Effects of E-ServQual in Creating Customer Loyalty Toward Online Marketplace in an Emerging Country

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Abstract

Nowadays, customers are used to shopping at online marketplaces as the results of information technology advancement and the value-added services offered by these platforms. Due to the intense competition, online retailers should maintain the overall e-service quality to gain customer loyalty. Online shopping is considered a risky activity as there are several cases related to the product quality, transaction security, and violation of data protection act. These risks may lead to customer disappointment, which later reduces the customer's willingness to remain loyal to the online retailers. Despite this, customers may hold different uncertainty avoidance level, which may influence their evaluation toward e-servqual and satisfaction toward online shopping. The purpose of this study is to investigate the effect of e-service quality on customer loyalty via customer satisfaction and to test the moderating role of uncertainty avoidance in the relationship between e-service quality and customer satisfaction. Samples of 302 e-commerce customers over 17 years old were selected using purposive sampling technique. The collected data was analyzed using PLS-SEM to test the hypotheses. The findings showed that e-servqual had a significant positive effect on customer loyalty through customer satisfaction. Unlike the proposed hypothesis, this study failed to prove the moderating effect of uncertainty avoidance in the relationship between e-servqual and customer satisfaction.

Keywords: Customer satisfaction, Customer loyalty, E-servqual, Online marketplace, Uncertainty avoidance

1. Introduction

The information technology advancement has brought enormous changes to commerce businesses (Jideani, Leenen, Alexander, & Barnes, 2018). This phenomenon has resulted in a new business model that enables collaborative resources among business people through online platforms (Laurell & Sandstrom, 2016), such as the online marketplace. The e-commerce retail sales grow continuously from $2,382 billion in 2017 to $3,535 billion in 2019, and it is expected to reach $6,542 billion by 2023 (Clement, 2020). The online marketplaces ease customers to shop anytime anywhere. This growth is indicated by the increasing number of traffic visits to online marketplace websites in each quarter (iPrice, 2020).

However, the growth of the online marketplaces cannot be separated from risks, such as undeliverable products (Al-Nasser, Islam, Abidin, Azam, & Prabhakar, 2015), product discrepancies due to seller's fault (Weltevreden & Rotem-Mindali, 2009), and the customer data leaks due to hacking (Al-Nasser et al., 2015; Aron, 2016; Iqbal, 2020). These risks may affect the overall service quality evaluation of e-commerce providers, known as e-service quality (hereafter, e-servqual). Service quality is a customer's assessment of their shopping experience in the online marketplace that eventually affects his satisfaction and loyalty to the online marketplace (Brady & Robertson, 2001). As a critical success factor of the online marketplace, e-servqual is multidimensional that consists of website performance, information quality, and electronic service quality (Sharma & Lijuan, 2015). Nevertheless, privacy and security factors cannot be ignored in shaping customer satisfaction and loyalty toward online marketplace (Chen & Barnes, 2007). Thus, Rita, Oliveira, and Farisa (2019) divide the dimensions of e-servqual into website design, customer service, security/privacy, and fulfilment. Each dimension affects satisfaction and ultimately develops customer loyalty.

Research about the effect of e-servqual on customer satisfaction and loyalty in the online marketplace has been carried out many times, but the results are inconsistent. For instance, Rita et al. (2019), Lopez-Miguens and Vazquez (2017), and Bilgihan (2016) reported that website design has a significant impact on customer satisfaction and loyalty. But Aishatu and Lim (2017) as well as Winnie (2014) found the opposite among customers who are familiar with the website. Similarly, Minh and Huu (2016) and Alam (2020) found that customer satisfaction and loyalty can be obtained by providing good service quality. Nevertheless, Choi, Chow, Kwok, Liu, and Shen (2013) reported that the effect was insignificant due to the difference of customer interaction in the traditional and online retail. Related to customer data security, Cui, Lin, and Qu (2017) found that e-commerce security significantly affects customer loyalty, while Jiang, Jun, and Yang (2016) affirmed the opposite. It can be concluded that the effect of e-servqual on customer loyalty is mediated by customer satisfaction as being confirmed by Sharma (2015), Kiran (2017), and Dharmesti and Nugroho (2013). Even though customer satisfaction is believed to increase loyalty (Lopez-Miguens & Vazquez, 2017; Huang, Lee, & Chen, 2017), research by Dhiranty, Suharjo, and Suprayitno (2017) found the effect was insignificant that indicates satisfied customers are not always loyal. These inconsistent results indicate that other factors can moderate the relationship between e-service quality, customer satisfaction, and loyalty.

