Goods to Good: Effect of Thai Consumers' Awareness of Corporate Social Innovation (CSI) on the Innovation Adoption Factors, Predictors of Behavioral Intention, and Brand Purchase Intention

จากสินค้าสู่ความดี: ผลกระทบของการรับรู้นวัตกรรมสังคมองค์กรที่มีต่อการเปิดรับนวัตกรรม ปัจจัยพยากรณ์ความตั้งใจเชิงพฤติกรรม และความตั้งใจในการซื้อสินค้าของผู้บริโภคชาวไทย

Article History

Received: August 23, 2020
Revised: December 1, 2020
Accepted: December 2, 2020

Sora Kaitkanarat[1]
สร เกียรติคณารัตน์
Pacharaporn Kesaprakorn[2]
พัชราภรณ์ เกษะประกร
Rosechongporn Komolsevin[3]
รสชงพร โกมลเสวิน
Ratanasuda Punnahitanond[4]
รัตนสุดา ปุณณะหิตานนท์

Abstract

This study examined the impact of Corporate Social Innovation (CSI) on the innovation adoption factors (perceived relative advantage (RA) and perceived compatibility (CP)), predictors of behavioral intention (subjective norm (SN), attitude (AT), and perceived behavioral control (BC)), and their purchase intention (PI) among Thai consumers. A total of 480 Bangkok residents aged between 25

[1] Doctoral Student, School of Communication Arts, Bangkok University
นักศึกษาปริญญาเอก คณะนิเทศศาสตร์ มหาวิทยาลัยกรุงเทพ
E-mail: sora.kaitkanarat@gmail.com

[2] School of Communication Arts, Bangkok University
คณะนิเทศศาสตร์ มหาวิทยาลัยกรุงเทพ
E-mail: pacharaporn.i@bu.ac.th

[3] Graduate School, Bangkok University
บัณฑิตวิทยาลัย มหาวิทยาลัยกรุงเทพ
E-mail: rosechongporn.k@bu.ac.th

[4] School of Communication Arts, Bangkok University
คณะนิเทศศาสตร์ มหาวิทยาลัยกรุงเทพ
E-mail: ratanasuda.p@bu.ac.th

to 40 years old were randomly selected. The results through Partial Least Square-Structural Equation Model (PLS-SEM) analysis with a significance level of 0.05 revealed six findings: (1) The awareness of CSI directly influenced the innovation adoption factors (RA and CP), predictors of behavioral intention (SN, AT, and BC), but not on purchase intention, (2) the awareness of CSI indirectly affected purchase intention, as mediated by each of the predictors of behavioral intention (SN, AT, and BC) and as mediated by brand loyalty together with perceived relative advantage, (3) the innovation adoption factors (RA) and attitude directly affected brand equity (perceived quality (Q) and brand loyalty (L)), (4) brand equity (Q) influenced attitude directly, (5) subjective norm and perceived behavioral control directly affected attitude, and (6) all predictors of behavioral intention (SN, AT, and BC) significantly influenced the purchase intention. The results of this CSI study fill the gap in the body of knowledge, and at the same time, create a potential framework for an organization to adopt this CSI practice for the sustainable betterment of both organization and society as a whole.

Keywords: *Corporate Social Innovation, Innovation Adoption Factors, Predictors of Behavioral Intention, Brand Equity, Purchase Intention*

บทคัดย่อ

งานวิจัยนี้ศึกษาผลกระทบของการรับรู้นวัตกรรมสังคมองค์กรที่มีต่อการเปิดรับนวัตกรรม (การรับรู้ประโยชน์เชิงเปรียบเทียบ และการรับรู้ความสอดคล้องกับความต้องการ) ปัจจัยพยากรณ์ความตั้งใจเชิงพฤติกรรม (การคล้อยตามกลุ่มอ้างอิง ทัศนคติ และการรับรู้ความสามารถในการควบคุมพฤติกรรม) และความตั้งใจในการซื้อสินค้าของผู้บริโภคชาวไทย โดยการสุ่มตัวอย่างผู้บริโภคชาวกรุงเทพที่มีอายุระหว่าง 25 ถึง 40 ปี จำนวน 480 คน ผลการวิเคราะห์ข้อมูลโดยใช้โมเดลสมการโครงสร้างแบบกำลังสองน้อยที่สุดบางส่วนที่ระดับนัยสำคัญทางสถิติที่ 0.05 พบว่า 1) การรับรู้นวัตกรรมสังคมองค์กรมีอิทธิพลโดยตรงต่อการเปิดรับนวัตกรรมทั้งสองปัจจัยและการพยากรณ์ความตั้งใจเชิงพฤติกรรมทั้งสามปัจจัย แต่ไม่มีอิทธิพลทางตรงต่อความตั้งใจในการซื้อสินค้า 2) การรับรู้นวัตกรรมสังคมองค์กรส่งผลกระทบทางอ้อมต่อความตั้งใจในการซื้อสินค้า ผ่านตัวแปรพยากรณ์ความตั้งใจเชิงพฤติกรรมทั้งสามปัจจัย ความภักดีต่อตราสินค้าและการรับรู้ประโยชน์เชิงเปรียบเทียบ 3) ปัจจัยการเปิดรับนวัตกรรมในเรื่องการรับรู้ประโยชน์เชิงเปรียบเทียบและทัศนคติ มีผลกระทบทางตรงต่อคุณค่าของตราสินค้า (การรับรู้คุณภาพ และความภักดีต่อตราสินค้า) 4) คุณค่าของตราสินค้ามีอิทธิพลโดยตรงต่อทัศนคติ 5) การคล้อยตามกลุ่มอ้างอิงและการรับรู้ความสามารถในการควบคุมพฤติกรรม มีผลกระทบทางตรงต่อทัศนคติ และ 6) ปัจจัยพยากรณ์ความตั้งใจเชิงพฤติกรรมทั้งสามปัจจัย มีอิทธิพลทางตรงต่อความตั้งใจซื้อ ซึ่งผลของงานวิจัยในครั้งนี้ สามารถช่วยต่อยอดองค์ความรู้และเป็นกรอบต้นแบบให้กับองค์กรที่สนใจเพื่อนำไปสร้างแผนธุรกิจที่ดีทั้งกับองค์กรและสังคมร่วมกันอย่างยั่งยืน

