The Effects of Perceived Service Quality towards Customer Satisfaction and Behavioral Intentions in Online Transportation

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Abstract—This study aim to determine the effect of service quality and e-service quality in application based transportation towards customer satisfaction and behavioral intentions. In this study, the behavioral intentions are customer loyalty and word of mouth. The six-hypotheses researches in this study are tested with Structural Equation Modeling (SEM). The results found out that perceived value for money, service quality, and e-service quality have a positive and significant impact towards customer satisfaction. Also, it found out that customer satisfaction has a positive and significant impact towards customer loyalty and word of mouth. However, customer loyalty doesn't have significant impact towards customer loyalty.

Index Terms— mobile application, transportation, service quality, behavioral intention, perceived value.

I. INTRODUCTION

Service industry is one of the industry that grows rapidly. Service industry is one of the priority sectors for economy in Indonesia. In 2015, services represented 60% of the gross domestic product (GDP). Specifically, transportations, logistics and tourism sectors represented 45% of GDP.

Providing an excellent quality of service considered as the key to gain success in competitive environment nowadays. This is not only realized by the pure service company providers but also across industry. Companies that sell good products also compete to give better service to their customers (Zeithaml, Berry and Parasuraman, 1996).

A right and effective service quality needed to get satisfied customers. Customers who satisfied with the quality of services they receive will be loyal (Izogo and Ogba, 2014), where loyal customers will be more profitable for company because they are less sensitive to price, and also the cost to maintain loyal customers considered lower than the cost to attract new customers (Silva and Goncalves, 2016).

In recent years, internet utilization to improve service quality is a common thing to do. If earlier internet was only used as another tool to read books or magazine, now there are so many new opportunities emerge because of the internet (Pereira, Salgueiro and Rita, 2006). In Indonesia the use of internet is not exclusive anymore. Internet user in Indonesia has reach to 88.1 million users in early 2016 (Noviadhista, 2016). Indonesia itself is the fourth biggest internet users country in Asia (Hartanti, 2016).

With the improvement of internet nowadays, companies race to make their products and services adapt with the internet era. We can find any kinds of products and service now on the internet (Parasuraman, 2005). The development of handheld devices such as cellphone, tablet, and smartphone, make it easier to access internet (Huang, Lin and Fang, 2015). In Indonesia, smartphone users has increase by 5 million users in the first quarter of 2016, and predicted will increase to 250 millions users by the end of 2021 (Dailysocial, 2016).

Mobile applications used by Indonesian are games (38%), instant messaging (27%), social media (19%), online shopping (8%), transportation (6%) and reference (6%).

One of the popular mobile application in Indonesia recently is in transportation industry. Online transportation is where customers make their reservation on mobile application. It is preferably by the customers because its simple, and easy. Customers don't have to call to make reservation for their travel. There are three majors online transportation providers in Indonesia right now. GoCar, GrabCar and Uber.

Customers feel that these online transportations charge fairer fare than conventional public transportations like taxi. Also, some of these online transportation have cashless payment methods in which customers feel more secure and practical (Budhiarti, 2016). The quality of service that provided by these online transportations providers considered better than conventional public transportations. This kind of service quality is needed because customers that are satisfied because of the quality of service they received are more likely to repeat they purchase (Murray and Howat, 2002).

Online transportation is a company or provider with service as their core business, with a unique service. They use 2 medias for their services. They use their cars for transportation and they use mobile applications to reserve their trip. With the competitiveness of this industry, online transportations providers need to maintain their service quality and also their e-service quality. Because it is really easy for customers to switch to competitors because there are almost no switching cost in the internet (Barutcu, 2010). Therefore, customer loyalty and word of mouth are two of the main objectives for companies in online industry (Casalo, Flavian and Guinaliu, 2008).

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II. LITERATURE

A. Perceived Value for Money and Customer Satisfaction

According to Rajaguru (2016) customers of low cost and full service airlines companies have different perception of perceived value for money, service quality and customer satisfaction. Satisfaction of customers in low cost airlines company more affected by perceived value for money than service quality. Thus the study hypotheses that :

H1. Perceived value for money positively influences customer satisfaction.

B. Service Quality and Customer Satisfaction

Satisfaction is generally viewed as a broader concept while service quality focuses on its dimensions (Zeithaml, 2013). Previous study showed that when customer satisfaction obtained by customers' multiple experiences with the service provider, service quality could be affected by other service provider or by their perception of value they get from the service provider (Sureshcandhar, 2002). Service quality positively affected customer satisfaction in sports and leisure center in Australia (Murray and Howat, 2002). The five dimensions of service quality positively affect customer satisfaction in after sales service business (Murali, Pugazendhi, and Muralidharan, 2016) and in automobile repair services (Izogo and Ogba, 2014). Thus the study hypotheses that:

H2. Service quality positively influences customer satisfaction.

