

Original Paper

Perspective of Triple Button Lines: Influence of Green Product Value

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Received: July 3, 2021

Accepted: July 7, 2021

Online Published: July 12, 2021

doi:10.22158/ibes.v3n3p15

URL: <http://dx.doi.org/10.22158/ibes.v3n3p15>

Abstract

The green product is a consumption model that combines environmental protection, preferential prices and social welfare. It not only allows customers to buy goods at reasonable prices, but also helps underprivileged groups and creates profits for the industry. It is beneficial to all aspects. Green products also equips with Knowledge-Based Trust (KBT), Institution-Based Trust (IBT), and Calculative-Based Trust (CBT); therefore, customers can utilize and purchase products with reliable, and build up a great brand image to gain a competitive advantage, thereby gaining consumers' willingness to repurchase products, increasing word-of-mouth and enhancing consumers' impression of the industry. The 435 participants of this study are consumers who have purchased green products to explore the impacts of Product Green Value (GPV) from consumers' points of view, examine how shaping of customer relationships demonstrates the green value, and analyzes the Green Product Value (GPV), trust (TRT), product satisfaction (PDS), word-of mouth (WOM) and repurchase willingness (RPW) via structural equation models (SEM). The results revealed that the more the awareness of product green value (GPV) for consumers, the more product satisfaction (PDS) and repurchase willingness (RPW) of green products as well as discuss and even recommend with others.

Keywords

green product value, product satisfaction, trust, word-of-mouth, repurchase willingness

1. Introduction

Nowadays, environmental protection issues have always been grabbed people's attention (Yang et al., 2021). Consumers have gradually enhanced their environmental awareness of green value and chosen the productions which have less impact on environment (Ogiemwonyi et al., 2020). Enterprise utilizes

co-friendly industrial products to enhance consumers' trust in purchasing willingness and satisfaction (Schill et al., 2019). Once the green products are valued by consumers, and people will buy green-related products (Khan & Mohsin, 2017). This study explores the consumers' habits and preferences for the green products sold by the company, and consumers who have experienced in buying green products fill in questionnaire as well as understand the impacts of green products value from the consumers' perspectives. Based on the above mentioned, the purpose of this research is to understand consumers' purchase green products and the attachment on green products in order to explore the impacts of Green Product Value (GPV) on consumers. The participants of this study focused on the consumers who have purchased green products. From the perspectives of the consumers, it is to explore as follows:

- (1) The impacts of Green Product Value (GPV) on trust (TRT) and product satisfaction (PDS).
- (2) The effects of product satisfaction (PDS) on trust (TRT), word-of-mouth (WOM) and repurchase willingness (RPW).
- (3) The effects of trust (TRT) on repurchase willingness (RPW).
- (4) The effects of word-of-mouth (WOM) on repurchase willingness (RPW).

2. Literature Review

2.1 Green Product Value (GPV)

From the "green Innovation and rolling market commercial opportunities" (Xie, Huo, & Zou, 2019), it can be seen that grasping the concept of sustainable management is beneficial for enterprises. Under the circumstance of economic recession period of time, enterprises have adopted sustainable management strategy in order to survive, which is called green strategy. Based on the green thoughts, global environmental regulations are formulated as well as increasing consumers' environmental awareness of green value; therefore, various environmental pressures have caused challenges for enterprises and must comply with international environmental standards. Facing with an increasing competitive market, if an enterprise can create its own green value, it will be essential for an enterprise to develop sustainability. The enterprise administration will continue to play driving force role, promote the growth niche with green innovation, and assist various enterprises to grasp the green sustainable commercial opportunities. The Global Reporting Initiative (GRI) is a non-profit international organization composed of multi-stakeholder groups which provides information related to enterprise sustainability for stakeholders as well as explains the relationship between enterprise financial and sustainability performance in a simple way. The report outline includes the economic, environmental, and social aspects of sustainable development, which can be used as one of the main selection tools for organizations to promote sustainable development (Global Reporting Initiative, 2013). The results also reflect the Dow Jones Sustainability Index's perspectives on economic, environmental, and social trends (Global Reporting Initiative, 2006, 2013).

2.2 Product Satisfaction (PDS)

Deutsch (1958) believed that the good customer satisfaction will increase the consumers' repurchasing rate. However, since he introduced the consumer satisfaction concept into the marketing fields, scholars still lack of an overall consensus on the consumer satisfaction definition. PDS was adopted by the definition of Cardozo (1965). Consumers are satisfied with products, which in turn will increase consumers' RPW and further affect their preference for other products. Therefore, PDS is a steady and continuous accumulation. The impacts of the green products value on consumers should not be underestimated.