คำสำคัญ: *นวัตกรรมสังคมองค์กร ปัจจัยการเปิดรับนวัตกรรม ปัจจัยพยากรณ์ความตั้งใจเชิงพฤติกรรม คุณค่าของตราสินค้า ความตั้งใจซื้อ*

Introduction

Humanity lives uncertainty under the challenge of environment, living quality, human rights, and sustainable living (Brown, 2018; NASA, n.d.). A need for a sustainable society where every organization helps one another is a global agenda (United Nations, 2015). Forty leading Thai conglomerates had pledged to deliver those goals. Even Thailand was ranked 40th in the global arena to deliver 2030 commitments, and Corporate Social Responsibility (CSR) as a separate extension of the business is -arguably- no longer sufficient (Sachs, Schmidt-Traub, Kroll, Lafortune, & Fuller, 2019). This is because the CSR is still dependable on profit-maximization in competitive markets (Pino, Amatulli, De Angelis, & Peluso, 2016). Hence, if profitability and social welfare are in direct opposition, the practice of CSR will be ineffective (Karnani, 2010).

The concept of Corporate Social Innovation (CSI) has been in focus through the foundation of shared value (Herrera, 2015). Wyman (2012) identified insights from global thought leaders participating in the World Economic Forum that the framework of CSI (1) is directly aligned with the company's innovation agenda and business strategy, (2) leverages a company's core for-profit assets, and (3) is managed from within an organization's core operations with (4) improvements to sustainable competitiveness. Hence, the practice of CSI remains was limited in practice (Googins & Mirvis, 2017). The issue may be caused by a lack of validation towards CSI's positive impacts on business or purchase intention (Wijaya, 2012). Therefore, this CSI study aims to bridge the gap in the body of knowledge to verify the impact of CSI on purchase intention and related factors (innovation adoption factors, brand equities, and predictors of behavioral intent) that may predict or facilitate the relationship between CSI and PI.

Literature review

Influential impacts of Corporate Social Responsibility (CSR) on purchase intention

The essential business performance indicator is purchase intention (PI), regardless of any marketing investment (Aaker, 1992). Various literature confirmed the notion of PI from CSR (Asatryan & Asamoah, 2014; Iqbal, Qureshi, Shahid, & Khalid, 2013). However, the consumer's level of preference was sensitive to different attributes of CSR. (Marquina, 2010). Since the CSI concept is an evolution from CSR, it is motivating to study the assumption that CSI would have a positive influence on the PI.

Mediating factors influencing purchase intention (PI)

Aaker (1992)'s brand equity model has identified five brand equity components: (1) brand loyalty, (2) brand awareness, (3) perceived quality, (4) brand associations, and (5) other proprietary assets which relatedly added value to, or subtracted value from, a product or service (Atilgan, Aksoy, & Akinci, 2005). Chi, Yeh, and Yang (2009) concluded that brand awareness, perceived quality, and brand loyalty had a significant relationship with PI. Brand loyalty mediates the effects between brand awareness and PI, while perceived quality forms a positive attitude and reasons to purchase. Coexisting with CSR, brand equity is a valid mediating variable driving PI (Singh & Islam, 2017). CSR was also expected to increase the value of the brand (Jamira, Oktavia, & Junaidi, 2016; Kumar, 2019). Therefore, to see the absolute impacts and relationship between the CSI concept and PI, this CSI study incorporated perceived quality and brand loyalty as potential mediating factors into the study model.

Diffusion of Innovation Theory (DOI)

CSI is a future-facing paradigm that inherits 'Innovation' that could be examined through DOI (Rogers, 1995). DOI encompasses five attributes which are: (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability (Rogers, 2003). DOI has been empirically supported through its validity as a framework regarding adoption factors of innovation (Al-Jabri & Sohail, 2012; Md Nor, Pearson, & Ahmad, 2010).

Regarding CSI, the degree of innovation adoption could increase if innovation is considered useful to individuals, businesses, and society (MacVaugh & Schiavone, 2010). Al-Jabri and Sohail (2012) confirmed that relative advantage and compatibility are critical influential-factors in the persuasion process. To have a holistic framework, relative advantage and compatibility were included in this study as the adoption's indicators of innovation.

Theory of Planned Behavior (TPB)

TPB proposed by Icek Ajzen in 1985 to improve the predictive power of behavior through three types of considerations: (1) beliefs about the consequences of the behavior (attitude), (2) beliefs about the expectations of others (subjective norm), and (3) beliefs about the factors that facilitate or constrain the performance of the behavior (behavioral control). Alam and Sayuti (2011) validated the TPB model as a predictor for PI in the Halal food study.

Regarding CSI, Han, Hsu, and Sheu (2010) confirmed that attitude, subjective norm, and perceived behavioral control positively affected intention to stay at a green hotel. Wang, Fan, Zhao, Yang, and Fu (2016) verified the intention to adopt hybrid electronic vehicles using an extended model of TPB. Consequently, TPB factors were included as a predictor of behavioral intent in this study.

The conceptual model and research hypotheses of this study were developed, as a result of the literature review, through the triangulated framework between DOI, brand equity model, and TPB.

Conceptual model and research hypotheses

Regarding the development of the conceptual model shown in Figure 1, there are three sections in organizing the conceptual model: (1) CSI as an independent variable, (2) knowledge and consideration of adoption process as mediating variables, and (3) PI as an ultimate dependent variable of this CSI study. The knowledge and consideration for the adoption section included perceived relative advantage and perceived compatibility factors from DOI, together with brand loyalty, perceived quality from brand equity, subjective norm, attitude, and behavioral control from TPB as indicators of behavioral intent (MacVaugh & Schiavone, 2010; Singh & Islam, 2017).

