Determinants of Satisfaction, Trust, and Loyalty of Indonesian E-Commerce Customer

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ABSTRACT

This study aimed to investigate the antecedents of online customer satisfaction and online customer trust in Indonesia toward a particular e-commerce website. This study also analyzes the effect of online customer satisfaction and customer trust as key factors influencing online customer loyalty. A quantitative approach has been employed. The gathered data obtained using online questionnaire with itemized rating scale resulting in 443 respondents. For the purpose of data analysis, Structured Equation Model (SEM) method has been adopted. This study found that user interface quality, information quality, customer service, and security and privacy have a positive significant impact on online customer satisfaction and online customer trust. This study also found that online customer satisfaction and online customer satisfaction influencing online customer loyalty significantly in Indonesia. This study suggests that Indonesian online merchant can win the loyalty of online customer by focusing their strategies on the satisfaction and trust of Indonesian online customers.

Keywords: customer loyalty, customer satisfaction, customer trust, e-commerce

INTRODUCTION

A global digital market research company, Emarketer, predicts that e-commerce users in Indonesia will reach to 7.4 million users in 2015 and 8.7 users in 2016. A research firm, Frost & Sullivan, also predict that Indonesian e-commerce transaction value to record a compound annual growth rate of 40.2 percent from 2010-2015, the year when transactions will hit 650 million US Dollars. Marketing research firm eMarketer also forecasts that in year 2013 the

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Indonesia's e-commerce transaction will reach 391 million US Dollars and it is predicted to increase up to 516 million US Dollars in 2016. As the spectacular increase of Indonesian e-commerce users, some experts and research firms predict that the sales volume of e-commerce transaction will also have an increasing trend. Regardless the debate on the research method, different number of the prediction and the released data, those indicate that Indonesia is a good potential market for business to conduct e-commerce business.

There are several channel and platform that business can employ in conducting e-commerce activity, such as conventional website, social media, online classified ads, online forum, and messaging application. In the context of conventional website merchant, several big players in Indonesia already get in to the competition supported by big company and conglomerates. For instance, MatahariMall.com supported by Lippo Group with US$500 million initial investment, Lazada strengthen by the outlay of US$250 million from Temasek Holding, Blibli. com founded by Djarum and BCA Bank, and may others. Many small medium player of online seller, however, still comfortable with another platform which are messaging application, social media, online classified ads, and online forum instead of website. They may use conventional website to get and maintain more satisfied customer and loyal customer in which e-commerce business is particularly concerned about keeping customers satisfied in order to turn them into loyal customer and willing to coming back (Otim and Grover, 2006).

Not many of small and medium online seller intended to use website as their channel since there are many hurdles such as the trust issues where business is held at a distance and risks and uncertainties are increase (Reichheld and Schefter, 2000). According to (Dhanuwardoyo, 2013), the barrier of the development Indonesian trust level toward e-commerce website is the lack of trust as many fraud and scam in Indonesia. Top five factors influencing trust are (1) afraid of fraud (34.6%), the intangibleness of product or they cannot touch and feel the items (21%), the higher cost (21.5%), not interested (21.5%), and product quality not guaranteed (APJIIas cited by AndrySuhaili, 2013).

Considering the importance of customer trust, customer satisfaction, and customer loyalty in e-commerce industry, numerous studies have empirically examined consumer satisfaction, trust, and loyalty in various e-commerce businesses and in various countries. However, the result and model of the previous research had a conclusion which might lead to different result in other countries such as in Indonesia. Indonesia having cultural and economic environment that different from other country where the previous research has been conducted.

Therefore, this study aimed to investigate and examine a model of the antecedents of e-commerce customer trust, satisfaction and loyalty in Indonesia. This study provides some useful information on what factors that online seller can consider to build customer satisfaction and trust. Based on the review of literatures, those factors include the website user interface quality, information quality, customer service quality, privacy and security. It also will further explore the effect of customer satisfaction and trust on customer loyalty of Indonesian e-commerce customer in Indonesia. Research questions to be addressed in this study are: Does Indonesian online customers perceive e-commerce website user interface quality, information quality, customer service, and privacy and security as key factors lead to their satisfaction and

trust? Are the Indonesian online customer satisfaction and customer trust will influence to their loyalty in e-commerce? The outcome of the study may be relevant and useful for both theoretical use and practical use.

