

The Effect of Perceived Value and Marketing 4.0 on Customer Satisfaction and Purchase Intention in an E-commerce Context

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ABSTRACT

To observe the effect of perceived value and Marketing 4.0 factors on purchase intention and satisfaction of customers in the context of e-commerce, this study used a quantitative method to analyze 315 collected data e-commerce platform users in Indonesia by applying the multiple-regression analysis method. A combination of SPSS Statistics v.20 and Microsoft Excel was used during the data analysis. In addition to the perceived value components that might influence the satisfaction of customers and purchase intention in an e-commerce context, all four components of the Marketing 4.0 model were combined as components that might also affect the satisfaction of customers and purchase intention. As a result, this study shows that two components (utilitarian value and hedonic value) as part of perceived benefits and three components (brand image, brand identity, and brand integrity) as part of the Marketing 4.0 model have a significant and positive influence on both satisfaction of customers and purchase intention. On the other hand, social value and perceived risk do not have a significant effect on customer satisfaction. Moreover, brand interaction and customer satisfaction have a positive impact on purchase intention.

Keywords: Perceived Value, Perceived Quality, Perceived Risk, Marketing 4.0, Satisfaction, Purchase Intention, E-commerce

1. INTRODUCTION

The existence of COVID-19 pandemic has increased global online retail. According to the estimates from UNCTAD [1], in 2020 the sales share of online retail increased to 19% of the total retail sales around the world. Moreover, the online retail sales share in the Republic of Korea has reached the highest online retail sales at 25.9% in 2020 compared to other countries [1]. This situation can be considered an opportunity for businesses worldwide to promote their products using an e-commerce platform.

Online platforms have also attracted many businesses in Indonesia. According to Indonesia's statistical e-commerce report in 2020 [2], 71.18% of businesses in Indonesia have started to adopt an e-commerce platform to sell their products in the last three years. The rapid growth of using an e-commerce platform has influenced supply chain competitiveness in the e-commerce industry. Moreover, the internally controlled strategies and the internal infrastructure contribute about 90% to the e-commerce supply chain competitiveness [3]. By facing the competitiveness with other businesses in the e-commerce industry, adopting a marketing strategy and understanding customers has become a challenge for newcomer businesses in this e-commerce industry, especially in Indonesia.

Deloitte [4], a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax and legal, and related services, has analyzed the contribution of Indonesia's digital economy in 2019 to its gross domestic product (GDP), which reached a value of 2.9 percent and is considered as being in the top three ranking among Southeast Asian countries. Furthermore, according to the analysis results from Google, Temasek Holdings Pte Ltd., and Bain & Co. [5], Indonesia's gross merchandise value (GMV) reached USD 70 billion in 2021 and is projected to grow to reach USD 146 billion in 2021. Based on those results and bearing in mind the fact that in Indonesia, with the world's fourth-largest number of Internet users of around 185 million [4], it is a motivation to understand the rationality of the factors already explored and to consider any supplementary factor(s) that might be significant to satisfy customers or to increase customers' intention to purchase online via e-commerce in Indonesia. Hence, this study examines the factors that might satisfy customers and increase customers' intention to purchase via e-commerce platforms in Indonesia.

Among many researchers who study the effect of purchase intention and customer satisfaction, Gan and Wang [6] considered the perceived value factors which are hedonic value, utilitarian value, social value, and perceived risk as the influential factors on purchase intention. By using the factors that have been studied by Gan and Wang [6], this study adds other factors which were also used by Dash et al. [7], who examined

the influence of the Marketing 4.0 model on purchase intention and satisfaction. To explore the Marketing 4.0 evolution, Dash et al. [7] adopted brand image, brand identity, brand integrity, and brand interaction as the factors which influence customer satisfaction and the intention to purchase in the context of the real estate industry in India.

In addition to perceived value, Marketing 4.0 factors might also affect customer satisfaction or decision-making factors for the customer to purchase online. The proposed model of this study has assimilated factors from the perceived value [6] along with Marketing 4.0 [7]. The factors of perceived value include hedonic value, utilitarian value, social value, and perceived risk, while the factors of Marketing 4.0 include brand identity, brand image, brand integrity, and brand interaction.

Although there exist several studies toward ascertaining the factors influencing customer satisfaction and purchase intention, to the best of the author's knowledge, this is an early attempt toward a holistic and integrative approach to examine the most significant factors that could satisfy customers or increase customers' intention to purchase via e-commerce. Hence, the strength of this research lies in integrating the perceived value constructs with Marketing 4.0 constructs as factors that might satisfy customers or increase customers' intention to purchase online via e-commerce platforms in Indonesia.

2. LITERATURE REVIEW

2.1 Perceived Value

Perceived value can be interpreted as the product utility assessment result assumed by consumers about what is given and what is received [8]. This definition is a combination of the perceived benefit that the customer obtains and the perceived risk that the customer sacrifices. Perceived benefit is defined as a product's physical attributes combined with the available technical support and service that can be obtained in a consumption situation. Moreover, companies also need to determine the relative importance of those benefits. On the other hand, the costs paid off while obtaining or using the products or services are referred to as perceived risk [8,9]. This definition is complemented by Cronin et al. [10], who said it is comprised of the financial and non-financial costs that the customer sacrifices, for instance, effort, time, price, and other risk factors.

The relationships among perceived value, purchase intention, and customer satisfaction has been well studied across literature in various contexts. Perceived value has been examined to have a significant impact on consumer satisfaction [11], and it is broken down into several attributes to measure the detailed effects of perceived value on customers. Through investigating 277 users of social commerce, Gan and Wang [6] found that perceived value comprising social value, hedonic value, utilitarian value, and perceived risk significantly affects user satisfaction. In addition, this study also

discovered that utilitarian value, hedonic value, and social value significantly affect purchase intention.