It seems that purchase and security risks do not reduce customer interest in shopping online, as indicated by the increasing number of customers. This tendency is probably related to customer attitudes towards uncertainty, as shown by the individual's uncertainty avoidance level. In countries with high uncertainty avoidance level, the ability of online retailers to protect customer privacy plays a significant role in shaping customer satisfaction (Sabiote, Frias, & Castaneda, 2012). This tendency may be different in countries with relatively low uncertainty avoidance, as found by Jauw and Purwanto (2017). Even though both studies provide new insight into customer satisfaction toward the online marketplace, these studies measure uncertainty avoidance at a country level. Since every individual may have different uncertainty avoidance preferences, the measurement of uncertainty avoidance at the individual level may provide a clear understanding on the role of uncertainty avoidance in moderating the effect of e-servqual on customer satisfaction. This study has two objectives, (1) to examine the effect of e-servqual in shaping customer loyalty through satisfaction in the online marketplace and (2) to explore the role of uncertainty avoidance in moderating the relationship between e-service and customer satisfaction.

2. Literature Review

2.1 The Importance of Service Quality in the Online Marketplace

Online shopping can help customers be more effective and efficient in carrying out shopping activities by saving time and energy (Amjad-ur-Rehman, Qayyum, & Javed, 2019). Alam (2019) defines service quality as a company's abilities in presenting services related to products, processes, and the environment that meet the customers' expectations. E-service quality is an overall customer's evaluation of the excellence and quality of electronic services in the digital market (Lee & Lin, 2005).

There is a consensus about the multidimensionality of e-servqual; however, researchers differ in determining its dimensions of e-Servqual. This study uses the e-servqual dimensions developed by Rita et al. (2019), consisting of website design, customer service, security/privacy, and fulfilment. Aishatu and Lim (2017), Akram et al. (2017), and Rita et al. (2019) emphasize that website design as a competitive advantage to obtain customer satisfaction and loyalty in e-commerce. Lopez-Miguens and Vazquez (2017) argue that website quality is shaped by three factors: a navigation structure that provides convenience for visitors, information relating to the presentation of publications and updates to website content, and exciting website design that can attract visitors. A website design affects customers' perception of the ease of use and comfortability when shop online, which affects customer satisfaction (Bilgihan, 2016; Laurell & Sandstrom, 2016). As such, failure to provide a quality website design will have the potential to lose customers.

The fulfilment of services also determines e-servqual to customers related to products, such as product availability and delivery according to the promised time (Yarimoglu, 2017) as well as product conditions and

product returns of a discrepancy product ordered by the customer as part of e-servqual (Jain, Gajjar, Shah, & Sad, 2018). Research conducted by Ma (2017) and Gawor and Hoberg (2018) shows that the speed of delivery time can increase customer purchase intention. Some customers even choose to pay more in order to get the goods faster. Cao, Ajjan, and Hong (2017) stated that good quality delivery in terms of process, time, and cost could increase customer satisfaction, followed by repurchase intention and recommendation to others. Service fulfilment is also related to product returns that occur not only because of product defects but also due to customer expectations of products purchased with the products received (Fu et al., 2016). Seo, Yoon, and Vangelova (2015) reported that product return policies might be part of sales strategy, especially for hedonic products. Many online retailers offer return policies for customers who want to change their products simply because they change their mind to choose another product. Thus, companies are required to provide adequate product return management because it can increase customer satisfaction towards the online marketplace (Jain et al., 2018).