C. E-Service Quality and Customer Satisfaction

It is important to always improve e-service quality so that customers always satisfied, because in online market, it is very easy for customers to switch to another providers (Barutcu, 2010). Dimensions from e-service quality that most determine customer satisfaction are responsiveness, reliability and ease of navigation (Yang and Fang, 2004). Service providers think that reliability and easy to access are two important dimensions from e-service quality, whereas customers think that responsiveness and ease of navigations are the most important dimensions (Stiakakis and Georgeadis, 2009). E-service quality positively affected customer satisfaction and also perceived value in mobile value add (Kuo, Wu and Deng, 2009). Yeh and Li (2008) found out that e-service quality positively affect customer satisfaction. E-service quality, represented by content reliability and transaction process, positively affect customer satisfaction and indirectly affect customer loyalty in m-commerce (Choi et. al., 2008). Thus the study hypotheses that :

H3. E-service quality positively influences customer satisfaction.

D. Customer Satisfaction and behavioral intentions

According to Mittal (2016), the relationship between customer satisfaction and customer loyalty is not always linear. Satisfaction could induce loyalty proportionally only when the loyalty moved from the very low level or from not satisfied to satisfied. Customer satisfaction created customer loyalty where the loyalty itself strengthen the satisfaction (Shankar, et, al., 2000). The relationship between customer satisfaction and customer loyalty on the internet mediated by customer involvement. The more involved customer in their purchases on the internet, the more loyal they become (Castaneda, 2011). Service quality also proven affect customer loyalty mediated by customer satisfaction (Kaura et,al., 2004).
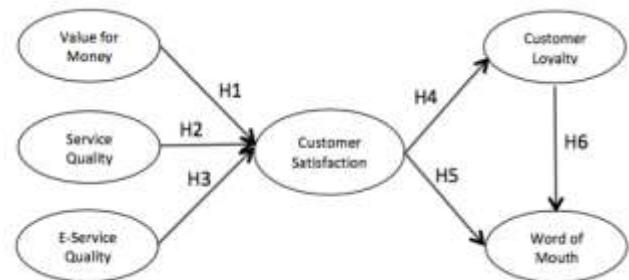
Satisfied bank customers could create positive word of mouth (Lymperopoulos and Chaniotakis, 2008). Satisfaction is one of the antecedents for word of mouth in financial services website (Casalo, 2008). Service quality has a strong effect on customer satisfaction and also word of mouth and purchase intentions as forms of customer loyalty (Kitapci et, al., 2013).

There is a strong relationship between loyalty and profitability. A loyal customer will purchase multiple times and will not looking for alternatives (Bowen and Chen, 2001). Managers of service providers should pay more attention to customer satisfaction, because customer satisfaction could lead to loyalty intentions where loyalty intentions could form word of mouth and also intention to purchase (Liao, Wang, dan Yeh, 2014). Loyal customers have a good chance to spread positive word of mouth voluntary (Boxer and Rekettye, 2010) and also have willingness to pay more (Srinivasan, 2002). Thus the study hypotheses that:

H4. Customer satisfaction positively influences customer loyalty.

H5. Customer satisfaction positively influences word of mouth.

H6. Customer loyalty positively influences word of mouth.

Fig. 1. Conceptual Model

III. METHODOLOGY

Respondents in this study are those who have experience using online transportations at least once. Respondents were contacted via email or instant messaging and they were filling it online using google docs. Within less than a week, 272 questionnaires were received.

A. Measurement Items and Validity

The measurement items for the construct service quality, e-service quality, value for money, customer satisfaction, customer loyalty and word of mouth were adapted from prior literature. Measurement items for value for money were adapted from Rajaguru (2016). Measurement items for service quality were adapted from Parasuraman (1988) and modified to suit the study context. Measurement items for e-service quality were adapted from Ribbink (2004) but in this study, one of the dimensions was changed and adapted from Parasuraman (2005). Measurement items for customer satisfaction were also

adapted from Ribbink (2004) and measurement items for both customer loyalty and word of mouth were adapted from Casalo (2008).

All measures used a 5-point Likert-type scale anchored on 1 = stongly disagree and 5 = strongly agree. We pre-tested the questionnaire on 33 respondents and amended the measurement items to enhance the content and face validity. Confirmatory factor analysis was performed to purify the measurement items.