On the other hand, some researchers categorize the perceived risk into five dimensions, such as perception of financial risk, physical risk, functional risk, psychological risk, and social risk [12,13,14]. Among a total of 352 respondents, Bhukya and Singh [15] noticed that perceived risk has a direct negative influence on the intention to purchase products from private labels.

2.2 Marketing 4.0

The Marketing 4.0 model was introduced by Kotler et al. [16] by combining offline and online interactions between customers and the company. This concept is the integration of four elements. The first three elements were part of Marketing 3.0 [17] which contain brand identity, brand image, and brand integrity. In addition, there is brand interaction that completes the Marketing 4.0 elements. The Marketing 4.0 model was introduced to adapt to the new interactions in people's lives that shape new business strategies [7]. Moreover, digital marketing has played an important role in business strategies to survive during and after experiencing the COVID-19 pandemic. Dash et al. [7] examined the effect of Marketing 4.0 as an upgraded model from Marketing 3.0 on both customer satisfaction and purchase intention in the context of the real estate market. Surprisingly, only brand identity and brand image positively impact both purchase intention and customer satisfaction.

2.3 Brand Identity

Brand identity can be described as “a unique set of brand associations that the brand strategist aspires to create or maintain” [18].

Furthermore, Ghodeswar [19] explained that a company conveys its image and promise to customers using a unique set of brand associations portrayed by brand identity. In addition, the brand identity reflects not only the company-customer relationship but also the brand perception within the internal team [20]. Hence, the capability of an internal team to manage the brand is also important to developing the interactions between the company and its customers. Moreover, brand reputation and image understanding also play an important role in corporate decision-making [21].

Prior studies have found that brand identity not only positively affects the intention to purchase [22,23] but also could satisfy customers [7].

2.4 Brand Image

Brand image can be described when consumers perceive a brand as a conception from its association and consumers conceive its differentiation which can improve the consumers' purchase intention [16,24] and even increase the consumers' loyalty [25]. [7] referred to a study conducted by Hosany et al. [26] stating that brand image is crucial in a product's positioning strategy. Indirectly, the brand image may conceive a competitive advantage owned by the brand. Moreover, brand image can also impact the attitude and behavior of consumers [25].

The positive impact of the brand image on the intention of customers to purchase has been observed by previous studies. Through surveying 126 respondents, Yaseen and Mazahir [27] discovered that the customer's intention to purchase products and services in the telecommunications industry in Karachi can be influenced by brand image as the most salient factor. In addition, Dash et al. [7] also revealed that brand image positively impacts both satisfaction of the customer and the intention to purchase the product or service in the real estate context.

The effect of brand image on satisfaction has been studied widely by researchers in various contexts, and some studies have found that brand image can positively influence the satisfaction of customers [28].

2.5 Brand Integrity

Brand integrity can be described as brand credibility and the capability to give a sustainable value proposition for customers [29] and to prove that the brand has the reliability to deliver value as promised [30]. In addition, delivering products and services as promised to the customer means that the firm should be open to every customer complaint [31] because paying more attention to customers' complaints signifies that the brand is reliable which also impacts the purchase intention and improves the perceived quality [32].

Studies that examine the relationship among the integrity of the brand, satisfaction of the customers, and purchase intention are still limited. However, previous studies show that image consistency and brand experience can influence brand integrity.

2.6 Brand Interaction

Brand interaction is an upgraded component that is combined with the Marketing 4.0 model [7], which describes the experience obtained by the customer when engaging with the company. The COVID-19 pandemic has forced businesses around the world, especially small and medium enterprises (SMEs) to adopt digital marketing to reach their customers. The advancement of technology has assisted businesses to engage with customers in real-time interactions [33], such as the existence of social media that increases customer engagement with the brand [34] ranging from fulfilling utilitarian needs to hedonic needs [35]. From the perspective of brand-customer interactions, the complexity of digital interactions involves three dimensions of customer engagement (behavior, cognitive, and emotional) [36] that can be applied in the context of e-commerce.

3. THEORETICAL MODEL AND RESEARCH HYPOTHESES

Many researchers have studied the influence on consumer satisfaction and purchase intention from different perspectives. To find the integrated results of the influence on customer satisfaction and purchase intention, this study emphasized that the perceived value and Marketing 4.0 model impact customer satisfaction and purchase intention, especially in the e-commerce context. The separate prior studies found different

impacts on customer satisfaction and purchase intention from the perspective of the perceived value and Marketing 4.0 model, e.g. [6,7,29,33]. Therefore, this study proposes the following research model as depicted in Figure 1 below.

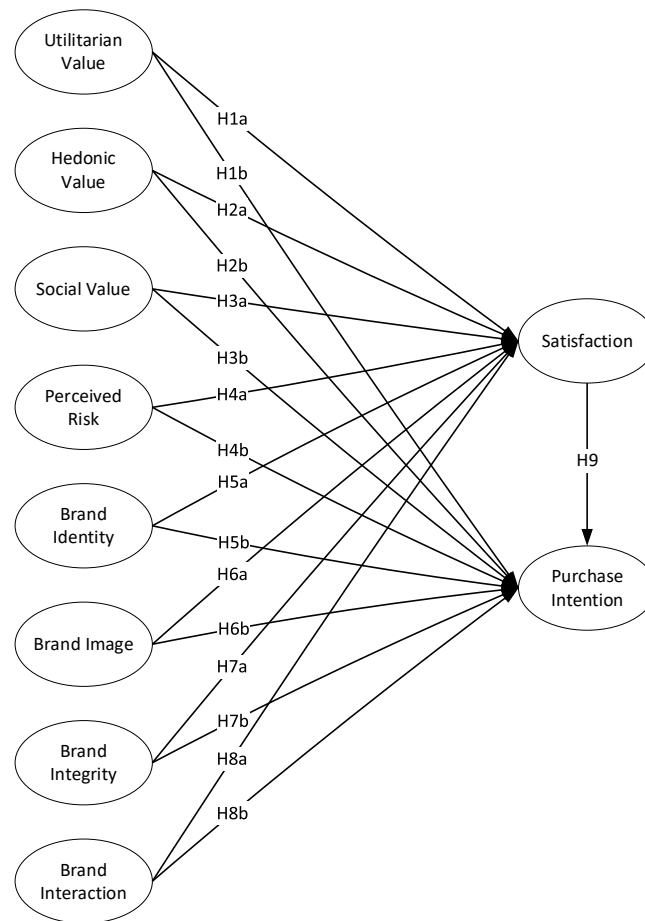


Figure 1. Research Model

This study will explain the relationship of each independent construct that plays an important role in customer satisfaction and customer purchase intention.