In terms of hypotheses, the first hypothesis explored the power of CSI towards the two adoption of innovation factors, three predictors of behavioral intent and PI (Al-Jabri & Sohail, 2012; Alam & Sayuti, 2011; Asatryan & Asamoah, 2014). The second hypothesis was derived from the results of the literature review regarding the mediating impacts of the three sections within the knowledge and consideration, which included innovation adoption factors, brand equity factors, and predictors of behavioral intentions (Jamira et al., 2016). The third hypothesis aimed to reconfirm the relationship between innovation adoption factors, attitude, and brand equity (Al-Jabri & Sohail, 2012; Kumar, 2019). The fourth hypothesis focused on the influential power of brand equity on attitude and PI (Chi et al., 2009). The fifth hypothesis reconfirmed the relationship between the predictors of behavioral intent (Wang et al., 2016). The last hypothesis emphasized the influential power of three predictors of behavioral intent on PI (Han et al., 2010).

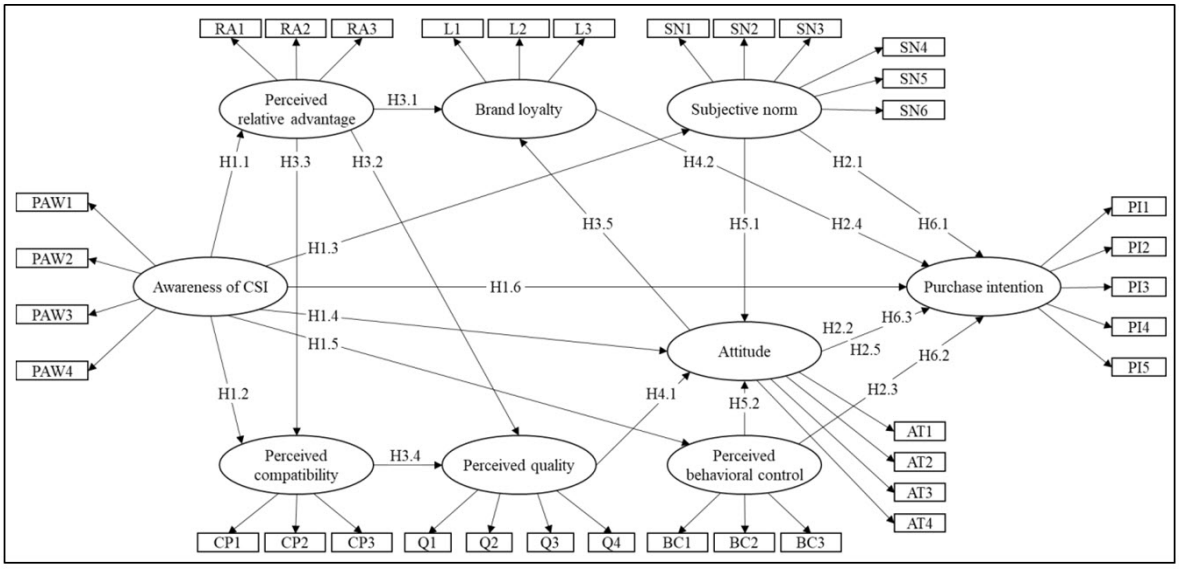

Figure 1 The CSI conceptual model

Hypothesis 1: The awareness of Corporate Social Innovation (CSI) has a direct influence on innovation adoption factors, predictors of behavioral intentions, and purchase intention (PI) of CSI practicing brand amongst Thai consumers.

H1.1: The awareness of CSI has a direct influence on the perceived relative advantage.

H1.2: The awareness of CSI has a direct influence on the perceived compatibility.

H1.3: The awareness of CSI has a direct influence on the subjective norm.

H1.4: The awareness of CSI has a direct influence on attitude.

H1.5: The awareness of CSI has a direct influence on perceived behavioral control.

H1.6: The awareness of CSI has a direct influence on the PI.

Hypothesis 2: The awareness of CSI has an indirect effect on the PI of CSI practicing brand amongst Thai consumers, as mediated by innovation adoption factors, brand equity factors, and predictors of behavioral intentions.

H2.1: The awareness of CSI has an indirect effect on PI, as mediated by subjective norms.

H2.2: The awareness of CSI has an indirect effect on PI, as mediated by attitude.

H2.3: The awareness of CSI has an indirect effect on PI, as mediated by perceived behavioral control.

H2.4: The awareness of CSI has an indirect effect on PI, as mediated by brand loyalty and perceived relative advantage.

H2.5: The awareness of CSI has an indirect effect on the PI, as mediated by attitude, perceived quality, and perceived compatibility.

Hypothesis 3: The innovation adoption factors of CSI practicing brand and attitude have a direct influence on the brand equity of CSI practicing brand amongst Thai consumers.

H3.1: The perceived relative advantage has a direct influence on brand loyalty.

H3.2: The perceived relative advantage has a direct influence on the perceived quality.

H3.3: The perceived relative advantage has a direct influence on the perceived compatibility.

H3.4: The perceived compatibility has a direct influence on the perceived quality.

H3.5: The attitude has a direct influence on brand loyalty.

Hypothesis 4: The brand equity of CSI practicing brand has a direct influence on attitude and purchase intention of CSI practicing brand amongst Thai consumers.

H4.1: The perceived quality has a direct influence on attitude.

H4.2: Brand loyalty has a direct influence on the PI.

Hypothesis 5: The subjective norms and perceived behavioral control of CSI practicing brand have a direct effect on attitude toward CSI practicing brand amongst Thai consumers.

H5.1: The subjective norm has a direct influence on attitude.

H5.2: Perceived behavioral control has a direct influence on attitude.

Hypothesis 6: The predictors of behavioral intentions of CSI practicing brand have a direct influence on the PI of CSI practicing brand amongst Thai consumers.

H6.1: The subjective norm has a direct influence on the PI.

