THE EFFECT OF ELECTRONIC WORD-OF-MOUTH ON BRAND IMAGE, PERCEIVED VALUE AND PURCHASE INTENTION OF THE SMARTPHONE'S CONSUMER

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Abstract

Electronic Word-of-mouth (eWOM) has been recognized as one of the most influential resources of information transmission. The purpose of this study is to investigate the effect of electronic word-of-mouth on brand image, perceived value and purchase intention of consumers to smartphone brands. Although the direct link between electronic word-of-mouth (eWOM) and purchase intention has been considered, few studies have examined the benefits of eWOM on brand image and perceived value in order to facilitate this link. Therefore, the purpose of this study is to investigate the effect of eWOM on brand image and perceived value to enhance purchase intention from the view of social capital theory. Using a sample of 379 consumers from smartphone sector in Vietnam, the study identifies how brand image, perceived value are enhancing purchase intention by the effect of eWOM. The findings have implications for the use of eWOM to foster the relationship between brand image, perceived value, and purchase intention. Then managers can apply some results to have the appropriate strategy for business short and long-term development.

Key words: eWOM, Brand image, Perceived value, Purchase intention, Smartphone

JEL Code: M31

Introduction

Electronic Word-of-mouth is one of the most favorite information sources for consumers (Adjei et al., 2009; Zhu and Zhang, 2010). According to Nielsen (2014), 70 pecent of the global online consumers have considered online advisting platform when comprehensive information offered properly.

eWOM is always a topic which attractes the attention and excitement of the marketing researchers (eg. Jalilvand and Samiei (2012), Kamtarin (2012), Sandes and Urdan (2013), ManouchehrAghababaei and Syed (2014)). Jalilvand and Samiei (2012) found that eWOM is one of the most effective factors influencing brand image and purchase intention of brands in

consumer markets in the automobile industry of Iran. Sandes and Urdan (2013) conducted a study entitled "effect of electronic word-of-mouth advertising on consumer's behavior: empirical and explanatory studies". This research aimed to examine the effect of eWOM advertising on consumer's behavior. The empirical and explanatory studies indicated that exposure to any comment affects brand image. Management reduces negative feedback from the effect on brand image, but does not change the effect on purchase intention. On the other hand, Kamtarin (2012) carried out a study entitled "The Effect of Electronic Word of Mouth, Trust and Perceived Value on Behavioral Intention from the Perspective of Consumers". The aim of this research is to examine factors influencing the formation of Behavioral Intention in Isfahan City. In this regard, factors were considered in the overall format of the Behavioral Intention, eWOM, perceived value and trust. Besides, there is the research of Syed Mehdi Jalali ManouchehrAghababaei (2014) which again confirms the relation of eWOM, brand image and purchase intent. In this study, the author added a new factor that affects eWOM, namely the brand equity. In Vietnam, the research into eWOM is quite rare with only one study found. Huynh Thi Nhu Ngoc (2013) found the impact of eWOM on purchase decision in the cosmetics and beauty industry through variables such as the confidence of eWOM sources, the reliability of eWOM information, the interest of consumers, consumer experiences and acceptance of eWOM.

Vietnam is one of the markets with the highest proportion of smartphone users, nearly catching up with the markets of developed countries in near future. Smartphone market share in Vietnam has overcome that of featurephone, with the percentage of smartphone users accounting for 52% of mobile users (Nielsen, 2014). When intending to purchase high-tech products as smartphones, which requires a lot of knowledge and experience, Vietnamese customers often search for comments, reviews, clips showing the comparative advantages and disadvantages between smartphones via technology forums or social networks. While Vietnamese marketers may spend a large amount of budget on elaborately conceived advertising campaigns, little attention has been given to a simple and free factor that can really help customers to make up their minds: an eWOM recommendation from a trusted source. There is little empirical research actually describing the relationship among eWOM, brand image, perceived value and purchase intention in Vietnam. Therefore, the aim of this study is to determine the effect of eWOM on brand image, perceived value and purchase intention of consumers to smartphone brands. Based on the research findings, managers can apply some results to devise the appropriate strategy for short and long-term business development.