2.3 Trust (TRT)

Nowadays, shopping channels are becoming more and more convenient. People can buy their favorite products via various channels. Along with consumers' environmental awareness of green value gradually increases, more and more enterprises will add the green messages to their products. Also, customers' TRT will affect the choice when buying goods. Consumers are willing to rely on products, brands or services which can be inferred that the goods can be trusted and the environment is indeed effectively. An individual's choice of TRT or distrust is mainly affected by situational factors, which is a kind of decision-making behavior in different situations (Deutsch, 1958). Lewivcki and Bunker (1995) believed that TRT is a state which possesses confidence of positive expectation to others, and the motives of others are risky to a certain degree. In this study, the definition of TRT is adopted by Chandhari and Holbrook (2001), and it is believed that TRT is an interactive behavior between customers and service providers. The higher the satisfaction of its experience TRT, the higher the customer's repurchases willingness. The participants aims at the consumers who has the experience of purchasing green products as well as adopts the perspectives of Gefen, Karahanna & Straub, (2003) to measure TRT based on knowledge-based trust (KBT), institution-based trust (IBT), and calculative-based trust (CBT).

Consumer value is considered an important factor that determines satisfaction (Zeithaml, 1988). Green perceived value affects loyalty toward green products and impacts consumers' TRT and satisfaction; hence, it is believed to influence TRT and purchase intentions (Chen, 2010; Chen & Chang, 2012). In particular, in Martinez (2015) and Assaker, O'Connor, and El-Haddad (2020) mentioned that both PDS and TRT were found to mediate the indirect effect of green image on behavioral intention. When GPV is higher, including economic aspect (ECA), environmental aspect (EVA) and social aspect (SCA), the product image is more consistent with consumers' self-image. Consumers will be more willing to purchase, and their PDS will also increase (Sirgy, 1982; Yim, 2007; Chon & Olsen, 1991). The research results also indicated that perceived value of green product could positively affects TRT and PDS (Lam, Lau, & Cheung, 2016). Furthermore, PDS is a prerequisite of customer TRT (Yoon, 2002). Therefore, the following hypotheses are proposed:

H1: GPV positively affects PDS.

H2: GPV value positively affects TRT.

Satisfaction results from an overall evaluation of economic conditions or psychological factors that can positively enhance a positive consumer relationship (Geyskens, Steenkamp, & Kumar, 1999). Furthermore, PDS is a prerequisite of TRT (Yoon, 2002). Prior researches also indicate that there is a positive relationship between PDS and TRT (Horppu et al., 2008; Lam, Lau, & Cheung, 2016). Satisfaction refers to consumers' expectation toward a product or service; if the product or service meets the consumers' expectation, they will be satisfied, leading to repurchase intention (Chang & Chou, 2014). If a company is able to provide a quality product or service that satisfies or even exceeds the customers' expectation, consumers will consider repurchasing or recommending the product to others (Kotler, 1999). The satisfactory experience with a product would stimulate a positive WOM with respect to the product (Babin et al., 2005). Hence, PDS is positively associated with positive WOM (Swan & Oliver, 1989; Chen, Lin, & Chang, 2013). Therefore, the following hypotheses are proposed:

H3: PDS positively affects TRT.

H4: PDS positively affects WOM.

H5: PDS positively affects RPW.

2.4 Repurchase Willingness (RPW)

Nowadays, consumers consider not only the value and quality of the product, but also various factors such as the seller's service quality and WOM to measure the possibility of repurchase. According to Sullivan, Yulia, Kim, and Dan (2018), RPW refers to the customers' psychological commitment to the product or service after using and then generating the ideas of repurchasing. Harris and Goode (2004) believed that after satisfied with the products for consumers, repurchasing is just a basic behavior. Zhang et al. (2011) revealed that the cost of developing new customers is much higher than maintaining old customers. Also, the cost of maintaining new customers is also higher than maintaining old customers. A sustainable operation must create continuous profits. Many scholars explained that maintaining existing customers can save costs more than developing new customers. In order to create profits continuously, consumers' repurchasing power is a crucial factor. Besides, past studies have demonstrated that first-hand experience with the seller in a repurchase situation is important and can serve as a dominating source for evaluating TRT (Haijun et al., 2016). Also, TRT has been presented as a central attribute in relationship initiation and formation in various exchange contexts (Harris & Goode, 2004). Thus, it has emerged in support of a strong relationship between TRT and RPW. Therefore, the following hypotheses are proposed as followed:

H6: TRT positively affects RPW.

