities. They should be made operational, especially to examine the marketing benefits of CSR such as brand equity on stakeholder relations (Heinberg et al., 2018; Fornes et al., 2019). As a result, people with authority in business now recognize CSR

activities as necessary (Pivato et al., 2008; Piercy and Lane, 2009).
Many longitudinal studies were conducted to examine CSR-related activities on financial-based brand equity worldwide (e.g. Torres et al., 2012 in 10 developed countries; Nakamura, 2016 in Japan, Eldomiaty et al., 2016 in Egypt; Harjoto and Salas, 2017 – 100 global brands; Feng et al., 2017 in the United States; Bajic and Yurtoglu, 2018 in 35 countries; Ting and Yin, 2018 in Taiwan; Cowan and Guzman, 2018 – 135 global brands, Simionescu and Dumitrescu, 2018 in Romania; Stranieri et al., 2018 in European countries; Frengiah and Yaacoub, 2019 in top 25 global companies; Gangi et al., 2019 in 20 European countries; Nair and Bhattacharyya, 2019 in India; Rahman et al., 2019 in the United States; Yang and Basile, 2019 in the United States; Yim et al., 2019 in the United States; El Zain et al., 2010 in European countries and the United States). However, only a few of the longitudinal studies were undertaken in developing countries like Malaysia (Lau, 2019).
For example, Torres et al. (2012) analyzed a sample of 57 global brands from ten countries in 2010. The result showed a significant different between various business sectors and countries with CSR activities and brand equity. Gangli et al. (2019) studied the CSR activities in the annual reports of 72 banks in 20 European countries for the years 2009 to 2015. The results showed significant differences between groups of years and business types with CSR-related activities and brand equity. Several other longitudinal studies also revealed significant differences in CSR-related activities, particularly on environmental-related CSR and brand equity in other countries such as Taiwan (Wang et al., 2015), United States and European countries (El Zain et al., 2020) and Mexico (Maldonado-Guzman et al., 2020). However, a contradictory result can be found in longitudinal works of Feng et al. (2016) and Yang and Basile (2019). They found insignificant differences between environmental-related CSR and financial-based brand equity among the Top 100 Best Global Brands Ranking and 78 firms, respectively.
On the other hand, Feng et al. (2017) examined community-related CSR in annual reports of 1877 companies in the United States for twenty years (1991-2011). They found a significance difference between community-related CSR and brand equity. In Malaysia, similar results can be found in a study conducted by Lau (2019). Another study by Farooq et al., (2015) also exposed a significant difference between community-related CSR and financial-based brand equity in various industries such as business services, consumer goods, electronics, financial services, and diversified industries from 2002 to 2010 in the United States. Past longitudinal studies in other countries also revealed similar results (e.g. Mensah et al., 2017 in Ghana; Ahmad Sharabati, 2018 in Jordan; Bajic and Yurtoglu, 2018 in 35 countries; Lv et al., 2019 in China). Moreover, a recent longitudinal study by Zahari et al. (2020) confirmed the significant difference between the community-related CSR and brand equity among PLCs in Malaysia. Conversely, Simionescu and Dumitrescu (2018) investigated content analysis of annual reports from 62 companies in 2014 and found insignificant differences between community-related CSR and financial-based brand equity.
Moreover, previous works of Harjoto and Salas (2017) and Salehi et al. (2018), who explored the CSR activities in the annual reports of top 100 global brands (2000-2014) and 158 Tehran companies, respectively, have confirmed significant differences between groups of year and business sector with workplace-related CSR and brand equity. Similar findings could be found in longitudinal studies conducted by Ting and Yin (2018), Lv et al. (2019), Rahman et al. (2019) and Zahari et al. (2020). However, Mensah et al. (2017) and Nair and Bhattacharyya (2019) studied the annual reports of insurance companies in Ghana and 414 Indian companies for nine years (2010-2018) discovered little differences between workplace-related CSR and financial-based brand equity. Additionally, Ting and Yin (2018), in their longitudinal study of 420 Taiwanese firms from 2007-2016, demonstrate the significant difference between

marketplace-related CSR and financial-based brand equity. Similarly, content analysis of annual reports from 57 global brands from 10 other countries has proven the significant difference between groups of year and the business sector on marketplace-related CSR and financial-based brand equity (Torres et al., 2012). Moreover, several previous longitudinal studies from Harjoto and Salas (2017), Lau (2019), and Zahari et al. (2020) also identified the significant differences between marketplace-related CSR and financial-based brand equity. However, studies from Mensah et al. (2017) and Yang and Basile (2019) have revealed insignificant differences between marketplace-related CSR and financial-based brand equity (Mensah et al., 2017; Yang and Basile, 2019). Thus, the following hypotheses are proposed:

H1. There are differences in the four subcategories (environmental, community, workplace and marketplace) of CSR-related activities and financial-based brand equity over the eight-type of business sectors.