The rest of the paper is arranged as follows. The next part is the review of existing literature to provide the background of the proposed research framework regarding with satisfaction, trust, and loyalty in online context including the development of the hypothesis. It then followed by the methodology of this research and the data analysis. The last part will conclude the finding of this study including the implication, limitation, and suggestion for further research.

This paper is organized as follows : Section 2 reviews the literature; Section 3 lays out the methodology; Section 4 contains data analysis; and Section 5 provides conclusions.

LITERATURE REVIEW

E-Commerce

E-commerce can be defined as the use of electronic networks with the objective to simplify and fasten all phases of business processes, from the production of goods to their sale and delivery (Barsauskas *et al*., 2008). There are several types of e-commerce classified by (Kalakota and Whinston, 2007) based on the parties involved and the nature of the transaction: business-to-business (B2B), business-to-consumers (B2C), consumer-to-consumer (C2C), consumer-to-businesses (C2B), and intra-business (intra-organizational) commerce. Considering the objectives of this study, this study will concern only on the business-to-consumers (B2C) and consumer-to-consumer (C2C) e-commerce type where the customers are involved directly to an e-commerce media or a website. Considering to the main objective of this study, this study will concern only on the business-to-consumers (B2C) e-commerce and consumer-to-consumer (C2C) e-commerce where the end customers are involved directly to an e-commerce media or a website.

In order to get profits from online selling activitythere are three critical factors to be accomplished (Lynch *et al*., 2001). First, online businesses have to attract potential buyers to visit and observe their online store. Second, online businesses must convert the shoppers and surfers to make an initial purchase. Third, online businesses have to ensure that the customers and shoppers will return and make more online purchases.

Online Customer Satisfaction

Customer satisfaction has been defined as an evaluation of the perceived discrepancy between prior expectations and the actual performance of the product as perceived after its consumption (Tse and Wilton, 1988), or as a global evaluative judgment about product usage/consumption (Westbrook, 1987). (Oliver, 1997) stated that satisfaction is a summary psychological state resulting from the condition when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience.

Website design produce positive outcomes to online satisfaction and it became one of the greatest effects on the online satisfaction (Szymanski & Hise, 2000). Design of the website is related with consumer perception of the organization and order at the site (Wang *et al.*, 2010). (Park and Kim, 2003) found that the user interface quality influences the customer satisfaction directly, since it provides physical evidence of the service provider's competence as well as facilitating effortless use of the service. (Cyr, 2008) also found that user interface design variables are key antecedents to website satisfaction in Canada, Germany, and China. Therefore, it is theorized that website user interface quality is an important driver of website experience satisfaction, leading to the first hypothesis of this study:

H1a: User interface quality has a positive effect on online customer satisfaction.

Shankar *et al.* (2003) found that ease of obtaining information has a greater positive impact on overall customer satisfaction when the service is chosen online than offline. (Liu *et al.*, 2008) also found that information quality has significant impact on customer satisfaction in Chinese context. Another study by Sadeh *et al.* (2011) also found that the information quality, as one of the characteristics of website quality, is able to influence satisfaction of customers positively and significantly. Following previous findings, this study hypothesized as follows:

H2a: Information quality has a positive effect on online customer satisfaction.

Yang and Peterson (2004) suggest that a firm may focus on the quality of customer service to satisfy their online customers. They explained that a customer service is company's representative that has the knowledge to answer customer questions. Study by (Liu *et al.*, 2008) also supports that customer service has s significant positive influence on customer satisfaction. (Devaraj *et al.*, 2002) found that after the consumer assume that the transaction costs are acceptable and chooses to continue online shopping, the service and support provided by the service provider determines the continued satisfaction. Therefore, it is hypothesized as follow:

H3a: Customer service has a positive effect on online customer satisfaction.