2.5 Word-of-Mouth (WOM)

WOM is the consumers' behaviors who have high or low satisfaction with their experience after using a product or service, resulting in the behavior of spreading positive and negative WOM to others. When highly satisfied with the product or service, consumers may spread positive WOM communication; conversely, when dissatisfied with the product or service, consumers may spread negative WOM communication. Positive WOM has a great impact on the enterprise reputation and will attract the new

consumer groups' attention; negative WOM will bring bad reviews to the enterprise which is not only lose old consumers, but also uneasy to attract new consumers and even cause the losses of enterprise. Kim, Kim, and Kim (2009) pointed out that when consumers are seeking WOM, the input and output of WOM will have different effects on consumers. Liu and Lee (2016) pointed out that when consumers are seeking WOM, the input and output of WOM will have different effects on consumers. Cantalops and Salvi (2014) defined WOM as non-commercial related to brand, product or service oral, person-to-person communication between the communicator and the recipient. Bansal and Voyer (2000) believed that when consumer receives the messages about professional ability and experience from sender, it will become the important influential factor to WOM during the purchasing decision. Consumers actively spread non-profit positive or negative WOM on message boards, virtual communities, electronic bulletin boards and so on which will directly affect product sales (Shin, 2017). Whether it is a traditional or an online transaction, WOM will affect consumers' purchasing decision or RPW. Davidow (2000) noted that WOM activity will be influenced by the perceived fairness of the organizational response, and in turn, repurchase willingness (RPW). Based on the customers' experiences of product or service usage, this possibility will grow. Therefore, the hypothesis was proposed as followed:

H7: WOM positively affects RPW.

3. Methodology

This study referred to Zeithaml (1988) and Global Reporting Initiative (2006, 2013) on the green product value (GPV), including three dimensions: economic aspect (ECA), environmental aspect (EVA) and social aspect (SCA) as well as consumers' perspectives on green products and internal factors. It was to explore GPV leads to RPW as well as explained whether TRT, PDS, and WOM have a positive impact.

3.1 Research Framework

Nowadays, GPV is the formation of consumers' perceptions of brand, price and quality which will affect their choices. And most consumers are also obsessed with the brand, including tangible and intangible services; for example, tangible service refers to the concrete service performance so that consumers can understand the benefits of buying this product; while intangible service refers to the establishment of good service attitude and quality. Because invisible service is uneasy to be remembered, it is very important for the reputation of green products. Therefore, the consumers' TRT in the product or brand is based on whether the consumption experience meets expectations as well as consumer information is safe or not. Finally, WOM, PDS, and RPW are generated, and consumers' perceptions on green products are explained. The research framework is formed as Figure 1.

With the advanced technology progresses, people are not eager to benefits of the product itself. Under the circumstance of excessive packaging in brand products, it can be seen that the sustainable development of green products are formed the product style with the innovative development. And the

integration of products with the life philosophy of environmental protection concept also brings unlimited green commercial opportunities. Past research pointed out that the purchasing green products by consumers can represent their attitude towards environmental protection and perceptions of using products to find a way closer to green life. This kind of consumer demand and values enhance more consumers to consume the products.