H2. There are differences in the four subcategories (environmental, community, workplace and marketplace) of CSR-related activities and financial-based brand equity over the three years.

Method

Sample and data collection

This study used content analysis to analyze company annual reports to determine the extent of CSR-related activities reported by Malaysia's Top 100 Brands that are PLCs. A content analysis was considered as an appropriate method to analyze the extent of disclosures (Choi, 1999). In most cases, each company's annual reports consisted of the company's financial and non-financial information and, therefore, any information regarding the companies' CSR activities could be found in these reports (Rowbottom and Lymer, 2010). Hence, Malaysia's Top 100 Brands' annual reports from 2016 to 2018 were downloaded from the Bursa Malaysia website and examined for references to CSR-related activities. The current study only included 81 PLCs because these companies were consistently listed in Malaysia's Top 100 Brands from 2016 to 2018. The PLCs were from eight business sectors: properties (18 firms), industrial products (10 firms), plantations (5 firms), trade/services (34 firms), investment (5 firms), oil and gas (2 firms), food and beverages (4 firms), and energy (3 firms).

Measures

To measure the CSR-related activities, the current study adopted and integrated 16 checklist items based on the work of Anas et al. (2015) and Abd Rahim (2016). Specifically, four items were used to measure environmental-related CSR (efficient use of energy, reduction of emissions that damage the climate, biofuels, and the essential requirements to protect flora and fauna), five items were used for community-related CSR (contribution to children, contribution to youth development, contribution to the underprivileged, support of employee involvement in the community, and supporting education. The four items for workplace-related CSR were health, safety, human rights issues, and quality of work environment, while the three items for marketplace-related CSR were supporting green products, ethical procurement practices, and developing local supplies and vendors. A score of "1" was given if any item on the checklist was mentioned by a company in their annual report, while a score of "0" denoted the absence of a CSR. This unweighted scoring approach has been used and supported in prior disclosure studies (Mohd Ghazali, 2007; Esa and Mohd Ghazali, 2012; Esa and Zahari, 2016).

The brand equity value was determined to calculate the brands' value in its league tables using the Royalty Relief Approach (The Brand Finance Group, 2019). This approach involved estimating the likely future sales that could be attributed to a brand and then calculating a royalty rate charged for the use of the brand i.e. what an owner would have to pay for the use of the brand-assuming it were not already owned. Below is the formula to calculate the brand value, which was adopted for this study.

Brand Strength Index (BSI) x Brand 'Royalty Rate' x Brand Revenues = Brand Value

Data was analyzed using a normality test and descriptive and one-way analysis of variance (ANOVA) tests using IBM Statistical Package for Social Science (SPSS) Statistics for Windows, Version 24.0.

Findings

Descriptive analysis

Table 1 presents the results of minimum, maximum, median and standard deviations of all constructs. In this study, the means value showed the average percentage for each company disclosing CSR-related activities. For instance, the mean value for the variable environmental-related CSR was .671 percent. This means that from 2016 to 2018, each company revealed 67.1 percent of environmental-related CSR in its annual report. Meanwhile, the average percentage for each company disclosing community-related CSR, workplace-related CSR and marketplace-related CSR was 75.2 percent, 85.7 percent and 77.6 percent, respectively. Besides, the average value of brand equity for each company was USD 508.76 million. This resulted in a ranking of workplace-related CSR in the first place, followed by marketplace, community, and environmental-related CSR.

About standard deviation, the values were ranged from .218 (workplace-related CSR) to 1261.679 (brand equity). The results show that the percentage of disclosures for workplace-related CSR is less dispersed and highly concentrated around the mean. Conversely, the largest standard deviation was brand equity, denoting that the companies' brand equity was more dispersed and less concentrated around the mean. Hence, most of the companies' brand equity differs from each other, and there is a huge disparity between them. Table 1 also shows the value of the minimum and maximum levels of each variable. Findings show that the minimum level for all CSR related activities was 0. The possible reason for this is the selected company may be focusing on contributing to only one or two CSR-related activities. Meanwhile, the maximum level of all CSR-related activities was 1, which means it is possible for the company to make a contribution to all four CSR-related activities and disclosed this in their annual reports. Also, Table 1 shows that the minimum value of brand equity was USD 7 million, while the highest value was USD 11, 501 million.

