

Determinants of Customer Satisfaction and Its Implications on Word of Mouth in E-Commerce Industry: Case Study in Indonesia

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ABSTRACT

The aim of this study is to analyze the effect of several antecedents of customer satisfaction in e-commerce industry, namely web design, time saved, product variety, and delivery performance, and their consequences on customer satisfaction and word of mouth. The investigation used purposive sampling with repeat buyers as criteria. 100 samples were eligible and feasible to test after validity and reliability are concluded. The results show that website design, time saved, and delivery performance are significantly influence on customer satisfaction. In the meantime, website design, time saved, and product variety were effect on word of mouth. In addition, the result also confirms the hidden role of customer satisfaction as intervening variable partially.

Keywords: electronic commerce; word of mouth; satisfaction; website design; time saved; product variety; delivery performance

INTRODUCTION

The evolution of technology is moving rapidly in helping humankind to achieve their need and willingness in fast and easy way. The emerge of internet allow people not only to communicate in wide range area, but also to search information, introduce their products and services, and run the business transactions. The advance of internet also change how the business is conducted (Kaur, 2011) or the business paradigm in a whole. The nature of internet that boundary less is highly advantage for both sellers and buyers in the terms of physical stores, interaction, and transactions.

E-commerce is an application form of internet economy along e-business (Fichter, 2003) in sharing business information, maintaining business relationship, and conducting business transactions by means of telecommunication networks (Zwass, 1996). In other word, e-commerce is the virtual based business application where the parties involved in the activity mostly interact through electronically rather than physical contact in exchange value.

In recent days, e-commerce has affected business activities such as retail, banking, transportation, etc. The empowerment of website and online application are the main key to attractiveness of e-commerce. Although it can utilize another media such as email or social media, but the popularity of those are significant.

In the context of marketing literature, e-commerce refer to an effort to market a products or services, and to build customer relationship among seller and buyer by using electronic media or internet (Kotler & Armstrong, 2014). It is undeniable that e-commerce has become a protagonist in the business world lately.



Since the rivalry among the firms in the industry become tight and the new entrant of competitors are popped out, all existing market player need to maintain customers by enhancing their satisfaction. As the main key to the brand and company sustainability, customer satisfaction has become the main issue in maintain customer relationship.

Hence, company need to provide several elements to support their efforts in affecting customer satisfaction, namely: (1) website design, the visual appearance that act as an interfere between buyers-sellers (Luo, Ba, & Zhang, 2012). They argued that a good design had a greater chance in making customer satisfaction. (2) Time saved, it is a comparison between time available and the number of tasks and duration of time need to perform (Richbell, 2007). (3) Product variety, it is a number or product collection differentiated by particular things to meet customer diversified requirements (Elmaraghy, Elmaraghy, Scuch, & Piller, 2013), and (4) Delivery performance, it represents the company ability to distribute products and services safely and on schedule.

This study was conducted in order to analyze whether the factors described above could actually affect customer's satisfaction in the Indonesian e-commerce industry.

RESEARCH METHOD

This study was conducted by explanatory approach and used non probability sample with purposive sampling method to get primary data. A 100 participants are eligible were those who made online purchasing more than once.

A total of 20 items parameter of questioners were used in this investigation represent six variables. 4 items parameter of website design were adopted from Guo et al., (2012) while 4 item parameter of time saved adapted from (Devarai et al., 2002). Meanwhile, 4 items parameter represented of product variety and delivery performance were adapted from (Guo et al., 2012). In the meantime, the instrument of word of mouth parameters were took from (Bearden, Netemeyer, & Haws, 1993). Furthermore, the questionnaire of this research used 7th points Likert-like scale.

The collection data were carefully checked and reviewed in order to ensure that all of the questionnaires were properly and completely filled by the respondents. After completing the checking process of the questionnaires, the data were then will be analyzed using PLS-SEM method in order to know the relationship between variables.

