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Abstrak

Penelitian ini memiliki dua tujuan utama. Tujuan pertama adalah untuk menguraikan dimensi kualitas layanan elektronik pada aplikasi *mobile* layanan transportasi *online* yaitu Go-Jek, Grab, dan Uber di Indonesia. Tujuan kedua adalah untuk menguji hubungan kualitas layanan elektronik dengan kepuasan konsumen dan niat membeli kembali. Pengumpulan data dari kuesioner *online* sebanyak 149 responden digunakan untuk meneliti model penelitian. Data responden tersebut kemudian dianalisis menggunakan (PLS-SEM). Hasil penelitian menunjukkan bahwa semua dimensi kualitas layanan elektronik yaitu kualitas informasi, desain aplikasi, metode pembayaran, dan keamanan dan privasi secara positif mempengaruhi kepuasan pelanggan. Sementara itu, kepuasan pelanggan secara signifikan berpengaruh langsung pada niat beli kembali. Selanjutnya, bagian terakhir akan mendiskusikan implikasi praktis dari hasil penelitian.

Kata kunci: Aplikasi *mobile*, Transportasi *online*, Kualitas layanan elektronik, Kepuasan konsumen, Niat membeli kembali

Abstract

This study has two main objectives. The first objective is to outline the dimensions of electronic service quality on mobile application of online transportation services namely Go-Jek, Grab, and Uber in Indonesia. The second objective is to examine the relationship of the electronic service quality with customer satisfaction and repurchase intention. Data collection from an online questionnaire of 149 respondents was used to examine the research model. Then, it was analyzed primarily using (PLS-SEM). The results of the study indicate that all dimensions of electronic service quality namely information quality; application design; payment method; and security and privacy positively influence customer satisfaction. Meanwhile, customer satisfaction has significantly a direct effect on repurchase intention. Furthermore, the last section will discuss the practical implication of the research results.

Keywords: Mobile application, Online transportation, Electronic service quality, Customer satisfaction, Repurchase intention

1. Introduction

Transportation business in Indonesia has become an industry that is more competitive since the existence of online transportation services. Go-Jek, Uber, and Grab are the most popular mobile application of online transportation services in Indonesia. Those applications offer a major competitive advantage over established conventional transportation in bringing together drivers and customers. In effect, the numbers of online transportation services continue to grow every year and there are currently 10 application-based online transportation services in Indonesia namely Go-Jek, Grabbike, Grabsi, Uber, Bajaj App, Transjek, Wheel Line, Bangjek, Ojek Syar'I, and Blue-Jek (Sindo, 2015). Moreover, the online transportation business continues being a promising business in line with the growth in the number of a smartphone user in Indonesia. The penetration of smartphone users put Indonesia as the biggest smartphone users in the Asia Pacific after China and India with 45.4 percent (C. Liu, 2015).

The phenomenon above indicates that online transportation services has already been in mind of customers and gradually become substitutes for conventional transportation. As the importance of online transportation services increases, the service quality of the mobile applications will become a critical issue for survival and success. Parasuraman, Zeithaml, and

Malhotra (2005) and Noorshella, Abdullah, and Nursalihah (2015) agreed that electronic service quality becomes a pivotal point in determining the competitive advantage in the long-term retention of firms operating online.

At this point, the emerging issue of online transportation services in Indonesia grabbed an attention of Santoso and Aprianingsih (2017) who conducted research on electronic service quality on Go-Ride as part of the Go-Jek application in Java, Indonesia. Although this research succeeded to reveal the relationships of both perceived service quality and electronic service quality towards customer satisfaction and repurchase intention, this result of the research was insufficient in revealing features' electronic service quality of the mobile applications that make customers retain to reuse the application comprehensively. Previously, the discussion of electronic service quality has been extensively discussed on website context such as (Yoo and Donthu, 2001); (Vidgen and Barnes, 2002); (Wolfenbarger and Gilly, 2003); (Parasuraman et al., 2005); (Lee and Lin, 2005); (Bauer et al., 2006); (Guo et al, 2012); (Li, 2014); and (Noorshella et al., 2015).

Referring to the previous researches above, the discussions of electronic service quality are dominant in the website context and there is still lack researchers related to the mobile application. Therefore, there are two main objectives of the current research. Firstly, the research is going to outline the dimensions of electronic service quality on mobile application of online transportation services namely Go-Jek, Grab and Uber in Indonesia. Secondly, the research will examine the relationships of the electronic service quality with customer satisfaction and repurchase intention. It is not a comparative study to compare three online transportation applications in delivering their service quality. However, the study generally focuses on revealing what dimensions that are reliable to describe electronic service quality on mobile application of online transportation. The researcher chooses mainly those three brands because the brands have dramatically changed the transportation business environment in Indonesia. Instead of having a well-established mobile application, according to Google Play Store record, the Go-Jek, Grab, and Uber have the biggest users of other online transportation services in Indonesia. Consequently, by examining those three mobile applications, we hope to get extensive results to answer the critical issue in this study.

