Article

The Impact of Digital Social Responsibility on Preference and Purchase Intentions: The Implication for Open Innovation

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Abstract: The COVID-19 pandemic has dramatically changed people's life and the ways businesses implement their social responsibility initiatives. During the COVID-19 pandemic, online and digital platforms have been increasingly realized as important mechanisms for businesses undertaking and implementing socially responsible activities—digital social responsibility (DSR). The purpose of this study was to investigate the impact of DSR on brand preference and consumers' purchase intention comparing between high and low involvement product categories. The quantitative empirical research was conducted by using an online questionnaire instrument, and a Structural Equation Modelling (SEM) technique was used to test the proposed model. Based on 194 samples of Thai respondents collected in November to December 2020, the findings demonstrate that DSR initiatives are significantly and positively associated with brand preference and with consumers' purchase intention. The moderating result reveals that product involvement plays a significant role in strengthening the association between DSR initiatives and brand preference. The effect of DSR on brand preference is stronger for low product involvement respondents than for high product involvement respondents. The research highlights the significance of DSR and extends the current knowledge about DSR and its potential impact on customers' perception.

Keywords: digital social responsibility; brand preference; purchase intention; product involvement; Thailand

JEL Classification: M10; M14; M31; M37

1. Introduction

The concept of corporate social responsibility (CSR) has gained more interest over the past decades. CSR is considered as a strategic approach to overcome the negative impacts on the external environment. Many companies have strategically carried out CSR initiatives to enhance their image and boost sales revenues. CSR has been realized as one of the most vital strategic movement to enhance brand image, and it eventually leads to enhance consumers' purchase intentions [1].

A digital transformation and an advance of information technology empower businesses to implement their social responsibilities with lower cost and in more effective ways. In today's digital world, people can communicate with complete digital tools, such as social networks, e.g., Facebook and Instagram, and various other applications. This makes it possible for socially responsible actors via digital platforms to quickly help those in need, e.g., flood victims in Northeast Thailand. Phone service providers can say that for every USD 2 you spend, they will donate USD 0.10 to help victims. It can be said that CSR has become digital social responsibility (DSR), the expression of social responsibility through digital tools. During the COVID-19 pandemic, many firms have turned their traditional offline CSR into DSR because of social distancing and lockdown policies. The Journal Storage digital library (JSTOR), which generally needs a subscription, made its 150 journals

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and 6000 eBooks freely available to the public. Home Box Office (HBO) is offering 500 h of programming available to those without subscriptions. Amazon lets you stream Arthur and other childrens' shows for free. Furthermore, a "stay-at-home" collection that includes audiobooks, mysteries, and free read-along e-Books for kids is offered by Apple Books. Moreover, in order to support social distancing behavior, several brands promoted social distancing, such as McDonald's, Coca-Cola, Audi, and Volkswagen.

Few studies focus on the impact of DSR on consumers' perceptions and behavior. Consequently, this study examines the impact of DSR on brand preference and consumers' purchase intentions. Section 2 provides a literature review concerned with DSR, brand preference, purchase intention, and product involvement. In Section 3, a conceptual framework and hypothesis development are illustrated. The research methodology used for data collection is described in Section 4. In Section 5, data analysis and results are discussed. Section 6 provides a discussion and conclusion, and Section 7 addresses the study's limitations and directions for future research.

2. Literature Review

2.1. Digital Social Responsibility (DSR)

Social responsibility has been accepted as a valuable strategic movement for businesses. Previous studies have confirmed the benefits of social responsibility initiatives in businesses. Social responsibility can enhance firms' financial performance [2], brand image, and brand loyalty [3], job seekers' perceptions on firms [4], and customers' purchase intentions [5]. According to [6], CSR is "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis." In [7], CSR is defined as a firm's ethical, moral, and social obligations beyond economic and financial returns. Many scholars have realized and proposed CSR as multi-dimensional. One of the most widespread multi-dimensional models of CSR is Carroll's model. Carroll's four-part definition of CSR was originally stated as follows: "corporate social responsibility encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time." Economic responsibility entails that businesses should be committed to earn as much of a profit as possible, and it is essential to maintain a high level of operating efficiency and a good competitive position. Economic responsibility is considered as a fundamental element of CSR. Legal responsibility implies that businesses should be law-abiding and comply with different local, state, and federal regulations, and it is important to provide goods and services to fulfill legal obligations. Ethical responsibility entails that businesses need to do what is expected ethically or morally and acknowledge and respect evolving new ethical norms, and it is important to recognize that corporate ethical behavior and integrity go beyond regulations and laws. Philanthropic responsibility is placed at the top of the pyramid. Businesses should be good corporate citizens by showing their goodwill to the society.