Researchers have found that customers' perceived value plays an important role when offering a product or service in the market. The measuring constructs related to the perceived value used by prior researchers are various. Hsu and Lin [37] broke down perceived value into performance value, emotional value, value-for-money, and social value. Utilitarian value can be defined as referring to the utility and quality of products or services that the customer obtains [6,38]. Thus, the performance value and value-for-money that are applied by Hsu and Lin [37] can be classified as utilitarian values. Meanwhile, hedonic value refers to the emotional benefit that the customer obtains [39]. Prior studies [6,37,38] revealed that both utilitarian value and hedonic value have a significant impact on customer satisfaction. Additionally, both utilitarian value and hedonic value can have a significant impact on purchase intention [6,37]. Thus, this study puts forward that:

H1a. Utilitarian value has a significant and positive impact on customer satisfaction.

H1b. Utilitarian value has a significant and positive impact on purchase intention.

H2a. Hedonic value has a significant and positive impact on customer satisfaction.

H2b. Hedonic value has a significant and positive impact on purchase intention.

Sweeney and Soutar [40] described social value as the improvement of the social self-concept that can be obtained from the ability of a product or service. To value a product or service, the customer evaluates it not only from a utilitarian and hedonic value perspective but also from a social value perspective such as the consequences of social activity. Social value can also be defined as the increase of a customer's self-esteem or social status [41]; for instance, people may increase their self-confession by sharing experiences or interacting with others via social commerce platforms [6]. According to the results from previous studies, by improving customers' social status or their self-confession via an online platform, customer satisfaction may be developed [6] and can further build their intention to purchase the product or service that is offered [6,37]. Therefore, this study developed the following hypotheses related to social value:

H3a. Social value significantly and positively impacts customer satisfaction.

H3b. Social value significantly and positively impacts purchase intention.

Uncertainty factors that are perceived by customers may vary depending on the type of product and service. The uncertainty factors that are mentioned as perceived risks as studied by Chiu et al. [42] in the social commerce context consist of financial loss, privacy disclosure, and the risk of the product or service quality offered in social commerce. In addition, the risk perceived by a customer may exist when there is an uncertain outcome or a possibility to result in an impact from an incorrect decision [43]. Prior studies found that perceived risk harms both purchase intention and customer satisfaction [44,45]. Hence, the hypotheses related to the perceived risk in this study are as follows:

H4a. The perceived risk significantly and negatively impacts customer satisfaction.

H4b. The perceived risk significantly and negatively impacts purchase intention.

Previous studies [7,46,47] have discovered that brand identity positively impacts the satisfaction of the customer. Hence, the level of customer satisfaction tends to be increased by the uniqueness of the brand identity [48,49] and the enhancement of the brand identity [50]. Prior studies have also identified the aspects that determine customer satisfaction due to brand identity which are customer prestige [51], customer enjoyment [52,53], and customer trust level [54]. Many studies have also found that brand identity plays an important role to build a purchase intention [7,55], in addition to consumer preference and consumer loyalty [56]. In referring to prior literature, the following hypotheses related to brand identity are defined in this study:

H5a. Brand identity significantly and positively impacts customer satisfaction.

H5b. Brand identity significantly and positively impacts purchase intention.

Previous works of literature [7,57-59] have found that brand image has a positive impact to increase the satisfaction of consumers. In addition, Rory [58] revealed that brand image can contribute to increase product referrals. By increasing customer satisfaction and manifesting promotional tools, the brand image may become a source of value creation for customers [60], and apparently by developing customer loyalty [61,62]. A unique brand image is also important to build a competitive advantage in the marketplace, especially when many businesses offer similar products or services because this brand image can also increase customer purchase intention [14]. Moreover, prior studies have also found that brand image impacts the customers' behavioral intention toward that brand [7,63,64]. Furthermore, the customer purchase intention can be influenced by the customer's trust as a level of the consequence of the image forming that brand [24,65]. Thus, the stronger the brand image is, the more influenced the customer's purchase intention will be. According to the previous works of literature found, the hypotheses developed in this study propose that brand image has a positive impact not only on customer satisfaction but also on purchase intention:

H6a. Brand image significantly and positively influences customer satisfaction.

H6b. Brand image significantly and positively influences purchase intention.

Brand integrity is related to the capability of delivering the suitability between the brand's promises and the consumers' expectations for the brand. When the consumers' expectations fail to be met as promised, negative impacts may happen [30]. In contrast, since brand integrity is related to the loyalty and trust of consumers, it not only positively impacts customer satisfaction [66] but also the exclusive group development of loyal customers [67]. To fulfill customers' expectations, commitment to improving the value proposition based on the customers' perceived value will also increase the level of purchase intention [68,69]. Hence, the following hypotheses related to brand integrity are developed in this study:

H7a. Brand integrity significantly and positively impacts customer satisfaction.

H7b. Brand integrity significantly and positively impacts purchase intention.

Morrison and Crane [70] found that to satisfy customers and strengthen the relationship between the brand and customers, brand interaction is crucial to be applied especially in the digital era. A prior study noticed that the interaction between a brand and its customers will satisfy customers [71]. On the other hand, when customers have engaged with the brand, the customers will have the intention to purchase and further decide to purchase products or services offered by the brand. Nowadays, the interactions between a brand and its customers can be built by using any kind of online platform. Previous research [33,72] discovered that social media can be adopted to inform the customer about the brand to improve purchase intention and customer satisfaction once the brand information is suitable for customers' needs. Thus, this study proposes the following hypotheses related to brand interaction:

H8a. Brand interaction significantly and positively impacts customer satisfaction.

