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Corporate social responsibility on customer behaviour: the mediating role of corporate image and customer satisfaction

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Corporate social responsibility (CSR) plays an important role in corporate profits, corporate reputation, and consumer attitudes; it has been identified as a critical marketing strategy for enterprise business activities and corporate sustainable development. How does CSR influence the consumer behaviour towards profit making for the enterprise? This issue has been an important research topic in the enterprise and management areas. Nevertheless, the mechanisms underlying how CSR can affect the consumer behavioural intention (CBI) have rarely been addressed in the literature. This study investigates the relationship between CSR and CBI, emphasizing on using corporate image and customer satisfaction as the mediate factors. Focusing on the bicycle industry, a total number of 491 valid questionnaires from the consumers are retrieved and are then analyzed using the structural equation modelling. Our analyses show that CSR has a positive effect on corporate image, customer satisfaction, and price premium. In addition, CSR can affect the customer behavioural intention (purchase intention and price premium) through enhancing corporate image and customer satisfaction. Our results clarify the relationship between CSR and CBI, and can offer a sound academic support for future related research and practical applications.

Keywords: corporate social responsibility; structural equation modelling; bicycle industries; customer behavioural intentions

1. Introduction

As Continued technological advancement renders increasingly frequent worldwide communication and collaboration, more and more corporate organisations are conducting business on a world scale and the market economy is undergoing globalisation. Therefore, corporate decisions and actions have a profound influence on a country’s economy, social development and the interest of stakeholders, making it necessary for corporations to fulfil corporate social responsibility (CSR), a topic that is receiving growing attention worldwide (Foote, Gaffney, & Evans, 2010; Kanji & Chopra, 2010; Matute-Vallejo, Bravo, & Pina, 2011). CSR is associated with corporate reputation, corporate image, corporate financial performance, and interaction among stakeholders (e.g. stockholders, employees, and consumers) (Barnea & Rubin, 2010; Bhattacharya & Sen, 2004; Galbreath & Shum, 2012; He & Lai, 2012; Keh & Xie, 2009; Yuen, Thai, & Wong, 2016). Moreover, undertaking CSR as an indispensable business activity or marketing strategy can crucially affect a firm’s sustainability (Green & Peloza, 2014; Marin, Rubio, & Maya, 2012; Porter & Kramer, 2006).

The stakeholder theory asserts that consumers are the primary stakeholders in a firm, the largest source of a firm’s income, and a major factor in its development (Freeman, 1984). Thus, failing to adequately address consumer perceptions may negatively influence a firm’s
growth, and this underlines the need to elucidate the relationship between a firm and its consumers. Although the relationship between CSR and consumer behaviour has been extensively studied, literature gaps remain to be filled.

First, because of the limited availability of CSR data, many previous studies have acquired such data from databases (e.g. Kinder, Lyndenberg, and Domini) or have used experimental designs to analyze data (Klein & Dawar, 2004; Oberseder, Schlegelmilch, Murphy, & Gruber, 2014; Sen, Bhattacharya, & Korschun, 2006). However, the results of such studies may not adequately reflect consumer perceptions of firms’ CSR participation. This limitation can be resolved by administering a questionnaire to collect primary data about consumer attitudes toward firms’ CSR initiatives.

Second, research on CSR within specific industries is scarce. Griffin and Mahon (1997) conducted a meta-analysis of 51 CSR studies and concluded that none had focused on one specific industry. The researchers argued that investigations into CSR across industries are limited because internal and external environments, social issues, and the specificity of stakeholders vary in different industries. Therefore, investigating CSR within a specific industry may facilitate better understanding of the relationship between the industry and consumers. Other CSR studies such as Godfrey and Hatch (2007) and Inoue, Kent, and Lee (2011) have also noted a lack of CSR research devoted to specific industries, particularly the sport industry. Considering the worldwide attention to CSR and scant research into CSR within specific industries, this literature gap needs to be addressed. Thus, the present study explored CSR within the cycling industry in Taiwan. Taiwan has established a global reputation as the kingdom of bicycles and is one of the world’s top three bicycle exporters. In recent years, amid growing public interest in fitness and exercise, the domestic cycling industry has witnessed a shift in the use of bicycles from serving as a mode of transportation to a form of exercise.

Third, although some recent studies have discussed the relationship between CSR and customer behavioural intentions, they have provided an incomplete understanding of the mechanisms underlying the influence of CSR on such intentions. Although CSR has non-significant direct effects on customer purchase intentions (Ali, Rehman, Yilmaz, Nazir, & Ali, 2010; Oberseder et al., 2014), it has significant positive effects on customer behavioural intentions (Mohr & Webb, 2005; Wu, Tsai, & Tai, 2016). Therefore, existing evidence of the relationship between CSR and customer behavioural intentions is inconclusive. To further the understanding of the factors affecting the relationship between CSR and customer behavioural intentions, the present study reviewed articles on the relationship between CSR and consumer buying behaviour and used corporate image and customer satisfaction as mediators. Practical and theoretical implications from the findings of this study are discussed in this paper.

The remainder of this paper is structured as follows. Section 2 presents a literature review and describes the development of the study hypotheses. Section 3 introduces the methodology, consisting of descriptions of the instrument, data collection, and the application of statistical methods. Section 4 presents the results and verification of the proposed hypotheses. Section 5 discusses the results and provides conclusions and theoretical and managerial implications. Section 6 describes the limitations of this study and proposes directions for future research.

2. Literature review and conceptual development
This study investigates the effects of CSR on customer behavioural intentions from the perspective of consumers. Figure 1 below shows the conceptual framework of the CSR drivers,
the customer behaviour of corporate image, and the customer satisfaction. In the following sections, based on the existing research results we will develop the research model adopted in our paper.