According to Salisbury (2001) and Eid (2011), security is defined as a condition in which customers believe that the website or online marketplace is safe. Meanwhile, Flavian, Guinaliu, and Gurrea (2006) define privacy as the customers' trust that other parties will not use their personal and banking data so that they feel confident and safe in DOIng online transactions. Security also means the ability of a website to protect customer personal data from irresponsible people during electronic transactions (Guo, Ling, & Liu, 2012). Technically, security ensures the integrity of data transmitted or stored will not be used or modified by third parties without permission (Flavia & Guinali, 2006). Many customers are reluctant to provide banking information, such as credit card data, because they fear that their data security may be misused (Armesh, Salarzehi, Yaghoobi, Heydari, & Nikbin, 2010). Therefore, an online marketplace must provide various security features and attributes on its website, such as encryption and secure socket layer (SSL). Based on research by Al-Jahwari, Khan, and Al Kalbani (2018), Jin and Park (2006), as well as Chung and Shin (2010), adequate security of a website has a positive effect on customer satisfaction in online shopping.

The arguments above indicate that all dimensions of e-servqual significantly affect the formation of customer satisfaction. Seng and Mahmoud (2020) add that customers who have strong beliefs on e-servqual of an online retailer tend to be satisfied and give good ratings and share it with others. Based on this argument, this study aims to test the following hypothesis:

H1. E-servqual has a positive effect on customer satisfaction.

2.2 Customer Satisfaction and Customer Loyalty in the Online Marketplace

Customer satisfaction is a result of customers' expectations and experiences (Vasic, Kilibarda, & Kaurin, 2019). A research by Khristianto, Kertahadi, and Suyadi (2012) confirms that customers are satisfied with the service if the experience matches or exceeds expectations. According to Gil, Hudson, and Quintana (2006), satisfaction has an important role in developing customer retention. Customers' decision to continue using a prodyct and maintain relationships with the company are influenced by their satisfaction with the products or services (Ndubisi, 2009). Vasic et al. (2019) describe that attractiveness, convenience, and excellent user interface affect customer satisfaction toward online shopping, which later fosters customers' loyalty toward the online marketplace.

Customer loyalty is vital for business since it enables companies to reduce the costs of attracting new customers (Thomas & Tobe, 2012). Loyalty can be identified through customers' continuous and repeated purchases (Leninkumar, 2017). In an online marketplace, Flavian et al. (2006) and Anderson and Srinivasan (2003) define customer loyalty as customers' tendency to make repeat purchases from online retailers continuously. Generally, customer loyalty is indicated by word-of-mouth (WoM), repurchase intention, and lower complaining behavior (Thurau, Gwinner, Walsh, & Gremler, 2004; Jones & Sasser, 1995; Chirico & Presti, 2008).

Studies by Sharma (2015), Kiran (2017), and Dharmesti and Nugroho (2013) found that the e-servqual dimension affects customer loyalty through satisfaction. Similarly, Sharma (2015) and Yieh, Chiao, and Chiu (2007) found that customer satisfaction influenced loyalty. The second hypothesis in this study is:

H2. Customer satisfaction has a positive influence on loyalty.

2.3 Role of Uncertainty Avoidance

Culture is all-embracing knowledge in an environment, and an implicit theory of beliefs, behavioral values, and other variables needed to understand and interpret different environments (Hong, Ying-yi, Morris, Chiu, & Martinez, 2000). According to Hofstede (1997), culture is a collective thought programming that distinguishes an individual in a specific society from another. Therefore, culture is an individual's characteristics as a society member that are shaped by the environment and life experiences. There is an increasing interest in the influence of culture on consumer behavior triggered by market globalization and customer diversification (Douglas & Craig, 1997).

Referring to Hofstede's cultural dimensions, a national culture has six dimensions, namely power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity, long-term orientation/short-term orientation, and indulgence/ restraint (Beugelsdijk & Welzel, 2018). The relevant cultural dimension to customers' purchasing decisions in the online marketplace is uncertainty avoidance, which is the society's tendency to avoid uncertainty by setting new formal rules (Hofstede, 2001).