H8b. Brand interaction significantly and positively impacts purchase intention.

Gan and Wang [6] described satisfaction as a customer's evaluated result of a product or service in the form of a positive emotional state referring to their expectations and requirements. Prior studies revealed that satisfaction has a significant impact on purchase intention [6,7,37] and even can develop continuance intention [73]. The more satisfied a customer is, the more intention that customer has to purchase. Thus, this study suggests the following hypothesis on the relationship between customer satisfaction and purchase intention in the e-commerce context:

H9. Customer satisfaction significantly and positively impacts purchase intention.

4. RESEARCH METHODOLOGY

4.1 Measurement Development

To achieve the aim of this study, a questionnaire survey of Indonesian consumers was conducted through online survey. This study included ten constructs in the model which consisted of four constructs comprising perceived value (social value, hedonic value, utilitarian value, and perceived risk), four constructs including the Marketing 4.0 model (brand integrity, brand image, brand identity, and brand interaction), customer satisfaction, and purchase intention. All measurement items applied in this study were obtained from two prior studies conducted by Gan and Wang [6] and Dash et al. [7]. Then the measurement items were adapted to be more appropriate in the e-commerce context. Perceived value measurement items were adapted from the study conducted by Gan and Wang [6]. The measurement items related to perceived value consisted of 4 items of utilitarian value, 4 items of social value, 4 items of hedonic value, and 5 items of perceived risk. The measurement items related to brand integrity, brand image, brand identity, and brand interaction were adapted from a study conducted by Dash et al. [7]. Thus, each component of the Marketing 4.0 model had 3 measurement items. Explicitly, as cited from a study conducted by Dash et al. [7], sophistication, signage, and reputation of the brand compose brand identity. Expertise, trust, and sincerity constitute brand integrity. Sensuality, mystery, and intimacy constitute the brand image. Contribution, consumption, and creation make brand interaction. In addition, three items of customer satisfaction and three items of purchase intention were also adapted from a study conducted by Gan and Wang [6]. So, 35 measurement items were included in this study. The original measurement items were written in English, but given the target of respondents was Indonesian, with the help of our faculty members who were proficient in both languages, the measurement items were translated to Indonesian and then back-translated to English. The survey consisted of questions measured on a 7-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (7). Thus, the final questionnaire was devised (as shown in the Appendix).

4.2 Data Collection

The data was collected during the period from October to November 2021. Only respondents who had experience using e-commerce platforms were further instructed to answer the main sections of the questionnaire. The questionnaire consisted of 2 segments. The first segment of the questions had personal data such as gender, age, occupation, favorite e-commerce, online shopping experience, and frequency of using e-commerce. Then the structural relationship between the research variables was examined in the second section. After that, a total of 396 responses were further analyzed, with 48 respondents stating that they had never used e-commerce and there were 33 data items containing ineffective or invalid data. As a result, 315 valid responses were obtained for further analysis.

5. DATA ANALYSIS

5.1 Sample Description

Among 315 valid responses, as shown in Table 1 below as the demographic information, the sample consisted of 128 males (40.6%) and 187 females (59.4%).

Table 1. Demographic profile of the respondents (n=315)

Category	Sub-Category	Total of Respondent	Percentage
Gender	Male	128	40.6%
	Female	187	59.4%
Age (years)	Below (or equals) 24	47	14.9%
	25 - 40	229	72.7%
	41 - 55	36	11.4%
	Above (or equals) 56	3	1.0%
Marital Status	Married	172	54.6%
	Single	143	45.4%
Most used e-commerce	Shopee	181	57.5%
	Tokopedia	104	33.0%
	Lazada	13	4.1%
	Bukalapak	9	2.9%
	JD.ID	4	1.3%
	Zalora	2	0.6%
	Blibli	1	0.3%
	Traveloka	1	0.3%
Occupation	Student / University student	31	9.8%
	Working staff	195	61.9%
	Entrepreneur	61	19.4%
	Others	28	8.9%
Online shopping experience	Less than 1 year	21	6.7%
	1-2 years	71	22.5%
	2-3 years	71	22.5%
	More than 3 years	152	48.3%
Frequency of using e-commerce	Several times a day	33	10.5%
	Once a day	11	3.5%
	Several times a week	95	30.2%
	Once a week	34	10.8%
	Less than once a week	53	16.8%
	Less than once a month	89	28.3%

The majority of the respondents are millennials (72.7%) and *Shopee* is the most popular e-commerce in Indonesia (57.5%). Additionally, most customers who use e-commerce in this sample are married (54.6%). Around 30% of the respondents use e-commerce several times a week and approximately 28% of the respondents use e-commerce less than once a month. Surprisingly, around 48% of the respondents have experienced using e-commerce for more than 3 years, in which they even started using e-commerce before the start of the COVID-19 pandemic.

5.2 Exploratory Factor Analysis

To examine the structural equivalence, this study conducted an exploratory factor analysis (EFA). As part of the EFA conducted in this study, a Kaiser Meyer Olkin (KMO) test and Bartlett's Sphericity test were performed to validate the adequacy of the sample data and verify the correlation of the sample data, respectively. Moreover, as a standardized regression weight, factor loading was also measured in this study for each construct [74,75]. The factor loading measurement for each construct was conducted to ensure that the variables from the predetermined construct were verified in forming one factor [74,75] while considering the accepted KMO value, Bartlett's Sphericity test result, communalities values, and total variance in the data by using SPSS v.20. The sufficient factor loading values should be greater than 0.400 when the sample data is larger than 200 respondents [76].