The results of the study will be beneficial for the transportation industry and for academic purpose. For the transportation industry, outlining dimension of electronic service quality on the mobile application can help online transportation company in catching customers' perception and expectation. Then, it will give insight for the company in developing the right features and benefits continuously on the mobile application to satisfy their customers. For the academic purpose, the research will contribute to the development of the dimension of electronic service quality related to the mobile application. In addition, it can be a reference material for the development of knowledge especially students and further researchers who will conduct research in the area of electronic service quality on mobile application of online transportation services.

2. Literature Review and Hypothesis Development

2.1 Electronic Service Quality

Santos (2003) explained that electronic service quality is overall customer evaluations and judgments regarding the excellence and quality of electronic service delivery in the virtual marketplace. Then, Noorshella et al. (2015) stated that electronic service quality was increasingly recognized as an important aspect as well as the key in determining the competitive advantage and factor in the long-term retention of firms operating online. In response to the importance of the service quality in the domain of electronic environment, some researchers had conducted some studies and formulated scale in measuring electronic service quality on the website.

Yoo and Donthu (2001) developed a *Sitequal* model and validated a psychometrically rigorous instrument to measure the perceived quality of an internet-shopping site. The questionnaire distributed to 94 students in three marketing classes and they were asked to both visit and interact with some shopping websites but not having any transaction activities. In

other words, the researchers merely focused on the website as interface media rather than revealed empirical result on how respondents used the website and made any transaction.

Similarly, Vidgen and Barnes (2002) proposed *WebQual* 4.0 model in measuring electronic service quality of bookstores website. The online questionnaire posted on the university's homepage and promoted through several media such as e-mail, notice boards and announcements at lectures finally got 376 respondents. Unfortunately, the *WebQual* 4.0 model did not explore deeply how respondents having transaction activities such as navigation of the website, selection of products or services, ordering, payment, delivery, and customer service because the designed instruments could be answered by respondents without dealing with the entire purchasing process. Consequently, Parasuraman et al. (2005) and Bressolles and Nantel (2008) stated that *WebQual* 4.0 model could not be categorized as ideal measurement scale of electronic service quality since the aspects of transactional activities were ignored.

On the contrary, Wolfenbarger and Gilly (2003); Lee and Lin (2005); Bauer et al. (2006); Guo et al. (2012); and Noorshella et al. (2015) not only focused merely on website interface but also revealed the entire transactional process done by respondents. Additionally, Wolfenbarger and Gilly (2003) argued that customers who experience real transactions are important elements to be explored as it comprises consecutively all things related to information search, product or service evaluation, decision making, making transaction, delivery, returns and customer service.

Then, Santoso and Aprianingsih (2017) had successfully revealed the relationship of service quality and electronic service quality towards repurchase intention which was mediated by customer satisfaction. Specifically, this research concerned with electronic service quality with seven dimensions namely security, reliability, responsiveness, application design, trust, ease of use and fulfilment. However, the model used in the research actually did not really evaluate electronic service quality of Go-Jek application as a whole. The researchers only focused on one of the services in the application that was Go-Ride. In addition, the generalization of the research results is very limited. It is because the respondents involved in this research mostly are students.

Thus, it is necessary to reexamine the previous research that covers the limitations of the last one. Therefore, this research will focus on outlining electronic service quality in the context of the mobile application of online transportation services in Indonesia especially Go-Jek, Grab, and Uber not only related to mobile application interface but also related to entire transactional process done by customers. In addition, the chosen dimensions of electronic service quality as measurement scale in this study are information quality, application design, payment method, and security and privacy.

2.1.1 Information Quality

Information quality within a mobile application is an important aspect for customers to know what services provided by the online transportation company. The clearer information provided in the application make customers easy to understand the description of services provided in the application. By creating a qualified information, customers can easily choose which best services needed by them. This suggests that online transportation business need to pay attention to the content of their mobile applications. Empirically, Vidgen and Barnes (2002) found that accurate information becomes the most important item in the *WebQual* 4.0 instrument. In addition, X. Liu, He, Gao, and Xie (2008) found that higher level of information quality will improve customer satisfaction in online shopping and information quality has a significant impact on customer satisfaction. However, although the previous study focuses on the information quality on the website of online shopping, the characteristic of the website and mobile application are similar in terms of internet-based service. Therefore, the researcher assumes that information quality in the mobile application can influence customer satisfaction, especially in an online transportation context. Hence, the following hypothesis is proposed.

H1. Information quality on the mobile application of online transportation services positively influences customer satisfaction.

2.1.2 Application Design

The combination of colour, frame, picture, font, user-friendly and display of the mobile application page constitutes basic component of mobile application design. Developing an attractive design of mobile application can influence customers' preferences and make customers enjoy using the mobile application. In website context, Wolfinbarger and Gilly (2003) conducted an empirical study and they found that website design is a strong predictor of customer quality judgments, satisfaction, and loyalty for internet retailers. In addition, Lee and Lin (2005) found that website design positively influences overall service quality and customer satisfaction. The results of previous research convince that design of website significantly influences customer satisfaction in two different contexts. Then, the researcher has no doubts that mobile application design of online transportation service also can potentially satisfy mobile application users. Therefore, the following hypothesis is proposed.