Digital transformation has dramatically changed the way businesses implement social responsibility initiatives. An advance in digital technologies and social networking allows businesses to establish virtual brand communities [8] for user-to-user support and knowledge sharing. For example, Facebook group members are willing to share their experiences and knowledge about products or services, whose firms can exploit knowledge of brand communities' members and their engagement in product-related discussions as a source of innovation for companies [9]. Social media platforms, such as Facebook, are important for businesses to engage customers and stakeholders into social responsibility campaigns, such as online donations, providing free online services, and so on. Any social responsibility endeavors on digital platforms can be conceived as digital social responsibility (DSR). There has been a paradigm shift from a brick and mortar to a brick and click business model. Traditional CSR activities must become digital. The COVID-19 pandemic is one of the most severe, unexpected factors catalyzing and forcing businesses into digital transformation. Social media has become an effective way for people to ask for assistance, for

example, medical staff in rural area hospitals asking for personal protective equipment (PPE). In addition, several businesses and influencers have used social media as a channel to implement social responsibility initiatives.

2.2. Brand Preference and Purchase Intention

Brand preference is an important goal for businesses and can even create a competitive advantage against competitors of other industries. In [10], it is stated that brand preference has long been recognized as virtually identical to purchase intention, and preference for brands was a good predictor of purchase. The consumer's preference for a brand is a function of his/her cognitive beliefs about the brand's weighted attributes. According to [11], cited in [5], consumers' perception of brand attributes refers to preferences or attitudes, affecting intentions or consumers' brand choice. This means that brand preference reflects information processing, which affects consumers' choices. Brand preference reflects a desire to use a specific company's products or services. Previous studies have confirmed positive relationships among CSR, brand attitude, and brand preference [10,12,13] and among CSR, purchase intention, and word of mouth [14–16].

Consumers' purchase intention is a desirable outcome of businesses. A propensity to purchase can lead to an actual purchase. Purchase intention refers to "consumers' willingness to buy a given product at a specific time or in a specific situation" [17]. Numerous prior studies have shown empirical evidence of a relationship between firms' CSR and consumer's purchase intention [14,15]. In [18], it is shown that the evaluation of products, companies, and purchase intentions depends on the amount and nature of the CSR information that is shared. In [19], a positive relationship between perceived CSR and purchase intention was found.
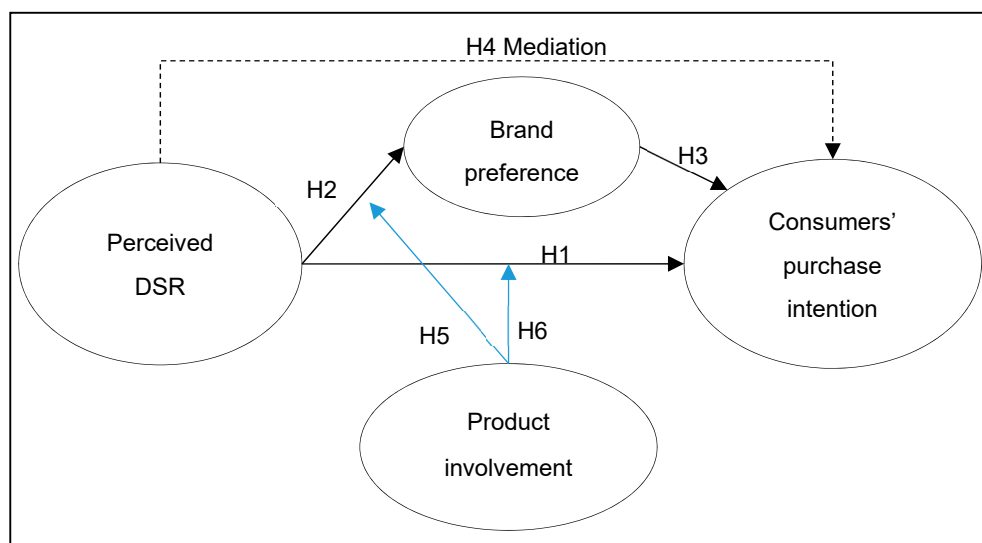
2.3. Product Involvement