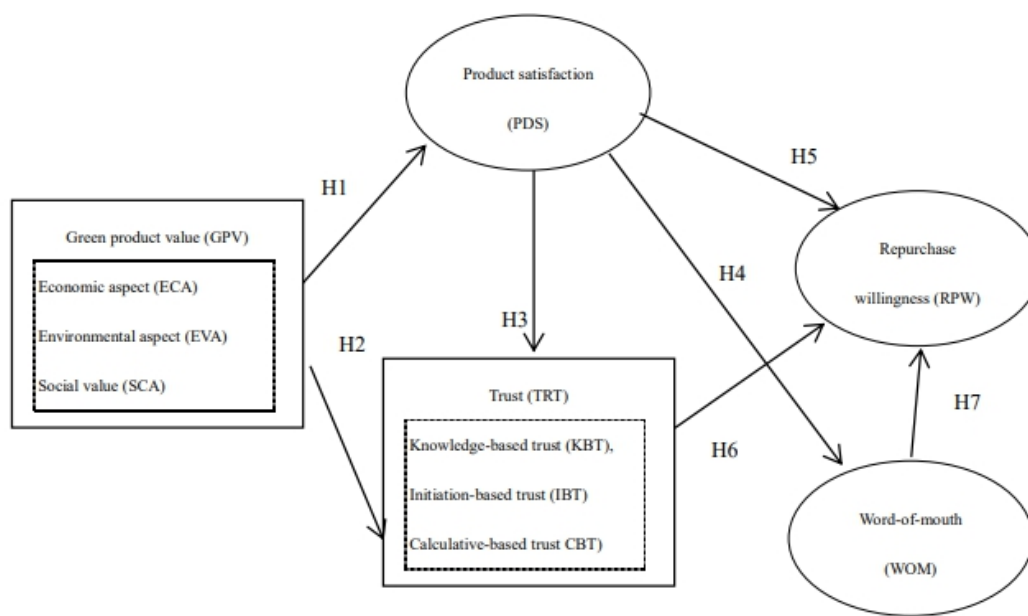


Figure 1. Research Framework

3.2 Questionnaire Design and Data Collection

The questionnaires of this research were divided into six parts including basic information, GPV (triple button line include ECA, EVA, and SCA), TRT (based on KBT, IBT, and CBT), WOM, RPW and PDS, a total of 32 items. A six Likert scale was used to quantify the data and filled by participants. This study categorized the ages into four groups. According to ration of the green product operators provided consumers structures, they were 20% (< 20 years old), 50% (20-30 years old), 20% (31-40 years old) and 10% (> 40 years old) respectively. Therefore, this study conducted a stratified sampling method. After the proportion of people bought green products was sorted in ascending order, the accumulated proportion of consumers who bought green products was estimated to be 100%. The questionnaire for this study was issued for three months. A total of 500 questionnaires were distributed according to different ages. After screening, 435 questionnaires were valid, with an effective rate of 87%. The ratio of participants were 19% (< 20 years old), 49% (20-30 years old), 13.6% (31-40 years old) and 5.4% (> 40 years old).

4. Results

4.1 Descriptive Analysis

Roscoe (1975) believed that the number of participants should be between 300 to 500, which is appropriate for most studies. Therefore, this study issued a total of 500 questionnaires from different ages and 435 questionnaires were valid, with an effective rate of 87%. According to valid questionnaires collected by this research, the ratio of men to women was roughly equal (50.3, 49.7%). The age groups of 21 to 30 were 56.3% (295/435), and were under 20 years old were 21.8% (95/435). In terms of income, most consumers had a monthly income less than 25,000 (52.9%). Consumers who purchased green products in the past year mostly consumed less than 3 times (58.6%), followed by 4 to 11 times (34%). This study conducted a statistical analysis for the measurement items as well as understood the participants' attitudes toward each dimension. In terms of GPV scale, the average scores of each item were between 4.66 and 5.02, and the average scores of each dimension were between 4.727 and 4.885 which the evaluation of ECA was the lowest. Based on TRT scale, the average score of each item was between 4.94 and 5.11, and the average score of the dimension was between 4.985 and 5.025 which the evaluation of KBT was the lowest. For the RPW scale, the average score of each item was between 4.74 and 5.06, and the average score of the dimension was 4.895. According to WOM scale, the scores of each item ranged from 4.70 to 4.90, with an average score of each dimension was 4.823. As for PDS scales, the scores of each item were between 4.75 and 4.99. The average score of the dimension was 4.918.

4.2 Reliability and Validity Analysis

To examine the reliability and validity between constructs and their indicators, this study assessed the questionnaire by conducting internal consistency, convergent validity and discriminant validity. Internal consistency is assessed by means of Cronbach's α and composite reliability. Cronbach's α ranges from 0.856 to 0.945, as shown in Table 1-3, attests to the high internal consistency of the instrument in that all values are above the suggested 0.70 level for scale robustness (Nunnally, 1978). Composite reliability ranging from 0.912 to 0.952 is higher than the recommended benchmark of 0.6 (Fornell & Larcker, 1981).

Table 1. Reliability and Convergent Validity of GPV

Construct	MLE		Composite reliability	AVE	Cronbach's α
	Loading	Error			
Green product value(GPV)			0.973	0.924	0.945
Economic aspect (ECA)	0.910***	0.112			
Environmental aspect (EVA)	0.964***	0.050			
Social aspect (SCA)	0.952***	0.058			
Economic aspect (ECA)			0.871	0.628	0.870

ECA 1	0.787 ^{***}	0.403			
ECA 2	0.823 ^{***}	0.342			
ECA 3	0.787 ^{***}	0.451			
ECA 4	0.783 ^{***}	0.302			
Environmental aspect (EVA)			0.899	0.692	0.880
EVA 1	0.828 ^{***}	0.320			
EVA 2	0.846 ^{***}	0.256			
EVA 3	0.717 ^{***}	0.334			
EVA 4	0.828 ^{***}	0.249			
Social aspect (SCA)			0.904	0.703	0.875
SCA 1	0.850 ^{***}	0.234			
SCA 2	0.843 ^{***}	0.230			
SCA 3	0.811 ^{***}	0.228			
SCA 4	0.719 ^{***}	0.411			

Note: GFI = 0.903, RMR = 0.038, NFI = 0.932, CFI = 0.944, ^{***} p < 0.001.

