



Research article

How corporate social responsibility affects brand equity and loyalty? A comparison between private and public universities

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ABSTRACT

This study compares the direct and indirect effects of corporate social responsibility (CSR) on brand equity and brand loyalty between public and private universities. Additionally, this study compares the direct effect of CSR on brand reputation; brand reputation on brand equity and loyalty; and the role of brand reputation as a mediator between public and private universities. Data were collected from one public and one private university in Malaysia, with 600 questionnaires collected from students of Taylor's University and the University of Malaya, both top private and public universities in Malaysia, respectively. The measurement model and hypothesis testing were assessed using partial least squares - structural equation modelling. The findings showed positive and significant effects for CSR on reputation, brand equity, and brand loyalty, either directly or indirectly, for private and public universities. There were significant disparities between public and private institutions in the direct and indirect impacts of CSR on brand loyalty, as well as the effects of brand reputation on brand loyalty. This study makes a unique theoretical contribution to the literature by comparing the direct and indirect effects of CSR on brand reputation, brand equity, and brand loyalty between public and private universities; in assessing the mediation role of brand reputation between CSR, brand equity, and loyalty through brand reputation; and in comparing this mediation effect between public and private universities. Furthermore, this research has practical implications for both public and private higher education institutions as they create their branding strategy.

1. Introduction

The Corporate Social Responsibility (CSR) concept spans numerous fields, with interest in CSR among higher education institutions (HEIs) growing steadily (Carroll, 2015; Chan and Mohd Hasan, 2018). One popular definition of CSR is that posited by Carroll (1979, p. 500): "The social responsibility of business encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time." CSR activities contribute toward the university's brand image and reputation, with the development of strong brands becoming increasingly crucial where universities must compete in international markets for student revenue (Garipağaoğlu, 2016).

CSR activities aim to strike a balance between economic, social, and environmental imperatives while simultaneously satisfying shareholder expectations (Steurer, 2010). Today's higher education industry has become increasingly competitive. Consequently, CSR activities are used

-to contribute to societal well-being and actively contribute to societal well-being and enhance the university's reputation (Burton et al., 2017; Esen, 2013; O'Brien et al., 2018). Brand perception is based on more than simply products; apart from a product's functional value, consumers also consider the emotional and social values associated with a brand, with their level of brand involvement commiserate with the level of associations they make (Cha et al., 2016). In terms of higher education, specifically, Taylor's University, activities conducted for example are targeted towards B40 communities, single parents, refugees, and the differently abled to ensure the knowledge that is sustainable for them. They provide programs that educates, equips and provide more business opportunities to the entrepreneurs from the marginalised communities stated. On the other hand, University Malaya also have launches its CSR activities under the umbrella of UMCares which focuses on low income urban community as well as secondary school students. This is in line with the education business model that the university is rooted in. Therefore, the CSR activities conducted are also primarily related to

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education, which will be helpful, practical, useful, and sustainable to the target audience.

On the other hand, whether public or private, organizations are concerned with their level of organizational performance, which can be expressed objectively in terms of financial indicators, or subjectively in terms of organizational perceptions (De Bernardis et al., 2010). Much of the earlier published research has focused on the connection between business financial performance and CSR, which has been found to be favourable (Quazi and Richardson, 2012). Far fewer studies have explored the issue of organizational perceptions in relation to CSR. Therefore, this study would like to explore on the area of organisational perceptions in relation to CSR because according to Smith (2020) consumer purchase intentions are ramified by organisation's impression 60% of the time, as compared to 40% product perception. CSR, as a strategy, impacts a firm's performance in general, and it is anticipated to raise the equity of a brand in particular. Previous literature revealed that being socially responsible about many areas of society such as hunger, poverty, the environment, and work life was regarded a measure of increasing a society's quality of life. However, in the current competitive environment, it contributes to brand equity by instilling a good picture in the minds of consumers (Aaker, 1991; Hur et al., 2014; Nair and Bhat-tacharyya, 2019; Woo and Jin, 2016) and it has also been identified as an additional technique to promote company profitability and development (Mahmood and Bashir, 2020).

Although there are several past study that look into branding in HEI, there are not much study that look into CSR and branding specifically. Study by Heffernan et al. (2018) shown that, for HEI, the reputation increase the students' trust and identification with the institution which focuses on university reputation, student trust, and student-university identity as factors affecting student behaviour toward transnational education partnerships. Parallel with this, another study by Kaushal and Ali (2019) discovered that reputation had both direct and indirect effects on student loyalty behaviour via satisfaction. On the perspective of brand equity on HEI specifically, Mourad et al. (2011) found that brand equity is unaffected by consumer traits. Thus, the current study would explore on CSR in influencing brand equity and brand loyalty.

The Malaysian public education sector operates mainly on a not-for-profit business model. Nevertheless, with expanding global competition and the commercialization of education, HEIs are expected to sustain themselves by reducing their dependency on government funding. Consequently, Malaysian public and private HEIs have looked to develop their financial independence while also improving their performance to attract government funding (Ahmad, 2012). Nevertheless, standardization issues, staff retention, and an increasingly mobile global workforce demand that Malaysian HEIs pay careful attention to their image and reputation (Chopra and Marriya, 2013). This study aims to investigate and compare the effects of CSR on loyalty and brand equity in the context of both public and private higher universities in Malaysia. Few studies have attempted to comprehend colleges' social responsibility in developing nations (Gomez, 2014; Mehta, 2011; Nejati et al., 2011; Rasooli-manesh et al., 2021b). However, several studies have highlighted the importance of investigating these effects through factors such as brand reputation (Kaushal and Ali, 2019; Liu et al., 2019). Since HEIs has provide a significant platform for the research, the HEI institutions across the globe have become increasingly "marketing oriented" and students increasingly become "consumers" (Chen, 2008; Mazzarol and Soutar, 2008; Mourad et al., 2011). Many multinational corporations have recently recognised that it is impossible to establish a customer's brand without being socially responsible and addressing a society's social requirements (Mahmood and Bashir, 2020) and this would not be exceptional for the HEI. The study of brand loyalty and equity for organisation is becoming more vital since the increasing of brand equity would lead into a higher return on marketing effort (Harvey, 2001) and also being loyalty toward the brand (El-Kassar et al., 2019). As a result, CSR has been seen as a crucial pillar in defining corporate behaviour, strategy, and objectives. The research's unique contribution is from the integration

of current brand equity models, resulting in a conceptual multi-dimensional framework for the drivers of brand equity and brand loyalty in HEIs. As a result, this study presents a distinctive empirical contribution by putting Malaysia's suggested conceptual framework to the test as an example of a developing HEI market. Notably, there would be limited information on the effect that investments in CSR may have in students' behaviour and preferences in the choosing of HEI due to a paucity of study in the context of HEI. Indeed, without a thorough examination of the problem, HEI and CSR practitioners will be unable to use CSR to impact the behaviour of their target audiences.