The concept of product involvement originates from the discipline of psychology. Product involvement has been widely utilized as an explanatory variable in consumer behavior, and the level of involvement identifies the depth, complexity, and comprehensiveness of cognitive and behavioral processes during a buying decision [20]. In [21], product involvement is defined as "a consumer's enduring perceptions of the importance of the product category based on the consumer's inherent needs, values, and interests". In [20], it is stated that product involvement is a consumer's perception of the importance of a product based on their inherent interests, values, and needs. Product involvement is regularly employed as an illustrative medium with customers segmented into high or low involvement groups [22]. High involvement decisions are products that are imperative to consumers. A high-involvement product is a product where an extensive thought process is involved and the consumer considers many variables before finally making a purchase decision. Purchasing a high-involvement product is frequently related to a customer's ego and self-image and involves some risk, be it financial, social, or psychological. A low-involvement product is a product that is not very important to the customer. A low-involvement product is generally low-priced and poses a low risk to customers if they make a mistake in purchasing them. Few studies focus on the impact of product involvement on CSR. The authors of [23] conducted empirical research on the effects of corporate ability and CSR associations on customer responses concerning corporate and product evaluations in China. They found that the CSR effect is stronger in a low-product involvement condition.

3. Conceptual Framework and Hypothesis Development

The research framework to examine the relation among consumers' purchase intention and brand preference through perceived DSR as the antecedent was developed based on a previous review of literature. In order to test the moderation effects of product involvement on the links among DSR, brand preference, and consumers' purchase intention, a product

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involvement construct is included in the proposed model. Figure 1 illustrates the proposed research framework and model.

Figure 1. The conceptual framework and measurement model of this study.

To test the relationship between DSR, BP, and PI with product involvement as a moderator, the following hypotheses were developed:

Hypothesis 1 (H1). *DSR has a positive, direct impact on brand preference.*

Hypothesis 2 (H2). *DSR has a positive, direct impact on consumers' purchase intention.*

Hypothesis 3 (H3). *Brand preference has a positive, direct impact on consumers' purchase intention.*

Hypothesis 4 (H4). *Brand preference mediates the effect of DSR on consumers' purchase intention.*

Hypothesis 5 (H5). *Product involvement moderates the positive effect of DSR on brand preference such that the effect is stronger for low product involvement respondents than for high product involvement respondents.*

Hypothesis 6 (H6). *Product involvement moderates the positive effect of DSR on consumers' purchase intention such that the effect is stronger for low product involvement respondents than for high product involvement respondents.*

4. Research Methodology

4.1. Research Design and Data Collection

A quantitative method with an online survey questionnaire was utilized for examining the suggested research hypotheses and testing the proposed model. Moreover, for analyzing and testing the data, AMOS 20.0 utilizing SEM (structural equation modeling) was used. The study was approved by the Bangkok University Human Ethics Committee before expert consultation regarding the development of the questionnaire. Furthermore, participants' anonymity was guaranteed at each step. The utilized method and suitable statistical tests that were used were explained comprehensively to social media users asked to fill out the online surveys. The data was collected with a purposive sampling technique. In [24], a sample size of 150 participants is suggested for a minimum level, but other researchers [25,26] have claimed that a minimum sample size of 200 is acceptable for SEM analysis—or at least 5 or 10 cases per parameter for uncomplicated SEM models. To assure the respondents' eligibility, a preliminary screening question was asked: Have you ever seen any firms' effort, initiatives, activities, or campaigns to respond or help people

cope with this situation via online platforms? The survey participants are respondents that answered "yes." Initially, during the questionnaire, a DSR definition and DSR examples were provided to participants. In detail, participants read the following: "DSR is any firms' social responsibility practices, initiatives, and activities via digital platforms that you have noticed or been involved with. Nowadays, several firms and brands implement online social responsibility practices in social media and other online platforms—what we define as DSR. Respondents were asked to answer the survey questions depending on their perceptions of DSR initiatives on online platforms such as Twitter and Facebook. Since this study contained 18 observables variables, the minimum sample size, as per [26], was $18 \times 10 = 180$. After collection and screening the data for analysis, 194 valid surveys were collected, which is beyond the minimum sample size criterion.