H2. Application design on the mobile application of online transportation services positively influences customer satisfaction.

2.1.3 Payment Method

The emergence of the internet has changed every single element of our environment. In the context of online transportation services, the form of services transforms from conventional to digital, especially how customers pay for the services. Unlike other common transportations, payment methods offered by online transportation provider are more various, not only cash but also virtual payment and credit card. These payment methods make it easy for the consumer when they use the services. Furthermore, Guo et al. (2012) had reconfirmed that website design; security; information quality; payment method; electronic service quality; product quality; product variety; and delivery service have a positive influence on consumer satisfaction from the aspect of online shopping environment in China. Moreover, Noorshella et al. (2015) stated that transaction capability and payment identified as factors of electronic service quality and this study revealed that customers feel comfortable with websites, which provide many options of payment method. Consequently, the researcher cannot ignore the dimension of payment method as a pivotal element that trigger consumer to reuse online transportation services. Hence, the following hypothesis is proposed.

H3. Payment method on the mobile application of online transportation services positively influences customer satisfaction.

2.1.4 Security and Privacy

Discussion on online-based services especially transportation, security and privacy become main considerations of customers when choosing the services. The quality of security and privacy system in the mobile application of online transportation services strengthen the confidence of customers in experiencing the services. In other words, more secure the application more confidence consumer chooses the mobile application of online transportation services. Then, Parasuraman et al. (2005) found that regression analyses using factor-score measures as independent variable clearly and consistently show that the factor representing privacy plays a significant role in customers' higher-order evaluations pertaining to the website. Meanwhile, Noorshella et al. (2015) indicated that security and privacy is one of the key determinants of electronic service quality among small online apparel business in Malaysia. Moreover, Wolfinbarger and Gilly (2003) and Guo et al. (2012) respectively stated that privacy and security are strongly predictive of customer judgments of quality and satisfaction. Consequently, the following hypothesis is proposed.

H4. Security and privacy on the mobile application of online transportation services positively influence customer satisfaction.

2.2 Customer Satisfaction

Kotler, Armstrong, and Opresnik (2017) stated that customer satisfaction is how a quality of the product produced by companies matches customers' expectation. In detail, if the products are far from customers' expectation, meaning that the customers are dissatisfied. If the products are in line with the customers' expectations, the customers are satisfied. Then, if the quality of products is more than customers' expectation, the customers are satisfied. In addition, customer satisfaction becomes a main purpose of companies when they deliver products or services. Moreover, customer satisfaction can lead the companies in gaining customer retention, market share, and profitability (Rust and Zahorik, 1993). In online transportation context, to be more sustainable, companies such as Go-Jek, Grab, and Uber must focus to get customer retention, develop market share and gain more profit by promoting their customer satisfaction. In this research, in promoting customer satisfaction, the companies should consider four dimensions of electronic service quality of mobile application namely information quality, application design, payment method, and security and privacy.

2.3 Repurchase Intention

Lacey, Suh, and Morgan (2007) defined repurchase intention as individual's judgment about buying again a product or services from the same company. In the online transportation context, repurchase intention means that customers of online transportation services will reuse the services by more order using their mobile application. Then, some question related to repurchase intention come up, especially factors that influence customers to repurchase intention. Patterson and Spreng (1997) stated that one of the antecedents of repurchase intention is customer satisfaction. In addition, customer satisfaction has a significantly positive effect on customer repurchase intention under the platform online retail environment and become an important antecedent of customer repurchase intention (Bao, 2015). Moreover, Atil Bulut (2015) empirically stated that both e-satisfaction and e-trust have a higher level of influence on online repurchase intention than e-loyalty, therefore customers are more likely to intent to repurchase from the website when an online store is able to keep customers more trusted and satisfied. In contrast, no significant effects are found in the relationship between satisfaction and repurchase intention (Dutta, 2016). However, Dutta (2016) had also no doubt that the importance of satisfaction should be recognized in-depth because it influences on consumer behaviour of repurchase intention. Therefore, the following hypothesis is proposed.

H5. Customer satisfaction on the mobile application of online transportation services positively influences repurchase intention.

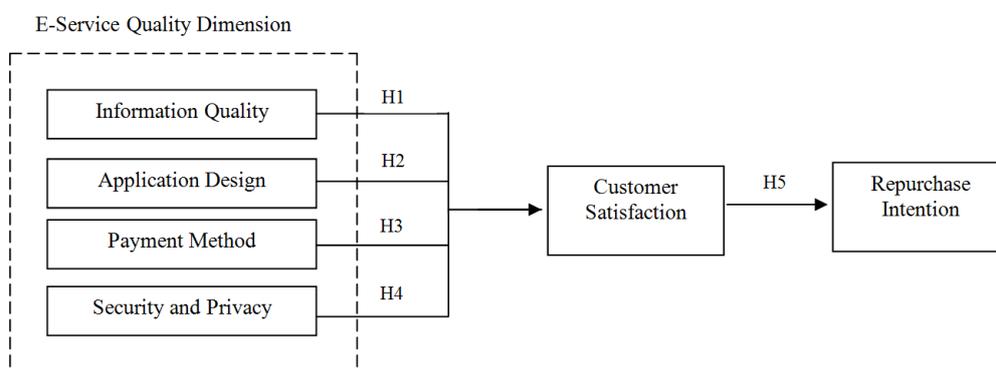


Figure 1.
Conceptual Framework

3 Research Method

3.1 Measures

The construct definitions of the instruments and the related literature are listed in Table 1 below. There are some steps in formulating electronic service quality dimensions. At the first