Service quality and e-service quality were conceptualized as second order construct consisting of the latent variables. Service quality was consists of reliability, responsiveness, assurance, empathy and tangibles. While e-service quality was consists of ease of navigation, site aesthetics, responsiveness, privacy and assurance.

Structural equation model (SEM) was used to test the relationships proposed in the study.

TABLE 1: VALIDITY AND RELIABILITY OF SERVICE QUALITY

	SLF	t-value	VE	CR
Reliability	0.73	12.98	0.63	0.89
Responsiveness	0.81	10.56		
Assurance	0.87	15.28		
Empathy	0.81	12.26		
Tangibles	0.75	9.50		

TABLE 2: VALIDITY AND RELIABILITY OF E-SERVICE QUALITY

	SLF	t-value	VE	CR
Ease of Navigation	0.82	12.06	0.56	0.86
Site Aesthetics	0.70	11.69		
Responsiveness	0.71	10.97		
Privacy	0.72	14.92		
Assurance	0.79	14.04		

IV. RESULTS

Respondents participated in the study were from Jakarta and its satellites cities like Bekasi, Bogor, Tangerang, and Depok. But respondents from outside of cities or even outside of the country were welcomed. There are three majors online transportations providers that are well-known by the people of Indonesia, especially in Jakarta and its satellites cities. They are GoCar, Uber and also GrabCar. 132 respondents (48.5%) used Uber as their online transportation providers, 115 respondents (42.3%) used GrabCars as their online providers and only 25 respondents used GoCar as their online providers. The striking differences between Uber and GrabCar users and GoCar Users maybe because, GoCar was relatively new in this kind of services. Before, GoCar was well known by its motorcycle public transportation, and only in April 2016 they launched their four-wheels transportation. While Uber and GrabCar were already available in the middle of 2015.

The goodness of fit indices for proposed model indicated the overall model fit (RMSEA = 0,05; GFI = 0.91; AGFI = 0.88; CFI = 0.99). The results indicated a positive significant effect of value for money (t = 3.85, p ≤ 0.001), service quality (t = 2.08, p ≤ 0.001), and e-service quality (t = 7.08, p ≤ 0.001) on customer satisfaction and supported hypotheses H1, H2 and H3, respectively. The effect of customer satisfaction on customer loyalty (t = 16.73, p ≤ 0.001) and word of mouth (t = 3.22, p ≤ 0.001) found to be positive and significant and supported

hypotheses H4 and H5. However the effect of customer loyalty (t = 0.17, p ≤ 0.001) on word of mouth was not significant nor positive and therefore not supported H6.
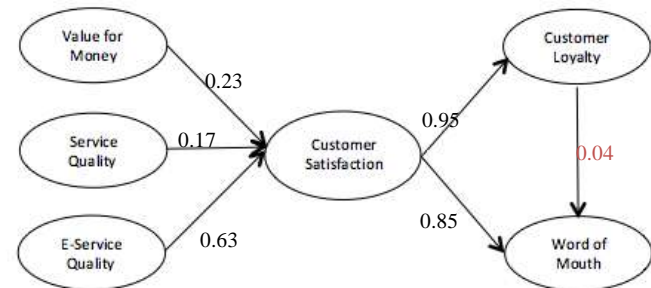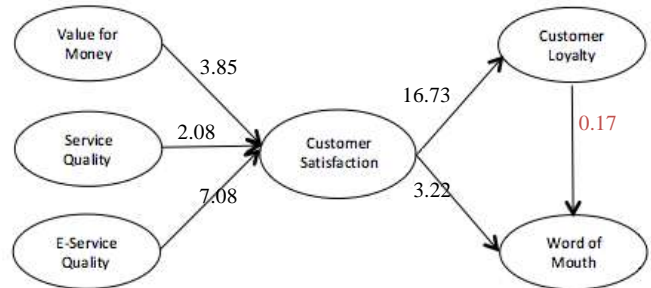
Fig.2. Structural Model (t-value)

Fig.3. Structural Model (standardized solution)

V. DISCUSSIONS

The purpose of this study is to test the six hypotheses as we described before. From six hypotheses offered, five of them are supported while one of them is not. The effect of perceived value for money on customer satisfaction found to be positive and significant. This indicate that the fare that is offered by the service providers is worth it. Customers are not disappointed to pay the money for what they get from the service providers. As said by Douglass and Levesque (2000) and Dolarslan (2014), customers are willing to pay more money if they think what they get is worth with what they get. Also, it is not impossible that they could become a loyal customer (Gallarza, 2016).