4.2. Questionnaire Development

The questionnaires were comprised of three sections: (1) an initial screening question, (2) typical information related to respondents' behavioral and demographic aspects, and (3) measurement items. A five-point Likert scale ranging from strongly agree (5) to strongly disagree (1) was used for the measurement items. In the proposed model, the independent variable, the perceived DSR, was calculated with five items, as per [27]. Brand preference was calculated with four items, as per [28]. Purchase intention was measured by four items, adapted from [29]. Product involvement was measured by five items, adapted from [30]. Constructs and measurement scales are represented in Table 1.

Table 1. Questionnaire constructs and variables.

Constructs	Items	Observed Variables
Perceived DSR	DSR1	Brand is committed to using a portion of its profits to help communities and societies via digital platforms.
	DSR2	During the COVID-19 pandemic, Brand gives back to the communities in which it does business via digital platforms.
	DSR3	The communities and societies benefit from Brand's contributions through digital platforms.
	DSR4	Brand integrates digital charitable contributions into its business activities.
	DSR5	Brand is interested in corporate donations through digital platforms.
Brand preference	BP1	I like this brand better than any other brand.
	BP2	I would consume this brand more than any other brand
	BP3	I would be inclined to buy products from this brand instead of those from other brands.
	BP4	This is my preferred brand overall.
Purchase intention	PI1	What is the likelihood that you would recommend this brand to someone close to you?
	PI2	Have you repeatedly consumed products offered by this brand?
	PI3	Would you recommend products offered by this brand to a friend and/or relative?
	PI4	Have you been buying products offered by this brand?
Product involvement	PV1	Regarding a DSR initiative you can recall, you choose this kind of product very carefully.
	PV2	Regarding a DSR initiative you can recall, you could talk about this kind of product for a long time.
	PV3	Regarding a DSR initiative you can recall, you feel like you have to consider as many alternatives as possible in order to make sure you get the best product.
	PV4	Regarding a DSR initiative you can recall, in making your selection of this kind of product, you are concerned about the outcome of your choice.
	PV5	Regarding a DSR initiative you can recall, the brands of goods you buy make a vast difference to you.

5. Results

5.1. Sample Profile

The data were collected with a self-completed online questionnaire format. Respondents tried recalling his/her latest experience with any firms' effort, initiatives, activities, or campaigns done to help society via digital platforms, such as community involvement, volunteer efforts, or charitable donations. After that, they were allowed to complete the questionnaire based on their perception related to those DSR initiatives.

For the data analysis, 194 valid questionnaires were received. Descriptive statistics utilizing SPSS was used to analyze the demographic characteristics. Table 2 shows that 52.82% of the participants were male, and 47.18% were female. The age of the respondents' majority group was 26–35 years (32.11%), and 49.6% had an undergraduate education.

Table 2. Descriptive statistics.

Item	Description	Sample	(%)
Gender	Female	92	47.18
	Male	102	52.82
Age	18–25	51	26.28
	26–35	62	32.11
	36–45	55	28.12
	46–55	19	9.67
	More than 55 years	7	3.82
Education	Below undergraduate	4	2.23
	Undergraduate	98	50.43
	Postgraduate	92	47.34

Note: N = 194.

5.2. Measurement Model

To test the relationships between constructs and their retained items, confirmatory factor analysis was used. The estimation includes a complete goodness of fit test, and separate tests for significance were performed to estimate the presumed relations among the variables. This model includes 18 observable variables and 4 latent variables. Table 3 summarizes our measurement model's items and constructs.

The value of Cronbach's α, which measures the model variables' reliability, is between 0.901 and 0.935, as per Table 3, for every construct and their respective subscales that have values greater than 0.7, which confirms the constructs' internal consistency. Furthermore, the constructs' discriminant and convergent validities were calculated. For evaluating the convergent validity, three indices were used: factor loading values should be more than 0.7, AVE (average variance extracted) values must be more than 0.5, and CR (composite reliability) values must be more than 0.7 [31].

Discriminant validity specifies the degree that helps in differentiating one construct from another. For the appropriate discriminant validity, the criteria being followed is that, for every construct, the AVE's square root result is greater than the association between that construct and another, which confirms every constructs' discriminant validity.

Overall, in the context of divergent and convergent validity, the construct validity's satisfactory level is indicated by testing results that imply that, for a structural model assessment, research constructs are suitably fit. For the revised measurement model, the goodness-of-fit indicators are as follows: Root Mean Square Error of Approximation (RMSEA) = 0.058; Comparative Fit Index (CFI) = 0.978; Trucker Lewis Index (TLI) = 0.973; Normal Fit Index (NFI) = 0.962; Goodness of Fit Index (GFI) = 0.947; df = 129; Chi-square = 327.248; Minimum discrepancy per degree of freedom (CMIN/df) = 2.279. This represents a good fit among the data and the model for further structural model analysis.