1 Literature Review

1.1 Electronic Word-of-Mouth

Electronic Word-of-mouth can be described as a communication way that provides information to consumers about sellers and usage of products and services through internet-based technologies (Westbrook, 1987). Some sources for eWOM are blogs, virtual communities, newsgroups, product review websites, fan clubs, e-mail, etc. According to Hennig (2004), electronic word-of-mouth is “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet”. eWOM is generally acknowledged to play a considerable role in influencing and forming consumer attitudes and behavioral intentions (e.g. Chatterjee, 2001; Chevalier and Mayzlin, 2006; Herr et al., 1991; Kiecker and Cowles, 2001; Sen and Lerman, 2007; Smith and Vogt, 1995; Weinberger and Dillon, 1980; Xia and Bechwati, 2008).

1.2 Purchasing intention

Intent to purchase is a kind of decision in which studied why a customer purchases a brand in particular. Constructs like considering something purchasing a brand and anticipating to purchase a brand aids to scope the intentions of purchasing (Porter, 1974). The term intention is a plan to purchase something in the near further (Peter & Olson, 2008). Purchase intention “is the single best predictor of actual behavior” (Peter and Olson, 2008). Purchase intention can measure the possibility of a consumer to buy a product, and the higher the purchase intention is, the higher a consumer’s willingness is to buy a product (Dodds, et al., 1991; Schiffman & Kanuk, 2000).

1.3 Brand image

Keller (1993) defined brand image as "perceptions about a brand as reflected by the brand associations held in consumer memory". Brand image includes consumers’ experience and evaluations related to brand (Wang and Yang, 2010; Bian and Moutinho, 2011). In addition, customer’s behaviour will be affected and determined by brand image (Burmann et al., 2008).