time, we consider that website and mobile application has a similar characteristic in the digital environment. Then, we decided to conduct a literature review of the previous studies regarding electronic service quality in a website context. At this point, we found that the previous studies in website context frequently used information quality; application design; payment method; security and privacy as the dimensions of electronic service quality. In addition, we also have judgment in deciding those four dimensions. Firstly, information quality in the mobile application is an important part of guidance for the users to complete transactions. Secondly, application design becomes a critical point of the users regarding the easiness to navigate on the application and the design attractiveness of the application. Thirdly, compared to conventional transportation, online transportation company provides the various option of the payment method which making transaction much simpler and easier. Fourthly, security and privacy also become an issue in the digital era. The online transportation company must convince that the users' personal data are secure when they make transactions through the applications. Shortly, it also makes the users feeling more convenience. The last step we make some minor wording changes in order to tailor the instruments into electronic service quality related to the mobile application context.

Although we observe three different online transportation applications, each respondent will respond the same questions regardless what application they use. This treatment applied because we focus on revealing what kinds of electronic service quality on the mobile application of online transportation service in general not specific only to one application or event compare to one another. In addition, the instrument of the research has been set universally in order to all respondents can answer easily. All items in the constructs are measured using a five-point Likert-type scale (ranging from 1 = strongly disagree to 5 = strongly agree).

Construct	Definition	References
Information Quality (IQ)	Customer perception of information quality in mobile application of online transportation services	(Vidgen and Barnes, 2002); (X. Liu, He, Gao, and Xie, 2008); (Noorshella et al., 2015)
Application Design (AD)	Customer perception of degree of user-friendliness in using mobile application of online transportation services	(Yoo and Donthu, 2001); (Wolfenbarger and Gilly, 2003); (Lee and Lin, 2005); (Bauer et al., 2006); (Noorshella et al., 2015)
Payment Method (PM)	Customer perception of flexibility and comfortable using payment method offered by mobile application of online transportation services	(Guo et al., 2012); (Noorshella et al., 2015)
Security and Privacy (SePri)	Customer perceptions of the security of transaction and personal privacy provided by mobile application of online transportation services	(Yoo and Donthu, 2001); (Wolfenbarger and Gilly, 2003); (Parasuraman et al., 2005); (Guo et al., 2012)
Customer Satisfaction (CSAT)	Customer satisfaction towards services provided by mobile application of online transportation services	(Atil Bulut, 2015)
Repurchase Intention (RI)	Customer probability of repurchase services provided by mobile application of online transportation services	(Atil Bulut, 2015)

Table 1.
Construct Definition

3.2 Subject and Procedure

The population of the research was people who have already used online transportation services (Go-Jek; Grab; and Uber) for at least six months in Surabaya. Ghozali (2008) stated that there are some techniques to determine how many samples used in PLS-SEM, namely:

- a. When parameter estimation using maximum likelihood method is large, the suggested sample is from 100 to 200 and a minimum sample is 50.
- b. A minimum sample is 5 to 10 times the amount parameters in the model.
- c. A minimum sample is 5 to 10 times the indicators of overall latent variables.

This research involves as many as 24 indicators. Consequently, referring to the third technique requires sample size at least 5×24 or as high as 120. Then, the sampling techniques used in this research were judgment sampling and snowball sampling. The online questionnaire was spreading via media social such as Facebook; Path; Whatsapp; and Telegram from February to May 2017. Technically, respondents that got a link to the online questionnaire in their social media accounts clicked the link and filled all questions or statements.

3.3 Statistical Analysis

The research model shown in Figure 1 was analyzed primarily using Partial Least Squares Structural Equations Modeling (PLS-SEM) approach, supported by SmartPLS 3.2.6 software. There was a two-stage model-building process for applying PLS-SEM (Hair, Ringle, and Sarstedt, 2011). Regarding the model used in this study is a reflective model; measurement model assessed on their internal consistency reliability and validity. In addition, the explanatory power of the structural model in the research will be measured by using R^2 value. Finally, the last stage is the assessment of the structural model results. It comprises on examining the model's predictive capabilities and the relationships between the constructs.