2.1. CSR

The Objectives of CSR are to maximise a firm’s profits and stockholder value, meet social expectations, maintain the interest of stakeholders (stockholders, employees, consumers, suppliers, and communities), conduct business in compliance with the law, and willingly undertake social responsibility (Carroll, 1979; Smith, 2003; Stubbs & Cocklin, 2007). Carroll (1991) proposed the CSR Pyramid, which has been applied extensively in previous studies (Galbreath & Shum, 2012; He & Lai, 2012; Ramasamy & Yeung, 2009; Xiao, Heo, & Lee, 2017). The CSR Pyramid is a graphic representation that describes CSR in terms of economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility. These four CSR concepts are detailed below:

1. Economic responsibility: A responsibility to produce the goods or services required by a society, deliver them at socially acceptable prices, earn profits through appropriate means to maintain corporate growth and profitability, provide jobs, and secure the interest of stakeholders.

2. Legal responsibility: A responsibility to conduct business in compliance with all applicable laws and regulations concerning labour standards, environmental protection, consumer protection, and taxation.

3. Ethical responsibility: A non-legally-binding, internally instituted obligation to meet social expectations by adhering to socially acceptable standards of conduct and ethical rules, or in other words, doing what is just, fair, and right and preventing harm to stakeholders.

4. Philanthropic responsibility: Referred to as ‘voluntary responsibility’ in early research (Carroll, 1979), this is a responsibility to willingly and unconditionally improve public welfare, undertake charity work, offer donations, and fulfil civic responsibilities.
As enterprises develop and consumer awareness improves, CSR is increasingly perceived as a corporate obligation, a form of corporate citizenship, and a strategic manifestation of corporate proactiveness, rather than a strategy to maximise stakeholder value (Jose & Lee, 2007; Lee, Kim, Lee, & Li, 2012). The focus of CSR research has shifted from the relationship between CSR and corporate financial performance (Galbreath & Shum, 2012; Inoue et al., 2011; Luo & Bhattacharya, 2006; McWilliams & Siegel, 2001) to the relationships of CSR with corporate reputation, corporate image, and consumers (Green & Peloza, 2014; He & Lai, 2012; Lee et al., 2012; Matute-Vallejo et al., 2011; Oberseder et al., 2014; Sen & Bhattacharya, 2001; Walsh & Bartikowski, 2013; Wu et al., 2016). CSR strongly influences not only a firm’s financial performance but also its efforts to build a solid reputation or image in a competitive environment and improve consumer attitudes toward itself.

2.2. Customer behavioural intentions

Freeman (1984) proposed the stakeholder theory, which suggests that consumers are the primary stakeholders in a firm and are vital for its development and profitability. Thus, consumer behaviour has profound implications for firms. Previous studies have shown that purchase intentions and price premiums, both of which represent customer behavioural intentions, are crucial factors in a firm’s performance and profitability, as well as the positive outcomes of a good firm–consumer relationship that help to increase cash flow and correlate positively with financial performance and market capitalisation (Ailawadi, Lehmann, & Neslin, 2003; Bondesson, 2012; Keh & Xie, 2009; Yuen et al., 2016).

Customer purchase intentions are key signals prior to actual purchase behaviours; the stronger an intention, the more likely a customer is to make a purchase (Kotler, 2003; Spears & Singh, 2004). A price premium is the percentage by which a product’s selling price exceeds its market price, the difference between the product’s selling price and its perceived value, and the amount a customer is willing to pay for a product above its market price. Therefore, firms with products that have higher price premiums earn higher cash flow and have higher consumer price tolerance than their competitors (Aaker & Keller, 1990; Klein & Leffler, 1981).

2.3. Corporate image

Image is the sum of an individual’s feelings, impressions, trust, experiences, thoughts, and beliefs concerning an object (Aaker, 1996; Kotler, 2003). Corporate image refers to the overall impression of consumers toward a company and the positive or negative perception of the company associated with consumers’ feelings, attitudes, and experiences of the company’s performance, products, or services (Aaker, 1996; Nandan, 2005; Walters, 1978).

The manner of assessment for corporate image differs depending on the research or application domain (Nguyen & Leblanc, 2001). The Taiwanese cycling industry, on which this study focused, is a service industry. Therefore, the present study evaluated the corporate image of cycling firms based on the definition of corporate image within service industries from the perspective of consumers, introduced by Walters (1978). Walters defined corporate image as having the following three aspects: (a) institution image, which encompasses corporate image (consumers’ overall perception of a firm’s participation in social activities) and store image (consumers’ overall perception of a firm’s commodities, layout of commodities, store atmosphere, and marketing campaigns); (b) functional image, which encompasses service image (consumers’ overall perception of
the relevance of a firm’s services and its attitudes and efficiency), price image (consumers’ overall perception of the prices of and discounts on a firm’s commodities), and promotional image (consumers’ overall perception of a firm’s promotional or marketing initiatives); and (c) commodity image, which encompasses product image (consumers’ overall perception of the quality, integrity, or utility of a firm’s product), brand image (consumers’ overall perception of the idea behind a branded product), and brand line image (consumers’ overall perception of the brand design, packaging, and attributes of a firm’s product portfolio).

Corporate image requires long-term maintenance and is a crucial intangible corporate asset (Aaker, 1996; Kotler, 2003). A solid corporate image helps to draw investment, build consumer trust, reduce the risk of uncertainty, and increase customers’ satisfaction, loyalty, and purchase intentions, thereby raising profits and sales (Bataineh, 2015; Cretu & Brodie, 2007; Martinez & Pina, 2005; Ryu, Lee, & Kim, 2012). Moreover, consumers are more likely to purchase products or services offered by a firm with a good corporate image than by one with an unknown or negative corporate image (Liou & Chuang, 2008; Nguyen & Leblanc, 2001).