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Convergent validity examined by model fit, item loadings and Average Variance Extracted (AVE) ensures that all items measures a single latent construct (Bagozzi & Yi, 1988). All constructs demonstrate AVE values between 0.628 and 0.933 which have a higher AVE than the recommended benchmark of 0.5 (Fornell & Larcker, 1981). The results are shown in Table 1-3 All indices in GPV, PDS, TRT, and WOM, are greater than the recommended level by NFI > 0.9, CFI > 0.9, GFI > 0.9, and RMR < 0.05. The indices in RPW are slightly lower than the recommended benchmark, but are still acceptable standards. Moreover, item loadings are also greater than 0.5 and the chi-square value reached a significant level (Bagozzi & Yi, 1988).

Table 2. Reliability and Convergent Validity of TRT

Construct	MLE		Composite reliability	AVE	Cronbach's α
	Loading	Error			
Trust (TRT)			0.977	0.933	0.944
knowledge-based trust (KBT)	0.906 ^{***}	0.063			
institution-based trust (IBT)	0.896 ^{***}	0.079			
Calculative-based trust (CBT)	0.931 ^{***}	0.037			
knowledge-based trust (KBT)			0.923	0.749	0.883
KBT 1	0.774 ^{***}	0.236			
KBT 2	0.809 ^{***}	0.233			
KBT 3	0.811 ^{***}	0.214			

KBT 4	0.839 ^{***}	0.194			
institution-based trust (IBT)			0.939	0.793	0.896
IBT 1	0.835 ^{***}	0.175			
IBT 2	0.878 ^{***}	0.132			
IBT 3	0.801 ^{***}	0.213			
IBT 4	0.794 ^{***}	0.197			
Calculative-based trust (CBT)			0.929	0.767	0.880
CBT 1	0.739 ^{***}	0.234			
CBT 2	0.796 ^{***}	0.211			
CBT 3	0.869 ^{***}	0.153			
CBT 4	0.826 ^{***}	0.199			

Note. GFI = 0.915, RMR = 0.022, NFI = 0.943, CFI = 0.955, ^{***} p < 0.001.

Table 3. Reliability and Convergent Validity of PDS, WOM, and RPW

Construct	MLE Loading	Error	Composite reliability	AVE	Cronbach's α
Product satisfaction (PDS)			0.922	0.749	0.899
PDS 1	0.848 ^{***}	0.197			
PDS 2	0.915 ^{***}	0.111			
PDS 3	0.883 ^{***}	0.147			
PDS 4	0.723 ^{***}	0.504			

Note: GFI = 0.993, RMR = 0.010, NFI = 0.995, CFI = 0.996, ^{***} p < 0.001.

Word-of-mouth (WOM)			0.918	0.736	0.907
WOM 1	0.823 ^{***}	0.269			
WOM 2	0.823 ^{***}	0.347			
WOM 3	0.864 ^{***}	0.222			
WOM 4	0.869 ^{***}	0.185			

Note: GFI = 0.996, RMR = 0.008, NFI = 0.997, CFI = 0.998, ^{***} p < 0.001.

Repurchase willingness (RPW)			0.883	0.662	0.856
RPW 1	0.581 ^{***}	0.439			
RPW 2	0.662 ^{***}	0.383			
RPW 3	0.915 ^{***}	0.154			
RPW 4	0.867 ^{***}	0.234			

Note. GFI = 0.838, RMR = 0.077, NFI = 0.809, CFI = 0.810, ^{***} p < 0.001.

Compared with each dimension, when the chi-square difference between the unconstrained model and the constrained model was greater than 3 and reached a significant level, each dimension possessed great discriminative validity (Anderson & Gerbing, 1988), as showed in Table 4. Discriminant validity reflects the level by which the measures of each constructs are distinctively different from each other. Cronbach's α for each construct should be greater than the squared correlation between constructs (Gaski, 1986). In summary, satisfactory internal consistency, convergent validity, and discriminant validity have been demonstrated.