RESULTS AND DISCUSSIONS

Out of 120 questionnaires which were distributed, a total of 100 were usable, and therefore were further used in this research. Before conducted an analysis on the data, the respondent's demographic analysis was conducted in order to know the profile of the respondents. Based on the result, it was revealed that female was the majority of the respondents (67%) rather than male (33%). Meanwhile, the age range vary in three classification. Under 20 years old recorded 1% only, while respondents between 21 to 23 years old were dominant as much as 97%, and the rest over 23 years old 2% only.

Furthermore, tokopedia and shoppe were the most marketplace respondents used to buy (43% and 30% respectively). It was followed by Lazada and Bukalapak (16% and



8% respectively) while blibli.com was the minor choice (3%). Next, we analyze the relationship between variables.

Table 1. Respondent's Profile

Demographics variables	Category	Frequency	Percentage
Gender	Male	33	33%
	Female	67	67%
Age	<20	1	1%
	21-23	97	97%
	>23	2	2%
Website	Tokopedia	43	43%
	Shoppe	30	30%
	Lazada	16	16%
	Bukalapak	8	8%
	Blibli.com	3	3%

4.1 Measurement Model (Outer Model) Analysis

Before the data were analyzed whether the antecedents have causal effect to the customer satisfaction and word of mouth, we need to clarify its validity and reliability. Therefore, we need to ensure whether the data and model fit meet several criteria, such as factor loadings value of each item should exceeded 0.7, the AVE value should exceed 0.5, and the square root value of AVE should be greater than correlation between latent variable through discriminant validity assessment. Further, the Cronbach Alpha should over 0.6 while the composite reliability at least 0.7 to be deemed as reliable.

Table 2. Measurement Model (Outer Model) Assessment

Items	Variables	Cronbach's alpha	Composite Reliability	AVE
WD1				
WD2	Website Design	0.771	0.865	0.683
WD3				
TS1				
TS2	Time Saved	0.705	0.830	0.623
TS3	Time Gaved			
PV1	Draduot varioty	0.802	0.882	0.714
PV2	Product variety	0.802	0.882	0.714



PV3				
DP1				
DP2	Delivery performance	0.629	0.803	0.579
DP3				
CS1				
CS2	Customer Satisfaction	0.885	0.920	0.742
CS3				
WoM1				
WoM2	Word of Mouth	0.819	0.881	0.649
WoM3				

Table 3. Discriminant Validity Assessment

Table 6: Discriminant Validity Assessment						
	Customer	Delivery	Time	Product	Word of	Web
	Satisfaction	performance	Saved	Variety	Mouth	Design
Customer						
Satisfaction						
Delivery	0.796					
performance	0.790					
Time Saved	0.575	0.051				
Time Saved	0.575	0.951				
Product	0.504	0.000	0.520			
Variety	0.581	0.963	0.530			
Word of	0.770	0.024	0.762	0.727		
Mouth	0.770	0.924	0.762	0.737		
Web Design	0.557	0.807	0.559	0.448	0.732	

Table 2 shows all the criteria of Cronbach Alpha and composite variable were over the criteria. Thus, all item parameters were reliable. Meanwhile, the AVE score for all items were exceeded 0.5. It means, all items of variable are valid.

4.2 Structural Model (Inner Model) Analysis

In this section we analyze the relationship between variables to determine whether the antecedents have consequences on others. There are two requirements to ensure the causal effect. First, the R-squared (R2) value as high as possible. Second, the path coefficient value should over cut-off value of 1.96 with 5% significant level. If the relationship over 1.96 it can be concluded that the hypothesis is supported.