2.4. Customer satisfaction

Because consumers are the primary stakeholders in a firm and the main source of corporate income, meeting consumer needs enables a firm to increase customer trust and repurchase intention, profitability, and competitiveness. Therefore, customer satisfaction should be accorded high priority in business management and viewed as a valuable form of customer feedback (Ranaweera & Prabhu, 2003). Customer satisfaction refers to an individual’s level of pleasure or disappointment (including under- or over-fulfillment) regarding his or her purchase of a product or service, and the result of the comparison between the product or service’s perceived performance and the individual’s initial expectations (Kotler, 2003; Oliver, 1997). Introduced by Oliver (1980), expectancy disconfirmation theory has been used extensively to study customer satisfaction. The theory asserts that customer satisfaction is the result of comparing a product or service’s perceived performance with an individual’s initial expectations. Consumers tend to measure their level of satisfaction with a product or service against their prepurchase expectations. When perceived performance exceeds these expectations, positive disconfirmation occurs, resulting in high satisfaction, and vice versa. When perceived performance corresponds with these expectations, neither positive nor negative disconfirmation occurs and satisfaction levels remain unchanged.

Consumer satisfaction, having been studied in the management domain, is considered to be crucial for firms in establishing long-term relationships with consumers (Anderson & Srinivasan, 2003; Gruca & Rego, 2005). Studies have also indicated that consumer satisfaction positively correlates with corporate stock returns and market values (Anderson, Fornell, & Mazvancheryl, 2004; Fornell, Morgeson, & Hult, 2016; Luo & Bhattacharya, 2006; Sorescu & Sorescu, 2016) and affects consumers’ future purchase intentions (Homburg, Koschate, & Hoyer, 2005; Matute-Vallejo et al., 2011; Szymanski & Henard, 2001; Theng, Wanzhen, Zhiqiang, Robert, & Pallavi, 2011).

2.5. CSR and customer behavioural intentions

According to the report in Creyer and Rose (1997), consumers will expect enterprises’ to realise CSR, and will take CSR into consideration in their purchase decision-making; they are willing to buy products even at higher prices, so as to encourage CSR-minded
firms to fulfil civic responsibilities. Besides, the study in Luo and Bhattacharya (2006) and Wu et al. (2016) revealed that another key factor that CSR can affect customer purchase behavioural intentions is customers’ perceived value. Indeed, if the entire business involves not only selling CSR products or services (e.g. green products or eco-friendly commodities) but also actions regarding social well-being or environmental protection, the perceived value can be enhanced: this can promote consumers’ support for companies’ efforts on realising CSR, leading to better purchase intentions and price premiums. Empirical studies (e.g. Devinney, 2009; Homburg et al., 2005; Mohr & Webb, 2005; Wang & Chen, 2016; Yue et al., 2016) have also confirmed that CSR will influence consumers’ purchase intentions and evaluation of the companies. When offered with the opportunity of selecting among products with similar brands and comparable prices, the consumers will prefer those products or services offered by CSR-minded firms and have higher price premiums. Therefore, we assert that:

\[ H1. \] CSR is positively related to customer purchase intention.

\[ H2. \] CSR is positively related to price premium.

2.6. **CSR, corporate image, and customer satisfaction**

A solid corporate image distinguishes a firm from its rivals, contributes to its market performance, and gains support from its consumers (Klink & Smith, 2001). A corporate image is based primarily on consumers’ first impressions of the quality of the products or services offered and external company activities (Dichter, 1985). CSR activity, a crucial item of external information about companies, increases the visibility of a firm in the market and helps to shape the firm’s corporate image and improve consumer attitudes. Thus, CSR is a crucial determinant of a corporate brand or image (Oberseder, Schlegelmilch, & Gruber, 2011; Oberseder et al., 2014; Wu et al., 2016).

The influence of CSR on corporate image and customer satisfaction can be explained through social identity theory, first introduced by Tajfel (1974). Social identity theory asserts that people identify themselves based on the groups to which they belong and derive a sense of pride, self-differentiation, and superiority when these groups earn favourable opinions or achieve commendable feats. Individuals subsequently become satisfied with their groups. Therefore, consumers tend to support and identify with firms that participate in CSR, demonstrating concern of and providing services for the public. Accordingly, such firms’ corporate image and customer satisfaction levels are more likely to improve because of consumers’ positive impression of and psychological belongingness to the firms (Luo & Bhattacharya, 2006; Martinez & Bosque, 2013; Marin, Ruiz, & Rubio, 2009). Furthermore, CSR affects consumers’ perceptions about firms and their willingness to sponsor them (Walker & Kent, 2009). Undertaking CSR activities generates intangible benefits, namely projecting a positive corporate image and improving customer satisfaction (Basdeo, Smith, Grimm, Rindova, & Derfus, 2006; Ellen, Mohr, & Webb, 2000). Based on social identity theory and previous research, we assert that:

\[ H3. \] CSR is positively related to corporate image.

\[ H4. \] CSR is positively related to customer satisfaction.