Another important factor affecting customer satisfaction in online environment is security (Park & Kim, 2003). Szymanski and Hise (2000) reveal that a positive perception of financial security can have a positive effect on online customer satisfaction levels. Their study also confirms that perceptions of online security play an important role in online customer satisfaction. (Evanschitzky *et al.*, 2004) replicate Szymanski and Hise's study in Germany. They confirm that Szymanski and Hise (2000) models are applicable in Germany's context. Eid (2011) and Sadeh (2011) study also confirmed that the perceived security risk and privacy was found to be the determinants of e-commerce service satisfaction. Therefore, this study hypothesized as follows:

H4a: Security and privacy has a positive effect on online customer satisfaction.

Online Customer Trust

Customer trust is commonly described as the willingness to rely on an exchange partner in whom one has confidence in a situation of vulnerability (Moorman *et al.*, 1992). Whereas trust

in the online store defined as a consumer's willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller (Mayer *et al*., 1995). Another definition of online trust is the belief that allows consumers to willingly become vulnerable to website merchant, based on the expectation that the Internet merchant will act in the customer's interest and behave in certain honest and reliable ways as promised, irrespective of the ability of the consumer to monitor or control the online purchase process (Hou, 2005).

Customer trust is important for the success of online business (Hou, 2005). As risk and uncertainty are always involved in online purchasing, developing confidence level of e-customer is important because any of them may be subjected to the violation of trust during the transactions (Muhammad *et al*., 2013). Moreover, (Reichheld and Schefter, 2000) argued that the single most important factor for customers choosing an online supplier is trust. It is because in the online business with the absence of face-to-face contact, people need a lot of reassurance. Therefore, before online businesses begin to build a relationship with their customer, they need to show that customer trust to them.

Online trust is affected by website user interface since it provides physical evidence of the service provider's competence as well as facilitating effortless use of the service (Gummerus *et al*., 2004). They argued that the quality of user interface is the signs of the service provider's competence, and therefore induce trust. (Roy *et al*., 2001) support that there is a strong relationship between interface quality and trust and some components of user interface quality were more important than others. (Cyr, 2008) and (Roy *et al*., 2001) found that user interface design variables are key antecedents to website trust in Canada, Germany, and China. Therefore, it hypothesized that:

H1b: User interface quality has a positive effect on online customer trust.

Meanwhile, (Mcknight *et al*., 2002) found that perceived website content quality is highly correlated with trusting beliefs and intentions in the vendor. (Cyr, 2008) also found that information design significantly influences trust in Canada. Therefore, it also hypothesized that:

H2b: Information quality has a positive effect on online customer trust.

(Chen, 2007) suggests that website design, fulfillment/reliability, privacy/security, and customer service are four key drivers of online customer trust. Further, consumer weighs customer service the most when making trust evaluations of an online merchant. Therefore, this study hypothesized as follows:

H3b: Customer service has a positive effect on online customer trust.

Website security in the term of keeping customers safe from an invasion of their privacy can affect trust and satisfaction (Gummerus *et al*., 2004). Flavia´n and Guinalý´u (2006) suggest that perceived privacy and perceived security are antecedents of trust developed due to the nature of the internet. They prove that trust is specially influenced by the perceived security in term of handling of private data. Therefore it is hypothesized that:

H4b: Security and privacy has a positive effect on online customer trust.

Online Customer Loyalty

Customer loyalty is a profound commitment to repurchase a favored product or service consistently in the future that makes the buyer choosing the same brand regardless situational effect and advertising efforts that lead them to choose another brand (Oliver, 1999). (Dick and Basu, 1994) consider customer loyalty as the clout of the connection between one's relative attitude and repeat patronage. Customer loyalty measured by combining behavioral, attitudinal and cognitive attributes as conceptualized by (Dick and Basu, 1994) and (Oliver, 1997). (Dick and Basu, 1994) developed a framework of customer loyalty based on cognitive, affective, and conative aspect of loyalty and it is considered as antecedent to loyalty. (Oliver, 1999), however, conceptualized loyalty in a sequence of cognitive-affective-conative-action pattern.