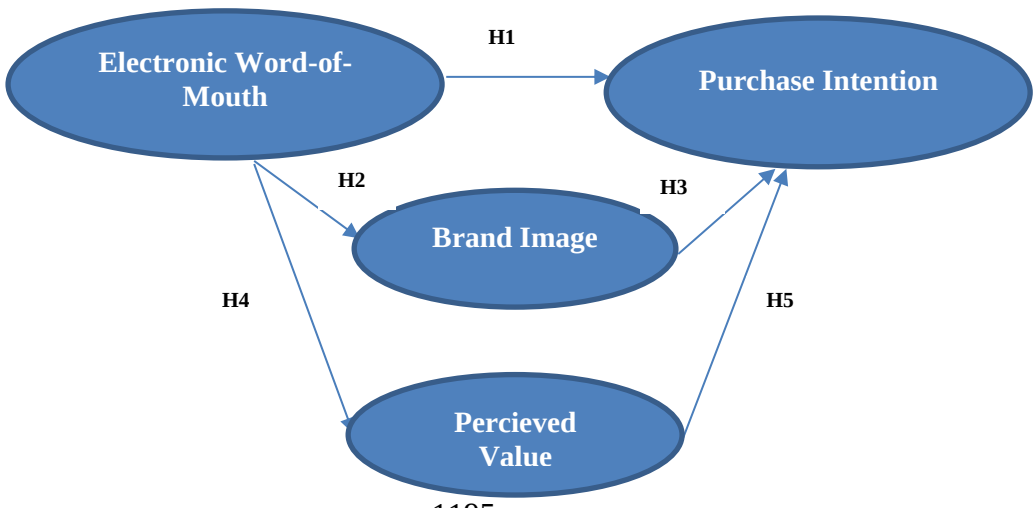
1.4 Perceived value

Zeithamal (1988) suggested that perceived value is a "consumer's overall assessment of the utility of a product or service based on perceptions of what is received and what is given". Perceived value is not determined by the sellers or owners, but by the customers based on their personal perceptions of product or service compared to the price they have already paid (Anderson et al., 1994). In addition, Dodds et al. (1991) also defined perceived value as a "trade-off between quality and benefits they receive in the product or service relative to the sacrifice they perceive in paying the price". According to Parasuraman and Grewal (2000), perceived value has been identified as having four components: Acquisition value is the benefit buyers believe they are getting by acquiring a product; transaction value is the pleasure of getting a good deal; in-use value is the utility derived from using the product; and redemption. Sweeney and Soutar (2001) developed the perceived value's scale as having four values: functional value, emotional value, social value and monetary value. Also Sanchez et.al (2006) developed the perceive value's scale as having five components: functional value in installation, functional value of contact personnel, functional value of purchase quality, functional value of price, emotional value and social value.

2 Research Hypotheses

An overview on what has been mentioned above has led to the insight that eWOM can have effects on variables such as brand image, percieve vale or purchase intention. In this section we will develop the research model that provides a basis for the assumed effect and test this effect in a new empirical study. By using of the models represented by ManouchehrAghababaei and Syed (2014) , Jalilvand and Samiei (2012), Kamtarin (2012), Guren et al. (2006), the research model will be as follows (figure 1).

Fig. 1: Conceptual model of research



Source: Author own research model

Purchase intention indicates that consumers will follow their experience, preference and external environment to collect information, evaluate alternatives, and make purchase decision (Zeithaml, 1988; Dodds et al., 1991; Schiffman & Kanuk, 2000; Yang, 2009). Meanwhile, product reviews that consumers post on the internet constitute one of the most important forms of online WOM communication (Schindler and Bickart, 2005; Sen and Lerman, 2007). In today's Internet era, consumers seek information through internet, gathering pre-purchase product information (Adjei et al., 2009; Zhu and Zhang, 2010) that majorly influences their purchase intentions (Zhang and Tran, 2009) and share the experience they had. In summary, eWOM has a strong impact on consumers's purchase intention (East R et al, 2007). Based on the aforesaid observations, the following hypotheses are proposed:

H1. eWOM has a positive impact on purchase intention.

Bambauer-Sachse and Mangold (2011) supported that eWOM has become a permanent element of the online marketing mix by contributing a great deal to the brand image and the purchasing decisions of online consumers. Additionally, Shukla (2011) indicated that interpersonal influences and branding cues shape consumers' luxury purchase intentions. The results of his study showed that brand image was a significant moderator between normative interpersonal influences and luxury purchase intentions. Moreover, Wang (2006) used brand image as independent variable, product category as moderator, and purchase intention as dependent variable and found that the higher the brand image is, the higher the purchase intention is. Based on these observations, the following hypotheses are proposed:

H2. eWOM has a positive impact on brand image
H3. Brand image has a positive impact on purchase intention

Finally, Dodds and Monroe (1985) proposed that perceived value is an important factor in consumers' purchasing decision process, and consumers will buy a product with high perceived value. Dodds and Monroe (1985) and Zeithaml (1988) contended that consumers will evaluate what they give and what they get in their subjective perception when they are

buying a product/service. According to Utility Theory, the probability of purchase intention will increase, when consumers acquire more benefits than they pay for a product (Dickson & Sawyer, 1990). Thaler (1985) also considered that perceived value is an important antecedent to influence consumer purchase intention because it is the composition of transaction utility and acquisition utility. Empirical results support such a perspective by demonstrating that perceived value leads to purchase intention (Chu and Lu, 2007; Dodds, Monroe and Grewal, 1991) and the spread of information via word of mouth (Babin, Lee, Kim and Griffin, 2005; Pihlström and Brush, 2008). Recently, Kamtarin (2012) indicated that percieve value has a positive impact on purchase intention. Guren et al. (2006) showed that eWOM may impact customer perceptions of the product and C2C (customers to customers) know-how exchange positively impacts the customer's perceived overall value of the firm's offering. Based on these observations, the following hypotheses are proposed:

H4: eWOM has a positive impact on perceived value
H5: perceived value has a positive impact on purchase intention