Table 3. Measurement model's summary items and constructs.

Constructs and Items	Loading	t-Value	SE	Alpha	Composite Reliability	AVE
Perceived DSR	-	-	-	0.927	0.943	0.770
DSR1	0.826	-	-	-	-	-
DSR2	0.935	24.171	0.046	-	-	-
DSR3	0.921	23.586	0.048	-	-	-
DSR4	0.889	22.217	0.048	-	-	-
DSR5	0.809	19.099	0.052	-	-	-
Brand preference	-	-	-	0.935	0.850	0.586
BP1	0.782	-	-	-	-	-
BP2	0.752	14.831	0.069	-	-	-
BP3	0.769	15.213	0.060	-	-	-
BP4	0.759	14.98	0.071	-	-	-
Purchase intention	-	-	-	0.901	0.883	0.656
PI1	0.710	-	-	-	-	-
PI2	0.884	16.306	0.073	-	-	-
PI3	0.905	16.594	0.075	-	-	-
PI4	0.722	13.449	0.076	-	-	-
Product Involvement	-	-	-	0.911	0.920	0.833
PV1	0.777	-	-	-	-	-
PV2	0.886	19.172	0.052	-	-	-
PV3	0.861	18.509	0.057	-	-	-
PV4	0.879	18.998	0.058	-	-	-
PV5	0.763	15.927	0.060	-	-	-

Note: SE = standard error.

5.3. Structural Model and Hypotehsis Testing

Underlying the proposed research model, the hypotheses' tests were used for evaluating the structural model. IBM Amos software (version 22) conducted a path analysis for investigating the causal model. This model's goodness-of-fit indicators are as follows: RMSEA = 0.052; CFI = 0.958; TLI = 0.947; NFI = 0.943; GFI = 0.916; df = 124; Chi-square = 313.705; CMIN/df = 2.530. These indicators meet cutoff values, suggesting a good model fit. Table 4 summarizes the hypothesis test results that indicate the variables' relationship significance.

Table 4. Hypotheses testing.

Hypothesis	Loading	t-Value	Result
H1: DSR has a positive, direct impact on brand preference.	0.571	10.025	Supported
H2: DSR has a positive, direct impact on consumers' purchase intention.	0.182	3.356	Supported
H3: Brand preference mediates the effect of DSR on consumers' purchase intention.	0.618	8.929	Supported

It was revealed by regression results that perceived DSR has a significant positive effect on brand preference (SE = 0.05; β = 0.57; $p < 0.001$; supporting H1) and consumers' purchase intention (SE = 0.05; β = 0.18; $p < 0.001$; supporting H2). The result of structural equation modelling also revealed that brand preference has a significant positive influence on consumers' purchase intention (SE = 0.07; β = 0.62; $p < 0.001$; supporting H3).

In order to test the perceived DSR's mediating effect towards consumers' purchase intention through brand preference, a bootstrapping technique method was used. The results of mediation analysis with bootstrapping show that perceived DSR has a direct effect on consumers' purchase intention (0.182; $p < 0.001$; 95% CI [0.067, 0.300]), and consumers' purchase intention through brand preference has a considerable indirect effect (0.353; $p < 0.001$; 95% CI [0.267, 0.454]), confirming partial mediation. The results of mediation analysis with bootstrapping are summarized in Table 5.

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Table 5. The mediation analysis results.

Hypothesis	Direct Effect	Indirect Effect	Result
H4: Brand preference mediates the effect of DSR on consumers' purchase intention.	0.182 (***)	0.353 (***)	Partial Mediation

Note: ***: $p < 0.001$.

In order to test Hypothesis 6 and 7, multi-group moderation tests were conducted to explore the variation effect of the antecedent variable (DSR) on the dependent variable (brand preference and consumer's purchase intention). Respondents were firstly classified into two groups (high- and low-involvement products) by calculating an average score of the product involvement construct from five questionnaire items. A median-split technique, which is a method for turning a continuous variable into a categorical one, was then employed [32]. Respondents who possessed a product involvement mean score lower than the median value (4.00) would be placed in the low product involvement group, and those with mean score higher than the median value were placed in the high product involvement group. In total, there were 111 and 83 samples in the low and high product involvement groups, respectively.