The good thing of online business is, as according to Shankar *et al.* (2003), loyalty to the service provider is higher when the service is chosen online than offline. Customer loyalty is an important factor for the survival of online businesses (Xu *et al.*, 2011). Without the glue of loyalty, e-commerce website or model will even collapse (Reichheld and Schefter, 2000). Therefore, customer loyalty has been found to be a critical asset for e-commerce players (Eid, 2011).

Previous study has proved that customer loyalty positively affected by customer satisfaction (Zeithaml *et al.*, 1996; Oliver, 1997). (Reichheld and Schefter, 2000) argued that this role has no different in both online and offline environments. It has proved that when consumers satisfied with on-line service, consumers are more likely to continue the service (Rodgers *et al*, 2005). Yang and Peterson (2004) found that customer loyalty can be generated through improving customer satisfaction and offering high product/service value. (Cyr, 2008) also found that satisfaction has a significant relationship to online customer loyalty in Canada, China, and Germany. (Dharmesti and Nugroho, 2012) also found that online customer satisfaction gives a significant effect on customer loyalty in Indonesian culture. From the review of the past research, therefore, it is hypothesized as follows:

H5:online customer satisfaction has a positive effect ononline customer satisfaction.

Tielman (2003) argued that loyalty of customer in a particular website merchant will not occur without customer trust. His study in among U.S., Dutch, and German customers reported that the more customers trusted to a particular web merchant, the less likely they switch to another merchant. Even another merchant offers better price, they will be more willing to purchase in a website merchant that they trusted. (Hou, 2005) also found that customer trust had a direct and positive influence on customer loyalty. He argued that it is possible for customer to spread information of a particular web merchant only if they have trusted it. He added that customer trust can be recognized as switching barriers because customers may prefer to choose at previous trusted merchant rather than risking themselves to a new web merchant they do not trust. Moreover, (Cyr, 2008) study found that customer trust in a particular web merchant is strongly related to the customer loyalty in Germany and China. Therefore, this study hypothesized as follows:

H6:Online customer trust has a positive effect on online customer loyalty.
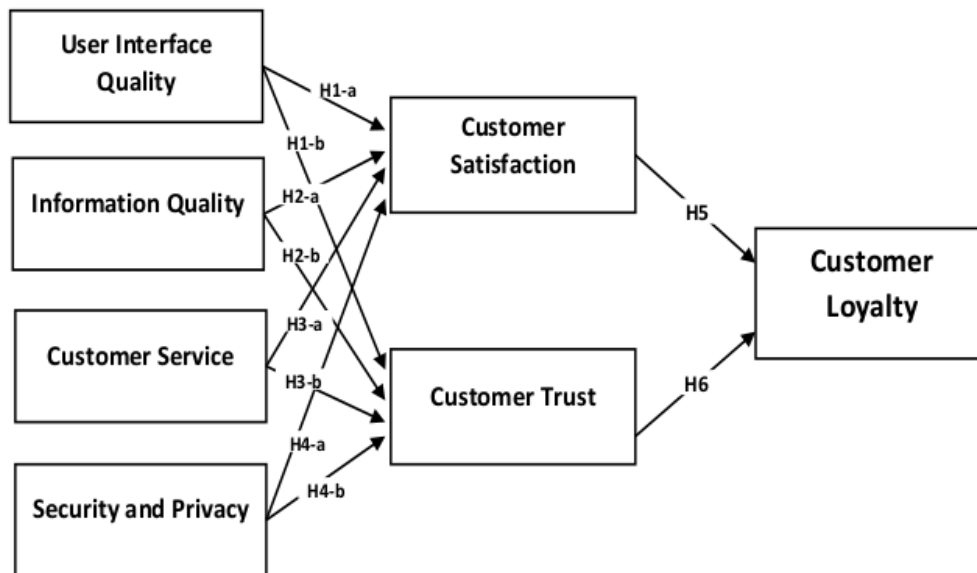
Figure 1 Research Framework

RESEARCH METHODOLOGY

This study tries to examine the determinant factors of customer satisfaction, and trust, which are suggested as the determinants of customer loyalty in the context of Indonesian e-commerce customers. The Indonesian e-commerce customers are within a business-to-consumers (B2C) e-commerce and consumer-to-consumer (C2C) e-commerce where the end customers are involved directly to an e-commerce media or a website.