2. Literature review

2.1. Theoretical framework: hierarchy of effects model (HEM)

HEM was established by Lavidge and Steiner (1961) to explain customer purchasing behavior, separating this behavior into cognitive, affective, and conative stages (Pérez and Rodríguez del Bosque, 2015b). The cognitive stage includes the beliefs and attitudes of customers toward a company or brand, which Lavidge and Steiner (1961) called "image advertising" (Pérez and Rodríguez del Bosque, 2015a). The affective stage represents the emotions, whereas the conative dimension refers to actual consumer behavior (Pérez and Rodríguez del Bosque, 2015a). Therefore, HEM can be seen as a cognitive-affective-conative model and can be used to impact or generate emotions and influence customer behavior or action (Pérez and Rodríguez del Bosque, 2015b). According to this model, CSR engenders a set of customer beliefs and attitudes; brand image, reputation, and trust are emotions that can be transformed into affective responses; while brand loyalty is an action articulated within the conative dimension (Pérez and Rodríguez del Bosque, 2013; 2015a; 2015b). Therefore, this study applies the HEM as a theoretical model to conceptualize the study framework.

2.2. Corporate social responsibility

According to Aguinis (2011), considering the stakeholders' expect, CSR is defined as the organisational action and policies in a specific context that considers the stakeholders' expectations together with the fundamental line of economic, social, and environmental performance. Contrary, Garay, and Font (2012) define CSR as a contribution of the firm to environmental, economic, and social growth on a voluntary basis. In order to fully address its CSR obligations, an organisation must embody economic, legal, ethical, and philanthropic elements (Liu et al., 2019; Pérez and Rodríguez del Bosque, 2015b). Thus, the concept of CSR has generated significant interest in the business world (Gunardi2016). Nevertheless, despite being a popular area of study, researchers have not come to an agreement on a uniform definition of CSR (Mackenzie and Peters, 2014). In the perspective of higher education, as universities continue to focus on international ranking platforms and dynamic change, social responsibility efforts in the education industry have gained traction (Păunescu et al., 2017) to sustain the marketplace. CSR reporting is found to generate reputation (Pérez, 2015) and affect organizational performance (Pires and Trez, 2018). Moreover, Lee and Lee (2015) stated that through consumer ethics, it has been proposed that ideas about CSR positively affect purchase intention. Carroll (1979) posits that CSR has four dimensions: economic, legal, ethical, and philanthropic responsibilities. According to Carroll (2016), business institutions must exercise their economic responsibilities benefits society that both permitted and sustained their creation (Pérez and Rodríguez del Bosque, 2015a). Companies also have a legal responsibility to comply with all relevant laws and regulations (Liu et al., 2019). From the societal perspective, businesses are not merely economic entities; consequently, every society invariably establishes a set of essential foundation principles for how firms should operate and function (Carroll, 2016; Liu et al., 2019). Having fulfilled their legal responsibilities, societies demand that businesses conduct their operations ethically (Pérez and Rodríguez del Bosque, 2015b). It is argued

that the most societies' normative expectations are that while the observance of the law is essential, it is far from being sufficient (Carroll, 2016). Therefore, businesses are also expected to observe their ethical responsibilities. Related to this ethical dimension, the idea of giving in an organisation is considered as corporate philanthropy. Corporate philanthropy encompasses any number of voluntary or discretionary acts carried out by a company (Carroll, 2016). For this study, CSR is defined as the "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance" (Aguinis, 2011, p. 855).

2.3. Corporate social responsibility and brand reputation

According to recent research, CSR should be one of a university's main duties, contributing to community sustainability while improving the organization's image (Dima et al., 2013; Parsons, 2014). Vasilescu et al. (2010) argue that universities are essential pillars of society. Therefore, CSR activities within universities serve as a precursor to those undertaken by corporate stakeholders, communities, and societies (Alzyoud and Bani - Hani, 2015). Several studies have demonstrated the importance of CSR activities in both public universities and private universities (Chan and Mohd Hasan, 2018; El-Kassar et al., 2019; Garde Sánchez et al., 2013; Mohaiyadin et al., 2018; Mohd Hasan, 2017; Nejadi et al., 2011; Plungpongpan et al., 2016). These studies differ in their use of financial indicators and measures of community perceptions about CSR initiatives (Chopra and Marriya, 2013; Ferrer-Balas et al., 2008). Additionally, CSR activities would further increase employee engagement and job satisfaction (Nazir and Islam, 2019, 2020; Nazir et al., 2021). Whether the university is private or public will determine which blend of branding strategies will work best to influence the decision-making of students in terms of deciding enrolment behavior (El-Kassar et al., 2019; Joseph et al., 2012; Yussof, 2003). University that shows leadership in CSR will strengthen its brand reputation among all stakeholders. This can contribute to differentiate the university by creating a strong brand reputation and being recognised by prospective students during the decision-making process (El-Kassar et al., 2019). Thus, CSR may be beneficial in increasing university competitive advantage (Du et al., 2011). Sources of university funding also influence to some degree their financial and non-financial performance, marketing strategies, as well as what social responsibilities students might perceive the university as having (González-Rodríguez et al., 2013; Ismail and Shujaat, 2019; Othman and Othman, 2014; Plungpongpan et al., 2016). For private companies, "being profitable" is the first level of the standard CSR pyramid, i.e., economic viability is the foundation (e.g., Carroll, 1991). Private non-profit institutions does not show much different as they may not pursue profits, but they must stay economically sustainable or risk losing their services (Plungpongpan et al., 2016). Therefore, there seems to be a significant difference between public and private universities in terms of the influence in CSR on university reputation (Burton et al., 2017; Esen, 2013; O'Brien et al., 2018). Generally, according to Plungpongpan et al. (2016) and El-Kassar et al. (2019), efficient implementation of CSR activities positively contributes to the university brand reputation. The following hypothesis can thus be established:

H1. There is a significant difference between the direct effect of CSR on brand reputation between public and private universities.

2.4. Corporate social responsibilities and brand equity

Brand equity describes the marketing effects attributed to a particular brand (Keller, 1993; Kotler et al., 2010). Brickley et al. (2002) argue that brand equity also includes a firm's reputation for ethical behaviour. CSR plays an important role in brand equity building and influencing consumers' supporting behavioural intentions (Hur et al., 2014; Woo and Jin, 2016). Therefore, consumer perceptions of an organization's CSR initiatives can have a positive effect on brand equity. In terms of private

organizations, the participation of employees in CSR activities is comparable to public organization (Ertas, 2018). Moreover, Hsu (2012) and Lai et al. (2010) argue that CSR activities can positively affect an organization's brand equity in terms of non-financial performance (Wang et al., 2015). Several past studies found that CSR practices positively affecting brand equity (Fatma et al., 2015; Nair and Bhattacharyya, 2019). This suggests that CSR activities will aid in the strengthening brand equity, which might become one of the most important components of a company's competitive advantage and success in today's highly competitive climate. Therefore, CSR activities are essential to brand equity as a company's products or services (Hur et al., 2014; Wang and Korschun, 2015). However, in terms of higher education, Mourad et al. (2020) state that the factors of brand equity may differ depending on the maturity of the higher education market, the nation and cultural settings, and whether the institution is publicly or privately held. Therefore, the following hypothesis for the direct effects of CSR on brand equity can be formulated:

H2. There is a significant difference between the direct effect of CSR on brand equity between public and private universities.