3 Method

Research method includes two stages; first, qualitative research begins with customer and expert interview which aims to find out whether the translation from English to Vietnamese of all scales is suitable for the smartphone market in Ho Chi Minh or not. Experts with plenty of experience in using and testing smartphones and experts with experience in conducting online marketing will provide advice and revisions for scale items. Then group interview was implemented with 27 customers divided into 4 groups, to give opinion about items which was presented in the official interview. After that, quantitative research was put into action. The survey was conducted for about two months in Ho Chi Minh city, Vietnam. A convenience sampling method was used with self-administered questionnaires which were distributed online and through surveyors at firms and universities. Survey administrators asked whether the customers had the purchase intention for smartphone and used social network for advice.
The survey consisted of four parts covering the following issues: (1) eWOM; (2) Brand image; (3) Perceived value (3) Purchase intention; and (4) Demographics.

In the eWOM section, with six items, respondents were asked about using online WOM communications (Bambauer-Sachse and Mangold, 2011). In the brand image section, with three items, respondents were asked to rate their level of agreement on the importance of

brand image regarding smartphone X (Jalilvand and Samiei, 2012). In perceived value section, with 13 items, respondents were asked about using Perceived value scale (Yang and Jolly, 2009). In the purchase intention section, with three items, respondents were asked about their intention to purchase this automobile (Shukla, 2011). Measurement of eWOM, brand image, perceived value, and purchase intention were carried out using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The measures are presented in Table I. The last section of the questionnaire gathered demographic information regarding the respondents, such as age, gender, education, monthly income and career.

Regarding data analysis, construct reliability of all four dimensions was assessed with Cronbach's alpha coefficient value. Next, explanatory factor analysis (EFA) was used with SPSS 16.0 before confirmed factor analysis (CFA) and structural equation modeling (SEM) was implemented through AMOS 18.0 to evaluate proposed research model and test hypotheses.

Tab. 1: Measure

Electronic word-of-mouth *Bambauer-Sachse and Mangold (2011)*	**eWOM1**	I often read other consumers' online product reviews to know what products/brands make good impressions on others
	eWOM2	To make sure I buy the right product/ brand, I often read other consumers' online product reviews
	eWOM3	I often consult other consumers' online product reviews to help choose the right product/ brand
	eWOM4	I frequently gather information from online consumers' product reviews before I buy a certain product/brand
	eWOM5	If I don't read consumers' online product reviews when I buy a product/brand, I worry about my decision
	eWOM6	When I buy a product/brand, consumers' online product reviews make me confident in purchasing the product/brand
Brand image Jalilvand and Samiei *(2012*)	**BI1**	In comparison to other products/brand, this product/brand has high quality
	BI2	This product/brand has a rich history
	BI3	Customers (we) can reliably predict how this product/brand will perform
Perceived Value *Yang and Jolly (2009*)	**PV1**	This product is reliable
	PV2	This product provides full of functionality
	PV3	This product has more rich features than similar products
	PV4	This product fulfills my needs well

	PV5	This product has better quality than similar products
	PV6	This product is widely used
	PV7	Using this product makes a good impression on other people
	PV8	Compared to other products, this one has much better value for money.
	PV9	The price of using this product is economical
	PV10	I feel good when I use this product
	PV11	Using this product is interesting
	PV12	Using this product gives me pleasure
	PV13	This product make me want to use it
Purchase Intention *Shukla (2011*)	**PI1**	I would buy this product/brand rather than any other brands available
	PI2	I am willing to recommend others to buy this product/brand
	PI3	I intend to purchase this product/brand in the future

Source: Authors' summary

4 Research finding

Cronbach's alpha was calculated to evaluate reliability to all constructs. When Cronbach's alpha did not reach the cutoff of 0.7 and the corrected item-total correlations was below 0.3 (Nunnally and Bernstein, 1994), the items lowering the construct reliability were deleted to increase alpha and for the parsimony purpose. According to the Cronbach's alpha results from SPSS 16.0, all the construct reliabilities were above 0.7 and the corrected item-total correlations were above 0.3; therefore, no item was removed from the construct to raise the scale reliability. Then, all items divided into four constructs were put into explanatory factor analysis.