4 Result and Discussion

4.1 Respondents Overview

There were 158 respondents filling out the questionnaire, but nine questionnaires later were discarded because of missing some data. According to 149 usable respondents, 22.1 percent were 15-24 years of age ($n=33$), 75.8 percent were 25-54 ($n=113$), and 2.0 percent were 55 years old and over ($n=3$). Next, about 47.7 percent were male ($n=71$) and 52.3 percent were female ($n=78$). Then, 2.0 percent were elementary school to high school in terms of their level education ($n=3$), 84.6 percent were college graduate ($n=126$), and 13.4 percent were a graduate school ($n=20$). In addition, 24.8 percent of respondents had monthly household income less than Rp3.000.000 ($n=37$), 38.3 percent had monthly household income from Rp3.000.000 to Rp5.000.000 ($n=57$), and 36.9 percent had monthly income over Rp5.000.000 ($n=55$). Then, related to frequency using mobile application of online transportation services, 40.3 percent respondents have used the services approximately 1-3 times of last six months ($n=60$), 19.5 percent has used 4-7 times ($n=29$) and 40.3 percent has used over 8 times ($n=60$). Finally, Go-Jek application was the most popular application that used by 114 respondents, followed by Grab application with 72 respondents and Uber application with 69 respondents.

4.2 Reliability and Validity Testing

The reflective measurement model was assessed by evaluating their internal reliability and validity. Hair et al. (2011) stated that internal reliability test focuses on composite reliability as an estimate of a construct's internal consistency. The acceptable value of composite reliability is 0.60 to 0.70 in exploratory research and 0.70 to 0.90 in more advanced stages of research. Referring to Table 2, the composite reliability values of 0.91 (IQ), 0.93 (AD), 1.00 (PM), 0.92 (SePri), 0.93 (CSAT), and 0.93 (RI) demonstrate that all six reflective constructs have high levels of internal consistency reliability. However, note that the composite reliability value of the single-item variable PM is 1.00, it cannot be interpreted as evidence that the construct exhibits perfect reliability.

Latent Variable	Indicators	Outer Loading	Composite Reliability	AVE	Discriminant Validity?
IQ	IQ1	0.82	0.91	0.72	Yes
	IQ2	0.86			
	IQ3	0.85			
	IQ4	0.85			
AD	AD1	0.81	0.93	0.65	Yes
	AD2	0.77			
	AD3	0.82			
	AD4	0.82			
	AD5	0.83			
	AD6	0.80			
	AD7	0.79			
PM	PM1	1.00	1.00	1.00	Yes
SePri	SePri1	0.86	0.92	0.73	Yes
	SePri2	0.88			
	SePri3	0.83			
	SePri4	0.85			
CSAT	CSAT1	0.93	0.93	0.87	Yes
	CSAT2	0.93			
RI	RI1	0.94	0.93	0.87	Yes
	RI2	0.92			

Table 2.

Result Summary for Reflective Measurement Model

Then, validity test evaluated the measurement model referring to convergent validity and discriminant validity. To established convergent validity, researchers consider the outer loadings of the indicators as well as the average variance extracted (AVE) (Hair et al., 2011). Hair et al. (2011) stated that a common rule of thumb for outer loadings should be 0.70 or higher. All outer loadings of the reflective construct presented in Table 4 IQ, AD, MA, PM, SePri, CS, CSAT, and RI are well above the threshold value of 0.70. In short, all of the indicators for the eight reflective constructs are well above the minimum acceptable level for outer loading. Subsequently, convergent validity assessment builds on the AVE value as the evaluation criterion. A common rule of thumb for AVE is 0.50 or higher (Hair et al., 2011). Referring to Table 2, the AVE values of IQ (0.72), AD (0.65), PM (1.00), SePri (0.73), CSAT (0.87), RI (0.87) are well above the required minimum level of 0.50. Thus, the measures of the six reflective constructs have high levels of convergent validity.

Lastly, discriminant validity was assessed by using two criteria namely the Fornell-Larcker criterion and the cross-loadings. According to the Fornell-Larcker criterion, the square root of the AVE of each construct should be higher than the construct's highest correlation with any other construct in the model (Hair et al., 2011). Overall, the square roots of the AVEs for the reflective constructs AD (0.81), CSAT (0.93), IQ (0.85), PM (1.00), RI (0.93), and SePri (0.86) are all higher than the correlations of these constructs with other latent variables in the path model.

In addition, discriminant validity is established when an indicator's loading on constructs is higher than all of its cross-loadings with other constructs. Then, the results show that all cross-loadings with other constructs are considerably lower. Overall, cross-loadings, as well as the Fornell-Larcker criterion, provide evidence for the discriminant validity of the variables. Finally, Table 2 summaries the results of the reflective measurement model assessment (rounded to two decimal places). As can be seen, all model evaluation criteria have been met, providing support for the measures' reliability and validity.

4.3 Model Fit Measurement

After both the construct validity and construct reliability have been established, the following step was to measure a structural model of the research. In PLS analysis, testing the structural paths and the R² scores of the endogenous variables to measures the explanatory power of a structural model (Dutta, 2016). The results of the standardized structural path analysis are shown in Figure 2. The variance R² from PLS outputs are as follows: customer

satisfaction (CSAT) 0.69 and repurchase intention (RI) 0.79. Shortly, the research model accounted for 69 to 79 percent of the variance (R-Square). While the exact interpretation of the R² value level depends on the particular model and research discipline, in general, R² values of 0.75, 0.50, or 0.25 for the endogenous construct can be described as respectively substantial, moderate, and weak (Hair et al., 2011). Thus, the model fit of the overall model is good because R² of the construct in the model are categorized moderate to substantial.