2.5. Corporate social responsibilities and brand loyalty

CSR initiatives have both direct and indirect positive and substantial benefits on loyalty (Chen et al., 2015; El-Kassar et al., 2019; Gürlek et al., 2017; Mandhachitara and Poolthong, 2011). Aaker (2012) contends that brand loyalty is a long-term source of competitive advantage, opening up new marketing options. Customers' trust is increased as a result of societal activities (Maignan et al., 1999) which is a direct result of service consumption and an indirect result of the firm's reputation (Burton et al., 2017; Esen, 2013; Delgado and Munuera, 2001; O'Brien et al., 2018; Plungpongpan et al., 2016), leading to customers' more substantial commitment and loyalty towards the organisation. Numerous research shown that, CSR was found to be strongly associated to loyalty (Fatma et al., 2016; He and Li, 2011; Lin and Chung, 2019; Nyadzayo and Khajehzadeh, 2016). CSR, therefore, may be used as a method to boost consumer's brand loyalty (Pirsch et al., 2007). Other research by Chen et al. (2015) and Lai et al. (2010) supports CSR's role in fostering consumer loyalty, thus increasing the likelihood of consumers choosing the organization's products. Research indicates that the impacts of CSR efforts on consumer loyalty are both positive and important (Mandhachitara and Poolthong, 2011). Customers appreciate these efforts and reward the company with increased loyalty (El-Kassar et al., 2019; Maignan et al., 1999). Therefore, enhancing the influence of CSR on brand loyalty should be prioritised in university planning. In the case of Malaysian public universities, however, the adoption of CSR initiatives is primarily due to government pressure (Rahman et al., 2019). Therefore, the following hypothesis can be identified:

H3. There is a significant difference between the direct effect of CSR on brand loyalty between public and private universities.

2.6. Brand reputation and brand equity

Organizational success is often contingent upon brand reputation and brand equity (Lai et al., 2010). Reputation describes the opinions that we form about others; due to their previous behavior; as such, reputation reflects an organization's track record of meeting stakeholder expectations (Coombs, 2007). Building a university's brand reputation is critical to the institution's long-term sustainability, especially in the private sector (Plungpongpan et al., 2016). Organizational reputation distinguishes between the products and services of different organizations. Therefore, private universities must build and emphasize their brand reputation in increasingly competitive markets to ensure high enrolment (Dejnaka et al., 2016). A positive reputation creates feelings of attachment, thus leading to a more satisfactory relationship and the establishment of brand equity (Hemsley-Brown et al., 2016). According to

Pinar et al. (2020), the most prevailing factor in developing university brand equity is reputation, as reputation creates a sense of connection, which leads to rewarding interactions and aids in the development of brand equity. Therefore, a range of strategies may be necessary to ensure the successful creation of brand equity (Lai et al., 2010; McDonald et al., 2001).

Nevertheless, differences exist between private and public institutions. For example, Yussof (2003) suggests that student perceptions of private versus public HEIs differ, and as such, different branding methods are needed to achieve their objectives. Similarly, Chapleo (2015) and Md. Noor (2019) argues that public education institutions might share more in common with other non-profit organizations, as opposed to private education providers, regarding branding. Recent research has also stressed the importance of internal branding, HEM supports the effect of the affective dimension (i.e., brand reputation) on brand equity (i.e., conative dimension), which can be connected to the conviction stage. In line with this, studies by Plewa et al. (2016) and Switala et al. (2020) illustrate that brand reputation has a beneficial impact on brand equity. Therefore, the following hypothesis can be identified:

H4. There is a significant difference between the direct effect of brand reputation on brand equity between public and private universities.

2.7. Brand reputation and brand loyalty

Positive impressions of brand reputation would lead in resulting to brand loyalty (Loureiro et al., 2017; Loureiro and Kastenholz, 2011; Walsh and Beatty, 2007). Reputation is the belief that an individual, group, or organisation can be depended on to keep a promise, and this belief is critical in creating consumer loyalty (Liu et al., 2019). Like other enterprises, ensuring the reputation of an HEI is critical for engendering favorable behavioral intentions among students (Su et al., 2016). In order to gain consumers's (e.g., students) and generating income for their services, higher education institutions must design their business models to compete with fast-changing entrepreneurial university advances (e.g., tuition fees). Brand reputation is seen as a key feature of branding that has a considerable influence on consumers' purchase decisions, resulting in good associations and assessments in the minds of consumers (Sasmita and Mohd Suki, 2015; Sultan and Wong, 2012, 2014; Watkins and Gonzenbach, 2013). Brand reputation is seen as a crucial driver of brand loyalty, and considering that recruiting new consumers may cost six times as much as maintaining existing ones, brand loyalty becomes the ultimate key to sustaining a company's competitive edge (Keller and Lehmann, 2006; Sasmita and Mohd Suki, 2015). Following a study of a private university, Kaushal and Ali (2019) demonstrate that students' loyalty is favourably influenced by their reputation, with loyalty demonstrated through the willingness of students to refer other to the university, to pursue further studies at the same university, or to maintain contact with their university long after graduation.

Developing reputation, however, can be challenging for public sector organizations. According to Wæraas and Byrkjeflot (2012), the very nature of public organizations as government-funded bodies means that they are inherently political. Wæraas and Byrkjeflot (2012) suggest that the layers of bureaucracy implicit within public organizations mean that they are seldom capable of forming meaningful emotional connections with their stakeholders and that communication consistency is an ongoing challenge for such organizations. Moreover, reputation building may not be appropriate for public sector organizations, which should ideally be seen as neutral playing fields (Luoma-aho, 2007; Whelan et al., 2010). This would suggest that public and private organizations might have different needs and priorities in reputation building to ensure loyalty. Therefore, the following hypothesis can be identified:

H5. There is a significant difference between the direct effect of brand reputation on brand loyalty between public and private universities.

2.8. Mediating role of brand reputation

Research suggests that brand equity and reputation might be directly and indirectly correlated. For example, Chaudhuri (2002) suggests that superior brands are often so positioned by virtue of their unique value to consumers and reputation, thus leading to excellent brand outcomes. Woo and Jin (2016) revealed that CSR efforts might have a insignificant influence on brand equity. This counterintuitive result implies the existence of alternative factors, such as brand reputation, that may mediate the relationship between CSR and brand equity. Past studies also demonstrate that CSR activities affect corporate reputation (Bianchi et al., 2019; Esen, 2013; Gürlek et al., 2017; Li et al., 2019), an important antecedent of sustainable competitive advantage (Branco and Rodrigues, 2006). In the context of education, a university's reputation is only as strong as its brand. Therefore, one of the key determinants of a university's competitiveness and positioning is the level of attention afforded to branding (Chapleo, 2007). In terms of private universities, the high tuition fees of private HEI increase students' expectations of performance, whereas, for public institutions, a focus on CSR projects can result in benefits such as brand equity (Ram et al., 2017). Private HEIs invariably emphasize efforts to improve their brand equity to maximize student enrollment and generate income (Chapleo, 2007).