The results of Skewness and Kurtosis show that the data in this study are not normal. Because the data were not normally distributed (shown in Table 1), the study was able to run non-parametric tests (Pallant, 2016).

Table 1: Descriptive statistics on CSR practices and brand equity: 2016-2018

Criteria	Environmental	Community	Workplace	Market-place	Brand Equity
Minimum	.000	.000	.000	.000	7.000
Maximum	1.000	1.000	1.000	1.000	11501.000
Mean	.671	.752	.857	.776	508.761
Standard Deviation	.271	.234	.218	.319	1261.679
Skewness	-.715	-.717	-1.632	-1.158	6.535
Kurtosis	.055	.113	2.304	.061	49.288

Analysis of variance

To test the hypotheses, this study performed the tests of differences between groups utilizing analysis of variance (ANOVA). A series of ANOVA was conducted to explore the business sector's and year's differences in environmental, community, workplace, marketplace-related CSR, and financial-based brand equity. Firstly, the PLCs were divided into eight groups according to the type of industry: Group 1: Property, Group 2: Industrial products, Group 3: Plantations, Group 4: Trade/Services, Group 5: Investment, Group 6: Oil and gas, Group 7: Food and beverages, and Group 8: Energy). Results shown in Table 2 indicate that there was a statistically significant difference at the $p < .05$ and $p < .01$ level in workplace-related CSR, marketplace-related CSR, environmental-related CSR, community-related CSR and financial-based brand equity for the eight business sector groups: [$F (7, 80) = 2.805$, $p = .008$; $F (7, 80) = 3.171$, $p = .003$; $F (7, 80) = 4.113$, $p = .000$; $F (7, 80) = 4.028$, $p = .000$; and $F (7, 80) = 5.734$, $p = .000$] respectively. Hence, Hypothesis 1 is supported. Additionally, the actual difference in mean scores between the groups was moderate. The effect size, calculated using eta squared set out in Table 2, were .109 (environmental-related CSR), .107 (community-related CSR), .077 (workplace-related CSR), .086 (marketplace-related CSR) and .146 (brand equity). According to Cohen (1988), these figures represent a moderate effect for financial-based brand equity because the eta squared values were greater than .060.

Table 2: One-way ANOVA of constructs by business sector

Construct	Element	Sum of squares	df	F	Sig.	Eta squared*	Effect size
EC	Between Groups	1.941	7	4.113	.000	.109	Moderate
	Within Groups	15.846	78				
	Total	17.788	80				
CC	Between Groups	1.415	7	4.028	.000	.107	Moderate
	Within Groups	11.792	78				
	Total	13.206	80				
WC	Between Groups	.884	7	2.805	.008	.077	Moderate
	Within Groups	10.584	78				
	Total	11.468	80				
MC	Between Groups	2.125	7	3.171	.003	.086	Moderate
	Within Groups	22.504	78				
	Total	24.629	80				
BE	Between Groups	56194679.49	7	5.734	.000	.146	Moderate
	Within Groups	329029398.67	78				
	Total	385224078.16	80				

Notes: df = Degrees of freedom; EC = Environmental-related CSR; CC = Community-related CSR; WC = Workplace-related CSR; MC = Marketplace-related CSR; BE = Brand equity; *Eta squared = Sum of squares between group/ Total sum of squares

The second series of one-way between subjects ANOVA was executed to identify the impact of selected years on environmental-related CSR, community-related CSR, workplace-related CSR, marketplace-related CSR, and financial-based brand equity. The current study selected three years and grouped them: Group 1: 2016. Group 2: 2017 and Group 3: 2018. Findings set out in Table 3 show that there was no statistically significant difference between year group and two constructs, namely environmental-related CSR and financial-based brand equity with the results: [$F = (2, 80) = 2.991$, $p = .052$ and $F = (2, 80) = .216$, $p = .052$]. However, there was a statistically significant difference at the $p < .05$ and $p < .01$ level in community-related CSR, workplace-related CSR, and marketplace-related CSR for the three-year groups: [F (2, 80) = 6.993, p = .001; F (2, 80) = 31.402, p = .000 and F (2, 80) = 30.626, p = .000] respectively. The results, thus, provide partial support of Hypothesis 2. Additionally, the results indicate that the actual difference in mean scores between the groups was both small and large. The effect sizes shown in Table 3, was .055 (community-related CSR); therefore, this value was considered small (Cohen, 1988). In addition, the effect size of workplace-related CSR, and marketplace-related CSR was declared as a large effect because the values were bigger than .14 (Cohen,1988).