2.7. **Corporate image, customer satisfaction, and customer behavioural intentions**

Kevork and Vrechopoulos (2009) suggested that increasing customer behavioural intentions requires identification and emotional support from customers, both of which can be
obtained by shaping a solid corporate image and achieving high customer satisfaction (Cretu & Brodie, 2007; Ryu et al., 2012). The factors that explain the influence of corporate image and customer satisfaction on customer behavioural intentions are as follows. First, social identity theory states that consumers tend to build relationships with firms with strong reputations and high levels of customer satisfaction, advocate such firms (by exhibiting purchase intentions, paying price premiums, and spreading positive word of mouth), and purchase highly regarded products or services to achieve uniqueness and improve their self-worth (Bhattacharya & Sen, 2003; Keh & Xie, 2009; Matute-Vallejo et al., 2011). Second, a solid corporate image distinguishes a firm from its rivals to reduce consumer uncertainty. High customer satisfaction enhances consumers’ confidence in and positive attitudes toward a firm, thereby increasing the perceived value of the firm’s products or services (Bataineh, 2015; He & Lai, 2012; Luo & Bhattacharya, 2006; Martinez & Pina, 2005). Third, when selecting similar products or services, consumers tend to reduce purchase risks predominantly by paying higher prices for products or services provided by firms with a favourable image and high levels of customer satisfaction (Aaker, 1996; Homburg et al., 2005; Kotler & Armstrong, 2010). Accordingly, we assert that:

- **H5.** Corporate image is positively related to customer purchase intention.
- **H6.** Corporate image is positively related to price premium.
- **H7.** Customer satisfaction is positively related to customer purchase intention.
- **H8.** Customer satisfaction is positively related to price premium.

2.8. **Mediating effects of corporate image and customer satisfaction**

Existing evidence on the relationship between CSR and customer behavioural intentions is inconclusive (Ali et al., 2010; Lee & Shin, 2010; Mohr & Webb, 2005; Oberseder et al., 2014; Wu et al., 2016), which suggests that the mechanisms underlying the influence of CSR on such intentions remain to be clarified. However, because mediators explain the causality between independent variables and dependent variables (Baron & Kenny, 1986), corporate image and customer satisfaction have strong effects on customer behavioural intentions (Homburg et al., 2005; Keh & Xie, 2009; Martinez & Pina, 2005; Ryu et al., 2012), and CSR is perceived to be a crucial antecedent of corporate image and customer satisfaction (Galbreath & Shum, 2012; He & Lai, 2012; Luo & Bhattacharya, 2006; Matute-Vallejo et al., 2011). The present study used corporate image and customer satisfaction to mediate the relationship between CSR and customer behavioural intentions, and used social exchange theory to explicite this relationship.

Social exchange theory asserts that a person maintains a reciprocal relationship with a group from which he or she may derive benefits by providing it with intrinsic (e.g. support or positive feelings) or extrinsic (e.g. financial resources or investments) benefits (Blau, 1964). When a firm undertakes CSR initiatives to promote national economic growth or social well-being, consumers are more likely to identify with the firm (indicating a solid corporate image) or assign high perceived value to its products or services (indicating high customer satisfaction), and respond favourably to the firm (e.g. by exhibiting purchase intentions or paying price premiums), thereby cultivating a relationship between consumer and firm on a long-term, reciprocal basis.

CSR allows a firm to improve social well-being, meet social expectations and consumer needs, and gain support from the public and consumers in the form of consumption, investment, and donations (Donaldson & Preston, 1995). Previous studies have found that consumers tend to build relationships with capable, public-spirited, and upright companies, and
that CSR participation enables a firm to exhibit its strengths and philanthropic deeds, strengthen consumer identification, cement its corporate image, improve its competitiveness, and enhance consumers’ favourable responses, thereby increasing purchase intention and loyalty (Carroll & Shabana, 2010; He & Lai, 2012; Porter & Kramer, 2006; Wu et al., 2016). Moreover, CSR can improve consumer attitudes toward and satisfaction with a firm. Highly satisfied consumers tend to develop purchase intentions and loyalty and pay price premiums (Luo & Bhattacharya, 2006; Martinez & Bosque, 2013; Walsh & Bartikowski, 2013; Wang & Chen, 2016). Thus, according to social exchange theory and prior research, we assert that:

*H9. Corporate image mediates the relationship between CSR and customer purchase intention.*

*H10. Corporate image mediates the relationship between CSR and price premium.*

*H11. Customer satisfaction mediates the relationship between CSR and customer purchase intention.*

*H12. Customer satisfaction mediates the relationship between CSR and price premium.*

3. Methodology

3.1. Sample and data collection

Our study is targeted at bicycle customers in Taiwan. The research data are collected using purposive sampling. Questionnaires, prepared according to the methods of He and Lai (2012) and Wu et al. (2016), were distributed to physical bicycle stores in Taipei, Taichung, and Kaohsiung to survey consumers anonymously who used bicycles and were willing to complete the questionnaires. In order to explain potentially confusing questions and ensure the representativeness of the items to be answered, all administrators were instructed regarding the content of the questionnaire to ensure representativeness in the samples and the effective administration of the instrument (such as simulation of the process of collecting data, purpose of the study, and the meaning of questionnaire entry). In this study, 600 questionnaires were distributed and 542 were returned. After ruling out some invalid responses because of reverse-worded questions and missing values, 491 valid responses remained, yielding a return rate of 90% and a valid return rate of 81.8%.

The demographic characteristics of the sample are described in this section. Men and women numbered 356 (72.5%) and 135 (27.5%), respectively. The age group with the most respondents was 21–29 years (*n* = 207, 42.2%), followed by 30–39 (*n* = 134, 27.3%), 40–49 (*n* = 61, 12.4%), under 20 (*n* = 46, 9.4%), and over 50 (*n* = 43, 8.7%). Regarding educational level, most respondents held an associate’s or bachelor’s degree (*n* = 305, 62.1%), followed by those with a master’s degree or higher (*n* = 99, 20.2%), those who completed secondary education (*n* = 73, 14.9%), and those who completed middle school or lower (*n* = 14, 2.8%). Among all the respondents, 296 (60.3%) were married and 195 (39.7%) were unmarried.

