THE RELATIONSHIP OF SERVICE QUALITY, WORD-OF-MOUTH, AND REPURCHASE INTENTION IN ONLINE TRANSPORTATION SERVICES

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Abstract: Sophisticated and ever-evolving technology enacts many companies use and utilize technology as a mean of delivering innovative and creative new services. Technological developments are widespread in various fields and one of them is in the field of online transportation. The high demand for fast and efficient transportation modes causes the companies engaged in the sector by providing online transportation services are increasing. High competition and large number of drivers require the companies to focus highly on providing high quality services to maintain and increase the number of consumers. This study aims to analyze the effect of service quality on word-of-mouth and repurchase intentions to 80 consumers of online transportation in Indonesia. Partial Least Square Structural Equation Model (PLS-SEM) was employed to analyze the data. The results signifies that there is a positive relationship between service quality to word-of-mouth and repurchase intention. Similarly, word-of mouth significantly influences repurchase intention. Further managerial implications are discussed.

***Keywords*:** Service quality, WOM, Repurchase intention, PLS-SEM

1. Introduction

Enterprises in the field of public transportation services today become a profitable business prospects, especially in the big cities and surrounding areas. Communities need practical and fast transportation services, because it cannot be denied the most critical points of congestion is in Jakarta and surrounding areas. In overcoming the problem of traffic congestion, motorcycle transportation or in Indonesia it is well known as *ojek* can be an effective solution for the community. *Ojek* is an informal public transportation because its operation does not have permission from the government. Still, it is considered as an interested transportation mean because it is faster, can pass through the jam, and able to reach the areas with narrow alleys which are difficult to pass by large vehicles such as cars. A new breakthrough was raised by young entrepreneurs in Indonesia who are developing new innovations in the provision of online transportation services by using a motorcyle. At the beginning of the emergence of this online transportation in Indonesia in 2011, there is only one brand existing that serves the needs of the community. However, along with the increasing number of users and the high interest of the community towards online transportation services, the number of competing brands with similar services increases. The high competition in this online transportation industry requires online transportation companies to pay attention, maintain, and improve the quality of services so that consumers do not switch to other brands.

Prior studies have analyzed the relationship of service quality, WOM, and repurchase intention to public services, yet the studies on online transportation services are still limited given that the service is still considered new in the transportation industry (Kuo et al., 2009; Zhang et al., 2011; Giovanis et al., 2013; Liu & Lee, 2014; Nikookar et al., 2015; Arifin et al., 2016; Rajaguru, 2016). In this study, we analyze the relationship of these three variables. High service quality will determine the desire of consumers to spread the impression and positive experience for prospective users of online transportation services. These positive impressions and experiences are very important as technological developments lead to very rapid dissemination of information through online media and social media. Negative of positive WOM will ultimately affect the consumer's decision to keep using the same online transportation services or switch to another brand.

In this study, we contribute to the body of existing literature by adding a new perspective of relationship of service quality, on word of mouth (WOM) and repurchase intention in online transportation services in Indonesia by employing Structural Equation Modelling (SEM) Bayesian approach. The rest of this paper is structured as follows. The second part will review the literature on service quality, WOM, and repurchase intention which became the basis of model building in this study. The third section will discuss the research methods. The fourth section will discuss results and managerial implications of the results of data processing. Finally, the fifth section will summarize the results of the analysis and provide advice for further study.

2. Literature review and hypotheses

2.2 Service quality and WOM

Service quality is a thorough evaluation by consumers of the services provided by the company (Zeithaml, 1988). Saha & Theingi (2009) added that the consumers' evaluation of service quality is based on whether the service quality they received was in line with consumer expectations before receiving the service. While WOM is the consumer post-purchase intentions that occur when consumers share their experiences and impressions when consuming services. These experiences and impressions can be both positive and negative experiences and impressions. A positive WOM will lead consumers to provide recommendations for consuming similar services to other potential customers, whereas negative WOMs may have the opposite effect (Zeithaml et al., 1996; Evangelho et al., 2005).

The relationship between service quality and WOM has been demonstrated by the previous empirical literatures (Alexandris et al., 2002; Hutchinson et al., 2009; Liu & Lee, 2016; Kuo et al., 2009; Giovanis et al., 2013; Nikookar et al ., 2015, Rajaguru, 2016). Positive consumer perceptions of service quality will increase the positive WOM. Based on the above analysis, the hypothesis to be tested is as follows:

H1: There is a positive relationship between service quality and WOM on online transportation services

2.3 Service quality and repurchase intention

Repurchase intention is one of the consumer post-purchase intentions that choose to use the services of the same company (McDougall & Levesque, 2000; William, 2002). The consumer's decision to repurchase intention depends on the evaluation of the service quality they received (Kumar, 2002; Zhang et al., 2011; Liu & Lee, 2016). If the evaluation of service quality exceeds consumer expectations, then the consumer will repurchase the services, otherwise if the evaluation of service quality is lower than consumer expectation it will give the opposite effect. Repurchase intention is a very important factor for online transportation service companies. The consumer's decision to keep using the same online transportation service will provide assurance to the company for business sustainability and ensure that consumers do not switch to other service providers. Based on the above analysis, the hypothesis to be tested is as follows:

H2: There is a positive relationship between service quality and repurchase intention on online transportation services

2.4 WOM and repurchase intention

The previous empirical literatures have shown that a positive WOM will generate consumers to do repurchase intention. Consumers who perceive the service quality performance exceed their expectations will tend to spread the experience and positive impression and recommend services to other prospective customers. These experiences and positive impressions are not only beneficial to other potential customers, but also to consumers themselves for future repurchase intentions (Kim et al., 2009; Cantallops & Salvi, 2014; Liu & Lee, 2016). Based on the above analysis, the hypothesis to be tested is as follows:

H3: There is a positive relationship between WOM and repurchase intention pada online transportation services.