Table 4. Path Coefficient analysis

Polationship between Variables	t-	P-	Hypotheses
Relationship between Variables	statistic	Value	Testing Result
Website design - customer satisfaction	2.105	0.00	Supported
Time saved - customer satisfaction	1.960	0.05	Supported
Product variety - customer satisfaction	1.235	0.21	n.s
Delivery performance - customer satisfaction	2.126	0.03	Supported
Website design – word of mouth	3.012	0.00	Supported
Time saved - word of mouth	2.418	0.01	Supported
Product variety - word of mouth	2.783	0.00	Supported
Delivery performance - word of mouth	0.709	0.47	n.s
Customer satisfaction - word of mouth	3.781	0.00	Supported

Table 5. R-Squared Assessment

Variable	R-Squared
Customer Satisfaction	0.435
Word of mouth	0.638

Figure 1. Research Model

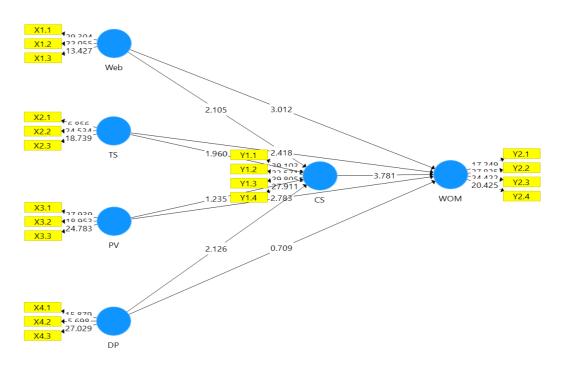


Table 5 revealed that r-square value is 0.435 or 43.5%. It means customer satisfaction can be explained by website, time saved, product variety, and delivery performance by 43.5% while the rest 56.5% is contributed by other which were not included in the investigation. Meanwhile, word of mouth is also can be explained by website, time saved, product variety, delivery performance, and customer satisfaction as much as 0,638 or 63.8% while the rest 36.2% is contributed by other variables which were not included in this study.



Table 4 shows the coefficient correlation among variables to describe hypothesis testing in this investigation. The first hypothesis proposed that website design positively affect customer satisfaction and word of mouth. The result showed that website design significantly affects both customer satisfaction (2.105) and word of mouth (3.012). Hence, the hypothesis 1a and 1b are supported.

The second hypothesis proposed that time saved positively affect customer satisfaction and word of mouth. The result showed that time saved significantly affect both customer satisfaction (1.960) and word of mouth (2.418). Hence, the hypothesis 2a and 2b are supported.

The third hypothesis proposed that product variety positively affect customer satisfaction and word of mouth. The result showed that product variety is not affect customer satisfaction significantly (1.235). However, the idea of relationship between product variety and word of mouth show the significant one (2.783). Hence, the hypothesis 3a is not supported while 3b is supported.

The fourth hypothesis proposed that delivery performance positively affect customer satisfaction and word of mouth. The result showed that delivery performance significantly affects customer satisfaction (2.126). Nevertheless, the relationship between delivery performance and word of mouth show the opposite result (0.709). Hence, the hypothesis 4a is supported while 4b is not supported.

The fifth hypothesis proposed that customer satisfaction positively affect word of mouth. The result showed that customer satisfaction influence word of mouth significantly (3.781). Hence, the hypothesis 5 is supported.

4.3 Discussion

The hypothesis testing revealed various result among independent variables and dependent variables relationship.

First, the website design significantly affects both customer satisfaction and word of mouth. As we said earlier, a well website design consists of an attractive visual appearance, simply navigation, and easy to use. Meanwhile, another study argued that a decent website consists of customization, informative, secure and privacy, consistency, and ease of understanding and ordering (Tandon et al., 2017). When visitors perceive those elements are attached to the website, the likelihood of satisfaction will rise. The result is supported to prior study by Guo et al., (2012) and (Wolfinbarger & Gilly, 2003) who found the identical outcome. In the meantime, customers who have positive experience with the website design will communicate to their relation about the existed website. They will give good spoken regarding those elements to persuade their peers, family, or friends. Chung & Shin, (2009) found the indirect effect of sites on word of mouth. They stated that site characteristics can drive visitors to inform customers regarding products and services.