This study uses non-probability and convenience sampling method. In this research, the sample specified to the Kaskus user in which Kaskus is the biggest online forum in Indonesia and they are easy to reach via direct message in the website. The background in choosing Kaskus is because the active users in Kaskus vary from many different cities in Indonesia and they represent to the generalization of the Indonesian e-commerce customers. The survey resulted in total 479 responses. Thirteen responses were deleted due to incompleteness of the response. The other six responses were also deleted due to detected as outliers. Seventeen responses were also removed due to their experience to an online shopping is more than a year ago. These criteria were applied to reduce errors due to memory recall (Dharmesti & Nugroho, 2012). Finally, only 443 valid responses were used for further analysis.

From the total of 443 valid responses, the male respondents are 393 people or about 88.71 percent, whereas the male respondents are 50 people or about 11.29 percent. The respondents aged 20 to 29 years old dominate this research with 287 respondents or about 64.79 percent from the total respondents. Most of the respondents are students (50.3%), private employee (38.92%), and business owners (20.29%). The respondents come from 21 different provinces in Indonesia. The respondents are mostly from West Java, Jakarta, Yogyakarta Special Region,

East Java, and Middle Java. The rest of the Provinces have minor participants with merely less than 2 percent for each province.

Online questionnaire used to collect the primary data to be used in this research since the nature of the object of this research is on the internet. The questionnaire is divided into three parts. The first part is a verification section that used for identifying the subject weather the subject is an e-commerce user or not. The second part is the main part that consists of seven sub-parts. Each sub-part contains several question items that represent each variable measured in this study. The last part is demographic section that used to record the subject demographical data and general profile in using e-commerce. All of the questions in the questionnaireare translated into Indonesian language in order to make the respondent easy to understand the question.

Indonesian e-commerce user experiences were measured using a set scale items developed from the combination of previous research as shown on the Table1. All of the questions in the questionnaire with seven-point Likert scale are translated into Indonesian language in order to make respondent understand the question.

Since the subject and the sample are internet users, the setting of this research is conducted via online. They are easily found via internet rather than to reach them via offline. Kaskus was selected as the online forum in which the sample subjects are located. The background of choosing Kaskus is because Kaskus is the biggest online forum and its users spread to many cities in Indonesia.

Preliminary study has been conducted to 50 prior respondents to validate the instrument. The value of corrected item total correlation (r) shows the value of the significance of the correlation of the data and the alpha scale is used to test the reliability of the data. All of the instruments used in this study are considered as valid and reliable as shown on Table 1.

Table 1 Validity and Reliability of the Instrument

Construct	Source	Scale Item	r	Cronbach Alpha
User Interface	Spiller and Lohse 1997; Van Riel et al, 2001; Park and Kim 2003; Gummerus et al. 2004	UI1	0.757	
		UI2	0.795	0.885
		UI3	0.809	
		UI4	0.638	
Information Quality	Park and Kim (2003); DeLone and McLean (2003)	IQ1	0.711	
		IQ2	0.694	
		IQ3	0.773	0.867
		IQ4	0.609	
		IQ5	0.755	
Security and Privacy	Wolfinbarger& Gilly (2003)	SP	0.714	
		SP	0.819	0.889
		SP	0.826	

Table 1 (Cont.)