On the other hand, the communality value of each variable in the construct was performed to validate the interrelation among variables that develop the same construct. The accepted communality value is above 0.4 [77]. Moreover, the total variance explained by each construct was measured to confirm that all variables in each construct could explain the construct with the minimum value required. Fifty percent or above the total variance explained is acceptable [78,79].

As shown in Table 2 below, the test results display that the KMO values of all constructs are greater than 0.5 as suggested by Malhotra et al. [80] and Kaiser [81], and the p-values as a result of Bartlett's Sphericity test of all constructs are very significant at 0.000 as recommended by Mingoti [82]. Consequently, this study has verified the sample data correlation.

In addition, the commonality values of hedonic value, social value, brand identity, satisfaction, and purchase intention indicate the ideal values of communalities that reached 0.7 or above as recommended by Beavers et al. [83]. However, the commonality values from all the variables meet the minimum requirement which is greater than 0.25 [83]. This variable's communality values explain other variables in the same factors [84].

Table 2. Factor loading and reliability estimates

Constructs	Variable Code	Communalities	VE (%)	Factor Loadings	KMO	Bartlett's sphericity test (<i>p</i> -Value)	Cronbach's Alpha
Utilitarian Value (UV)	UV1	0.531	53.621%	0.728	0.700	0.000	0.707
	UV2	0.603		0.776			
	UV3	0.480		0.693			
	UV4	0.532		0.729			
Hedonic Value (HV)	HV1	0.739	75.724%	0.860	0.845	0.000	0.891
	HV2	0.752		0.867			
	HV3	0.750		0.866			
	HV4	0.788		0.887			
Social Value (SV)	SV1	0.827	85.507%	0.909	0.813	0.000	0.943
	SV2	0.857		0.926			
	SV3	0.889		0.943			
	SV4	0.848		0.921			
Perceived Risk (PR)	PR1	0.426	59.301%	0.653	0.807	0.000	0.826
	PR2	0.632		0.795			
	PR3	0.640		0.800			
	PR4	0.612		0.782			
	PR5	0.655		0.810			
Brand Identity (BID)	BID1	0.739	72.726%	0.860	0.707	0.000	0.811
	BID2	0.764		0.874			
	BID3	0.679		0.824			
Brand Image (BIM)	BIM1	0.701	68.419%	0.837	0.628	0.000	0.748
	BIM2	0.804		0.897			
	BIM3	0.547		0.740			
Brand Integrity (BIT)	BIT1	0.684	67.252%	0.827	0.694	0.000	0.754
	BIT2	0.670		0.819			
	BIT3	0.663		0.814			
Brand Interaction (BIC)	BIC1	0.697	73.039%	0.835	0.712	0.000	0.815
	BIC2	0.760		0.872			
	BIC3	0.734		0.857			
Satisfaction (SAT)	SAT1	0.765	73.434%	0.875	0.714	0.000	0.815
	SAT2	0.705		0.840			
	SAT3	0.733		0.856			
Purchase Intention (PI)	PI1	0.868	82.311%	0.932	0.698	0.000	0.884
	PI2	0.886		0.941			
	PI3	0.715		0.846			

As recommended by Hair et al. [85], this study also conducted a reliability test to evaluate the validity of the construct that comprised the research model. In the case of this study, 10 constructs were included to measure the value of Cronbach's alpha. As a result, all constructs have an ideal value of Cronbach's alpha. According to a study conducted by Kline [86], a Cronbach's alpha value greater than 0.7 is considered an ideal value [87].

5.3 Hypothesis Test

According to the research model, this study conducted three tests of multiple linear regression analysis, with a similar method shown by Padlee et al. [88] and Sağlam and Jarrar [89]. The first test aimed to evaluate the influence of the eight independent constructs, namely utilitarian value, hedonic value, social value, perceived risk, brand identity, brand image, brand integrity, and brand interaction toward one dependent construct, namely customer satisfaction. As shown in Table 3, the first regression model is statistically significant, $F(8, 306) = 59.487$, $p < 0.001$, and the value of R^2 is

considered moderately acceptable (0.609) [90], which means the eight independent constructs (4 perceived value constructs and 4 Marketing 4.0 model constructs) can explain 60.9 percent of the total variance of a dependent construct (customer satisfaction).

Table 3. Regression model fit summary and ANOVA result I

Model	R	R ²	Adjusted R ²	Std. Error of the estimates	Durbin-Watson	ANOVA	
						F	Sig.
1	0.780	0.609	0.598	0.455	2.143	59.487	0.000

Notes: Dependent construct: customer satisfaction; independent construct: utilitarian value, hedonic value, social value, perceived risk, brand identity, brand image, brand integrity, brand interaction

The first regression test revealed that both utilitarian and hedonic values have a positive relationship with the satisfaction of customers. Hence, H1a and H2a are supported. However, the other two components of perceived value which are social value and perceived risk do not have a significant impact on customer satisfaction. Thus, H3a and H4a are not supported. Moreover, the other supported hypotheses are three components of the Marketing 4.0 model (brand identity, brand image, and brand integrity), which are the inherited components from the Marketing 3.0 model. Those three components significantly and positively impact customer satisfaction. Hence, H5a, H6a, and H7a are also supported. In addition, as an upgraded component of Marketing 4.0, brand interaction does not have a significant impact on customer satisfaction (H8a is not supported).