Hwang and Lee (2012) stated that the level of customer acceptance of e-commerce influenced by uncertainty avoidance. Reimann, Lunemann, and Chase (2008) examined the moderating role of uncertainty avoidance in the relationship between e-servqual and customer satisfaction. They found that customers in countries with high uncertainty avoidance level would experience dissatisfaction for the risk. This would be different for customers from countries with low uncertainty avoidance rate if they find a service defect. This difference is due to customers' willingness to accept uncertainty. Customers in countries with high uncertainty avoidance tend to have high expectation toward product and services. Thus, the effect of e-servqual on customer satisfaction is expected to be stronger among individuals with high uncertainty avoidance compared to those with low uncertainty avoidance that is presented through the following hypothesis:

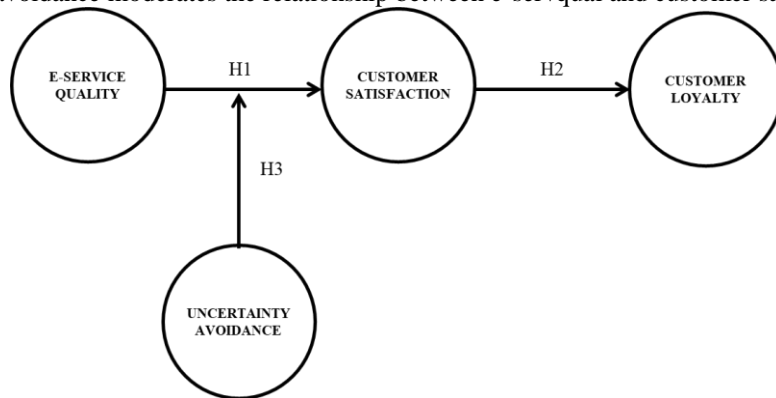**H3.** Uncertainty avoidance moderates the relationship between e-servqual and customer satisfaction.

Figure 1. Research model

3. Methodology

Indonesian e-commerce customers have increased by 10.8% from 139 million in 2017 to 154.1 million in 2018 (Jayani, 2019). It is projected the number of customers will reach 193.2 million people in 2021. Despite this rapid growth, the risks pertaining to online shopping are also increasing. According to the Republic of Indonesia Ministry of Communication and Informatics, 93 customers filed complaints regarding customer data theft by irresponsible parties from 2018 to 2020 (Jemadu, 2020).

Three hundred and two respondents were selected using purposive sampling by including only customers who shop online in the last three months. A survey was conducted to collect data by distributing a questionnaire via Google Form. The questionnaire consists of two parts. The first part consisted several questions on respondents' demographics and online shopping habits. The second part asked respondents' opinion regarding the variables of interest.

This study adopted measurement items from the literature. All dimensions of e-servqual variable were measured by 17 indicators adopted from Rita et al. (2019), while customer satisfaction was measured by 5 indicators from Elbeltagi and Agag (2016) and Anderson and Srinivasan (2003). Customer loyalty was measured by 5 indicators adopted from Anderson and Srinivasan (2003) and Eid (2011). Uncertainty avoidance is measured by 5 indicators adopted from Sharma (2010). All items were measured using a 5-point Likert scale. A partial least square structural equation modeling (PLS-SEM) was used to test the hypotheses.

4. Results

Four hundred eighteen respondents filled out the questionnaire, but only 302 used in the analysis. Samples who did not meet the criteria were excluded from the analysis. As shown in Table 1, all respondents were over 17 years old and had been shopping more than twice in the online marketplace in the last three months. The survey was dominated by female respondents and customers with monthly income less than IDR 5 million, equivalent to $345.

Table 1. Respondents' demographics profile

Items	Category	Frequency	Percentage
Gender	Male	87	28.8%

		Female	215	71.2%
Age		17 - 25 years old	84	27.8%
		26 - 35 years old	154	51.0%
		36 - 45 years old	47	15.6%
		46 - 55 years old	16	5.3%
		> 55 years old	1	0.3%
Occupation		Employee	107	35.4%
		Students	44	14.6%
		Professional	31	10.3%
		Government Employee	20	6.6%
		Entrepreneur	37	12.3%
		Others	63	20.9%
Income (IDR)*		< 5 million	182	60.3%
		5 – 10 million	72	23.8%
		10 – 15 million	26	8.6%
		> 15 million	22	7.3%
Online shopping experience		3 - 6 months	36	11.9%
		7 - 12 months	19	6.3%
		1 - 2 years	74	24.5%
		3 - 5 years	109	36.1%
		> 5 years	64	21.2%
Online shopping intention		2 - 5 times	168	55.6%
		6 - 8 times	54	17.9%
		8 - 10 times	34	11.3%
		> 10 times	46	15.2%

Note: IDR 1,000,000 is equal to US$68.97

Table 2 presents the descriptive statistics, results of validity and reliability tests. Four indicators (ES16, CS3, CS5, and UA1) were excluded from the analysis because they did not meet the validity requirement. The remaining indicators had outer loadings exceeding 0.70 and AVE above 0.5 that met the convergent validity requirements. Meanwhile, the value of composite reliability was above the minimum value of 0.7.