Customer Service Quality	Wolfinbarger& Gilly (2003)	CS1	0 .757	
		CS2	0.785	0.883
		CS3	0.774	
Customer Satisfaction	Hou (2005); Wu (2006)	Sat1	0.783	
		Sat2	0.824	
		Sat3	0.829	
		Sat4	0.845	0.948
		Sat5	0.858	
		Sat6	0.862	
		Sat7	0.769	
Customer Trust	Hou (2005)	Trust1	0.753	
		Trust2	0.801	
		Trust3	0.661	
		Trust4	0.504	0.894
		Trust5	0.803	
		Trust6	0.805	
		Trust7	0.762	
Customer Loyalty	Zeithaml *et al.* (1996); Hou (2005)	Loy1	0.801	
		Loy2	0.836	
		Loy3	0.847	0.912
		Loy4	0.799	
		Loy5	0.798	

DATA ANALYSIS

Goodness of fit test is used to determine whether the model can be statistically accepted or not. The result of goodness of fit test shows that the fit indices of Chi-Square (1713.313; <211.217) and Probability (0.000; > 0.05) are poor below the cut-off value. The CMIN/DF (3.149; < 3), GFI (0.811; $\geq$ 0.9), AGFI (0.818; $\geq$ 0.9), and NFI (0.880; $\geq$ 0,9) are marginal that it close with the cut-off value. However, only RMSEA (0.070; $\leq$ 0.8) and TLI (0.906; $\geq$ 0.9) that reach the recommended cut-off value and indicating a good model. The probability level is significant (0.000; $p < 0.05$). It shows that there is a deviation between sample covariance matrix and model (fitted) covariance matrix. In order to be a good model, the value of chi-square should have insignificant probability level ($p > 0.05$) to get better expected value of Goodness Fit Index.
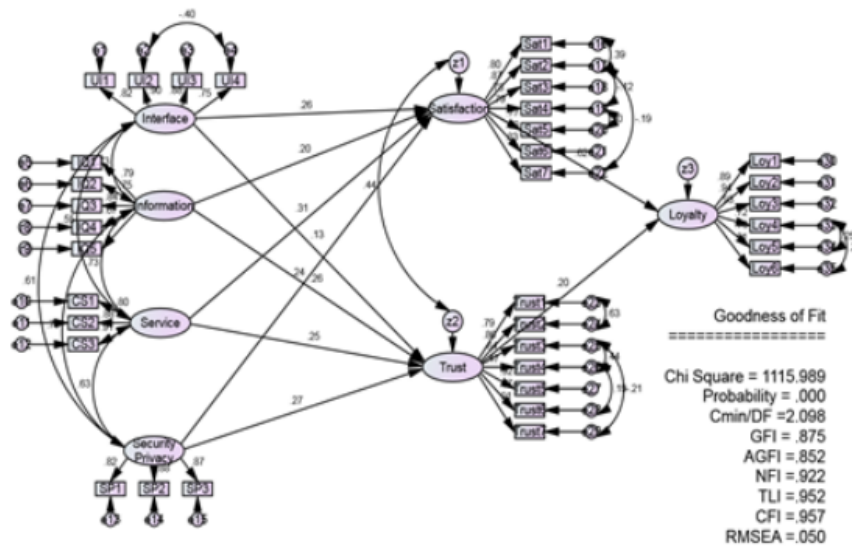
Figure 2 Path Diagram and Structural Equation after Modification

Model revision by making a modification index has been conducted to revise the model by increasing the parameter number. As a result, the value of Chi-square statistics will decrease compared to the decrease of degree of freedom (*df*). After the modification index, Likelihood Chi-Square has a probability of 1115.989, which is not < 211.217. Probability level was also still significant (P = 0.000). In practice, a big Chi-square is affected by two factors. Larger samples size produce larger chi-squares that are more likely to be significant (Type I error), and small samples may be too likely to accept poor models (Type II error). Even though the probability level is still significant and it is indicating a poor model, according to (Ghozali, 2004), there must be other models for goodness of fit to be categorized as fit. Number of Absolute Fit Measured which is measured by CMIN/DF GFI, and RMSEA has all reached the cut off value. The Incremental Fit Measured, which is measured by AGFI, TLI, and NFI, has all reached the cut off value. In sum, CMIN/DF, GFI, RMSEA, AGFI, TLI, and NFI has reached the cut off value. It can be concluded that the parameter has met the expected requirement and the model meets the assumption of Goodness of Fit model. The result of the modification index can be seen in the Table 2.