3.2. Measures

The Formal questionnaire in this study was developed based on relevant theories and empirical evidence, reviewed by five experts, and pretested on 200 bicycle consumers to ensure its content validity and attain a Cronbach’s *α* of > .7 (Nunnally, 1978). The questionnaire comprised scales to measure CSR, corporate image, customer satisfaction, purchase intention, and price premium. To reduce common-method variance (CMV) in the data collected, the questionnaire was designed to conceal item rationale and the items were arranged
randomly (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). All scales were measured using a seven-point Likert format (1 = ‘strongly disagree,’ 7 = ‘strongly agree’). The scales involved are detailed in this section.

The CSR scale in this study is based on the CSR definition and standards proposed by Carroll (1979, 1991) and the CSR scales developed by Galbreath and Shum (2012) and Walsh and Bartikowski (2013). The scale in this study comprised 13 items regarding the constructs of economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility. Items in this scale included ‘I think that this company has professional specifications for bicycles’ and ‘I think that this company is highly supportive of sports or cultural events in Taiwan.’ The corporate image scale was developed based on the studies of Nguyen and Leblanc (2001) and Walters (1978), and comprised eight items regarding the constructs of institution image, functional image, and commodity image. Items in this scale included ‘I think that this company is a leading brand in its immediate industry’ and ‘I think that the company’s service representatives are professionally competent.’ The customer satisfaction scale was adapted from that developed by Oliver (1980) and comprised four items, including ‘I am highly satisfied with the company’s after-sales service’ and ‘I am highly satisfied with the quality of the company’s products.’ The purchase intention scale was based on the scales of Spears and Singh (2004) and Keh and Xie (2009) and comprised three items, including ‘I am willing to continue to use the company’s product(s) or service(s)’ and ‘I prefer this company’s product(s) or service(s) over others.’ The price premium scale was based on the scales of Aaker (1996) and Keh and Xie (2009) and comprised three items, including ‘I am willing to buy CSR commodities even though they are more expensive’ and ‘When choosing among commodities of identical price, I am willing to purchase those with CSR features.’

Confirmatory factor analysis (CFA) was conducted to test the reliability and validity of all the aforementioned scales in accordance with the goodness of fit indices developed and recommended by Joreskog and Sorbom (1989) and the recommended levels of convergent validity (deemed significant with a factor loading of >.50) (Hair, Black, Babin, Anderson, & Tatham, 2006), construct reliability (CR; >.60), and average variance extracted (AVE; >.50) (Fornell & Larcker, 1981). The analysis results showed that the standardised coefficients and standard errors of all items were .65–.95 (p < .01) and .04–.11, respectively, thereby indicating nonsignificant errors of measurement and the absence of negative error variance and offending estimates in the model. Subsequently, the fit of internal structure of the model in each scale was assessed. The assessment results are shown in Table 1. Three items (degree of freedom [df] = 0) from each of the customer purchase intention and price premium scales were unique solutions, rendering it impossible to estimate the

| Variables | Variables | $\chi^2$ | df | $\chi^2$/df | SRMR | RMSEA | CFI | CR | AVE | $\alpha$
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<tbody>
<tr>
<td>CSR</td>
<td>155.28</td>
<td>61</td>
<td>2.55</td>
<td>.046</td>
<td>.056</td>
<td>.99</td>
<td>.90</td>
<td>.70</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>CI</td>
<td>44.95</td>
<td>17</td>
<td>2.64</td>
<td>.026</td>
<td>.058</td>
<td>.99</td>
<td>.87</td>
<td>.70</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>2.55</td>
<td>2</td>
<td>1.28</td>
<td>.007</td>
<td>.024</td>
<td>1.00</td>
<td>.91</td>
<td>.71</td>
<td>.89</td>
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<tr>
<td>CPI</td>
<td>126.81</td>
<td>1</td>
<td>–</td>
<td>.064</td>
<td>.051</td>
<td>.92</td>
<td>.94</td>
<td>.83</td>
<td>.94</td>
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<tr>
<td>PP</td>
<td>55.36</td>
<td>1</td>
<td>–</td>
<td>.078</td>
<td>.033</td>
<td>.86</td>
<td>.77</td>
<td>.53</td>
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Notes: CSR = corporate social responsibility; CI = corporate image; CS = customer satisfaction; CPI = customer purchase intention; PP = price premium; CR = construct reliability; AVE = average variance extracted; $\alpha$ = Cronbach’s $\alpha$. 

Table 1. Result of CFA.
goodness of fit of these scales. Therefore, the residuals of one item were set as 0 to release a degree of freedom and enable the goodness of fit of the scales to be assessed (Joreskog & Sorbom, 1989). The CFA results showed that each scale had high goodness of fit with a CR between .77 and .94 (higher than the acceptable level of .60), AVE between .53 and .83 (higher than the acceptable level of .50), and Cronbach’s α between .77 and .94 (higher than the acceptable level of .70). Therefore, all scales were adequately reliable and valid.

4. Analysis and results
The overall model in this study was tested in two stages (Anderson & Gerbing, 1988), described as follows: (a) assessing the offending estimates, goodness of fit, and fit of the internal structure (reliability) of the measurement model; and (b) conducting structural equation modelling (SEM) to test the hypotheses. Furthermore, Harman’s single factor test (Podsakoff et al., 2003) was used to determine whether CMV existed within the collected data. The test results revealed the presence of five factors rather than one. Thus, no CMV existed in the data.