Second, the time saved affect customer satisfaction and word of mouth significantly. Visitors who made purchasing via online are the buyers who consider about time limit, avoid the cost and time travel, and escape from trapped in the store crowd. Online purchasing is the only way to save their time. E-commerce is offered the easy way to purchase with the less possibility of time loss. Customers will satisfy if they involve in time save in online purchasing rather than wasting their time visit the store physically.



Rudansky-Kloppers, (2014) also found the similar outcome. Next, the explanation of time saved and word of mouth relationship occur from the past experience. When customers are surfing the sites, it also looks like hanging around the store. Nonetheless, the action can be done by sitting at home and did it by one click. It is not only saving their time, but also their energy. The enjoyment and simplicity would be the good point to share the experience to others.

Third, the relationship of product variety to customer satisfaction is not significant. Although prior investigation demonstrated that the relationship between product variety and customer satisfaction was significant (Guo et al., 2012), but in this study there is no existence about it. We believe customers who made online purchasing were not impulsive buyers. They intended to surf on the websites to make purchase on their purposes. Therefore, their intention in online purchasing was to buy specifically. However, we found that product variety can lead to word of mouth significantly. The result is supported to the prior investigation (Rudansky-Kloppers, 2014). The sites which offer a wide broad variety of products and adding some sufficient information such as product types, descriptions, instructions, product reviews, or even demonstrations will ensure increase the likelihood of word of mouth references.

Fourth, we found that delivery performance significantly affects customer satisfaction. It also supported the former exploration by (Lin et al., 2011) who found that delivery performance consists of time, reliable, and precise access were the exact determinant to increase customer satisfaction. However, the relation between delivery performance and word of mouth is not significant. It is likely to happen since website is not responsible in the transshipment. In Indonesia, it is common to over the delivery process to the third parties. The online marketplace collaborates to some couriers' company in order to distribute customer's order. Customers can choose which courier they want and how long the order will arrive. Consequently, the transshipment fee is following their choices. That is why customers will not see the delivery performance as the main key, because it is not the responsible of the web.

Fifth, the measurement proved that the influence of customer satisfaction on word of mouth. It means when customer satisfied with their experience when surfing or purchasing on the sites, they will endorse the sites to their peers, relatives, or families willingly. The result also supported the previous study by Babin et al., (2005) and Lloyd et al., (2014).

Surprisingly, we found that customer satisfaction has extraordinary role as intervening variable. In this investigation, customer satisfaction plays as mediation from website design and time saved to word of mouth while the others were failed since they did not meet the requirements. As partial intervening variable, customer satisfaction can enhance the likelihood of word of mouth

The result also confirmed the prior study when customer satisfaction mediated from selfcongruence to return intention (Ekinci et al., 2008), and from website quality to repurchase intention (Tandon et al., 2017)



CONCLUSIONS

The hypothesis testing revealed that website design, time save, and delivery performance had positive effect on customer satisfaction. In contrast, product variety showed the opposite way. In the meantime, website design, time save, product variety, and customer satisfaction had positive effect on word of mouth. Nonetheless, delivery performance relation on word of mouth is insignificant. In addition, we also found that customer satisfaction plays a great role as intervening variable from website design and time save with word of mouth.

Practically, when company choose to stand in e-commerce, they need to pay attention for those antecedents that drive customer satisfaction. Customers who have positive experience on website design, time save, and delivery performance will enhance satisfaction. Moreover, those elements were also contributed in driving word of mouth.

In spite of all those the results, this study is not free of limitations. First, the investigation conducted in 1 (one) city only. Thus, generalization of the result is not recommended. Therefore, we suggest further research based on cross cultural background to comprehend the existence. Second, we suggest several antecedents such as privacy and security, reliability, perceived risks, or information availability to complete the current study. Third, we conducted on specific sample which is youth age. We considered a 20-25 years old were an age range who get used to e-commerce activity. Fourth, word of mouth is the only consequence in this research. After all, we suggest more consequences since satisfaction can affect to several variables such as repeat purchase behavior or loyalty.

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