H6.2: The perceived behavioral control has a direct influence on the PI.

H6.3: The attitude has a direct influence on the PI.

Methodology

This study proceeded with the quantitative approach, using a survey for data gathering. The study aimed to examine the relationship among variables and develop explanatory inference, and the data were analyzed through a statistical method of Partial Least Squares-Structural Equation Modeling (PLS-SEM).

Participants

This study focused on Bangkok residents aged 25 to 40 years old. The SEM sample-size calculation was set at the anticipated effect size of 0.20 (small to medium), the desired statistical power of 0.95, nine numerator latent variables, 35 observed variables, and probability level at 0.050 (Hair, Hult, Ringle, & Sarstedt, 2016). The results of the calculation suggested 460 samples. Comparing with the G*Power software, the recommended sample size was 402 samples, setting the effect size f-square at 0.10 (small to medium), the statistical beta power level at 0.95, alpha error probability at 0.05, and the total number of predictors at 35. To prevent any error or incompletion from data gathering, the researcher decided to collect data from a total of 480 samples for this CSI study.

Procedure

The probability sampling framework using a systematic random sampling method was selected for this study with two different processes based on two data collection approaches. The face-to-face data collection was conducted through a randomized street intercept on random date and time. The online data collection was randomly implemented through randomized sampling from lists of online connections. The informed consent was first obtained along with the explanation regarding the purpose of the study, confidentiality policy, and guidelines.

Research instruments

The questionnaire of this study covered two sections. The personal information section contained questions regarding the respondent's demographic profile and the openness to innovation to avoid the innovation rejector (Rogers, 2003). The constructs section encompassed nine variables. The awareness of CSI (independent variable) was measured based on 11-point Likert-type scales (Zero is not at all

aware, and 11 is fully aware) (Wu & Leung, 2017). Applying indicators from Yoo, Donthu, and Lee (2000), the selected indicators were reliable (α > 0.70) and acceptable (AVE = 0.72), exceeding the acceptable level of 0.50 (Fornell & Larcker, 1981).

Perceived relative advantage connoted the degree in which innovation is perceived as better than the idea that it replaces, the indicators of (1) more fun, (2) more interesting, (3) easier to use, (4) can provide better knowledge, and (5) provide a real advantage over other solutions were accepted (AVE = 0.91, α > 0.70) from Atkinson (2007), while perceived compatibility's indicators (fit with behavior, fit with lifestyle, more relevant to individual need, and fit with individual-related activity) were consolidated from Amaro and Duarte (2015) (AVE = 0.86, composite reliability = 0.93, α > 0.70) and Atkinson (2007) (factor loading = 0.50 to 0.75, α > 0.70).

Perceived quality encapsulated the overall quality, degree of superiority, durability, and high functionality relative to its intended purpose. The perceived quality's indicators were accepted (composite reliability = 0.84, α > 0.70) from the study of Yoo and Donthu (2001). The brand loyalty emphasized the brand is the first choice, consider loyal to the brand, and the likelihood of an individual to always select one brand over other replacement brands. The indicators of brand loyalty were accepted with strong reliability (α > 0.83) from Yoo and Donthu (2001).

Subjective norm represented a perception of an individual on a particular behavior that is influenced by the judgment of significant others, which can be indicated by the opinion of significant others, the influence from significant others, the influential behavior from significant others, and expectation from significant others. Perceived behavioral control characterized the perception of an individual regarding ease or difficulty of performing the particular behavior, which included a controllable level of self-decision making, confidence to control, positivity toward future control, and confidence of self-capability (Ajzen, 2002). Indicators of both subjective norm and perceived behavioral control were adopted from Lada, Harvey Tanakinjal, and Amin (2009) with the acceptable reliability (α > 0.84) and construct validity values of 0.619 to 0.784, higher than the acceptable values of 0.50 (Igbaria, Iivari, & Maragahh, 1995). Attitude, an individual accessible belief about the behavior, consists of six indicators (good idea, pleasant idea, beneficial, enjoyability, appealing, value), adopted from Amaro and Duarte (2015) with strong composite reliability at 0.94 and α > 0.70.

Lastly, the purchase intention signified the willingness of an individual to purchase a particular brand or product in the areas of intention to consider, consider purchasing, intent to purchase, trial, and actual purchase. These five indicators were accepted (convergent validity = 0.67 to 0.91, α = 0.757 to 0.949) from the study of Yüksel (2016)'s.

All items of each indicator to key variables, except the awareness, were measured using a 5-point Likert scale (5 = strongly agree, 1 = strongly disagree). Only the sections of current brand usage, CSI awareness, and understanding of CSI concept applied bi-polar Yes-No questions to gain a certain degree of consensus from participants.

Pilot study

A pilot study was conducted in July 2019 with 50 respondents within the criterion of sampling framework. A total of 48 indicators were included to measures the nine variables. The results of Exploratory Factor Analysis (EFA) of all 48 questions had strong construct validity and reliability (loading > 0.50, eigenvalues > 1, α > 0.70) (Costello & Osborne, 2005). To ensure that each question contributes to the study, corrected item-total correlation analysis was applied, and 14 questions with the value lower than 0.20 were removed.

Data collection and analysis

The data collection was conducted from August 1 to September 15, 2019. A total of 1,187 samples were recruited based on the systematic random sampling approach. Only 480 samples who completed the questionnaires and met all the criteria were included for the statistical analysis.