Table 4. Hypotheses results of regression analysis I

Hypotheses	Relationship	Path Coefficients	p-value	Test Results
H1a	Utilitarian Value → Satisfaction	0.271***	0.000	Supported
H2a	Hedonic Value → Satisfaction	0.196***	0.000	Supported
H3a	Social Value → Satisfaction	-0.076 ^{ns}	0.088	Not Supported
H4a	Perceived Risk → Satisfaction	-0.032 ^{ns}	0.399	Not Supported
H5a	Brand Identity → Satisfaction	0.144**	0.004	Supported
H6a	Brand Image → Satisfaction	0.132*	0.020	Supported
H7a	Brand Integrity → Satisfaction	0.277***	0.000	Supported
H8a	Brand Interaction → Satisfaction	0.012 ^{ns}	0.809	Not Supported

Notes: ns, not significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

To evaluate the influence of perceived value and the Marketing 4.0 model on purchase intention, a second multiple regression test was conducted in this study. The eight independent constructs and one dependent construct were included in the second regression test. The second regression model is statistically significant as shown in Table 5, $F(8, 306) = 46.950$, $p < 0.001$, and the value of R² is considered moderately acceptable (0.551) [90], which means the eight independent constructs (4 perceived value constructs and 4 Marketing 4.0 model constructs) can explain 55.1 percent of the total variance of a dependent construct (purchase intention).

Table 5. Regression model fit summary and ANOVA result II

Model	R	R ²	Adjusted R ²	Std. Error of the estimates	Durbin-Watson	ANOVA	
						F	Sig.
1	0.742	0.551	0.539	0.503	1.974	46.950	0.000

Notes: Dependent construct: purchase intention; independent construct: utilitarian value, hedonic value, social value, perceived risk, brand identity, brand image, brand integrity, brand interaction

As a result of the second regression analysis test, utilitarian value and hedonic value also have a positive relationship with purchase intention; hence, H1b and H2b are supported. H3b and H4b are not supported because the path coefficients of social value and perceived risk are in a contrary relationship with the hypotheses toward purchase intention, although their significant values are acceptable toward purchase intention. All components of the Marketing 4.0 model (brand identity, brand image, brand integrity, and brand interaction) have positive impacts on purchase intention. Therefore, H5b, H6b, H7b, and H8b are supported.

For the third test, the researchers conducted a multiple linear regression analysis to assess the impact of customer satisfaction on purchase intention. As revealed in Table 7, the third regression model is statistically significant, $F(1, 313) = 375.312$, $p < 0.001$, and the value of R^2 is considered moderately acceptable (0.545) [90], which means the independent construct (customer satisfaction) can explain 54.5 percent of the total variance of a dependent construct (purchase intention).

Table 6. Hypotheses results of regression analysis II

Hypotheses	Relationship	Path Coefficients	p-value	Test Results
H1b	Utilitarian Value → Purchase Intention	0.196***	0.000	Supported
H2b	Hedonic Value → Purchase Intention	0.236***	0.000	Supported
H3b	Social Value → Purchase Intention	-0.167***	0.000	Not Supported
H4b	Perceived Risk → Purchase Intention	0.079*	0.049	Not Supported
H5b	Brand Identity → Purchase Intention	0.124*	0.021	Supported
H6b	Brand Image → Purchase Intention	0.130*	0.032	Supported
H7b	Brand Integrity → Purchase Intention	0.200***	0.000	Supported
H8b	Brand Interaction → Purchase Intention	0.161**	0.003	Supported

Notes: ns, not significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 7. Regression model fit summary and ANOVA result III

Model	R	R ²	Adjusted R ²	Std. Error of the estimates	Durbin-Watson	ANOVA	
						F	Sig.
1	0.738	0.545	0.544	0.501	1.950	375.312	0.000

Notes: Dependent construct: purchase intention; independent construct: customer satisfaction

Obviously, as a result of the third regression analysis test, customer satisfaction significantly and positively impacts the intention of customers to purchase online using e-commerce (H9 is supported).

Table 8. Hypothesis result of regression analysis III

Hypotheses	Relationship	Path Coefficients	p-value	Test Results
H9	Satisfaction → Purchase Intention	0.738***	0.000	Supported

Notes: ns, not significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 9. Summary Results of Proposed Model

Hypotheses	Relationship	Path Coefficients	p-value	Test Results
H1a	Utilitarian Value → Satisfaction	0.271***	0.000	Supported
H1b	Utilitarian Value → Purchase Intention	0.196***	0.000	Supported
H2a	Hedonic Value → Satisfaction	0.196***	0.000	Supported
H2b	Hedonic Value → Purchase Intention	0.236***	0.000	Supported
H3a	Social Value → Satisfaction	-0.076 ^{ns}	0.088	Not Supported
H3b	Social Value → Purchase Intention	-0.167***	0.000	Not Supported
H4a	Perceived Risk → Satisfaction	-0.032 ^{ns}	0.399	Not Supported
H4b	Perceived Risk → Purchase Intention	0.079*	0.049	Not Supported
H5a	Brand Identity → Satisfaction	0.144**	0.004	Supported
H5b	Brand Identity → Purchase Intention	0.124*	0.021	Supported
H6a	Brand Image → Satisfaction	0.132*	0.020	Supported
H6b	Brand Image → Purchase Intention	0.130*	0.032	Supported
H7a	Brand Integrity → Satisfaction	0.277***	0.000	Supported
H7b	Brand Integrity → Purchase Intention	0.200***	0.000	Supported
H8a	Brand Interaction → Satisfaction	0.012 ^{ns}	0.809	Not Supported
H8b	Brand Interaction → Purchase Intention	0.161**	0.003	Supported
H9	Satisfaction → Purchase Intention	0.738***	0.000	Supported

Notes: ns, not significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

In addition to the significant results of all three regression tests (the p-values are less than 0.001), all three tests of the multiple linear regression analysis have achieved a good model fit because the differences between R^2 and the adjusted R^2 are less than 0.05. Additionally, the Durbin-Watson test value of all three regression tests resulted in a range value of 1.9 to 2.2, which indicates that all three regression models of this study are in a normal distribution.

In conclusion, this study found that the hypotheses involving the independent variables of social value and perceived risk, and the hypothesis that has a relationship between brand interaction and customer satisfaction are not supported. However, the rest of the hypotheses are supported as summarized in Table 9.