Table 2 Goodness of Fit Index after Modification

Goodness of Fit Index	Result	Cut Off Value	Criteria
Absolute Fit Measures			
Likelihood Chi-Square	1115.989	< 211.217	Poor
Probability	0.000	> 0.05	Poor
CMIN/DF	2.098	< 3	Good
GFI	0.957	≥ 0.9	Good
RMSEA	0.050	≤ 0.8	Good

Table 2 (Cont.)

Incremental Fit Measured			
AGFI	0.925	≥ 0.9	Good
TLI	0.952	≥ 0.9	Good
NFI	0.922	$\geq 0,9$	Good

The hypothesis testing is conducted by examining the path coefficient of the model which are presented in regression weights output. The result of the regression weights for the structural equation model by using AMOS software is presented in the Table 3.

Table 3 Result of Regression Weights

Hypothesis	Path	Regression Weights		C.R.	P
		Unstandardized	Standardized		
H1-a	SAT ←UI	0.245	0.259	5.426	0.000
H2-a	SAT ←IQ	0.191	0.202	3.149	0.002
H3-a	SAT ←CS	0.234	0.311	6.206	0.000
H4-a	SAT ←SP	0.199	0.236	4.947	0.000
H1-b	TRUST ←UI	0.133	0.130	2.426	0.015
H2-b	TRUST←IQ	0.266	0.261	3.505	0.000
H3-b	TRUST←CS	0.200	0.247	4.351	0.000
H4-b	TRUST←SP	0.249	0.273	4.952	0.000
H5	LOY← SAT	0.718	0.625	9.193	0.000
H6	LOY← TRUST	0.217	0.203	3.222	0.001

As shown in Table 3, the standardized regression weights estimate of all hypotheses has positive value. The positive value of standard regression weights estimate reveals that the independent variable and dependent variable has positive relation. It is proven by all of the significant levels (P) is less than 0.05. It is meaning that the confident level is more than 95%, indicating that the relationship is significant. Since the standardized regression weights estimate of all hypotheses are positive and significant (< 0.05), therefore all hypotheses are accepted.

The regression weight shows that online customer loyalty is influenced significantly by online customer satisfaction and online customer trust, and online customer satisfaction and online customer trust are influenced by user interface quality, information quality, customer services, and security and privacy. User interface quality of the website has positive association with online customer satisfaction. It means that the higher the level of the user interface quality perceived by Indonesian online customer, the higher the levels of Indonesian online customer satisfaction. This result is in line with Park and Kim (2003) that also found that user interface quality influences the customer satisfaction directly in Korea. It is also in line with (Cyr, 2008) that also found that user interface design variables are key antecedents to website trust in Canada, Germany, and China. User interface quality of the website also has a positive significant influence on online customer trust. It means that the higher the level of user interface quality perceived by Indonesian online customer, the higher the levels of Indonesian online

customer trust. This finding is in line with (Roy *et al.*, 2001) that support that there is a strong relationship between interface quality and trust in Canadian context. It is also in line with Cyr (2008) that also found that user interface design variables are key antecedents to website trust in Canada, Germany, and China.

Information quality of the website has a positive significant influence on online customer satisfaction. It means that the higher the level of information quality perceived by Indonesian online customer, the higher the levels of Indonesian online customer satisfaction. This result is in line with (Liu *et al.*, 2008) that also found that information quality has significant impact on customer satisfaction in Chinese context. (Sadeh *et al.*, 2011) also found that the information quality is able to influence satisfaction of customers positively and significantly. Information quality of the website also has a positive significant influence on online customer trust. It means that the higher the level of information quality perceived by Indonesian online customer, the higher the levels of Indonesian online customer trust. This finding is in line with Roy *et al.* (2001) that support that there is a strong relationship between interface quality and trust in Canadian context. It is also in line with (Cyr, 2008) that also found that user interface design variables are key antecedents to website trust in Canada, Germany, and China. This result is in line with Mcknight *et al.* (2002) that found that perceived website content quality is highly correlated with trusting beliefs and intentions in the vendor. Also it is in line with (Cyr, 2008) that also found that information design significantly influences trust in Canada.