Table 2. Descriptive statistics, validity and reliability of the constructs

Items	Mean	Standard Deviation	Factor Loading	Average Variance Extracted (AVE)	Composite Reliability
WEBSITE DESIGN				0.742	0.935
ES1	4.268	0.698	0.857		
ES2	4.139	0.759	0.817		
ES3	4.430	0.732	0.866		
ES4	4.288	0.755	0.900		
ES5	4.281	0.748	0.867		
CUSTOMER SERVICE				0.659	0.885

ES6	3.248	1.205	0.707		
ES7	3.649	0.961	0.778		
ES8	3.765	0.850	0.875		
ES9	3.742	0.876	0.874		
SECURITY/PRIVACY				0.748	0.922
ES10	4.215	0.748	0.800		
ES11	4.046	0.771	0.877		
ES12	3.811	0.903	0.896		
ES13	3.738	0.910	0.884		
FULFILLMENT				0.749	0.900
ES14	4.010	0.735	0.877		
ES15	3.921	0.764	0.883		
ES17	3.712	0.793	0.836		
CUSTOMER SATISFACTION				0.817	0.930
CS1	4.119	0.695	0.901		
CS2	3.904	0.760	0.918		
CS4	3.897	0.759	0.892		
CUSTOMER LOYALTY				0.714	0.926
CL1	4.060	0.799	0.875		
CL2	4.103	0.884	0.835		
CL3	3.904	0.842	0.875		
CL4	3.964	0.831	0.852		
CL5	3.669	0.961	0.783		
UNCERTAINTY AVOIDANCE				0.642	0.877
UA2	3.940	0.878	0.701		
UA3	4.093	0.848	0.841		
UA4	3.924	0.919	0.821		
UA5	3.887	0.877	0.833		

The discriminant validity test was carried out to see whether there were overlapping definitions among the variables used in this study (Wang, 2018). The Fornell-Larcker criterion test in Table 3 showed that each construct was unique and could explain phenomena that were not explained by other constructs.

Table 3. Discriminant validity

	CUSTOMER LOYALTY	CUSTOMER SATISFACTION	E-SERVQUAL	UNCERTAINTY AVOIDANCE
CUSTOMER LOYALTY	0.845			
CUSTOMER SATISFACTION	0.759	0.904		
E-SERVQUAL	0.687	0.721	0.842	