Table 3: One-way ANOVA of constructs by year

Construct	Element	Sum of squares	df	F	Sig.	Eta squared*	Effect size
EC	Between Groups	.433	2	2.991	.052	-	-
	Within Groups	17.355	79				
	Total	17.788	80				
CC	Between Groups	.727	2	6.993	.001	.055	Small
	Within Groups	12.479	79				
	Total	13.206	80				
WC	Between Groups	2.379	2	31.402	.000	.207	Large
	Within Groups	9.090	79				
	Total	11.468	80				
MC	Between Groups	5.008	2	30.626	.000	.203	Large
	Within Groups	19.621	79				
	Total	24.629	80				
BE	Between Groups	691219.98	2	.216	.806	-	-
	Within Groups	384532858.17	78				
	Total	385224078.17	80				

Notes: df = Degrees of freedom; EC = Environmental-related CSR; CC = Community-related CSR; WC = Workplace-related CSR; MC = Marketplace-related CSR; BE = Brand equity; *Eta squared = Sum of squares between group/ Total sum of squares

Discussion and Conclusion

The results of this study have both theoretical as well as practical implications. From a theoretical perspective, Stakeholder theory, all CSR-related activities, and brand equity had significant differences between business sector groups. However, only a few CSR activities such as community, workplace, and marketplace-related CSR had had significant differences between groups of year. Although prior research has studied the differences between a firm's CSR activities and its financial-based brand equity (e.g. Eldomiaty et al., 2016; Harjoto and Salas, 2017), a more limited amount of research has looked at the comparative study on CSR activities and financial-based brand equity, particularly in developing countries. The results show that all CSR activities and financial-based brand equity have significant differences with the groups of the business sector, which confirms prior studies (e.g. Lau, 2019; Zahari et al., 2020). This indicates that the eight sectors of PLCs have committed to invest in CSR-related activities, which lead to strengthening their financial-based brand equity.

In addition, the results of this research show that only a few CSR-related activities such as community, workplace and marketplace have significant differences with groups of year (2016-2018). Previous literature has reported consistent findings on the differences between these constructs with the groups of year (e.g. Harjoto and Salas, 2017; Salehi et al., 2018; Lv et al., 2019). The results also proved that the two constructs, namely workplace and marketplace-related CSR showed a large effect size with groups of years. Furthermore, the results revealed an increased trend in reporting CSR activities in annual reports after ten years of implementing a framework for disclosure of CSR activities for PLCs by Bursa Malaysia in 2006.

In terms of practical implications, the managers of PLCs need to consistently or improve their investments on CSR-related activities and better formulate CSR-related activities to address these key stakeholders' needs. Secondly, the managers of PLCs should note the need for increased emphasis on the information of CSR-related activities pertaining to such areas as environmental, community, and marketplace CSR in their annual report, company's website, and social media platform. Finally, the managers should also communicate these activities to the customers because it will increase the value of financial-based brand equity.

In conclusion, this longitudinal study's findings contribute to a better understanding of CSR-related activities and financial-based brand equity among Malaysia's Top 100 Brands reported in the annual reports from 2016 to 2018. The findings prove that all CSR-related activities and financial-based brand equity have significant differences with business sector groups. On top of that, only a few of CSR-related activities such as community, workplace, and marketplace have shown significant differences with groups of year. It shows that majority of PLCs have reported their CSR-related activities in the annual reports. The results of this study will also encourage PLCs and other corporations to engage in more CSR activities because of their many benefits, particularly with the value of brand equity.

However, this study has some limitations. Firstly, the current study only measured the CSR-related activities of 81 PLCs annual reports from 2016 to 2018. Therefore, future studies should extend the time span for studying the effects of CSR'-related activities on brand equity. In addition, this study only involved a content analysis with sixteen checklists. Therefore, gathering information from business leaders, key executives, or even customers using more checklist is crucial for future studies. Finally, future research could focus more on the quality of CSR-related activities rather than CSR disclosure.

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