6. DISCUSSION

In examining the effect of perceived value on purchase intention and customer satisfaction, this study used hedonic, utilitarian, and social values as the components of perceived benefits and also included perceived risk by referring to a study conducted by Gan and Wang [6]. Consistent with the previous studies, this study found that hedonic and utilitarian values positively impact purchase intention and customer satisfaction (e.g. [6,37,42,91-93]). The more utilitarian and hedonic values that customers acquire when purchasing online through an e-commerce platform, the more intention to purchase and satisfaction they will build. This study found that among the components under the perceived value, the utilitarian value is the strongest factor influencing customer satisfaction and purchase intention. The utilitarian value reflects the functional benefit and performance outcome, whereas the hedonic value is related to enjoyment, emotional benefit, or self-fulfillment [37,39]. Regarding the utilitarian value of purchasing online using e-commerce, customer satisfaction, and purchase intention will be influenced not only by the product's reliability and price worth but

also by the convenience level of using e-commerce and how quickly to find the appropriate products. In terms of hedonic value in the context of e-commerce, customer satisfaction and purchase intention are also influenced by the level of enjoyment, excitement, and emotional feeling that customers obtain when using e-commerce. Therefore, taking the hedonic value into account in the formation of a product strategy, such as improving the customer shopping experience, is as important as considering the utilitarian value [6].

Unlike prior studies that examined the impact of social value on customer satisfaction and purchase intention in a social commerce context [6], by examining in an e-commerce context, this study unexpectedly yielded a negative impact of the social value factor on purchase intention and customer satisfaction, though the result is not significant on customer satisfaction. Previous studies [41,94] have suggested that customers pursue not only utilitarian value and hedonic value but also social value in the context of social commerce, but based on the finding in this study, the e-commerce users may perceive that social value is not as necessary as they use social media platforms to purchase online. Most e-commerce platforms provide a feature for users to review the products and services for suggesting to other users with the same preferences and interests [95,96]. Since e-commerce users do not pursue social value, the users who review products and services may not expect recognition from others. This finding may increase the curiosity about the specific reasons users have for giving online reviews on an e-commerce platform besides expecting recognition from others.

By referring to a study conducted by Gan and Wang [6], this study included the risks related to the product performance, financial loss due to a lack of warranty, personal confidentiality, insecurity payment, and post-purchase guarantee for the components of perceived risk to evaluate the perceived risk effects toward customer satisfaction and purchase intention in the context of e-commerce. Although not a significant result, this study found that the perceived risk factor has a negative impact on customer satisfaction. Unexpectedly, perceived risk has a positive impact on purchase intention. Among the components related to perceived risk, personal confidentiality and payment system are the most contributing factors that have a negative impact on customer satisfaction and purchase intention. Therefore, the risks related to the product performance, financial loss due to a lack of warranty, and post-purchase guarantee have the least negative effects on customer satisfaction and purchase intention. This finding may also increase curiosity about the factors that affect the risk appetite of e-commerce users especially related to product performance, financial loss due to a lack of warranty, and a post-purchase guarantee.

In addition to perceived value, this study also included Marketing 4.0, which comprises brand image, brand identity, brand integrity, and brand interaction [7] to examine their effects on purchase intention and customer satisfaction. In referring to a study conducted by Dash et al. [7], this study measured brand identity using an analysis of reputation, sophistication, and signage. The brand image was measured through an analysis of mystery, sensuality, and intimacy. Brand integrity was examined using the

dimensions of trust, expertise, and sincerity. The measurement items of brand interaction chose three of four items that are suggested by Schivinski [97] and applied by Dash et al. [7], namely consumption, contribution, and creation. This study did not take the distribution item into account in the brand interaction to minimize the confusion of the respondents while answering the questionnaire. This is still acceptable since the specified minimum number of measurement items required is three items [98]. Consistent with the prior studies, brand identity and brand image significantly and positively impact customer satisfaction and purchase intention [7,99–101]. Likewise, brand integrity significantly and positively affects customer satisfaction and purchase intention. The result related to brand integrity is also consistent with prior studies [29, 30]. This study also found that brand integrity is the most salient factor influencing customer satisfaction and resulting in a high and positive relationship between brand integrity and purchase intention. Consequently, maintaining and improving trust with the customer, the expertise of the products or services offered to the customer, and sincerity to the customer are important in the formation of a marketing strategy to keep or even improve customer satisfaction and purchase intention. Interestingly, brand identity, brand image, and brand integrity which compose the Marketing 3.0 model and inherit components of the Marketing 4.0 model were found to significantly and positively impact both customer satisfaction and purchase intention. Although brand interaction does not have a significant impact on customer satisfaction, this upgraded component of Marketing 4.0 significantly and positively affects purchase intention. This finding still requires further exploration to know the reason for the different impacts between brand interaction toward customer satisfaction and brand interaction toward purchase intention. Moreover, by integrating the findings of this study that brand interaction positively influences purchase intention and social value negatively influences purchase intention, e-commerce users may have more interest to interact with the brand than interacting with other users when using the e-commerce platform.

Obviously, consistent with prior studies, the results of this study show that customer satisfaction has a significant and positive impact on purchase intention (e.g. [6,7,73]). The more satisfied users are from using e-commerce, the more intent they will have to purchase using e-commerce.

7. IMPLICATIONS AND LIMITATIONS

From a theoretical perspective, this study contributes to giving different perspectives from different cultures to other researchers who conduct an observation or analysis, especially in the e-commerce context. Based on the results, several relationships that were assessed in this study were found to be different compared to prior studies, such as the influence of social value and perceived risk toward satisfaction and purchase intention, as well as the influence of several components in the Marketing 4.0 model. Different cultures will have different points of view, especially while purchasing online using an e-commerce platform. Thus, the different findings resulting in this study will contribute to other researchers who analyze the behavior and perceptions of people to

purchase online using e-commerce platforms especially related to the constructs and variables implied in this study. Moreover, in terms of utilitarian value and hedonic value in the e-commerce context, the findings of this study confirm the findings of previous studies that the utilitarian and hedonic values are important to develop the intention of customers to purchase and also to satisfy customers, even though there is a different habit or culture. In addition, since there are still few studies related to the Marketing 4.0 model, this study also extends research related to the Marketing 4.0 model in the context of e-commerce and integrated with the customer perceived value.