According to Hair et al. (2010), factor loading should be more than 0.5 to get the empirical significance; hence, items whose factor loading below that cut off point were deleted from the construct.

Confirmatory factor analysis was performed to assess the items of the constructs with AMOS 18.0. The measurement model fit was satisfactory: $\chi 2 = 387.489$, df = 203, p=0.000; root mean square error of approximation (RSMEA) = 0.049; goodness-of-fit index (GFI) = 0.916; Tucker and Lewis index (TLI) = 0.951; comparative fit index (CFI) = 0.957. To assess the covergent validity, Gerbing and Anderson (1988) suggested that the standardized loading values must be over 0.5 and p-value should be less than 0.01. The results showed that all the conditions were satisfied, which demonstrated adequate convergent validity.

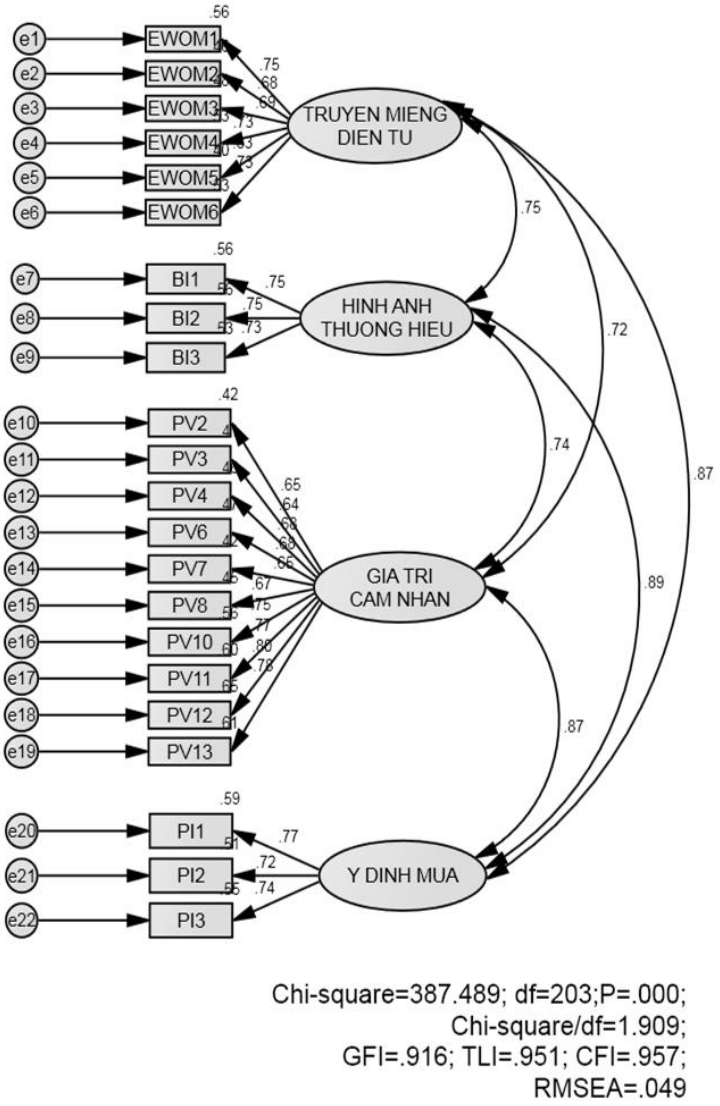
Tab. 2: Construct reliability and validity