Customer service of the website has a positive significant influence on online customer satisfaction. It means that the higher the level of customer service perceived by Indonesian online customer, the higher the levels of Indonesian online customer satisfaction. This result is in line with (Liu *et al.*, 2008) that also support that customer service has s significant positive influence on customer satisfaction in Chinese context. Customer service of the website also has a positive significant influence on online customer trust. It means that the higher the level of customer service perceived by Indonesian online customer, the higher the levels of Indonesian online customer trust. This result is in line with Chen (2007) who developed an integrative model of online consumer trust and found that online consumer weighs customer service the most when making trust evaluations of an online merchant.

Security and privacy of the website has a positive significant influence on online customer satisfaction. It means that the higher the level of security and privacy perceived by Indonesian online customer, the higher the levels of Indonesian online customer satisfaction. This result is in line with a study by Hise (2000) that concluded that a positive perception of financial security can have a positive effect on online customer satisfaction levels. Sadeh *et al.* (2011) study also confirmed that privacy and security can directly affect customer satisfaction positively and significantly. Security and privacy of the website also has a positive significant influence on online customer trust. It means that the higher the level of security and privacy perceived by Indonesian online customer the higher the levels of Indonesian online customer trust.

This study found that online customer satisfaction is influencing online customer loyalty positively and significantly. It means that the higher the level of customer satisfaction of Indonesian online customer, the higher the levels of online customer loyalty in Indonesian

context. This finding is in line with Nugroho (2012) that also found that online customer satisfaction gives a significant effect on customer loyalty in Indonesian culture. It is also in line with Yang and Peterson (2009) that found that online game satisfaction has significantly and strongly direct effect on online loyalty in online game services. (Cyr, 2008) found that satisfaction has a significant relationship to online customer loyalty in Canada, China, and Germany.

This study also found that online customer trust is influencing online customer loyalty positively and significantly. It means that the higher the level of customer trust of Indonesian online customer, the higher the levels of online customer loyalty in Indonesian context. This finding is in line with (Hou, 2005) that found that customer trust had a direct and positive influence on customer loyalty. It is also in line with (Cyr, 2008) study that found that customer trust in a particular web merchant is strongly related to the customer loyalty in Germany and China.

CONCLUSION

From the result of the analysis, it can be concluded that user interface quality, information quality, customer service, and security and privacy have a positive significant impact online customer satisfaction and trust. Online customer satisfaction and online customer trust are also found to influence online customer loyalty significantly.

The results of this study suggest that Indonesian online merchant can win the loyalty of online customer by focusing their strategies on the satisfaction and trust of Indonesian online customer, because the increase of satisfaction and trust of Indonesian online customer will lead to increase of the customer loyalty. To obtain the satisfaction and trust, it is suggested to develop the key factors affecting it. This study found that satisfaction and trust of Indonesian online customer can be obtained by increasing (1) quality of user interface, (2) quality of information, (3) customer services, and (4) security and privacy of the website. Marketing practitioners in website media can focus on those four factors that can lead to the higher satisfaction and trust of Indonesian online customer and further can lead to the loyalty of the customer. Therefore, marketing practitioner can still use another e-commerce channel such as social media, messenger apps, online classified ads, and online forum.

Limitation in this study occurs from several factors. First, the data gathered in this study mostly came from male respondents, which is 88.71 percent or about 393 respondents from the total 443 respondents. It may not be representative of general Indonesian e-commerce customers. Second, the Likelihood Chi-Square and probability level of the model in this study are not exceeding the cut off value indicating that it is significant in which recommended to be not significant. It may because the large sample size that produce larger chi-squares (error type 1). Another factor may influence the poor indication of fit model is because the current model modifies and combine some model and it has not been tested.

For the future study, it is suggested to add or modify another several important factors that may influence and determine online customer satisfaction, online customer trust, and online customer loyalty. Review of previous study found that there are many another factors that

may affect and become the antecedents of online customer satisfaction, online customer trust, and online customer loyalty. Whereas in this research, the proposed antecedent and factors influencing online customer satisfaction and online customer trust are limited to user interface quality, information quality, customer services, and security and privacy. The research model in this study is suggested to be modified and developed to become a better research construct model.

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