To test the categorical moderation hypotheses, we produced critical ratios for the differences in regression weights between groups of product involvements (high and low) using AMOS. In [33], a stats tools package for testing multi-group moderation effects that uses regress weights and critical ratios for differences parameters is provided. Product involvements were set as having "high" and "low" involvement, and the relevant models were assessed separately for these categorical groups and compared with their respective regression weights and critical ratios for group differences (see Table 6) using the stats tools package [29].

Table 6. Path wise moderation effect-group differences.

	Hypotheses			High Involvement		Low Involvement		
	Structural Path & Direction			Estimate	*p*	Estimate	*p*	z-Score
H5	BP	<—	DSR	0.318	0.000	0.579	0.000	2.271 **
H6	PI	<—	DSR	0.178	0.000	0.185	0.000	1.301

Notes: ** *p*-value < 0.05.

The results in Table 6 indicate that DSR significantly and positively affected brand preference (BP) in both the high (β = 0.318, $p < 0.01$) and low (β = 0.579, $p < 0.01$) product involvement groups. The effect of DSR on BP is stronger in the low involvement product group than in the high involvement product group. Therefore, H5 is supported. DSR has a significantly positive effect on consumers' purchase intention (PI) in both the high (β = 0.178, $p < 0.01$) and low (β = 0.185, $p < 0.01$) product involvement groups. However, as a result of moderating effect testing in Table 6, there is no statistically significant difference (Z score = 1.301) between high and low involvement product groups in the effect of DSR on PI. Therefore, H6 is not supported.

6. Discussion and Conclusions

Digital transformation has changed the way businesses undertake social responsibility. Social responsibility should become part and cornerstone of businesses' practices [34], and firms now employ digital platforms to implement their social responsibility initiatives. This DSR can be realized as an effective way for firms to implement social responsibility initiatives. Unlike offline CSR, DSR allows for customers to participate or collaborate with DSR activities originated by businesses. Various social media platforms such as Instagram, Twitter, and Facebook offer multidirectional communication at low cost and high speed and enable dialogue among firms' DSR programs, firms, and customers. Digital platforms and social media allow businesses to create more customer-centric social responsibility programs that are more noticeable and relevant to consumers [35]. The previous studies [36]

revealed that successes of businesses rely on the extent to which firms attempt to move towards open innovation and firms' sustainability can be enhanced through social open innovation implications [37]. By adopting DSR approaches which can be realized as one of modern social open innovation strategies [38–40] will enhance businesses' competitive advantages and achieve their sustainability. To the best of our knowledge, few studies provide empirical evidence on the impact of DSR on brand preference and consumer's purchase intention, especially during and after the COVID-19 pandemic. Our study's purpose is to provide a better understanding of the impact of DSR on customers' perception. The results show that DSR significant influences brand preference and consumer's purchase intention. The results of multi-group moderation tests reveal that the effect of DSR on brand preference is stronger in low involvement product groups than in high involvement product groups. This finding is in line with [23], showing that corporate ability and corporate social responsibility associations are stronger in a low product involvement condition. These findings have implications. Firstly, firms need to pay attention to the emergence of DSR as a strategy and formulate DSR plans that synchronize with the core values of business. Secondly, the effect of DSR on brand preference is stronger for low product involvement respondents than high product involvement respondents. Therefore, it is important for businesses to consider and identify the different moderation effects on the direct relationship between DSR and brand preference. Separate DSR programs in terms of messages or messengers, by considering customer's product involvement characteristics, may be essential to have a more precise impact on DSR's stakeholders.

7. Limitation and Further Research

No study has yet analyzed the impact of DSR on brand preference and purchase intention in Thailand. With this research, an endeavor has been made in stepping forward in the DSR field, and it is believed that this study is a stepping stone to future research. Nonetheless, this research contains some limitations. Initially, the outcomes of our study depend on a self-administered questionnaire and respondents' perceptions. The study's sample size is quite insignificant and was collected in Thailand, which restricts this research's findings' generalizability. It is recommended that larger sample sizes are considered in future studies to provide more meaningful results. Secondly, the cross-sectional method was used in this study. Consequently, the degree to which customers' attitude toward DSR changes over time could not be assessed. A longitudinal study is recommended to explore how customers change in their brand preference and purchase intention over time. Thirdly, this research did not consider a specific type of digital platform. Future studies can comparatively investigate the differences in DSR efficiency among a wide range of social platforms.

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