Service quality measured by SERVQUAL found to have a positive and significant effect on customer satisfaction. From five dimensions of service quality used in this study, assurance found to have the highest factor loading on service quality. It means that hospitality and courtesy from the drivers of online transportations considered very well by the customers. Drivers who are polite and friendly to the customers build up customers trust to use this kind of transportation (Badri, Abdulla and Madani, 2004). Also sincerity, trust and confidence are things felt by the customers that can enhance their satisfaction (Jabnoun and Khalifa, 2005).

E-service quality measured by ease of navigation, site aesthetics, responsiveness, privacy and assurance as its dimensions found to have a positive and significant effect on customer satisfaction. It is very important for service providers to always maintain their application for reservation, because its very easy for customers to switch to another online transportation service providers (Barutcu, 2010).

Ease of navigation found to have the highest factor loading among other e-service quality dimensions. This dimensions is the most important dimension for the customers, but sometimes ignored by the providers (Stiakakis and Georgeadis, 2009). Ease of navigation is the simplicity using the application and the most decisive dimensions on customer satisfaction (Yang and Fang, 2004).

Customer satisfaction found to have positive and significant impact on customer loyalty and word of mouth. Service providers who know factors that can determine customer satisfaction so it is easier for customers to become loyal and spread positive word of mouth (Bansal, et, al., 2014). Customer satisfaction also considered as the antecedents of repurchase intention and positive word of mouth as form of customers' loyalty (Kitapci et, al., 2013).

Customer loyalty in online transportation doesn't have any significant effect on word of mouth. This could be because of customers perceived the fare as worth and service providers always giving excellent service quality, so customers think that the excellent service quality was normal and was not something special that needs to be spread. Choi and Choi (2014) found that customers who remains loyal or become more loyal after experiencing service failure will be more possible to spread positive word of mouth than customers who always loyal and never experiencing service failure.

Fig. 4 Second Order Service Quality Loading factor and t value

Fig. 5. Second order e-service quality loading factor and t value

VI. MANAGERIAL IMPLICATIONS

It is important for online transportations service providers to give service quality as promised, having drivers who could give secure feelings to customers, and also provides clean and neat cars to improve service quality.

It is important for online transportation service providers to always maintain their easiness of navigation so that customers will not switch to another service providers. Because it is very easy for them to do so.

Online transportation service providers also need to maintain their excellent service in conventional service quality and e-service quality to generate customer satisfaction and its behavioral outcomes. Also it is important for online transportation service providers to always make innovations to trigger positive word of mouth.

VII. LIMITATIONS AND FURTHER RESEARCH

This research is about four-wheel online transportations in Indonesia in general. Next study could compare service quality of each brand that provides online transportation. Or could also compare service quality of Uber, as online transportation providers that available in many countries.

This research only studied about four-wheel transportations only. In Indonesia, online transportations also provides two-wheels public transportations. Next research could also compare service quality of conventional public transportations such as taxi and online transportations.

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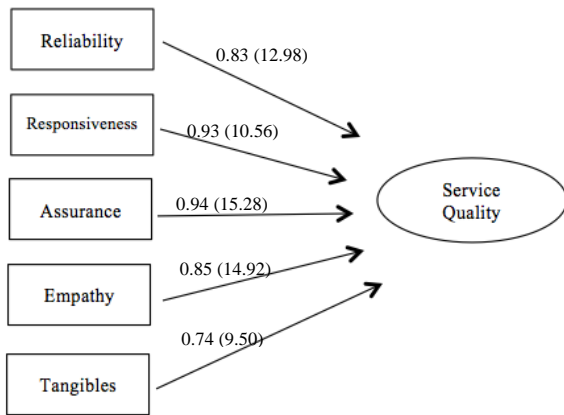[11] Hartiani, Jeany (2016) *Indonesia Peringkat 4 Pengguna Internet Asia*. January 13, 2016.

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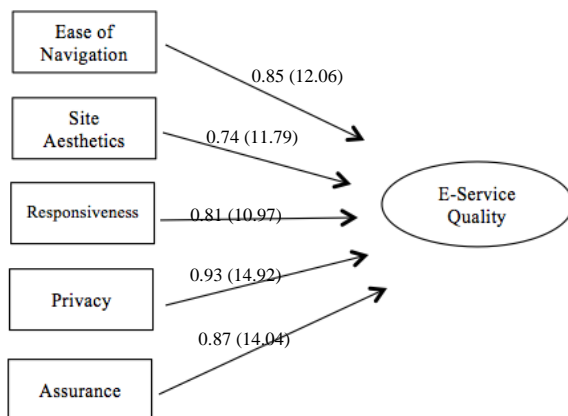
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