Table 4. Discriminative Validity Analysis of Each Dimension

Green product value model	χ^2	d.f	$\Delta\chi^2$
Unconstrained model	207.7	51	—
Economic aspect (ECA) ↔ Environmental aspect (EVA)	240.3	52	32.6
Economic aspect (ECA) ↔ Social aspect (SCA)	239.3	52	31.6
Environmental aspect (EVA) ↔ Social aspect (SCA)	250.2	52	42.5
Green product value model	χ^2	d.f	$\Delta\chi^2$
Unconstrained model	167.3	53	—
Knowledge-based trust (KBT) ↔ Institution-based trust (IBT)	219.0	52	51.7
Knowledge-based trust (KBT) ↔ Calculative-based trust (CBT)	198.0	52	30.7
Institution-based trust (IBT) ↔ Calculative-based trust (CBT)	206.3	52	39.0

4.3 Analysis of the Structural Equation Model

This study uses the Structural Equation Model (SEM) to assess the study framework. Regarding SEM, the correlations of the measurement variables are significant at $p < 0.001$, meaning it is possible to obtain the values of parameters implemented in the overall model, as showed in Table 5. Based on the recommendations of Hair et al. (1998), this study was to evaluate model fit of the entire model and observation data into three indicators: Absolute Fit Measures, Incremental Fit Measures and Parsimonious Fit Measures. The overall theory model of absolute fit measure index in this study was $\chi^2=727.1$, GFI=0.822, AGFI=0.763, RMR =0.035. Among them, AGFI was slightly lower than the 0.8, RMR was acceptable standards, and the chi-square value reached a significant level. The indicators of Incremental Fit Measures were NFI=0.905 and CFI=0.920. Both of them were higher than 0.9 and met the acceptable standards. The indicators of Parsimonious Fit Measures were PNFI=0.757 and PGFI=0.770. Both were acceptable ranges. Overall, these results suggest an adequate fit between the proposed model and the data, as shown in Figure 2.

The composite reliability of GPV, TRT, PDS, RPW, and WOM were 0.973, 0.977, 0.922, 0.883 and 0.918, respectively, and the variances extracted were 0.936, 0.950, 0.754, 0.726 and 0.739. Both were achieved the standard. Therefore, this study should equip with a good internal structure model fit. From

the factor loading of each dimension, it revealed that for the construction of GPV, consumers' evaluation of ECA (0.912) was the most important, and the items included "Green products will regularly launch discounts", "Green products are valued for money", "Green products price meet expectations", "Green products have well after-sales service" as well as followed by EVA (0.880) and SCA (0.871). The results of this study showed that the price of green products is reasonable from consumers' points of view. If they have any questions, they can get an immediate reply after purchasing.

Table 5. Variable Correlation Coefficient Analysis in Research Model

Dim.	Avg.	Std.	ECA	EVA	SCA	PDS	KBT	IBT	CBT	RPW	WOM
ECA	4.727	0.858	1.000								
EVA	4.853	0.792	0.768	1.000							
SCA	4.885	0.759	0.777	0.818	1.000						
PDS	4.918	0.773	0.748	0.654	0.685	1.000					
KBT	4.985	0.686	0.753	0.746	0.801	0.715	1.000				
IBT	5.006	0.660	0.641	0.610	0.677	0.663	0.719	1.000			
CBT	5.025	0.657	0.650	0.613	0.665	0.714	0.751	0.759	1.000		
RPW	4.895	0.833	0.689	0.641	0.661	0.825	0.664	0.621	0.634	1.000	
WOM	4.823	0.752	0.734	0.703	0.738	0.834	0.743	0.694	0.729	0.822	1.000

In the construction of TRT, consumers' evaluation of KBT (0.900) was the most important. The items included "Green products can be used with confidence", "Green products have obvious instructions for use", "The customer service center for green products can really solve my problems", "Green products have a good return mechanism" and followed by CBT (0.846) and IBT (0.821). The results showed that KBT is the most important dimension on TRT.

In the construction of PDS, consumers believed that "The functions of green products meet my expectations" (0.886) is the most important, and followed by "The service of green products meet my expectations" (0.885), "The quality of green products meets my expectations" (0.857), and "The price of green products meets my expectations" (0.747). The results of this study showed that consumers can learn product information from the sellers and agree with the value of the product.

In the construction of RPW consumers pointed out that "I will give priority to use green products when launching new products" (0.832) is the most important, and followed by "If there is a demand for products, I will give priority to green products" (0.810), "When the goods are ran up, I will buy green products again" (0.758), and "I would like to buy green products again" (0.705). The results of this study showed that consumers support green products and are willing to buy again.