4.1. Model estimation
All 31 observable variables had an absolute value of skewness of .07–1.11 (falling under the acceptable limit of 2) and kurtosis of .02–1.66 (under the acceptable limit of 8), which suggests that the data could be estimated using maximum likelihood estimation (MLE). Each of the variables had a significant standardised coefficient (.68–.95) and standard error (.04–.10), indicating that all the scales had high convergent validity. The overall model was a good fit because it met the requirements of all the goodness of fit indices (chi-squared test $[\chi^2] = 1689.93 \ (p < .05)$, $df=417$, standardised root mean square residual [SRMR] = .078, root mean square error of approximation [RMSEA] = .079, comparative fit index [CFI] = .90, $\chi^2/df=4.05$). Moreover, the model exhibited an $R^2$ value of .46–.85, which exceeded the recommended level of .20 (Joreskog & Sorbom, 1989), as well as a CR of .77–.91 and AVE of .53–.83, indicating good fit of internal structure.

The discriminant validity of the overall model was assessed by determining whether constructs overlapped excessively in definition. Two criteria were applied during the assessment. First, the correlation coefficients between all dimensions would have to be lower than .85 and those between latent dimensions would have to be lower than the squared AVE values (Fornell & Larcker, 1981). Second, when the model was estimated using MLE, bootstrapping was used to calculate confidence intervals at a confidence level of

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean (S.D.)</th>
</tr>
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<tbody>
<tr>
<td>CSR</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.43 (0.81)</td>
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<tr>
<td>CI</td>
<td>.71**</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td>5.40 (0.90)</td>
</tr>
<tr>
<td>CS</td>
<td>.72**</td>
<td>.76**</td>
<td>(.84)</td>
<td></td>
<td></td>
<td>5.36 (0.99)</td>
</tr>
<tr>
<td>CPI</td>
<td>.62**</td>
<td>.66**</td>
<td>.69**</td>
<td>(.91)</td>
<td></td>
<td>5.33 (1.16)</td>
</tr>
<tr>
<td>PP</td>
<td>.43**</td>
<td>.36**</td>
<td>.43**</td>
<td>.37**</td>
<td>(.73)</td>
<td>5.75 (0.90)</td>
</tr>
</tbody>
</table>

Notes: 1. Level of significance: *$p < .05$; **$p < .01$.
2. The numbers in the diagonal are the square root of average variance extracted.
3. CSR = corporate social responsibility; CI = corporate image; CS = customer satisfaction; CPI = customer purchase intention; PP = price premium.
<95% and confidence interval of <1 (Torkzadeh, Koufteros, & Pflughoeft, 2003). The overall model met these criteria (Table 2), thereby indicating adequate discriminant validity.

4.2. Hypotheses testing

The hypotheses were tested using SEM and the results are described as follows. The analysis of the effects of CSR on customer purchase intention \( (\beta = .61, p < .05, \chi^2 = 365.05, df = 99, \text{SRMR} = .074, \text{RMSEA} = .074, \text{CFI} = .95, \chi^2/df = 3.68) \) and price premium \( (\beta = .53, p < .05, \chi^2 = 265.24, df = 99, \text{SRMR} = .048, \text{RMSEA} = .058, \text{CFI} = .96, \chi^2/df = 2.68) \) without any mediators suggested that CSR had significant positive effects on both customer purchase intention and price premium, thereby supporting \( H1 \) and \( H2 \). The analysis of the model in this study indicated that CSR had significant positive effects on corporate image \( (\beta = .77, p < .05) \) and customer satisfaction \( (\beta = .79, p < .05) \) (Figure 2), thereby validating \( H3 \) and \( H4 \).

\( H5 \) to \( H8 \) examine the impact of corporate image and customer satisfaction on the two behavioural intentions. Corporate image had a significant direct effect on customer purchase intention \( (\beta = .61, p < .05) \) and a nonsignificant direct effect on price premium \( (\beta = -.23, p > .05) \), thereby validating \( H5 \) but invalidating \( H6 \). Customer satisfaction had significant direct effects on customer purchase intention \( (\beta = .41, p < .05) \) and price premium \( (\beta = .46, p < .05) \), thereby validating \( H7 \) and \( H8 \).

\( H9 \) to \( H12 \) examine the mediating role of corporate image and customer satisfaction in the linkages between CSR and two behavioural intentions. According to Baron and Kenny (1986), mediators that render the predictive power of independent variables over dependent ones insignificant have full mediating effectors, whereas those that decrease the predictive power of independent variables have partial mediating effects, the statistical significance of which can be tested using bootstrapping (Shrout & Bolger, 2002). Table 3 shows that the effects of CSR on customer purchase intention decreased from .61 \( (p < .05) \) to -.14 \( (p > .05) \), suggesting that corporate image (indirect effect = .47, \( p < .05 \), 95% confidence interval = 0.047–0.531) and customer satisfaction (indirect effect = .32, \( p < .05 \), 95% confidence interval = 0.263–0.779) fully mediated the effects of CSR on customer purchase intention. This finding validated \( H9 \) and \( H11 \). Furthermore, corporate image had a nonsignificant direct effect on price premium

![Figure 2. Result of model (standardised coefficients).](image-url)

Notes: Level of significance: *\( p < .05 \); **\( p < .01 \).
(β = −.23, p > .05), thereby invalidating H10. With customer satisfaction as the mediator, the effect of CSR on price premium decreased from .53 to .35 (indirect effect = .36, p < .05, 95% confidence interval = 0.008–0.767), thereby validating H12.