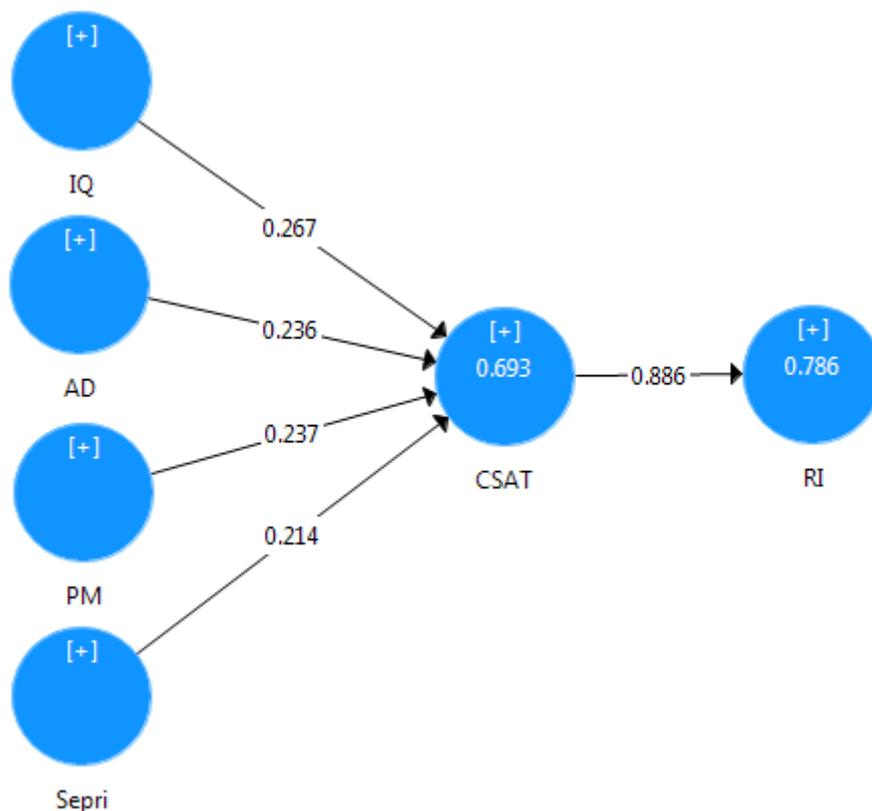


Figure 2.
Path Coefficient Results

4.4 The Hypothesis Testing

The statistical significance of all structural parameter estimates was evaluated to determine the validity of the hypothesized paths. This study evaluates the relationships between the dimensions of electronic service quality of mobile application, which consist of information quality; application design; payment method; and security and privacy towards customer satisfaction and customer repurchase intention in the mobile application of online transportation services context.

Hypo. No.	Hypothesis	Path Coefficient	Standard Deviation	T Statistic	P Values	Significant Level
H1	IQ → CSAT	0.27	0.08	3.304	0.00	**
H2	AD → CSAT	0.24	0.09	2.771	0.01	**
H3	PM → CSAT	0.24	0.07	3.426	0.00	**
H4	SePri → CSAT	0.21	0.08	2.706	0.01	**
H5	CSAT → RI	0.89	0.02	39.993	0.00	**