In the construction of WOM, consumers revealed that "I will share product experience with friends" (0.854) is the most important, and followed by "I will invite friends to go shopping with green

products" (0.853), "I will recommend friends to buy green products" (0.851), "I will take the initiative to share green products promotion activities" (0.820). The results of this research showed that consumers will actively recommend their favorite products to friends and relatives and send positive WOM.

4.4 Effects Analysis of Each Construct

Figure 2 demonstrates the results for the path estimates of the proposed model through AMOS software. In the analysis of the effects between each construct, it can be divided into three aspects: direct, indirect and total effects. GPV had no direct effect on RPW. There were four indirect effects with values of 0.181 (0.816×0.222), 0.088 ($0.816 \times 0.308 \times 0.349$), 0.067 ($0.816 \times 0.905 \times 0.461$) and 0.233 (0.667×0.349), and the total effect was 0.569 ($0.181 + 0.088 + 0.067 + 0.233$). PDS had a direct effect and two indirect effects on RPW which values were 0.222, 0.107 (0.308×0.349) and 0.417 (0.905×0.461), and the total effect was 0.746 ($0.181 + 0.088 + 0.067 + 0.233$). TRT and WOM only had a direct effect on RPW which values were 0.349 and 0.461. In summary, PDS was the highest for the total effect of RPW, followed by GPV, WOM, and TRT. Moreover, GPV had a direct effect on PDS strongly which value was 0.816. It explored that GPV was the very important factor which affected RPW. Consumers will buy more green products to reduce damage on earth when they have increased environmental awareness of green value. GPV had no direct effect on WOM. There was one indirect effect with values of 0.739 (0.816×0.906), and the total effect was 0.739. PDS had direct effect on WOM, and its value is 0.905. Above mentioned, for the total effect of WOM, PDS was the highest, followed by GPV. Moreover, GPV had a direct effect on PDS strongly which value was 0.816. It explored that GPV and PDS are the very important factors which affect WOM. When environmental awareness of green value and PDS increases, consumers' will be willing to introduce products and enhance the positive WOM.