5. Discussion and implications

This study explored the interrelationships between CSR, corporate image, customer satisfaction, and customer behavioural intentions from the perspective of customers to elucidate consumer perceptions toward CSR and inform the formulation of CSR plans. The findings are summarised as follows. First, CSR positively affected corporate image, customer satisfaction, and price premium. Second, corporate image positively affected customer purchase intention. Third, customer satisfaction positively affected customer purchase intention and price premium. Fourth, corporate image and customer satisfaction fully mediated the effects of CSR on customer purchase intention, whereas customer satisfaction partially mediated the effects of CSR on price premium. Theoretical and managerial implications from the findings are presented in the following subsection.

5.1. Theoretical implications

This study makes a number of contributions to the theoretical implications. First, the issues entailed by CSR and stakeholders affected by CSR differ by region, market, and industry. Therefore, the findings of this study may not be applicable to other markets or industries (Bondesson, 2012). This study focused on the cycling industry to improve the external validity of CSR research. Notably, the results showed that CSR strengthens customers’ identification with firms, satisfaction, and willingness to pay price premiums. This finding is consistent with those of previous studies that collected CSR data from different sources (e.g. databases, rankings in magazines, and surveys) or investigated CSR in other industries (Devinney, 2009; Luo & Bhattacharya, 2006; Martinez & Bosque, 2013; Marin et al., 2009; Wu et al., 2016). Therefore, investigating CSR by exploring different data sources and different industries provides substantive results supporting the positive influence of CSR.

### Table 3. Summary of effect decomposition.

<table>
<thead>
<tr>
<th>Path</th>
<th>Direct effects</th>
<th>Indirect effects</th>
<th>Total effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR → CPI</td>
<td>−.14</td>
<td>−</td>
<td>.65**</td>
</tr>
<tr>
<td>CSR → CI → CPI</td>
<td>−.47**</td>
<td>−</td>
<td>−.47**</td>
</tr>
<tr>
<td>CSR → CS → CPI</td>
<td>−.32**</td>
<td>−</td>
<td>−.32**</td>
</tr>
<tr>
<td>CSR → PP</td>
<td>−.35**</td>
<td>−</td>
<td>−.35**</td>
</tr>
<tr>
<td>CSR → CI → PP</td>
<td>−.18</td>
<td>−</td>
<td>−.18</td>
</tr>
<tr>
<td>CSR → CS → PP</td>
<td>−.36*</td>
<td>−</td>
<td>−.36*</td>
</tr>
<tr>
<td>CSR → CI</td>
<td>−.77**</td>
<td>−</td>
<td>−.77**</td>
</tr>
<tr>
<td>CSR → CS</td>
<td>−.79**</td>
<td>−</td>
<td>−.79**</td>
</tr>
<tr>
<td>CI → CPI</td>
<td>−.61**</td>
<td>−</td>
<td>−.61**</td>
</tr>
<tr>
<td>CI → PP</td>
<td>−.23</td>
<td>−</td>
<td>−.23</td>
</tr>
<tr>
<td>CS → CPI</td>
<td>−.41**</td>
<td>−</td>
<td>−.41**</td>
</tr>
<tr>
<td>CS → PP</td>
<td>−.46**</td>
<td>−</td>
<td>−.46**</td>
</tr>
</tbody>
</table>

Notes: 1. Level of significance: *p < .05; **p < .01.
2. CSR = corporate social responsibility; CI = corporate image; CS = customer satisfaction; CPI = customer purchase intention; PP = price premium.
on corporate performance and indicates that CSR can serve as a viable marketing strategy. Second, more CSR-related studies have discussed the direct effects of CSR on corporate finance, corporate image, and purchase intention (Galbreath & Shum, 2012; Green & Peloza, 2014; He & Lai, 2012; Oberseder et al., 2014; Wu et al., 2016) than the relationship between CSR and price premium. The present study filled this literature gap by showing that consumers are more willing to pay for commodities that have CSR attributes, which generally sell at higher prices than their counterparts with no CSR attributes. This finding not only indicated that CSR influences consumer willingness to pay price premiums but also contributed to the breadth and depth of CSR research.

Finally, this study used mediators to elucidate how CSR influences customer behavioural intentions. Corporate image and customer satisfaction were the primary mediators of the effects of CSR on customer behavioural intentions, indicating that CSR implementation enables a firm to gain more support from customers, shape a positive image, increase customer satisfaction, and enhance the purchase intention. Furthermore, this study found that CSR directly affected price premium and customer satisfaction mediated the effect of CSR on price premium. Accordingly, CSR implementation may increase customers’ perceived value of products or services to encourage them to pay price premiums, or meet their needs to improve customer satisfaction, perceived value, and customer willingness to pay price premiums. This interpretation, which indicates the role of perceived value in the willingness to pay price premiums, agrees with the shared argument of Bondesson (2012) and Zeithaml (1988) that the perceived benefits or value associated with a purchase is a crucial predictor of consumer willingness to pay price premiums. This also provides an explanation for the finding of this study concerning the nonsignificant effect of corporate image on price premium. Customers normally evaluate a firm based on external information about the firm rather than its internal structure (Nguyen & Leblanc, 2001). Therefore, it follows that corporate image exerts no strong influence on the benefits or value associated with purchases as perceived by consumers.