Partial Least Square-Structural Equation Model (PLS-SEM) was applied as the statistical analysis method. PLS-SEM has been increasingly significant in terms of academic usage (Hair, Hult, Rigle, Sarstedt, & Thiele, 2017b). The PLS approach of SEM was suitable for this study because (1) PLS-SEM tests theoretical framework from a prediction perspective, (2) when the structural model is complex and includes many constructs, indicators, and model relationships, (3) to gain a better understanding via exploring theoretical extension or combinations of established theories (Hair, Risher, Sarstedt, & Ringle, 2019). PLS-SEM analyzes the outer model and the structural model or inner model (Chin, 2010). The outer model encompassed (1) convergent validity (outer loading, indicator reliability, and average variance extracted [AVE]), (2) internal consistency reliability (composite reliability and Cronbach's alpha), and (3) discriminant validity (heterotrait-monotrait ratio of correlations [HTMT]). The inner model examined (1) coefficient of determination (Adjusted R^2), (2) predictive relevance (Q^2), (3) size and significance of path coefficients, and (4) effect size (f^2) of the influence of the exogenous variable on the endogenous variable (Hair, Hult, Ringle, & Sarstedt, 2017a). On top of the inner model analysis, a significant level of < 0.050 or 0.95 reliability was analyzed to reject or accept the null hypothesis accurately.

The mediating effect within inner models was then analyzed through (1) indirect effect, (2) the strength of the indirect effect, (3) a significant indirect effect calculated through bootstrapping analysis, and (4) the significance of the direct effect (Carrión, Nitzl, & Roldán, 2017). To ensure the accuracy of the mediating effect, the variance accounted for (VAF) was calculated (Hair et al., 2017a). The PLS-SEM analyses were calculated through SmartPLS-3, which is the statistical analysis program that can analyze the complexity of PLS-SEM and provide all necessary metrics of PLS-SEM (Ringle, Wende, & Becker, 2015).

Research results

Outer model analysis

The results of validity and reliability are at a satisfactory level. All 35 indicators and variables were proven to pass the convergent validity criteria (outer loading > 0.708, indicator reliability > 0.50, AVE > 0.50) (Hair et al., 2017a; 2019). Internal consistency reliability results demonstrated that all indicators that proposed to measure the same construct produce similar results (composite reliability 0.60 to 0.95, α > 0.70), and achieved acceptable discriminant validity (HTMT < 0.85) (Hair, Ringle, & Sarstedt, 2011; Henseler, Ringle, & Sarstedt, 2015; Nunnally & Bernstein, 1994). All indicators also achieved a satisfactory level of the indicator weight (> 0), level of significance (p > 0.001), and standard deviation (0.006 to 0.016) (Hair, Sarstedt, Pieper, & Ringle, 2012).

Inner model analysis

The results of the Adjusted R^2 and Q^2 were accepted. The Adjusted R^2 results shown in Table 1 identified that all the variables could be explained (R^2 > 0.10) by the independent variables (Falk & Miller, 1992). CSI structural model can explain PI at 61.20% (Adjusted R^2 = 0.612). The Q^2 results shown in Table 1 confirmed that all variables had predictive power (Q^2 > 0.020) for this construct, where purchase intentions (Q^2 = 0.431) and attitude (Q^2 = 0.386) had strong predictive relevance (Q^2 > 0.350) (Hair et al., 2017a).

Table 1 The results of the coefficient of determination (Adjusted R^2) and predictive relevance (Q^2)

Variables	Adjusted R^2	Q^2
Awareness of CSI (Independent Variable)		
Perceived relative advantage	0.296	0.247
Perceived compatibility	0.369	0.291
Brand loyalty	0.352	0.270
Perceived quality	0.384	0.303
Subjective norm	0.313	0.204
Attitude	0.531	0.386
Perceived behavioral control	0.206	0.167
Purchase intention	0.612	0.431

a. Adjusted R^2 0.100, 0.250, 0.500, and 0.750 represent acceptable, weak, moderate, and strong models.
b. Q^2 values of 0.020, 0.150, and 0.350 signify a weak, moderate, and strong model.

The PLS-SEM results shown in Table 2 verified that the awareness of CSI directly influenced innovation adoption factors (perceived relative advantage [Path Coefficient = 0.546***, p < 0.001, Adjusted R^2 = 0.296, f^2 = 0.424], perceived compatibility [Path Coefficient = 0.273***, p < 0.001, Adjusted R^2 = 0.369, f^2 = 0.083]), and predictor of behavioral intent (subjective norm [Path Coefficient = 0.561***, p < 0.001, f^2 = 0.458, Adjusted R^2 = 0.313], attitude [Path Coefficient = 0.168***, p < 0.001, Adjusted R^2 = 0.531, f^2 = 0.038], and perceived behavioral control [Path Coefficient = 0.456***, p < 0.001, Adjusted R^2 = 0.206, f^2 = 0.262]). However, the awareness of CSI falls short in influencing PI (Path Coefficient = 0.084*, p < 0.050, Adjusted R^2 = 0.612, f^2 = 0.011) due to the lack of substantive impact (f^2 < 0.020) (Cohen, 1988). Therefore, only H1.1, H1.2, H1.3, H1.4 and H1.5 were supported, whereas H1.6 were not supported.

In terms of mediating impact, the PLS-SEM results shown in Table 2 confirmed that the influential power from awareness of CSI was partially mediated by the predictor of behavioral intention (subjective norm [Specific indirect effect = 0.088**, p < 0.010, VAF = 0.512], attitude [Specific indirect effect = 0.040**, p > 0.010, VAF = 0.323], and perceived behavioral control [Specific indirect effect = 0.149***, p < 0.001, VAF = 0.639]). Regarding the paths combining innovation adoption factors and brand equity, brand loyalty and perceived relative advantage had mediating effect from CSI on PI (Specific indirect effect = 0.032**, p < 0.010, VAF = 0.276), while the attitude, perceived quality and perceived compatibility path fell short (Specific indirect effect = 0.005**, p < 0.010, VAF = 0.056) in explaining PI (VAF < 0.20) (Hair et al., 2017a). As a result, H2.1, H2.2, H2.3, and H2.4 were supported, while H2.5 was not supported.