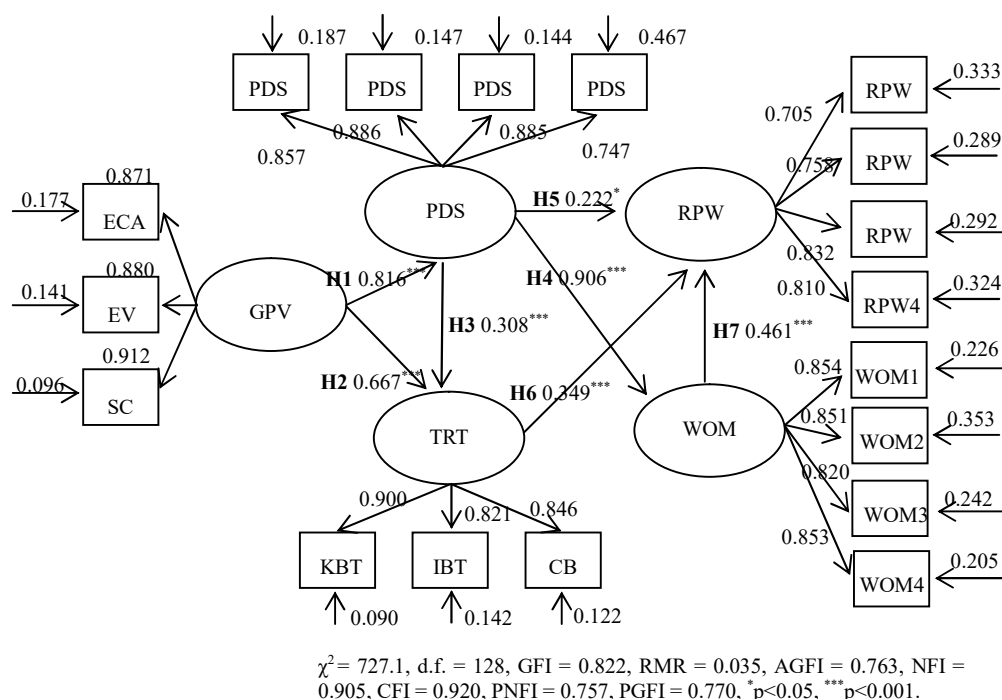


Figure 2. SEM Path of the Research Model

4. Conclusion

The participants in this study are consumers, who have purchased green products to explore GPV, TRT, PDS, WOM, and RPW of GPV from the consumer perception, and then we construct the research model. According to measurement items, GPV scale revealed that participants had a good evaluation of ECA, EVA, and SCA. Among these three values, EVA was the highest. TRT scale showed that participants also had TRT in green products, and KBT needed to be strengthened. PDS scale explained that the score of the item “The green products price meets my expectations” was the lowest, which means that green products should be offered with preferential discounts so that consumers will feel good and cheap after purchasing green products. RPW scale presented that “If there is a demand for products, I will give priority to green products” got the lowest, which means that consumers will compare prices and services of different brands when buying products. Therefore, green products of brand image should be enhanced. WOM scale displayed that “I will actively share green product promotion activities” had the lowest score, which means that green products should think about how to make consumers actively share their satisfaction after using with others. Thus, the promotions of green products can be added and impressed by consumers. The empirical results of this study were mostly supported, as described in Table 6.

Table 6. Path Coefficient and Hypothesis

Relationship	Path coefficient	Hypothesis	Result
GPV → PDS	0.816***	H1	supported

GPV→TRT	0.667***	H2	supported
PDS →TRT	0.308***	H3	supported
PDS→ WOM	0.906***	H4	supported
PDS→ RPW	0.222*	H5	supported
TRT→RPW	0.349***	H6	supported
WOM → RPW	0.461***	H7	supported

Note. * $p < 0.05$, *** $p < 0.001$.

This study found that consumers' perceptions of SCA (4.885) and EVA (4.853) were higher than ECA (4.727). However, the empirical results showed that ECA (0.912) can well-demonstrate the value of GPV. In other words, consumers have the strongest perceptions of ECA on GPV. Therefore, green product operators should focus on highlighting the values of EVA and SCA, and then transforming them into values that consumers can perceive. EVA include apply the introduction of carbon footprint calculations, circular economy certification, traceable products and so on which can help strengthen and deepen consumers' impressions, sales, and explanations of products. Consumers can use information technology to query and link their contributions to EVA at any time, as well as enhance the immediacy, richness, value and entertainment of green products and consumers' interactions, thereby transforming EVA into consumer perception values. From SCA, Accenture's survey of 30,000 consumers around the world found that in addition to considering price and quality when making shopping decisions, 66% consumers will be attracted by enterprises with good culture and commitment to society; in addition, 66% of consumers are also more willing to buy products sold by enterprises that provide transparent information on important issues (Accenture Strategy, 2019). Therefore, green product operators should grasp every opportunity to respond to consumers, increase interaction with consumers through two-way communication channels, demonstrate their own excellent corporate culture and social responsibility, and enhance consumers' sense of identity with green brands which is shorten the distance between consumers and green enterprises, so that the relationship between each other is more stable, and the perception of social aspect is transformed into the value that consumers can perceive.

The improvement of PDS, as shown by this empirical research, can start from the economic, environmental and social aspects of GPV which links service quality, product attributes, transaction procedures and after-sales service. It will shorten the distance between consumers and green enterprises which will increase consumers' TRT, reputation and RPW. In addition, creating a green discussion topic and an interactive atmosphere can make consumers are willing to share information, experience, and WOM can increase the willingness to buy green products. The closer the connection and relationship between consumers and green enterprises, the greater the value created. Consumers can easily obtain product reviews and opinions via information technology, and green product operators can utilize official websites, social media, product feedback links and other channels to strengthen the Q&A

functions in ECA, EVA, and SCA, and quickly respond and solve problems on consumers so as to improve PDS with green products. Green product operators could use positive WOM links to convey green product buyers' experience, post-purchase experience, and products' advantages and disadvantages to enhance buyers' RPW.

This study did not explore the relationship between TRT and WOM mainly because this study adopted the view of TRT in shopping experience (Gefen et al., 2003). TRT is composed of KBT, IBT, and CBI without considering it personality-based trust and cognition-based trust (McKnight, Cummings, & Chervany, 1998). Due to the lack of consideration of initial trust and trust interaction between people, there is no further discussion on the influence of TRT on WOM. The aspects of green products (ECA, EVA & SCA) are sufficient to shorten the distance between consumers and green enterprises, and consumers are willing to make short-term sacrifices, such as spending time to share information, experience, and reputation, and long-term cooperation. For green product operators, the feedback of the consumers is PDS. Also, it can quickly solve the consumers' problems as well as add the links between each other. Therefore, it is recommended that product operators must realize the green value or demand that consumers' value, convert it into PDS and deliver brand trust and reputation, and create a sustainable relationship based on triple button line (ECA, EVA & SCA).

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