UNCERTAINTY AVOIDANCE	0.423	0.409	0.403	0.801

After testing the measurement model, the next step was testing the structural model. As presented in Figure 2, e-servqual was a multidimensional construct formed by four dimensions: website design, customer service, security/privacy, and fulfilment. All dimensions had a significant influence on the formation of the overall e-service, with fulfilment having the most substantial effect, followed by security/privacy, website design, and customer service.
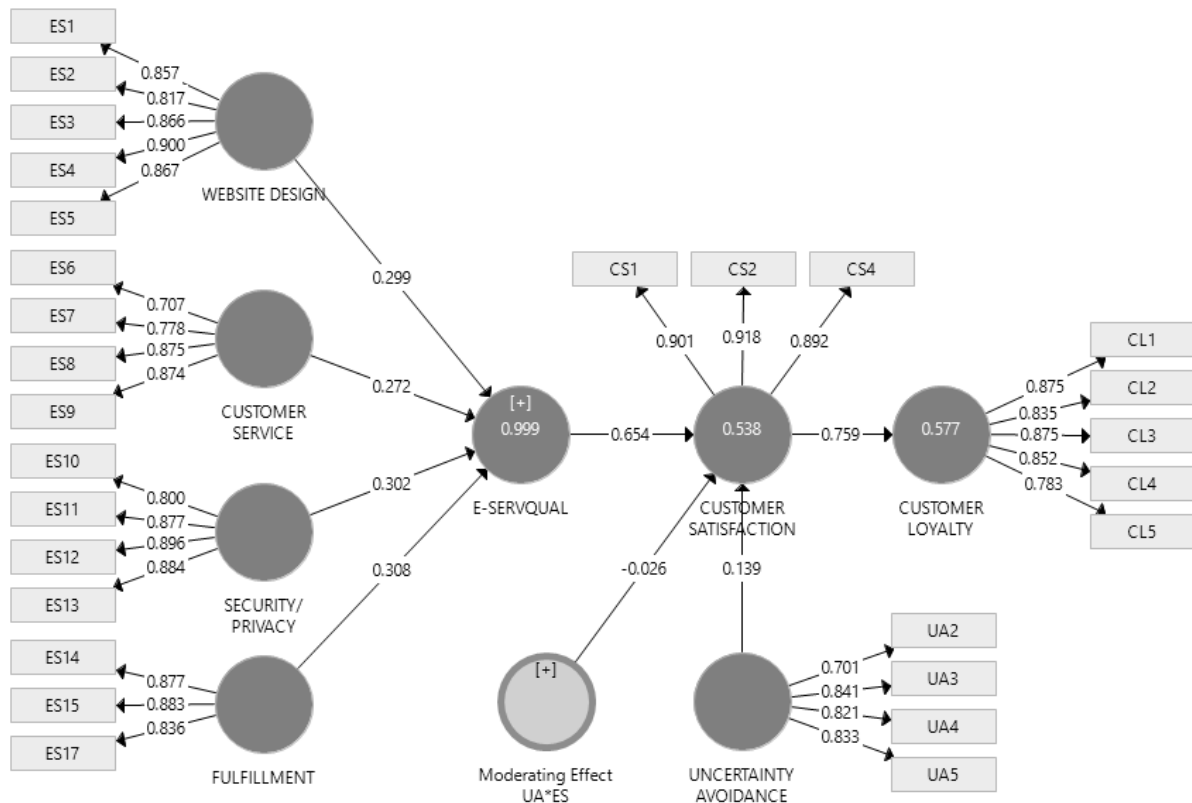

Figure 2. Path diagram

Table 4 shows the path analysis with and without moderating variables. Before including the interaction effect of e-servqual and uncertainty avoidance, e-servqual was able to explain the variability of customer satisfaction by 52%, while customer satisfaction could explain customer loyalty by 57.7%. This study found that H1 and H2 were supported, where e-servqual had a positive effect on customer satisfaction ($\beta = 0.721$, $p < 0.05$), then customer satisfaction had a positive effect on customer loyalty ($\beta = 0.759$, $p < 0.05$). The interaction between e-servqual and uncertainty avoidance could increase the coefficient of determination from 52.0% to 53.8% that resulted in small effect size ($f^2 = 0.039$). However, it turned out that the interaction effect of uncertainty avoidance in the relationship between e-service and customer satisfaction was not statistically significant ($\beta = -0.026$, $p = 0.364$), so H3 was rejected. This finding was supported by Figure 3 that showed an insignificant interaction effect. Rather than interaction with the e-servqual, this study found a significant direct relationship between uncertainty avoidance to customer satisfaction ($\beta = 0.139$, $p < 0.05$).

Table 4. Path analysis without and with interaction effect

Hypothesis	Without interaction effect			With interaction effect			Remark
	Path coefficient	S. E.	t-value	Path coefficient	S. E.	t-value	
H1: ES → CS	0.721	0.066	10.956	0.654	0.084	7.758**	Supported
H2: CS → CL	0.759	0.030	25.666	0.759	0.029	25.819**	Supported
H3: ES*UA → CS				-0.026	0.074	0.348	Not supported

UA → CS	0.139	0.053	2.637*

Note: * significant at 0.05   **significant at 0.01

Figure 3. Interaction effect between e-servqual and uncertainty avoidance

5. Discussion

This study found that the most influential dimension of e-servqual was fulfilment, which is in accordance to Rita et al. (2019). Fulfilment, which consists of on-time delivery, order accuracy and delivery conditions (Rita et al., 2019), is an important factor in building good service quality (Gawor & Hoberg, 2017). Customers are willing to pay more to get their products earlier (Ma, 2017). The security/privacy dimension also plays a significant role in the formation of e-servqual, which signifies the importance of data security in a digital environment (Flavia & Guinali, 2006). Meanwhile, website design and customer service have the least influence on e-service quality. Based on previous research by Rita et al. (2019), of all e-servqual dimensions, only three dimensions have a significant influence on e-servqual, which are website design, security/privacy, and fulfillment. This study has slightly different results, in which all e-servqual dimensions have a significant effect on the formation of e-servqual. It indicates that the existence of customer service is still needed by Indonesian customers when shopping online.