The innovation adoption factors and attitude were found to directly affect brand equity. The perceived relative advantage directly influenced brand loyalty (Path Coefficient = 0.328***, p < 0.001, Adjusted R^2 = 0.352, f^2 = 0.123), perceived quality (Path Coefficient = 0.370***, p < 0.001, Adjusted R^2 = 0.384, f^2 = 0.152), and perceived compatibility (Path Coefficient = 0.416***, p < 0.001, Adjusted R^2 = 0.369, f^2 = 0.193). The perceived compatibility directly influenced the perceived quality (Path Coefficient = 0.333***, p < 0.001, Adjusted R^2 = 0.384, f^2 = 0.123), and the attitude towards

CSI directly influenced brand loyalty (Path Coefficient = 0.356***, $p < 0.001$, Adjusted $R^2 = 0.352$, $f^2 = 0.145$). Consequently, H3.1, H3.2, H3.3, H3.4, and H 3.5 were supported.

The brand equity influenced attitude directly as the perceived quality influenced attitude towards CSI (Path Coefficient = 0.232***, $p < 0.001$, Adjusted $R^2 = 0.531$, $f^2 = 0.057$). The brand loyalty also directly influenced PI (Path Coefficient = 0.177***, $p < 0.001$, Adjusted $R^2 = 0.612$, $f^2 = 0.044$). H4.1 and H4.2 were therefore statistically supported. H5.1 and H5.2 were also supported as the attitude was directly affected by the subjective norm (Path Coefficient = 0.231***, $p < 0.001$, Adjusted $R^2 = 0.531$, $f^2 = 0.054$) and the perceived behavioral control (Path Coefficient = 0.269***, $p < 0.001$, Adjusted $R^2 = 0.531$, $f^2 = 0.100$).

All the predictors of behavioral intention significantly influenced PI (subjective norm (Path Coefficient = 0.157***, $p < 0.001$, Adjusted $R^2 = 0.612$, $f^2 = 0.026$), perceived behavioral control (Path Coefficient = 0.326***, $p < 0.001$, Adjusted $R^2 = 0.612$, $f^2 = 0.165$), and attitude (Path Coefficient = 0.236***, $p < 0.001$, Adjusted $R^2 = 0.612$, $f^2 = 0.069$). Therefore, H6.1, H6.2, and H6.3 were supported.

Table 2 The summary results of hypotheses testing

HP		Paths	Path Coefficients	f^2	Spc. Indir. effect	VAF	Results
H1	H1.1	PAW→ RA	0.546***	0.424			Supported
	H1.2	PAW→ CP	0.273***	0.083			Supported
	H1.3	PAW→ SN	0.561***	0.458			Supported
	H1.4	PAW→ AT	0.168***	0.038			Supported
	H1.5	PAW→ BC	0.456***	0.262			Supported
	H1.6	PAW→ PI	0.084*	0.011			Null
H2	H2.1	PAW→ SN→ PI			0.088**	0.512	Supported
	H2.2	PAW→ AT→ PI			0.040**	0.323	Supported
	H2.3	PAW→ BC→ PI			0.149***	0.639	Supported
	H2.4	PAW→ RA→ L→ PI			0.032**	0.276	Supported
	H2.5	PAW→ CP→ Q→ AT→ PI			0.005**	0.056	Null
H3	H3.1	RA→ L	0.328***	0.123			Supported
	H3.2	RA→ Q	0.370***	0.152			Supported
	H3.3	RA→ CP	0.416***	0.193			Supported
	H3.4	CP→ Q	0.333***	0.123			Supported
	H3.5	AT→ L	0.356***	0.145			Supported
H4	H4.1	Q→ AT	0.232***	0.057			Supported
	H4.2	L→ PI	0.177***	0.044			Supported

Table 2 The summary results of hypotheses testing (continued)

HP		Paths	Path Coefficients	f^2	Spc. Indir. effect	VAF	Results
H5	H5.1	SN→ AT	0.231***	0.054			Supported
	H5.2	BC→ AT	0.269***	0.100			Supported
H6	H6.1	SN→ PI	0.157***	0.026			Supported
	H6.2	BC→ PI	0.326***	0.165			Supported
	H6.3	AT→ PI	0.236***	0.069			Supported

a. * $p < 0.050$, ** $p < 0.010$, ***$p < 0.001$

b. Accepted effect size $f^2 > 0.02$

c. Accepted VAF > 0.20

d. Spc. Indir. Effect = Specific Indirect Effect

Conclusion and discussion

The results of this pioneering study have proven that the awareness of CSI practicing brand has an influential impact on PI and has a direct impact on crucial factors that have a strong tendency to be a predictor of PI as well. With such positive results, five identified novel notions bring S.M.I.L.E. to the discussion, which are (1) superiority, (2) mediation, (3) influence, (4) linkage, and (5) evolutionary.

The superiority of CSI was perceived by Thai consumers compared to the current practice and also seen as compatible with the current needs, demonstrating the adoption potential as the CSI influences the perceived relative advantage of the CSI brand (Roger, 1995; Vaccaro, 2008). The results reconfirmed the notion of DOI from the previous study conducted by Ax and Greve (2017).

The mediation power of CSI was realized instead of a full direct impact, contradicting to empirical literature that had proven the direct relationship between CSR (the previous concept of CSI) and PI (Bianchi, Bruno, & Sarabia-Sanchez, 2019). However, the merit of this mediating impact remains, especially on the subjective norm, which specified that the CSI has influential power on others' views towards an individual to purchase the CSI practicing brand since Thais value collectivism is at the highest level (Hofstede Insights, 2020).

The influential power from the awareness of CSI impacted all factors that lead to PI, including indicators of innovation adoption and predictors of behavioral intention, even though the CSI is an innovative paradigm. The results coincided with various studies (Johe & Bhullar, 2016; Mi, Chang, Lin, & Chang, 2018;). The CSI is a powerful factor for Thai consumers regarding the PI since this structural model can predict the PI related to CSI at 61.20%.