Therefore, reputation mediates between CSR and organizational brand equity. Because brand value is a product of reputation, which is related to brand equity (Hur et al., 2014; Lai et al., 2010). From the perspective of HEM, reputation is a resource capable of influencing customers' emotions, and as such, is related to the affective and later conative dimensions of HEM (Pérez and Rodríguez del Bosque, 2013; 2015a; 2015b). This leads to the following hypothesis:

H6. There is a significant difference between the indirect effect of CSR on brand equity through brand reputation between public and private universities.

Previous research indicates a linear association between CSR efforts and behavioural outcomes such as repurchase intentions and loyalty (Khan et al., 2015; Lee et al., 2017). The primary strategic goal of any organization's is to increase consumer's loyalty (Zhang et al., 2014) and is crucial to a firm's success (Han and Kim, 2009). This relationship, however, might be particularly complex in the context of the education industry. Aramburu and Pescador (2019) and Osakwe and Yusuf (2020) suggest that business reputation may act as a mediator between the impacts of perceived CSR and brand loyalty. Many scholars have stated that customer loyalty to a given brand derives from the presence of an excellent company reputation (Bartikowski et al., 2011; Chang, 2013), which, in turn, has been directly connected to CSR activities (Aljarah and Ibrahim, 2020; Brown and Dacin, 1997). He and Lai (2014) note that CSR might positively contribute to brand loyalty by acting as a mediator between symbolic and functional brand reputation. Kaushal and Ali (2019) discovered that the reputation of the university had both direct and indirect effects on student loyalty behaviour. However, while students at public institution define reputation in terms of education quality and accreditation, students at private institution describe reputation to them include name recognition as well as institutional and faculty's reputation (Joseph et al., 2012).

Similarly, other studies have found that corporate reputation mediates the influence of CSR activities on customer loyalty (He and Lai, 2014; Lee et al., 2017). In light of HEM, CSR is analogous to the beliefs and attitudes of customers; brand image, reputation, and trust are the customers' emotions and can be implied as to the affective dimension; while brand loyalty, as an action, parallels the conative dimension (Pérez and Rodríguez del Bosque, 2013; 2015a; 2015b). Therefore, in the context of higher education, a sound reputation contributes to brand loyalty (Panda et al., 2019). Accordingly, we can predict that:

H7. There is a significant difference between the indirect effect of CSR on brand loyalty through brand reputation between public and private universities.

Figure 1 shows the conceptual framework of this study.

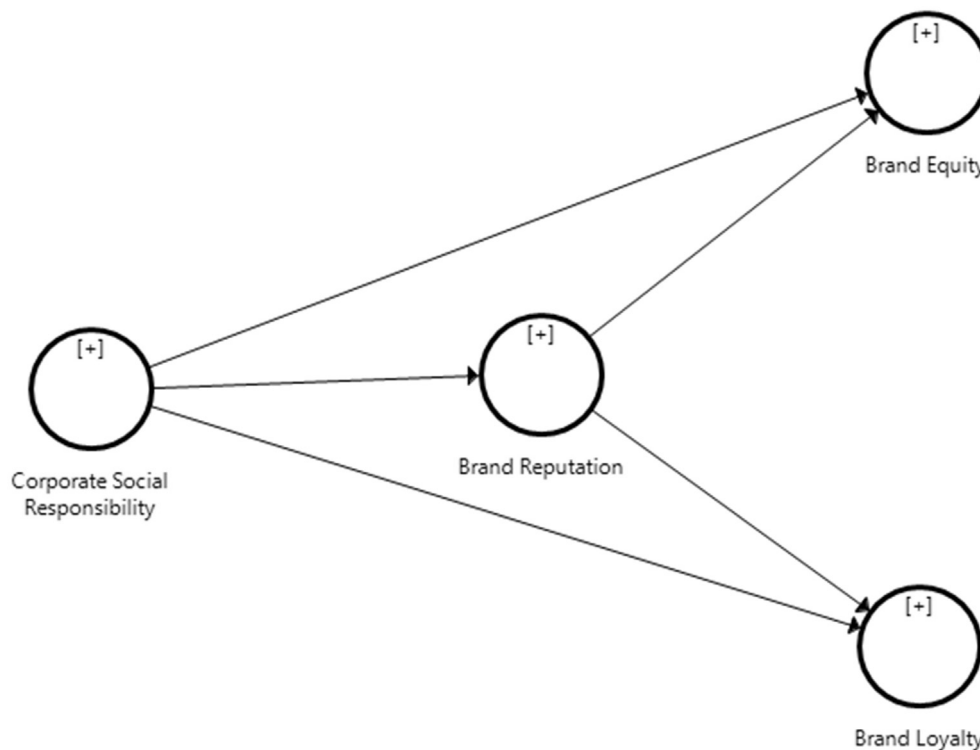


Figure 1. Conceptual framework.

3. Methodology

This quantitative study used a questionnaire, developed based on previous studies, to collect data. Items were adapted to measure CSR (8 items) (Bianchi et al., 2019), brand reputation (3 items) (Bianchi et al., 2019; Foroudi et al., 2019), brand loyalty (4 items) (Bianchi et al., 2019; Liu et al., 2019), and brand equity (Dennis et al., 2016). Respondents were asked to rate each item according to a 7-point Likert scale, with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Data was collected from students attending Taylor's University and Universiti Malaya (UM), Malaysia. Taylor's University is a private university, while UM is a public university, both of which have been ranked first private and public university, respectively, by QS Ranking. Data were collected in November 2019, using purposive sampling from undergraduate and postgraduate students from different disciplines in both universities. Approximately 300 students from each university were sampled. Samples included 150 undergraduate and 150 postgraduate students from each university. Of the 300 Taylor's University students, 55.7% were female, 41.3% were international students, 53.6% were from the social sciences, while 53.6% were from the social sciences, and the rest were from engineering and sciences and medical-related disciplines. With respect to UM, 60.5% were female, 32.3% were international students, and 57% were from social sciences.

We used partial least squares-structural equation modeling (PLS-SEM) to analyze the collected data and assess the measurement and structural models. Recent literature suggests that PLS-SEM is appropriate for both confirmatory and exploratory studies (Henseler, 2017), particularly when the research model is complex and the study is prediction-oriented and aimed at theory development (Hair et al., 2017). In order to perform PLS-SEM and assess measurement and structural models, bootstrapping resampling method, using 5000 re-samples has been applied (Hair et al., 2017). Moreover, we applied multigroup analysis (MGA) to compare the direct and indirect effects between private and public universities (Rasoolimanesh et al., 2021c). Therefore, PLS-SEM is appropriate when conducting MGA (Hair et al., 2017; Henseler et al., 2016). We evaluated measurement invariance using the

measurement invariance for composite (MICOM) approach ahead of conducting MGA or hypotheses testing (Henseler et al., 2016). MGA was performed using two nonparametric methods: Henseler's MGA (Henseler et al., 2009) and the permutation test (Hair et al., 2019).