Construct	Cronbach's Alpha	Item	Standardized loading	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EWOM *(CR= 0.853, AVE = 0.493***)**	0.853	**eWOM1**	0.747	.671	.822
		eWOM2	0.681	.628	.830
		eWOM3	0.691	.623	.832
		eWOM4	0.728	.668	.822
		eWOM5	0.630	.585	.837
		eWOM6	0.730	.658	.824
BI *(CR = 0.788, AVE = 0.553)*	0.788	**BI1**	0.751	.634	.704
		BI2	0.751	.628	.712
		BI3	0.729	.621	.719
PV *(CR= 0.910, AVE = 0.505)*	0.909	**PV2**	0.647	.615	.902
		PV3	0.638	.613	.902
		PV4	0.679	.644	.901
		PV6	0.685	.656	.900
		PV7	0.651	.612	.903
		PV8	0.670	.645	.901
		PV10	0.751	.709	.897
		PV11	0.772	.732	.895
		PV12	0.804	.760	.894
		PV13	0.784	.724	.896
PI *(CR= 0.786, AVE = 0.551)*	0.786	**PI1**	0.768	.620	.715
		PI2	0.716	.596	.741
		PI3	0.742	.659	.670

Source: Calculation from data and Authors' calculation

To assess internal consistency of each latent variable, the composite construct reliability (CR) values were measured. Because all constructs displayed the value greater than 0.7, an acceptable level of composite reliability (Fornell and Larcker, 1981), it was concluded that each construct has internal consistency. In addition, it is also important to evaluate discriminant validity of each construct. In general, the average variance extracted (AVE) should be greater than 0.5 (Fornell and Larcker, 1981) and the results were consistent with the conditions. Table 2 and Figure 2 present all the results from Cronbach's alpha, explanatory factor analysis to confirmatory factor analysis of the research.

Fig. 2: Confirmatory factor analysis of the research



Source: Calculation from data

Structural model

Figure 3 shows the overall explanatory power, the standardized path regression coefficients that indicate the direct influences of the predictor upon the predicted latent constructs for the model, and associated t-values of the paths of the research model. The goodness-of fit statistics show that the structural model fit the data reasonably well. The three-item model produced a Chi-square =417 (df=204, p= 0.000). The CMIN/df = 2.048 < 3 and this new value is within an acceptable cut-off value range, from 1.0 to 3.0. The goodness of fit index (GFI = 0.910, with 1 indicating maximum fit), comparative fit index (CFI = 0.950, 1 =

maximum fit), Tucker-Lewis index (TLI = 0.944, 1 = maximum fit) met the proposed criterion of 0.90 or higher (Bentler and Bonett, 1980). Finally, the root mean square error of approximation (RMSEA = 0.053, with values <0.08 indicating good fit) (Steiger, 1990), one of the indices best suited to our model with a large sample, indicated that the structural model was a reasonable fit.

SEM was used to test the proposed hypotheses which are presented in Table 3. Among the five relationships tested, they were found to be significant at the a level of 0.01. eWOM had a significantly positive impact on brand image, with $\beta = 0.796$, $t = 11.155$ and $p = 0.000$, indicating that customers' e-WOM communication was an important antecedent of brand image. eWOM also had a strong positive effect on purchase intention ($\beta = 0.328$, $t = 3.301$ and $p = 0.000$). These results suggest that compared to other promotional media, e-WOM communication plays a major role as an important antecedent of customer's behavioral intentions. In addition, eWOM had a significantly positive impact on perceive value, with $\beta = 0.756$, $t = 10.335$ and $p = 0.000$. Finally, brand image influenced purchase intention, with $\beta = 0.361$, $t = 4.382$ and $p = 0.000$, and perceived value had a strong positive effect on purchase intention with $\beta = 0.380$, $t = 5.700$ and $p = 0.000$.

To examine the interplay between the two variables that affect intention to purchase, an analysis of the standardized direct, indirect and total effects was conducted. Of particular interest is the direct effect of eWOM on intention to purchase (0.328). The analysis also indicates that e-WOM has an indirect impact on purchase intention through its impact on brand image (0.361) and perceived value (0.380).