This study found that e-servqual has a significant positive effect on customer satisfaction that supports research by Lee and Lin (2005) and Rita et al. (2019). Based on the dimensions that shape e-servqual, customer satisfaction is largely determined by the condition of the goods ordered and delivery speed. Security features that ensure customer personal information are also important in developing e-servqual. By prioritizing fulfilment and customer safety/privacy, online marketplaces can increase customer satisfaction with the services provided. This finding is in line with research conducted by Blut, Chowdhry, Mittal, and Brock (2015), Cao et al. (2017), Al-Jahwari, et al. (2018), Jin and Park (2006), and Chung and Shin (2010). All dimensions in e-service quality must be taken into account because they have a role in improving the services of the online marketplace.

The results also found that customer satisfaction has a significant positive effect on customer loyalty that is in line with Sharma (2015) and Yieh et al. (2007). Satisfied customers tend to be loyal, which is shown by their tendency to choose e-commerce as their main choice, make repeat purchases, and recommend it to others. Satisfaction that is formed from customers' assessment of the quality of e-commerce services, especially in terms of service fulfilment, security/privacy, and website design causes them to be willing to shop again in a particular online retailer and recommend it to others. It supports the finding of Brady and Robertson (2001), Rita et al. (2019), Blut et al. (2015), and Thurau et al. (2004).

The inclusion of uncertainty avoidance is able to increase the ability of e-servqual to explain customer satisfaction, but the effect is relatively small. From the statistical test, it was found that uncertainty avoidance

does not play a significant moderating role in the relationship between e-servqual and customer satisfaction. This finding is related to the preferences of Indonesian customers in facing uncertainty. It is consistent with Reimann et al. (2008) who stated that countries with low uncertainty avoidance would maintain a level of satisfaction even though there are service defects. This finding also strengthens Jauw and Purwanto's (2017) research on Indonesian customers that found an insignificant moderating effect of uncertainty avoidance in the relationship between privacy protection and customer satisfaction toward the online marketplace.

One of the risks in online shopping is the vulnerability of data abuse and hacking. In fact, according to Armesh et al. (2010), many online marketplace customers are reluctant to provide credit card data for fear of misuse. Online marketplaces in Indonesia provide many options for payments, so customers do not have to input credit card data. This minimizes the impact of uncertainty faced by Indonesian customers in doing online shopping. Indonesian customers also feel that the personal data provided when registering in the online marketplace is not important data such as a credit card, resulting in data leakage problems do not reduce customer interest in shopping through the online marketplace. The impact of other uncertainties, such as product defects, also does not necessarily reduce Indonesian customers' interest to shop through the online marketplace. Customers will continue to shop by choosing other merchants that are considered more trustworthy with review preferences and ratings from other customers.

6. Conclusions

This research found a significant impact of e-servqual on customer satisfaction, which increases customer loyalty to the online marketplace. The findings show that all dimensions of e-service consisting of website design, customer service, security/privacy, and fulfilment are important to provide good e-servqual in the online marketplace. In addition, this study tests the moderating effect of uncertainty avoidance in the relationship between e-servqual and customer satisfaction. However, it is found that the moderating role is not significant.

These findings can provide insights for practitioners to understand the importance of each dimension of e-servqual and how it affects customer satisfaction and loyalty. As service fulfilment gives the highest contribution to e-servqual, online retailers must ensure that customers get services as promised, such as on-time delivery, good quality products (Yarimoglu, 2017), and appropriate return policies (Jain et al., 2018). The security/privacy is also essential, given the potential for a security system that is very vulnerable to hacking. To develop a reliable online marketplace platform, retailers must increase user security/privacy and ensure all users' data is safe. The addition of security features such as SSL (Armesh, 2010) and other security systems that can ensure data and transaction security will improve the performance of the online marketplace.