5.2. Managerial implications
In a highly competitive and ever-changing market, it is vital that businesses differentiate themselves and cultivate strong relationships with consumers. This study provided three managerial implications. First, cycling firms should participate in CSR and disseminate information about their CSR activities more vigorously. Similar to previous studies, the present study found that CSR participation may yield intangible benefits for firms such as an improved corporate image, increased customer satisfaction, and strengthened purchase intention (Luo & Bhattacharya, 2006; Marin et al., 2009; Martinez & Bosque, 2013; Oberseder et al., 2011; Oberseder et al., 2014; Wu et al., 2016; Yuen et al., 2016). Moreover, judiciously spreading information about CSR activity can strengthen consumers’ support for a firm as well as their purchase intention (Groza, Pronschinske, & Walker, 2011). Thus, cycling manufacturers in Taiwan can offer products and services at reasonable prices, develop them in compliance with legal requirements, promote social well-being, sponsor sports events to improve their visibility, and establish a reputation for being public spirited and quality minded. In addition, they can use mass media or the Internet to propagate their CSR practices as items of external information, thereby attracting further support from customers and motivating them to make purchases and price premiums.

Second, the customer-perceived value of cycling products and services should be enhanced. This study found that perceived value underlay the influence of CSR and customer satisfaction on price premium. Therefore, the perceived value of cycling commodities...
can be improved by developing products (in compliance with legal requirements) from environmentally friendly or recyclable materials to promote reuse, establishing feedback mechanisms, and supporting charity organisations or community services. Products can also be customised to ensure their uniqueness, thereby increasing their added value and customer satisfaction (Nagle, 1987).

Finally, cycling firms should strive to enhance customer satisfaction. This study found that customer satisfaction influenced customer behavioural intentions and mediated the association between intention and CSR. Lapersonne, Laurent, and Goff (1995) indicated that because gathering external information about a product or service involves considerable time and effort, consumers tend to consider their previous purchase experiences when making purchasing decisions if such experiences provide them with a sufficient understanding of the purchase they are considering. This finding highlighted the crucial effect of customer satisfaction on purchase intention. It is equally crucial for businesses to improve the functionality of their products and their interaction with consumers. Offering products or services in line with consumer needs enables consumers to be more confident in their transactions, and implementing high-quality services can contribute to the value of a product (Zeithaml, 1988; Smith, 2003; Wu et al., 2016).

Thus, based on the findings of this study and Wang and Chen (2016), bicycling firms should increase professionalism among their front-line service personnel, whose service attitudes influence consumers’ first impressions of a firm. In addition, front-line service personnel should be equipped with a solid knowledge of cycling commodities (e.g. types of bicycles, functionality, safety, and paths suitable for the bicycle) because the product information they provide is critical to consumers’ purchasing decisions. This can render the delivery of services satisfying to consumers, thereby meeting their needs. In addition, to ensure that consumers can have their bicycles maintained and repaired readily, postsales services including warranties for bicycle bodies, component replacement, and maintenance and repair should be provided and as many postsales service stations as possible should be erected. Feedback channels can be established for consumers to voice their opinions about their purchases, thereby enabling bicycle firms to better understand consumer needs and refine their products or services accordingly.

5.3. Conclusions
This study investigates the impact of CSR on consumers’ behavioural intention, from the consumers’ point of view. Based on the social identity and social exchange theories, together with our previous study, we investigate the mechanism governing the impact of CSR on the consumer’s behavioural intention, on the basis of the mediate factors (including corporate image and customer satisfaction). Our study shows that the good practice of CSR can enhance the consumers’ support of the companies: This is conductive to build a positive image of the companies, overall leading to better customer purchase intention and price premium. Hence, CSR can be a promising and important marketing strategy towards enhancing consumers’ positive evaluation of the companies, satisfaction, and purchase behaviour. This can develop unique characteristics, and positive images, of the companies that can potentially bring large financial profit.

6. Limitations and future research
This paper explicates the relationship between CSR and customer behavioural intentions and provides suggestions for academic research and managerial practices. However, this
paper has a few limitations that present opportunities for future research. First, because CSR has received considerable attention among sports management researchers (Zeigler, 2007), the present study investigated the relationship between CSR and customer behavioural intentions in the cycling industry. However, the findings of this study may not be applied to other industries. Further studies could examine the effects of CSR on customer behavioural intentions within other sport-related industries.

Second, because this study used a cross-sectional design and administered a self-report questionnaire to bicycle consumers only, the findings have limited generalizability. Solutions to this limitation such as asking the same subjects to complete the questionnaire at different temporal periods would have been impractical, and thus the questionnaire was designed to conceal item rationale and the items were arranged randomly to reduce CMV in the data. Harman’s single factor test was conducted to check for CMV. Future studies could employ a qualitative or experimental research design or recruit other stakeholders (e.g. managers, employees, or government workers) to prevent the occurrence of CMV in their data and elucidate the causal relationship between CSR and customer behavioural intentions.

Third, it is suggested that one can focus on more diverse aspects of CSR (such as economics, legalisation, ethics, and philanthropism), in conjunction with key factors of corporate image (such as institution image, functional image, and commodity image), to conduct a more holistic study. In addition, it is also interesting to take into account the issues of regeneration and environmental protection in the future study (Lee et al., 2012; Lee, Park, & Lee, 2013; Matute-Vallejo et al., 2011). Through analyzing the influence of CSR and corporate image on corporate stakeholders, the results can be of great value to firms concerning how to realise CSR in a way beneficial to them, as well as specific strategies to strengthen the corporate image and to acquire competitive advantages in the market. Notably, the present study did not consider the effect of moderators, such as company type, product quality, service quality, and those related to consumer characteristics, e.g. average monthly income and attitudes toward money (Arredondo, Maldonado, & Garcia, 2010; Barnett, 2007; Luo & Bhattacharya, 2006; Marin et al., 2012; McWilliams & Siegel, 2001; Peloza & Shang, 2011; Udayasankar, 2008). Accordingly, future work will take into account of the above-mentioned issues for a more in-depth study.

**Disclosure statement**

No potential conflict of interest was reported by the authors.

**References**