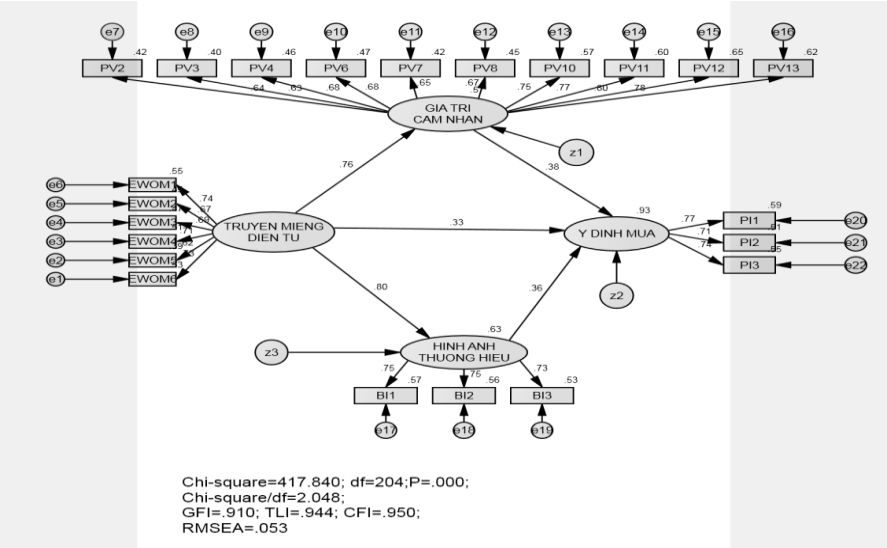
Tab. 3: Decomposition of total effects for research model (n =379)

Dependent variable	Independent variable	Estimate	Standardized estimate	Standard error	t-value	p-value
Percieve Value	Electronic Word-of-Mouth	.685	.756	.066	10.335	***
Brand Image	Electronic Word-of-Mouth	.788	.796	.071	11.155	***
Purchase Intention	Percieve Value	.408	.380	.072	5.700	***
Purchase Intention	Brand Image	.355	.361	.081	4.382	***

Dependent variable	Independent variable	Estimate	Standardized estimate	Standard error	t-value	p-value
Purchase Intention	Electronic Word-of-Mouth	.320	.328	.097	3.301	***

Source: Calculation from data

Fig. 3: Standardized regression coefficients



Source: Calculation from data

Conclusion, implications and limitations

This study provides valuable insight into the measurement of eWOM, brand image, perceived value and purchase intention of consumers to smartphone brands in Ho Chi Minh City. Research shows that eWOM has a positive impact on purchase intention, on brand image and on perceived value. In particular, the analysis also indicates that eWOM has an indirect impact on purchase intention through its impact on brand image and perceive value.

Our results have several important implications. Above all, eWOM has a significant influence on purchase intention, brand image and perceived value of consumers to smartphone brands. The business enterprises in the smartphone market should pay attention to the influence of electronic word-of-mouth to build brand image, increase the perceived value and purchase intention. This will be the basis for those business enterprises in the smartphone market to consider their marketing programs in order to achieve high efficiency with a reasonable cost.

In particular, the analysis of this study also indicates that eWOM has an indirect impact on purchase intention through its impact on brand image and perceived value. This result implies that building a good brand image through eWOM will positively impact the

purchase intention, which is the original step to attract the attention and trust of customer, thence helping to increase sales and competitive advantage. In addition, the perceived value of the customers is a significant factor affecting the purchase intention. So, if customers feel good perceived value in any smartphone brand, it will have much higher chance to be selected. The implication of this result is that business enterprises should pay attention to potential customers, who haven't touched their products and those who are going to buy smartphone though social networks.

Nevertheless, this study also has some limitations. The findings of this study are from a sample in Ho Chi Minh City as a result of the limitations of time and resources, so generalization of the findings is limited. Future research should gather information in other provinces in Vietnam so as to test the results again. Additionally, since this study was conducted on smartphone brand, the results cannot be generalized to other products. Future studies are recommended to investigate the issue with different products and different groups of consumers.

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