Furthermore, management must provide an attractive online marketplace website/application design and make it user-friendly. According to Bilgihan (2016), online marketplace service providers can add hedonic features in their website design to attract customers, especially teenage customers. Retailers must always improve the user interface and user experience (UI/UX) in the design of the website or online marketplace application. Indonesian customers still need customer service to get an immediate solution if they face problems when purchasing online. Online retailers can provide 24/7 customer service via telephone or chat on the website/application to assist customers. They can also adopt chatbots to serve a large number of customers at one time.

This study has several limitations that can be used as stepping stones for further research. First, this study involves all customers over 17 years of age. Future studies may focus on a specific customer age to get more detailed information about their purchase behavior. Besides that, this study only examines uncertainty avoidance as the only moderating variable. Future research can add other moderating effects that can influence the relationship between variables, such as type of online marketplace.

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APPENDICES

Questionnaire questions

CONSTRUCT	DIMENTION	ITEMS	MEASUREMENT	SOURCE(S)
E-Servqual	Website Design	ES1. The website adequately meets my information needs.	Likert Scale (1-5)	Rita et al. (2019)
		ES2. The website displays a visually pleasing design.	Likert Scale (1-5)	
		ES3. The purchasing process was not difficult.	Likert Scale (1-5)	
		ES4. The website displays a visually pleasing easy to read	Likert Scale (1-5)	

		content.		
		ES5. The site has a wide variety of products that interest me.	Likert Scale (1-5)	
	Customer Service	ES6. The online shop provides a telephone number to reach the company.	Likert Scale (1-5)	
		ES7. The online shop offers the ability to speak to a live person if there is a problem.	Likert Scale (1-5)	
		ES8. The online shop provides me with convenient options for returning items.	Likert Scale (1-5)	
		ES9. The online shop handles product returns well.	Likert Scale (1-5)	
	Security/ Privacy	ES10. I feel safe in my transactions with the online shop.	Likert Scale (1-5)	
		ES11. The online shop has adequate security features.	Likert Scale (1-5)	
		ES12. I trust the online shop to keep my personal information safe.	Likert Scale (1-5)	
		ES13. I trust the website administrators will not misuse my personal information.	Likert Scale (1-5)	
	Fulfillment	ES14. The product is delivered by the time promised by the company.	Likert Scale (1-5)	
		ES15. It quickly delivers what I order.	Likert Scale (1-5)	
		ES16. The product was damaged during delivery (Reverse).	Likert Scale (1-5)	
		ES17.The website is truthful about its offerings.	Likert Scale (1-5)	
Customer Satisfaction		CS1. I am satisfied with my decision to purchase from this website.	Likert Scale (1-5)	Ebeltagi & Agag (2016); Anderson &

		CS2: My choice to purchase from this website was a wise one.	Likert Scale (1-5)	Srinivasan (2003)
		CS3. I feel badly regarding my decision to buy from this website (reverse).	Likert Scale (1-5)	
		CS4. I think I did the right thing by buying from this website.	Likert Scale (1-5)	
		CS5. I am unhappy that I purchased from this website (reverse).	Likert Scale (1-5)	
Customer Loyalty		CL1. I believe that this is my favorite retail website.	Likert Scale (1-5)	Anderson & Srinivasan (2003); Eid (2011)
		CL2. When I need to make a purchase, this website is my first choice.	Likert Scale (1-5)	
		CL3. I will continuous purchase from the website in the near future.	Likert Scale (1-5)	
		CL4. I do recommend that others use the E-commerce services.	Likert Scale (1-5)	
		CL5. Changing my preference from the E-commerce requires major re-thinking.	Likert Scale (1-5)	
Uncertainty Avoidance		UA1. I would not describe myself as a risk taker.	Likert Scale (1-5)	Sharma (2010)
		UA2. I would like to avoid making a mistake when selecting an online marketplace.	Likert Scale (1-5)	
		UA3. I am very cautious about how I spend my money.	Likert Scale (1-5)	
		UA4. I get anxious easily when I do not know the performance of online marketplace.	Likert Scale (1-5)	
		UA5. I feel stressful when I cannot predict the	Likert Scale (1-5)	

		consequence of purchasing at an unfamiliar online marketplace.		