The linkage between theories and models through the triangulated approach of DOI, Brand Equity, and TPB were identified, which confirmed and extended from existing studies (Amaro & Duarte, 2015; Wang et al., 2016). These interlinked factors can be the framework to enhance the power of CSI, and at the same time, influence the PI of the CSI practicing brand. These interlinked factors can potentially be the framework to enhance the power of CSI, and at the same time, influence the purchase intention of the CSI practicing brand. It is noteworthy that these mediating factors can facilitate the adoption of the pioneering concept of CSI amongst Thai consumers.

It is vital to note that the practice of CSI in Thailand can create an influential impact on the purchase intention towards the CSI practicing brand amongst Thai consumers. Simultaneously, during the adoption process, the CSI can influence innovation adoption factors from the DOI, brand equity, as well as predictors of behavioral intent from the TPB amongst Thai consumers.

The evolution concept of CSI transcends the new era of win-win solutions for both business and society, as the PI of Thai consumers towards the CSI practicing brand can be predicted. The results of this pioneering study in Thailand can be the beginning of the evolutions in business practice, theories integration, and a potential model for the adoption of social innovation. Even though Thailand is one of the leading countries in the adoption of technology and digital lifestyle, but at the same time, Thais live in a collectivist culture. (Hofstede Insights, 2020; We Are Social, 2020). This CSI study demystified the crucial factors influencing the adoption process and factors facilitating the behavioral intent within the complexity of Thais.

Implication and recommendation

This CSI study identified the predictability of PI at 61.20%, skewing towards strong predictability. The CSI conceptual model of this study can be an initial foundation for CSI practicing, especially when the conceptual framework has been holistically verified. The significant results of this study paved the way for many interested academia and practitioners to have a framework to create mutual betterment for Thailand, for the region, and the world at large.

To take a full benefit from the significance of this study, the recommendations for future applications are identified into four dimensions. First, likeminded academia may use this study as a reference point to further appreciate the impacts of CSI toward the business result through the triangulated framework of DOI, brand equity, and TPB, especially on different demographic in different parts of the world, to verify the full potential of CSI at a global level. Secondly, the practitioners may have an informed decision to incorporate the practice of CSI into their business strategy and communication framework to drive win-win business results. By incorporating CSI into business practice, there is a good potential that Thai consumers may appreciate the CSI practicing brands over non-practicing ones. Thirdly, the policymakers could utilize this study to create a win-win policy for business and society to legitimize the positive impact of business operation without compromising business results. Lastly, the society could use its power to influence the adoption of CSI to create a genuinely good-will brand since the positive demand of society influences the purchasing decision of Thai consumers.

The future research could consider (1) minimize the consumer's understanding gap by referencing tangible cases as research stimuli, (2) identifying the level of respondent's openness to the innovation to be able to compare consumer's segments, (3) incorporate the DOI adoption process into the conceptual model in order to reduce the barrier of understanding, (4) explore the power of subjective norm on the society to understand the influential social power, and (5) to have the CSI study in different geographic parts of the nation and the world, so the global corporates can make an informed decision to adopt the CSI paradigm into their global business practices, shifting from goods to good, which will potentially create a positive impact to all.

References

Aaker, D. (1992). The value of brand equity. *Journal of Business Strategy, 13*(4), 27-32.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl, & J. Beckmann (Eds.), *Action Control* (pp.11-39). Berlin, Heidelberg: Springer. doi:10.1007/978-3-642-69746-3_2

Ajzen, I. (2002). Constructing a TPB questionnaire: Conceptual and methodological considerations. Retrieved September 15, 2018, from https://pdfs.semanticscholar.org/0574/b20bd58130dd5a961f1a2db10fd1fcbae95d.pdf

Alam, S. S., & Sayuti, N. M. (2011). Applying the Theory of Planned Behavior (TPB) in halal food purchasing. *International Journal of Commerce and Management, 21*(1), 8-20.

Al-Jabri, I. M., & Sohail, M. S. (2012). Mobile banking adoption: Application of diffusion of innovation theory. *Journal of Electronic Commerce Research, 13*(4), 379-391.

Amaro, S., & Duarte, P. (2015). An integrative model of consumers' intentions to purchase travel online. *Tourism Management, 46,* 64-79.

Asatryan, R., & Asamoah, E. (2014). Perceived corporate social responsibility (CSR) activities and the antecedents of customer loyalty in the airline industry. *Scientific Papers of the University of Pardubice. Series D, Faculty of Economics & Administration, 21*(32), 5-17.

Atilgan, E., Aksoy, S., & Akinci, S. (2005). Determinants of the brand equity: A verification approach in the beverage industry in Turkey. *Marketing Intelligence & Planning, 23*(3), 237-248. doi: 10.1108/02634500510597283.

Atkinson, N. L. (2007). Developing a questionnaire to measure perceived attributes of eHealth innovations. *American Journal of Health Behavior, 31*(6), 612-621.

Ax, C., & Greve, J. (2017). Adoption of management accounting innovations: Organizational culture compatibility and perceived outcomes. *Management Accounting Research, 34,* 59-74.

Bianchi, E., Bruno, J. M., & Sarabia-Sanchez, F. J. (2019). The impact of perceived CSR on corporate reputation and purchase intention. *European Journal of Management and Business Economics, 28*(3), 206-221.

Brown, K. (2018, January 4). 7 Global issues to watch in 2018. Retrieved September 6, 2018, from http://unfoundationblog.org/7-global-issues-watch-2018/

Carrión, G. C., Nitzl, C., & Roldán, J. L. (2017). Mediation analyses in partial least squares structural equation modeling: Guidelines and empirical examples. In *Partial Least Squares Path Modeling* (pp. 173-195). Cham: Springer.

Chi, H. K., Yeh, H. R., & Yang, Y. T. (2009). The impact of brand awareness on consumer purchase intention: The mediating effect of perceived quality and brand loyalty. *Journal of International Management Studies, 4*(1), 135-144.

Chin, W. W. (2010). How to write up and report PLS analyses. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields* (pp. 655-690). Berlin: Springer.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* Abingdon. England: Routledge.

Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation, 10*(7), 1-9.

Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling.* Akron, OH: University of Akron Press.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Googins, B., & Mirvis, P. (2017, October 10). Innovating for a better world: The rise of Corporate Social Innovation. Retrieved October 1, 2018, from https://www.conference-board.org/blog/postdetail.cfm?post=6497

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM).* LA: Sage publications.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017a). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.), Thousand Oaks, CA: Sage Publications.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017b). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science, 45*(5), 616-632.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed A Silver Bullet. *Journal of Marketing Theory and Practice, 19*(2), 139-150.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2-24.

Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). Applications of partial least squares path modeling in management journals: A review of past practices and recommendations for future applications. *Long Range Planning, 45*(5-6), 320-340.

Han, H., Hsu, L. T. J., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management, 31*(3), 325-334.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115-135.

Herrera, M. E. B. (2015). Creating competitive advantage by institutionalizing corporate social innovation. *Journal of Business Research, 68*(7), 1468-1474.

Hofstede Insights. (2020). Country comparison: Thailand. Retrieved June 20, 2020, from https://www.hofstede-insights.com/country-comparison/thailand/

Igbaria, M., Iivari, J., & Maragahh, H. (1995). Why do individuals use computer technology? A Finnish case study. *Information & Management, 29*(5), 227-238.

Iqbal, F., Qureshi, A., Shahid, N., & Khalid, B. (2013). *Impact of corporate social responsibility on brand equity* (Research project, University of Central Punjab).

Jamira, A., Oktavia, A., & Junaidi, J. (2016). *The effect of brand associations toward brand equity and brand loyalty as intervening variable of Honda motorcycle in Jambi city.* Paper presented at Malaysia Indonesia International Conference on Economics, Management and Accounting (MIICEMA), Jambi, Indonesia.

Johe, M. H., & Bhullar, N. (2016). To buy or not to buy: The roles of self-identity, attitudes, perceived behavioral control and norms in organic consumerism. *Ecological Economics, 128,* 99-105.

Karnani, A. (2010). The case against corporate social responsibility. *Wall Street Journal, 23*(14), 1-5.

Kumar, T. P. (2019). Impact of corporate social responsibility on service performance in mediating effect of brand equity with reference to banks in India. In *Corporate Social Responsibility: Concepts, Methodologies, Tools, and Applications* (pp. 1421-1432). Hershey, PA: IGI Global.

Lada, S., Harvey Tanakinjal, G., & Amin, H. (2009). Predicting intention to choose halal products using theory of reasoned action. *International Journal of Islamic and Middle Eastern Finance and Management, 2*(1), 66-76.

MacVaugh, J., & Schiavone, F. (2010). Limits to the diffusion of innovation: A literature review and integrative model. *European Journal of Innovation Management, 13*(2), 197-221.

Marquina, P. (2010). The influence of corporate social responsibility on Peruvian's consumers purchasing behavior. *Journal of Leadership, Accountability and Ethics, 8*(2), 70-79.

Md Nor, K., Pearson, J. M., & Ahmad, A. (2010). Adoption of internet banking theory of the diffusion of innovation. *International Journal of Management Studies (IJMS), 17*(1), 69-85.

Mi, C., Chang, F., Lin, C., & Chang, Y. (2018). The theory of reasoned action to CSR behavioral intentions: The role of CSR expected benefit, CSR expected effort and stakeholders. *Sustainability, 10*(12), 4462.

NASA. (n.d.). Climate change: How do we know?. Retrieved September 5, 2018, from https://climate.nasa.gov/evidence/

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.

Pino, G., Amatulli, C., De Angelis, M., & Peluso, A. M. (2016). The influence of corporate social responsibility on consumers' attitudes and intentions toward genetically modified foods: Evidence from Italy. *Journal of Cleaner Production, 112*(4), 2861-2869.

Ringle, C. M., Wende, S., & Becker, J. M. (2015). *SmartPLS 3.* Bönningstedt: SmartPLS.

Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York, NY: Free Press.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., & Fuller, G. (2019). Sustainable development report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN). Retrieved December 11, 2019, from https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf

Singh, K. S., & Islam, M. A. (2017). Validating an instrument for measuring brand equity of CSR driven organizations in Malaysia. *Management & Marketing Challenges for the Knowledge Society, 12*(2), 237-251. https://doi.org/10.1515/mmcks-2017-0015

United Nations. (2015). The sustainable development goals. Retrieved December 11, 2019, from https://www.un.org/sustainabledevelopment/development-agenda/

Vaccaro, V. L. (2008). Cause marketing partnerships, diffusion of breast cancer awareness & the Komen case. In S. Jones (Ed.), *Partnerships, Proof and Practice - International Nonprofit and Social Marketing Conference 2008-proceedings,* 9. NSW: University of Wollongong.

Wang, S., Fan, J., Zhao, D., Yang, S., & Fu, Y. (2016). Predicting consumers' intention to adopt hybrid electric vehicles: Using an extended version of the theory of planned behavior model. *Transportation, 43*(1), 123-143.

We Are Social. (2020). Digital 2020: Global digital overview. Retrieved June 20, 2020, from https://wearesocial.com/digital-2020

Wijaya, B. S. (2012). The development of hierarchy of effects model in advertising. *International Research Journal of Business Studies, 5*(1), 73-85.

Wu, H., & Leung, S. O. (2017). Can Likert scales be treated as interval scales?—A simulation study. *Journal of Social Service Research, 43*(4), 527-532.

Wyman, O. (2012). Rethinking financial innovation: Reducing negative outcomes while retaining the benefits. Retrieved September 5, 2018, from http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2012/apr/Rethinking_Financial_Innovation.pdf

Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research, 52*(1), 1-14.

Yoo, B., Donthu, N., & Lee, S. (2000). An examination of selected marketing mix elements and brand equity. *Journal of the Academy of Marketing Science, 28*(2), 195-211.

Yüksel, F. (2016). Factors affecting purchase intention in YouTube videos. *Journal of Knowledge Economy & Knowledge Management, 11*(2), 33-47.