Note: ***:p<0.001,**:p<0.01

Table 3.
Result Summary of the
Hypothesis Testing

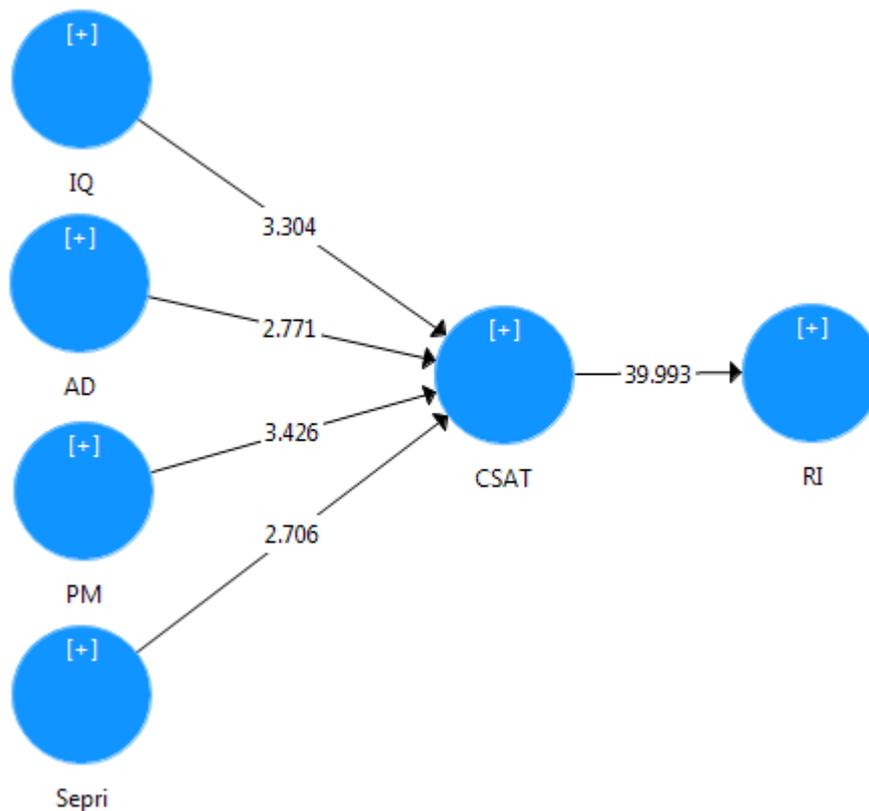


Figure 3.
Path Coefficient of T
Statistics

As illustrated in Table 3 and Figure 3, the T statistics result of hypothesis 1 is $3.304 > 1.96$ and P value is about $0.00 < 0.005$, meaning that the hypothesis 1 is accepted. Then, the T statistics result of hypothesis 2 is $2.771 > 1.96$ and P value is about $0.01 < 0.005$, meaning that the hypothesis 2 is accepted. Next, the T statistics result of hypothesis 3 is $3.426 > 1.96$ and P value is about $0.00 < 0.005$, meaning that the hypothesis 3 is accepted. In addition, the T statistics result of hypothesis 4 is $2.706 > 1.96$ and P value is about $0.01 < 0.005$, meaning that the hypothesis 4 is accepted. Finally, the T statistics result of hypothesis 5 is $39.993 > 1.96$ and P value is about $0.00 < 0.005$, meaning that the hypothesis 5 is accepted. To sum up, the results provide support for the all proposed positive relationships at the 0.05 level of significance.

Noorshella et al. (2015) stated that responses got at the pre-sale stage tend to reflect attitudes of respondents prior to their purchase actions and the value judgments provided by these respondents may be provisional and differ from their evaluation at the point of purchase. Therefore, this study was directed to shed light on the phenomenon of electronic service quality on mobile application of online transportation service at the point of purchase. Then, the analytical results of the study are discussed below.

First, the analytical results showed that information quality is a significant predictor of customer satisfaction for online transportation services delivered by the mobile application. This finding is in line with Noorshella et al. (2015) and Liu et al. (2008). The result of the research reveals that information in the mobile application of online transportation services like Go-Jek, Grab and Uber are reliable and easy to understand by the customers. In addition, all information attached to the application is already good and it is an important element for customers as considerations to choose the appropriate service that they need. However, the information accuracy of the application perceived by customers still become a critical point because loading factor of the indicators has the lowest scores 0.82. Take an example, information about a type of vehicle driven by the chosen drivers are not the same as the actual vehicle. This case makes customers feel disappointed with the condition and it can potentially decrease the level of customers' satisfaction. Consequently, in boosting customer satisfaction of online transportation users, making information more accurate is necessary.

Second, the dimension of application design has a positive influence on customer satisfaction. According to the research results, the level of customers' satisfaction on mobile application of online transportation is influenced by some elements of application such as layout, creativity, navigation, easy to open, colour combination, loading time, and easy to make order or transaction. Then, a colour combination used by Go-Jek, Grab, and Uber application becomes the highest element in making customers feel satisfied. At this point, the colour combination of those three applications is a part of their branding strategy. They have a unique colour, which is different to each other as their identity. However, the customers of online transportation in Indonesia feel that the application design of Go-Jek, Grab, and Uber is not highly creative because the loading factor is in the lowest position among other indicators with 0.77. In response to that condition, those three online transportation companies should always develop the creativity of the design, which covers all elements that can satisfy their customers especially the colour combination used in the mobile application.

Third, the dimension of payment method has a positive influence on customer satisfaction. This result reveals that customers are satisfied by payment options on mobile application of online transportation services. In fact, applications of Go-Jek, Grab, and Uber provide some payment methods namely cash or electronic money using debit or credit card. This result is consistent with the previous study by Liu et al. (2008) who revealed that convenient payment mechanism raised the degree of satisfaction among customers.

Fourth, the dimension of security and privacy is also a significant predictor of customer satisfaction. The results show that customers of Go-Jek, Grab, and Uber feel satisfied with security feature on the application. It refers to the highest loading factor among other indicators namely 0.88. In addition, this factor automatically contributes to improving the level of customers' confidence to choose the application. Moreover, the customers also feel save when making transactions or order through the applications. On the other hand, the companies should simplify the terms and conditions in order to easy to understand by the customer. This indicator is in the last position with loading factor 0.83.

Finally, this study found that a positive relationship between electronic service quality towards customer satisfaction and repurchase intention on mobile application of online transportation context. According to the research result, customer satisfaction is obviously an antecedent of repurchase intention. The customers of Go-Jek, Grab, and Uber are feeling satisfied and happy when they make orders by using the applications with loading factor 0.93. In this particular context, improving on information quality; application design; payment method; and security and privacy can simultaneously make customers feeling satisfied with online transportation services.