The determination of minimum sample size was based on power analysis, for which we used G*Power (Faul et al., 2009; Hair et al., 2017). The results of power analysis indicated a minimum sample size of 107 for each group to achieve a power of 0.95. Moreover, Reinartz et al. (2009) suggests a sample size of 100 to perform PLS-SEM. Therefore, the sample size of 300 respondents for each group offered sufficient statistical power for testing the proposed hypotheses.

Due to collection of data from one single source for all variables, the common method bias was tested using two recommended methods for PLS-SEM namely the full collinearity (Kock, 2015), and the correlation matrix procedure. The value of full collinearity for all constructs were lower than 3.3 (Kock, 2015; Kock and Lynn, 2012), and the correlation between constructs lower than 0.9 (Rasoolimanesh et al., 2021a) indicating the model free of common method bias.

4. Analysis and findings

4.1. Assessment of model using PLS-SEM

We performed PLS-SEM using SmartPLS 3.2.9 (Ringle et al., 2015) software to assess the measurement and structural models in this study and for hypotheses testing. Reliability, convergent validity, and discriminant validity were checked to assess the measurement model. We used MGA to assess the structural model and to examine the hypotheses.

4.1.1. Assessment of measurement model

The framework for this study includes four reflective constructs: CSR, brand reputation, brand loyalty, and brand equity. To assess the measurement model, the composite reliability (CR) and ρ_A were checked to establish construct reliability, and should be greater than 0.7, the average variance extracted (AVE) should be greater than 0.5 to establish convergent validity (Hair et al., 2017). Table 1 shows the results of the assessment

Table 1. Assessment of measurement models.

| Construct | Loadings | | CR | | rho_A | | AVE | |
|-------------------------------------------------------------------------------------------------------------------------|----------|--------|---------|--------|---------|--------|---------|--------|
| | Private | Public | Private | Public | Private | Public | Private | Public |
| Corporate Social Responsibility | | | 0.901 | 0.906 | 0.882 | 0.904 | 0.534 | 0.556 |
| The university treats employees very well. | 0.596 | 0.752 | | | | | | |
| The university is socially responsible. | 0.772 | 0.829 | | | | | | |
| The university helps civil society organizations in the community | 0.786 | 0.820 | | | | | | |
| The university is committed to ecological issues. | 0.728 | 0.724 | | | | | | |
| The university returns some of what it has received to society. | 0.762 | 0.832 | | | | | | |
| The university thinks about society in its activities. | 0.802 | 0.820 | | | | | | |
| The university behaves honestly with their customers. | 0.716 | 0.339 | | | | | | |
| The university respects the legal regulations. | 0.663 | 0.724 | | | | | | |
| Brand Reputation | | | 0.914 | 0.903 | 0.869 | 0.855 | 0.780 | 0.757 |
| I have a good feeling about the university. | 0.917 | 0.913 | | | | | | |
| I admire and respect the university. | 0.918 | 0.915 | | | | | | |
| The university offers products and services that are good value of money. | 0.811 | 0.775 | | | | | | |
| Brand Equity | | | 0.903 | 0.936 | 0.839 | 0.898 | 0.757 | 0.829 |
| Even if another university had the same features as this one, I preferred to study at this university. | 0.884 | 0.911 | | | | | | |
| If there was another university as good as this one, I would have still preferred to study at this university. | 0.888 | 0.914 | | | | | | |
| If another university was similar this university in any way, it would have seemed smarter to study at this university. | 0.837 | 0.907 | | | | | | |
| Brand Loyalty | | | 0.923 | 0.942 | 0.905 | 0.924 | 0.752 | 0.804 |
| I say positive things about this university to other people. | 0.858 | 0.866 | | | | | | |
| I recommend this university to others. | 0.931 | 0.948 | | | | | | |
| I encourage friends and relatives for education in this university. | 0.915 | 0.946 | | | | | | |
| I consider this university as my first choice. | 0.753 | 0.819 | | | | | | |

of the measurement model for both private and public university groups, indicating excellent reliability and convergent validity for both groups.

Additionally, the hetrotrait–monotrait (HTMT) ratio was applied to establish discriminate validity (Hair et al., 2019). The HTMT ratio should be lower than either 0.9. Table 2 shows the results of discriminant validity testing for both groups.

Before assessing the measurement model or performing hypothesis testing it is necessary to establish measurement invariance (Henseler et al., 2009; Rasoolimanesh et al., 2020; Sarstedt et al., 2011). For composite-based approaches, such as PLS-SEM, the literature recommends the measurement invariance of composites (MICOM) approach (Henseler et al., 2016). To establish measurement invariance using MICOM we must assess: (a) configural invariance, (b) compositional invariance, and (c) equal means and variances (Henseler et al., 2016; Rasoolimanesh et al., 2017). Table 3 shows the results of MICOM, indicating the establishment of partial measurement invariance, thus allowing MGA to be performed for hypotheses testing. Significant between-group differences in the mean value of the constructs, however, precludes data pooling. The results in Step 3 shows that the mean value of CSR, brand reputation, and brand loyalty are significantly lower in the private university group. Therefore, the structural model should be assessed separately for the two groups.

4.1.2. Assessment of structural model and hypothesis testing

In the first step we evaluated the R² of the endogenous constructs to assess the structural model of each group and for hypothesis testing. The R² values for brand reputation, brand loyalty, and brand equity was 0.470, 0.542, and 0.437 for the private university group; and 0.513, 0.539, and 0.434 for the public university group. These values of R² values are considered high and acceptable (Hair et al., 2017).

The sign and significance of the direct and indirect effects using 95% bias-corrected confidence intervals (BC CI_{0.95}) was assessed for both groups (Hair et al., 2017; Rasoolimanesh et al., 2021d). The results showed positive and significant direct and indirect effects, the exception being for the effect of CSR on brand loyalty in the public university, which was not significant. Table 4 and Figure 2 show the results of the assessment of direct and indirect effects and hypothesis testing using MGA.

The two most conservative nonparametric approaches – PLS-MGA and the permutation test – were applied to test the research hypotheses and to perform MGA to compare the direct and indirect effects between private and public universities (Henseler et al., 2009; Md Noor et al., 2019). The results of MGA could not support differences between the private and public universities for the effects of CSR on brand reputation (H1), CSR on brand equity (H2), brand reputation on brand equity (H4), or the indirect effect of CSR on brand equity through brand reputation

Table 2. Discriminant validity through HTMT_{0.90}.

| Constructs | CSR | Brand Reputation | Brand Equity | Brand Loyalty | CSR | Brand Reputation | Brand Equity | Brand Loyalty |
|------------------|--------------------|------------------|--------------|---------------|-------------------|------------------|--------------|---------------|
| | Private University | | | | Public University | | | |
| CSR | | | | | | | | |
| Brand Reputation | 0.777 | | | | 0.816 | | | |
| Brand Equity | 0.642 | 0.753 | | | 0.592 | 0.751 | | |
| Brand Loyalty | 0.677 | 0.814 | 0.875 | | 0.564 | 0.831 | 0.803 | |

Note 1: The numbers show the HTMT ratio for two constructs.