From a practical perspective, this study contributes to the suggestion that online resellers should offer their products using an e-commerce platform. Since this study found that utilitarian value and hedonic value have a positive relationship toward satisfaction and the intention of customers to purchase, online resellers should consider these influential factors to reach the appropriate target market. Different types of target markets are usually prone to have a different perceived benefit that is expected to obtain, for instance, related to product reliability and worth the price. On the other hand, since the convenience of using e-commerce to purchase online has a significant impact on satisfaction and purchase intention, this study also contributes to e-commerce platform providers. The more conveniently people use e-commerce, the more valuable the e-commerce platform is for the customer. Hence, the design of an e-commerce platform is also important. Besides that, this study also found that the elements of Marketing 4.0 have a positive impact on purchase intention. Thus, an e-commerce company should also consider reaching more users by using the Marketing 4.0 model in its marketing strategy.

Collecting broader data is necessary to give supporting information from a global perspective. The uniqueness of the respondents will give diverse results for the research. Hence, the findings of this study call for more exploration, and certainly different types of respondents will have a comprehensive perspective in a broader view, especially in an e-commerce context. Analyzing different sample data from different respondents across cultures hopefully will give a different point of view regarding customers' perceived risk and social value in the context of e-commerce. Moreover, by adapting from a study conducted by Gan and Wang [6], the measurement items of perceived risk in this study are not categorized in more detail like that of perceived benefit. Thus, categorizing the measurement items of perceived risk in more detail will give a more comprehensive point of view about customers' perceived risk in the e-commerce context, especially in finding the effect of perceived risk on customer satisfaction and purchase intention.

8. CONCLUSION

A combination of two research models from Gan and Wang [6] and Dash et al. [7] was applied in this study. Consistent with the results of prior studies, this study found that the hedonic and utilitarian values have a significant and positive influence on

satisfaction and the intention to purchase online using an e-commerce platform. However, the other components of perceived value which are social value and perceived risk are not supported based on the hypotheses of this study. Both social value and perceived risk do not significantly impact customer satisfaction. Even though both components have a significant impact on purchase intention, social value and perceived risk have relationships toward purchase intention which are contrary to what the hypotheses expected. Interestingly, the Marketing 4.0 components that can satisfy customers are the inherited components from the Marketing 3.0 model. Additionally, all the Marketing 4.0 components have a significant and positive impact on the intention of customers to purchase online using an e-commerce platform. Consistent with previous studies (e.g. [6,7,73]), customer satisfaction has a significant and positive impact on the intention of customers to purchase in the context of e-commerce. The more satisfied customers are in using e-commerce, the more intent they will have to purchase using e-commerce.

APPENDIX

(1) Utilitarian value (UV) ([6,40,42]):

- UV1: quality of products purchased from this e-commerce is reliable.
- UV2: products purchased from this e-commerce offer good value for money.
- UV3: shopping on this e-commerce would allow me to quickly find out the appropriate products.
- UV4: using this e-commerce for shopping would be a convenient way.

(2) Hedonic value (HV) ([6],[40]):

- HV1: using this e-commerce for shopping is one that I would enjoy.
- HV2: using this e-commerce for shopping would make me feel good.
- HV3: using this e-commerce for shopping is one that I would feel interesting.
- HV4: using this e-commerce for shopping would give me pleasure.

(3) Social value (SV) ([6],[40]):

- SV1: using this e-commerce for shopping would help me to feel acceptable.
- SV2: using this e-commerce for shopping would make a good impression on others.
- SV3: using this e-commerce for shopping would improve the way I am perceived.
- SV4: using this e-commerce for shopping would give its owner social approval.

(4) Perceived risk (RISK) ([6],[42]):

- PR1: the product I purchased on the e-commerce likely failed to meet the performance requirements originally intended by the purchase.
 - PR2: shopping on this e-commerce will likely cause me to suffer a financial loss due to the lack of warranty in case of faults.
 - PR3: shopping on this e-commerce will likely cause me to lose control over the privacy of my personal and payment information.
 - PR4: the online payment system is likely unsafe.
 - PR5: likely, the services after the sale may not be guaranteed.
- (5) Brand Identity (BID) ([7])
- BID1: The logo of the E-commerce brand looks good
 - BID2: The brand from E-commerce looks cool
 - BID3: The brand from E-commerce has a good reputation
- (6) Brand Image (BIM) ([7])
- BIM1: I found the uniqueness of this E-commerce brand
 - BIM2: This E-commerce brand is so attractive that I really want to use it
 - BIM3: I feel an emotional bond with this E-commerce brand
- (7) Brand Integrity (BIT) ([7])
- BIT1: Trust (in a brand) is very important for me
 - BIT2: This E-commerce brand has expertise in online sales
 - BIT3: This sincerity of this E-commerce brand in providing services is very important to me
- (8) Brand Interaction (BIC) ([7])
- BIC1: Using this E-commerce brand strengthens my relationship with this brand
 - BIC2: I believe in contributing (as a consumer) to the brand to make it better
 - BIC3: The collaboration between me and this E-commerce brand is very important
- (9) Satisfaction (SAT) ([6],[10],[102]):
- SAT1: I am satisfied with my decision on using this e-commerce for shopping.
 - SAT2: my choice to use this e-commerce for shopping is a wise one.
 - SAT3: my experience with using this e-commerce for shopping is satisfactory.

(10) Purchase intention (PI) ([6],[103]):

- PI1: I predict that I would shop on this e-commerce in the future.
- PI2: I intend to shop on this e-commerce in the future.
- PI3: I will recommend others to purchase on this e-commerce.

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