5 Conclusion

The results of this study which focused on electronic service quality on mobile application of transportation services in Indonesia indicate that all dimensions of electronic service quality namely information quality; application design; payment method; and security and privacy positively influence customer satisfaction. Meanwhile, customer satisfaction has significantly a direct effect on repurchase intention.

5.1 Practical Implication

This research reveals some prominent recommendations for the online transportation industry in improving the level of customers' satisfaction. Firstly, regarding the dimension of information quality, Go-Jek, Grab, and Uber or other online transportation providers should aware of the informational accuracy of the application. The information accuracy may cover the vehicle being used by the drivers, the identity of the drivers, the accuration of the map, and information related to service stated in the application. Secondly, the customers still indicate that the application design of online transportation should be more creative. In response to that condition, the online transportation providers should develop their mobile application especially in term of colour combination. Customers tend to be bored if the display of the application is static. Therefore, the providers of online transportation services to make customers more enthusiastic must do refreshing the colour combination within the application

sometimes. Nowadays, the emergence of a digital technology also makes a transformation in the financial sector. Therefore, online transportation business must see the transformation and consistently promote new payment options for customers. In fact, digital payment makes a transaction easier. It will make customers feeling satisfied with the application performance. Finally, although customers of Go-Jek, Grab, and Uber have already felt secure making orders through the application, those online transportation providers should optimally maintain this element. This dimension of security and privacy become a critical point related to the level of customers' confidence using the application. In addition, the providers should simply terms, conditions in the application, and make it easy to understand by customers.

5.2 Limitation and Future Research

The research only focused on the context of the mobile application of online transportation services. Consequently, the result of the research cannot fully be generalized for the others mobile application services. Further research model can develop a more comprehensive model to examine electronic service quality on mobile applications and examine the moderation of age in acquiring mobile application technology of online transportation services. Previously, three respondents are more than 55 years old using mobile application of online transportation services in this research. Thus, it will be an interesting issue to be discussed in the future research.

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Variables	Indicators	
	English	Bahasa
Information Quality	I believe that the application provides accurate information.	Saya percaya bahwa aplikasi transportasi <i>online</i> menyediakan informasi yang akurat.
	The information provided on the application is reliable.	Informasi yang tersedia pada aplikasi transportasi <i>online</i> dapat diandalkan.
	The information provided on the application is easy to understand.	Informasi yang tersedia pada aplikasi transportasi <i>online</i> mudah dimengerti.
	The application contains all information that I need for the purpose of my purchase decision.	Aplikasi transportasi <i>online</i> berisi semua informasi yang saya butuhkan sebagai pertimbangan saya menggunakan layanan tersebut.
Application Design	I like the layout of the application.	Saya suka dengan tata letak pada aplikasi transportasi <i>online</i> .
	The application design is creative.	Aplikasi transportasi <i>online</i> memiliki desain aplikasi yang kreatif.
	The start page easily leads me to the information I need.	Halaman depan pada aplikasi transportasi <i>online</i> dengan mudah memandu saya mendapatkan informasi yang saya butuhkan.
	It is easy to move around on the website.	Sangat mudah untuk membuka menu-menu pada aplikasi transportasi <i>online</i> .
	The application uses a good colour combination.	Aplikasi transportasi <i>online</i> menggunakan kombinasi warna yang bagus.
	The application loads quickly.	Jeda perpindahan menu pada aplikasi transportasi <i>online</i> berjalan cepat.
	Transaction process on the application is easy and quick.	Proses transaksi pada aplikasi transportasi <i>online</i> berjalan mudah dan cepat.
Payment Method	I feel comfortable using the payment options provided by the application.	Saya merasa nyaman menggunakan pilihan metode pembayaran yang disediakan oleh aplikasi transportasi <i>online</i> .
Security and Privacy	I feel secure doing transactions with the application.	Saya merasa aman melakukan transaksi di aplikasi transportasi <i>online</i> .
	The application has adequate security features.	Aplikasi transportasi <i>online</i> memiliki fitur keamanan yang memadai.
	The application provides clear and understandable terms and conditions.	Aplikasi transportasi <i>online</i> menyediakan syarat dan ketentuan yang berlaku dengan jelas dan mudah dimengerti.
	I feel my personal information is secure on the application.	Saya merasa informasi pribadi saya aman pada aplikasi

		transportasi <i>online</i> .
Customer Satisfaction	I am satisfied with my decision using the application.	Saya puas dengan keputusan saya menggunakan layanan pada aplikasi transportasi <i>online</i> .
	I am happy using the application.	Saya senang menggunakan layanan pada aplikasi transportasi <i>online</i> .
Repurchase Intention	I will continue to use the application in the future.	Saya akan mengunjungi kembali aplikasi transportasi <i>online</i> kedepannya.
	I intend to recommend the application that I regularly use to people around me.	Saya berniat merekomendasikan aplikasi transportasi <i>online</i> yang sering saya gunakan ke orang di sekitar saya.