Table 3. Results: Invariance measurement testing using permutation.

| Constructs | Configural invariance | Compositional invariance (Correlation = 1) | | Partial measurement invariance established | Equal mean assessment | | | Equal variance assessment | | | Full measurement invariance established |
|------------------|-----------------------|--------------------------------------------|---------------------------|--------------------------------------------|-----------------------|---------------------------|-------|---------------------------|---------------------------|-------|-----------------------------------------|
| | | C = 1 | Confidence Interval (CIs) | | Differences | Confidence Interval (CIs) | Equal | Differences | Confidence Interval (CIs) | Equal | |
| CSR | Yes | 0.991 | [0.991, 1.000] | Yes | - 0.373 | [-0.155, 0.159] | No | -0.173 | [-0.237, 0.228] | Yes | No |
| Brand Reputation | Yes | 1.000 | [0.999, 1.000] | Yes | -0.300 | [-0.155, 0.159] | No | 0.043 | [-0.212, 0.216] | Yes | No |
| Brand Equity | Yes | 1.000 | [0.999, 1.000] | Yes | -0.126 | [-0.157, 0.164] | Yes | 0.002 | [-0.213, 0.210] | Yes | Yes |
| Brand Loyalty | Yes | 1.000 | [0.999, 1.000] | Yes | -0.214 | [-0.159, 0.159] | No | -0.002 | [-0.217, 0.215] | Yes | No |

(H6). These direct and indirect effects were positive and significant for both and public university groups; therefore, the differences were not significant. However, the results showed significant differences for the effects of CSR on brand loyalty (H3), brand reputation on brand loyalty (H5), and for the indirect effect of CSR on brand loyalty through brand reputation (H7) between university groups. The effect of brand reputation on brand loyalty was significantly higher for the public versus the private university. Moreover, the indirect effect of CSR on brand loyalty through brand reputation was stronger for the public university. However, the results showed that the direct effect of CSR on brand loyalty was stronger for the private university. CSR improved the public university's reputation, which in turn inspires brand loyalty; therefore, the effect of CSR on brand loyalty is indirect. For the private university, however, CSR had a more direct effect on brand loyalty directly, and an indirect effect on reputation. The results of both PLS-MGA and the permutation approach support the significance of H3, H5, and H7.

5. Discussion

The purpose of this study was to investigate the impacts of CSR on brand reputation, brand loyalty, and brand equity in both public and private higher education. The results could not support H1. Previous studies of CSR initiatives in both public and private universities allude to differing objectives with respect to financial and non-financial (i.e., subjective) indicators, which is about the perceptual aspects of CSR initiatives they face different challenges from various stakeholders (Chan and Mohd Hasan, 2018; Chopra and Marriya, 2013; Ferrer-Balas et al., 2008; Garde Sánchez et al., 2013; Mohaiyadin et al., 2018; Mohd Hasan, 2017; Nejadi et al., 2011). The current study's findings are similar with prior research, with the influence of CSR on brand reputation being extremely robust and favourable for both public and private colleges, implying that the distinctions are not substantial. Furthermore, the results show no differences between the implementation of CSR activities between both public and private universities or the effect of CSR implementation on reputation.

This finding could be due to the perceived social importance of universities, irrespective of whether they are public or private institutions (Alzyoud and Bani - Hani, 2015; Vasilescu et al., 2010).

The results of the current study could not support H2. According to the research, the factors of brand equity differ based on the maturity of the higher education market, as well as the nation and cultural settings (Mourad et al., 2020). Nevertheless, results demonstrate that this effect is significant and positive for both public and private universities, there is no significant between-group differences. For example, a study by Hur et al. (2014) which looks at the consumers' perception in South Korea, found that CSR and corporate brand equity is sequentially and fully mediated by corporate reputation. Thus, it is reasonable to assert that CSR activities can contribute toward the overall brand equity of an organisation's products or services (Hur et al., 2014; Wang and Korschun, 2015). Results of the current study are unable to fully support the difference between the implementation of CSR on brand equity between both public and private universities. Past literature illustrate that CSR practices have a positive effect on brand equity (Fatma et al., 2015; Nair and Bhattacharyya, 2019), which however, according to Mourad et al. (2020), might be different based on the development of the higher education industry, as well as the country and cultural contexts, and whether it is publicly or privately owned. However, this study showed the strong effects for both public and private higher education institution, indicating no significant difference between effects.

The findings of the current study support H3. Previous studies have shown that CSR has a positive and significant effect on loyalty (Chen et al., 2015; Gürlek et al., 2017; Mandhachitara and Poolthong, 2011). The results show that CSR has a positive and strong direct effect on brand loyalty in private universities, while this effect is insignificant for public universities; therefore, a significant difference exists between public and private universities vis-à-vis the direct effect of CSR on brand loyalty. This finding is consistent with Mandhachitara and Poolthong (2011) research, which discovered that CSR in private firms had a favourable and large impact on customer loyalty in Bangkok's retail banking sector,

Table 4. Results of Hypothesis Testing (MGA results for relationships).

| Hypothesis | Relationships | Path Coefficient | | BC CI _{0.95} | | Path Coefficient Difference | P-value Difference | | Supported |
|------------|---------------|--------------------|-------------------|-----------------------|-------------------|-----------------------------|--------------------|------------------|-----------|
| | | Private University | Public University | Private University | Public University | | Henseler's MGA | Permutation Test | |
| H1 | CSR → BR | 0.686 | 0.716 | [0.627, 0.731] | [0.653, 0.755] | -0.031 | 0.762 | 0.557 | No |
| H2 | CSR → BE | 0.224 | 0.130 | [0.122, 0.306] | [0.019, 0.237] | 0.093 | 0.143 | 0.285 | No |
| H3 | CSR → BL | 0.217 | -0.018 | 0.128, 0.300] | [-0.147, 0.100] | 0.235 | 0.005*** | 0.013** | Yes |
| H4 | BR → BE | 0.487 | 0.559 | [0.397, 0.580] | [0.469, 0.655] | -0.072 | 0.815 | 0.366 | No |
| H5 | BR → BL | 0.570 | 0.747 | [0.481, 0.656] | [0.650, 0.847] | -0.177 | 0.985** | 0.032** | Yes |
| H6 | CSR → BR → BE | 0.334 | 0.400 | [0.266, 0.410] | [0.327, 0.478] | -0.066 | 0.846 | 0.310 | No |
| H7 | CSR → BR → BL | 0.391 | 0.535 | [0.323, 0.462] | [0.449, 0.462] | -0.144 | 0.984** | 0.038** | Yes |

Note 1: In Henseler's MGA method, the p value lower than 0.05 or higher than 0.95 indicates at the 5% level significant differences between specific path coefficients across two groups.

Note 2: ***P < 0.01, **P < 0.05, *P < 0.1.

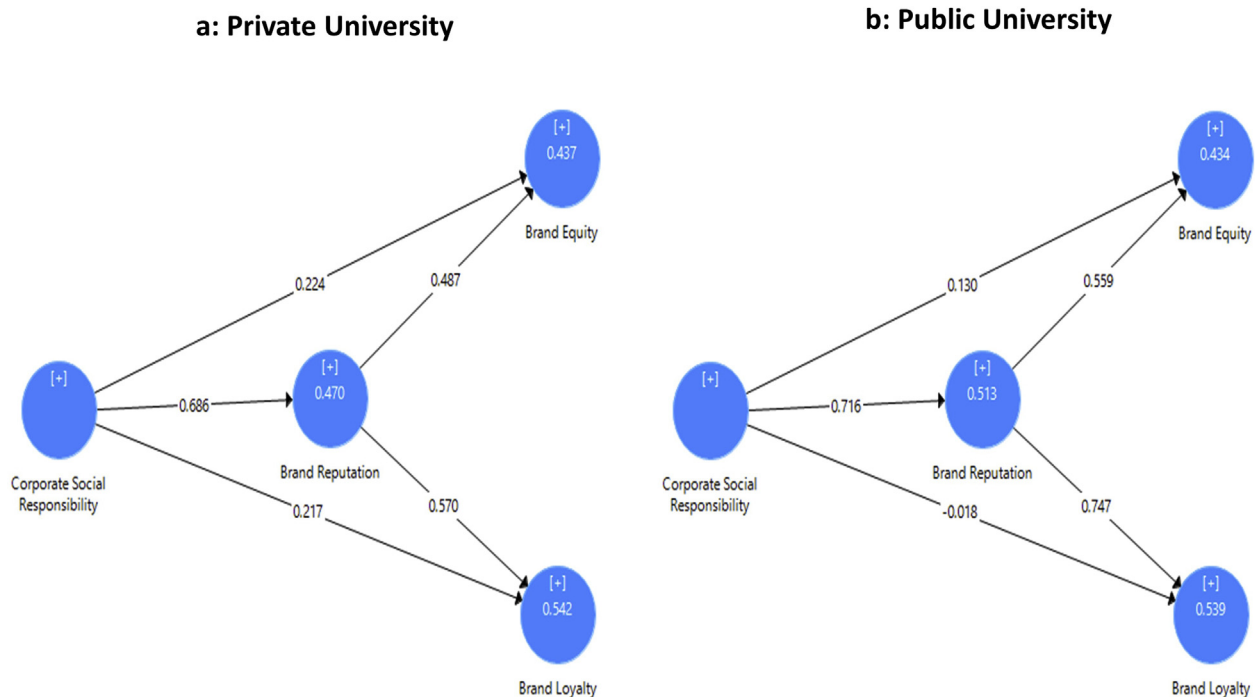


Figure 2. Results of assessment of structural model for public and private universities.

Thailand. Thus, the results demonstrate the consistency between the private sector organisation that CSR significantly affecting customer loyalty. Conversely, the results demonstrated no significant direct effect of CSR on brand loyalty among public universities. This outcome is consistent with the literature, which implies that CSR programmes at public institutions are mostly motivated by administrative or governmental pressure (Rahman et al., 2019). In summary, the current study supports the notion that CSR has a positive and strong direct influence on brand loyalty in private institutions, but this effect is insignificant in public universities. The findings validated the model's contention that the influence of CSR on brand loyalty should be prioritised in university planning. This results showed that, in the perspective of Malaysian public universities, however, the adoption of CSR initiatives is largely primarily due to government pressure (Rahman et al., 2019). Hence, demonstrating the consistency with past studies.

The findings could not support H4. The results showed no significant difference in the direct effect of brand reputation on brand equity between public and private universities. Reputation is essential for ensuring an organization's goodwill (Esen, 2013; Falck and Hebllich, 2007; Foroudi et al., 2019). Thus, for both public and private universities, the findings with respect to the effect of reputation on brand equity are consistent with previous studies, that the difference are not significant. Previous literature has shown that brand reputation and brand equity are important for ensuring organizational success (Lai et al., 2010). According to the study by Lai et al. (2010), corporate reputation has a favourable influence on industrial brand equity in Taiwan, which concentrates on business-to-business (B2B) marketplaces. Another study by Pinar et al. (2020) strengthens the current results as their study, which is in the context of universities (public and private) in Turkey, also shown that brand reputation contributes towards brand equity. Therefore, both public and private universities should prioritize brand reputation given its contribution toward brand equity.

However, the results showed significant differences in the direct effect of brand reputation on brand loyalty between public and private universities (H5). The results demonstrate that public universities have a more robust and greater effect for brand reputation on brand loyalty as compared with private universities, with these differences being

significant. This finding is inconsistent with the earlier literature, which shows that public sector organization often face many challenges in constructing reputation. Wæraas and Byrkjeflot (2012) suggest that reputation building is perhaps particularly difficult for public organizations given their inherently political nature, inability to make emotional connections with their stakeholders, and challenges in communicating consistent messages among stakeholders. Therefore, reputation building may not be suitable for public sector organizations (Whelan et al., 2010), with Luoma-aho (2007) suggesting that they should perhaps remain neutral in maintaining or building a reputation. On the other hand, the findings with respect to private universities are consistent with those of previous studies, demonstrating that student loyalty is largely affected by their university's reputation. The results of this study are consistent with a study by Kaushal and Ali (2019) that demonstrates as university reputation has a substantial effect on student loyalty in Indian universities. Loyal students, therefore, are more likely to suggest their university to others, continue their studies at the same school, and keep touch with their alma mater after graduation (Kaushal and Ali, 2019).

For the indirect effects of CSR on brand equity and brand loyalty through brand reputation, the results could only support the indirect effect CSR for brand loyalty (H7), but could not support the effect of CSR on brand equity (H6). The results of this study which support the H7 shown parallel results with past study by He and Lai (2014), which found significant results of the indirect relationship between CSR and brand loyalty which look at the cosmetics industry of Hong Kong. Another study that supported these results also showed significant results of the indirect relationship between CSR and brand loyalty in the insurance industry in Taiwan. In general, CSR activities can support the development of good relationships with other stakeholders, as well providing a source of reputational capital for enhancing their performance (Bianchi et al., 2019; Gürlek et al., 2017; He and Lai, 2014; Lee et al., 2017; Li et al., 2019). Therefore, reputation building is essential for creating brand equity and loyalty and mediating the effects of CSR on loyalty and equity. However, because the effect of reputation on brand loyalty is stronger for public universities and the indirect effect of CSR on brand loyalty through reputation is stronger for public universities, we see significant differences in this indirect effect, thus supporting H7.

6. Conclusion

6.1. Theoretical contributions

This study investigated the effects of CSR on brand reputation, loyalty, and equity in the context of both public and private higher education, with previous studies having tended to highlight only a singular perspective (Chan and Mohd Hasan, 2018; Garde Sánchez et al., 2013; Mohaiyadin et al., 2018; Mohd Hasan, 2017; Nejadi et al., 2011). The results showed strong and positive effects of CSR on brand reputation, equity, and loyalty in both public and private universities, indicating the importance of perceptions of students towards CSR in higher education context and customers in general for brand management of organisations and companies. As a result, this study provides a substantial theoretical addition to the literature on CSR and brand management, particularly for higher education institutions. Additionally, this study investigated the mediation function of brand reputation between CSR and brand equity and loyalty based on the proposed sequence of factors in the hierarchy of effects model. The findings showed a strong mediation role of brand reputation between CSR and brand equity and loyalty in public and private universities. When the indirect benefits of CSR on brand equity and loyalty were compared to the direct effects, the relevance of brand reputation in transferring the effect was shown. These results provided strong support for the application of the HEM to link CSR and brand outcome factors such as equity and loyalty. This study showed that the perceptions of customers about CSR (cognitive layer of the HEM) improve the brand reputation from the perspective of customers (affective layer of the HEM), and improving the reputation, will lead to increasing brand equity and loyalty (conative layer of the HEM). This work study a novel theoretical contribution to both the CSR and brand management literatures. Moreover, this study compared public and private higher education institutions for the direct effects of CSR on brand reputation, equity, and loyalty and the indirect effects of CSR on brand equity and loyalty through brand reputation using the HEM. To our knowledge, this study is one of the earliest studies to utilise the HEM process of cognition, affective, and conation from the HEM framework in understanding the responses to CSR information, specifically in the context of higher education. Additionally, past study studies rely heavily on a theoretical framework such as the stakeholder theory and social exchange theory (Ahmed et al., 2020; Rupp et al., 2018; Shah et al., 2020; Slack et al. 2015; Waheed and Yang, 2018; Waheed and Zhang, 2020). Therefore, this study by these comparisons offers new insights for the effects of CSR on brand management of public and private higher education organisations, which these insights can be considered another significant theoretical contribution of the current study to the CSR and brand management literature in the higher education context. This study also contributes a novel theoretical addition to the field by measuring and evaluating the effects of CSR on brand management in public and private higher education organisations using the HEM. Additionally, incorporating new constructs such as brand reputation, loyalty, and equity in the context of both public and private higher education institutions in relation to the perceived CSR, can contribute to the HEM literature by expanding the application of this model in a new context, as well as application of this model in CSR literature.

6.2. Practical implications

This study has several practical implications for both private and public universities administrators. The results highlight the importance of CSR in improving the reputation of both public and private universities. This research also helps to a better understanding of the significance of CSR initiatives in changing students' perceptions and behavioural intentions toward the institution brand. Increasing university reputation can influence the university's brand equity and loyalty, which can have significant financial, non-financial, and performance implications. Given the business models of private universities,

reputation, brand equity, and loyalty are critical for improving their image and reputation and attracting students. Public universities, on the other hand, attend to reputation, equity, and loyalty to maintain their image. Therefore, the managers of both public and private universities should emphasize on implementation of CSR as a key predictor of university's reputation, equity and loyalty from the perspective of students. In addition, the results demonstrate that for public universities, the indirect effects of CSR through reputation on brand equity and brand loyalty are more important than the direct effects when compared to private universities. These findings also highlight the importance of reputation and image and the role of CSR for improving these qualities in the context of public universities. For allocation of budget to public universities, the government should consider the implementation of CSR, which highlights should consider the implementation of CSR, which highlights the university's responsibility and contributes to improving the image of the university. The managers and owners of private universities care more about than public universities, which the government supports the financial aspect and attracting more students than public universities, which the government supports them and allocates budget for their expenses. Therefore, for private universities, the implementation of CSR is more critical than public universities, directly affecting the loyalty of students, and leads to an increasing number of students.

Additionally, the findings of this study give important insights for Malaysian institutions, both private and public, to develop successful branding strategies, particularly by focusing on the importance of CSR in brand management. Along with the study's findings, there is support and encouragement for HEIs that are not already involved in CSR activities or are hesitant about actively participating in CSR practises to make that commitment. To attract more students in a very competitive environment, owners and managers of private universities in Malaysia should focus on the implementation of CSR as a key factor to improve university's brand equity and loyalty and be successful compared to their competitors. However, an issue remains, namely maintaining a balance between the favourable views of the university brand, particularly in a nation like Malaysia where private education may be too expensive for the majority to purchase. As a result, it is a demand for universities to develop an image that attracts the rich strata of society while also encouraging access to less privileged groups through academic scholarships. Scholarships are urged to be awarded to worthy students at private institution on a frequent basis. According to this study, students who viewed CSR as a significant factor would improve their devotion to the higher education organisation since receiving a scholarship is considered one of the CSR actions. The notion of corporate sponsorship may be linked to the provision of scholarships or financial help in higher education, and it has been argued that such efforts should be considered as a strategic instrument for institutions to catalyse excellent enrolment. In addition, the government of Malaysia, to allocate a budget for public universities, needs to consider the reputation and image of universities, which is significantly affected by the implementation of CSR and the responsibility of universities towards society. The managers and staff of university (e.g. academic and non-academic) in both public and private institutions should commit to the principles of CSR to contribute to the enhancement of the reputation, the university's image, followed by brand equity and loyalty. Managers may also use the HEM to predict the customer behaviour based on CSR actions that have a beneficial influence on their businesses. With the rising need for ethical and socially responsible goods and practises of an organisation, a rise in colleges publicly vocalising their CSR activities to customers can lead to increased understanding and knowledge of current industry challenges.

6.3. Limitations and recommendation for future research

This study has several drawbacks, having compared public and private universities in Malaysia. Malaysia has only a brief history of implementing CSR activities in the context of education. Comparing universities in other countries with a more developed history of

performing CSR activities might yield richer and more valuable insights, providing more generalisable results. Furthermore, a comparative analysis of CSR activities in both public and private universities in Malaysia might help to illuminate the degree to which each organization is successful in its adoption of CSR activities.

Additionally, the study was conducted within universities in Malaysia, capturing only the data from students' perspectives. Future study might benefit from the perspectives of other stakeholders such as members in the faculty, staff, alumni, and parents, as well as examining the relationships for different types of stakeholders in understanding and designing university branding strategies. It is also proposed that more research be conducted to increase the sample size and the number of colleges in order to improve the model's generalisability.

Future studies might explore mediating factors to understand better the mechanisms underlying the effects of CSR on brand loyalty and brand equity, with this study focusing solely on reputation as a mediator. However, the inclusion of a more comprehensive set of variables would help to understand the mechanisms better underpinning this effect. Therefore, future studies might examine other relevant mediators to provide deeper insights into the effects of CSR on brand loyalty and equity.

Declarations

Author contribution statement

Poh Ling Tan: Conceived and designed the experiments; Wrote the paper.

S. Mostafa Rasoolimanesh: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Govindaraju Manickam: Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interests statement

The corresponding author of this article is an Editorial Board member of the Heliyon journal.

Additional information

No additional information is available for this paper.

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