Based on hypotheses above, we build the conceptual framework of this study, as can be seen in Figure 1 below.

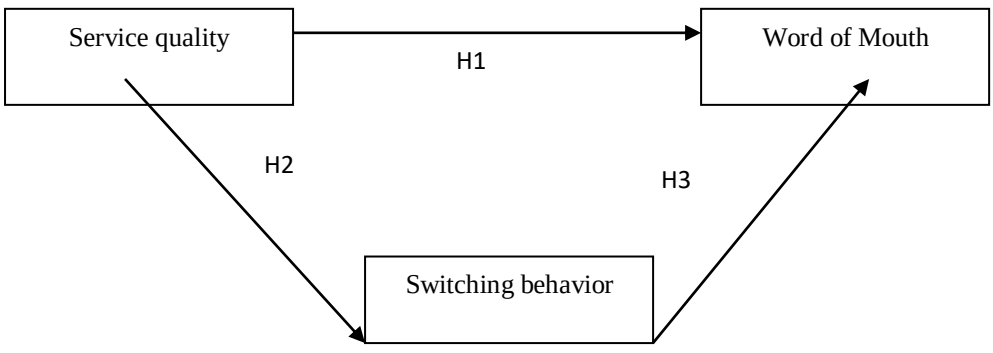

Figure 1. Conceptual framework

3. Methods

3.1 Measures

A five-point Likert scale is employed to measure the construct variables, where 1 = strongly disagree and 5 = strongly agree. Service quality indicators are adopted from SERVQUAL Parasuraman et al. (1988) consisting of tangible, reliability, responsiveness, assurance, and empathy. While the WOM indicators are adopted from Zeithaml et al. (1996) which are the result of the question: I will invite my relatives to use online transportation services and I will share information about online transportation services to others through social media. Finally, the indicators of repurchase intention are adopted from Liu & Lee's (2016) model which are the result of the questions: 1) I always use this online transportation service as a top priority, 2) I will keep using this online transportation service service over others, 3) I always prioritize this online transportation service for future use, 4) I will always use online transportation service even though there are many other competitors, 5) I will keep using this online transportation service although other brands are more famous, 6) I will remain loyal to this online transportation service without thinking of other competitors, and 7) If there is a shortage of this online service transportation service, I do not directly switch brands

3.2 Sample and data collection

Data were collected from consumers who use online transportation services in Banten Province, Indonesia. A total of 80 samples was collected using stratified random sampling method. Data analysis was carried out by Partial Least Square Structural Equation Modeling (PLS SEM).

4. Results

4.1 Evaluasi model pengukuran

Evaluation of the model indicates that the model has sufficient terms of convergent validity and discriminant validity (standardized loading > 0.5) (Hair et al., 2010). All loading factor dimension values are greater than 0.5 thus it can be concluded that all the manifest variables used to measure constructs variables are valid. The significance of all loading factor values is measured by all CR values > 2.0 (Table 1).

Table 1
Reliability test results

Constructs	Manifest variables	Standardized loadings	Critical (CR)	Ratios	Standard error	Communalities
Service quality	Tangible	0.945		46.452	0.020	0.941
	Reliability	0.947		45.242	0.021	0.945
	Responsiveness	0.773		9.295	0.083	0.755
	Assurance	0.916		38.950	0.024	0.915
	Emphaty	0.903		37.818	0.024	0.902
WOM	WOM 1	0.933		43.533	0.021	0.936
	WOM 2	0.927		35.698	0.026	0.925
Repurchase intention	Repurchase intention 1	0.508		4.801	0.106	0.497
	Repurchase intention 2	0.828		18.385	0.045	0.836

	Repurchase intention 3	0.895	36.191	0.025	0.894
	Repurchase intention 4	0.833	16.733	0.050	0.820
	Repurchase intention 5	0.556	5.215	0.107	0.538
	Repurchase intention 6	0.811	26.717	0.030	0.810
	Repurchase intention 7	0.910	48.045	0.019	0.914

Further evaluation of the composite reliability indicates that cronbach's alpha and D.G rho (PCA) values are all above 0.7 indicate that the model has sufficient composite reliability. The Average Variance Extracted (AVE) value of all latent variables > 0.5 indicates that all manifest variables have good ability to define construct variants (Yamin & Kurniawan, 2011) (Table 2).

Table 2
Composite reliability test results

Constructs	Manifest variables	Cronbach's alpha	D.G rho (PCA)	AVE	Critical Values	Eigenvalues
Service quality	Tangible	0.939	0.954	0.808	0.570	2.301
	Reliability					0.455
	Responsiveness					0.043
	Assurance					0.031
	Emphaty					0.021
WOM	WOM 1	0.843	0.928	0.865	0.916	1.585
	WOM 2					0.247
Repurchase intention	Repurchase intention 1	0.881	0.910	0.605	0.822	3.436
	Repurchase intention 2					0.968
	Repurchase intention 3					0.574
	Repurchase intention 4					0.290
	Repurchase intention 5					0.226
	Repurchase intention 6					0.142
	Repurchase intention 7					0.116

Further evaluation result in Table 3 indicates that the AVE value in general exceeds the correlation square value of each construct with the other constructs. This condition proves that the discriminant validity requirement has been reached (Fornell & Larcker, 1981).

Table 3
Discriminant validity test results

	Service quality	WOM	Repurchase intention
Tangible	**0.945**	0.746	0.872
Reliability	**0.947**	0.791	0.850
Responsiveness	**0.773**	0.530	0.633
Assurance	**0.916**	0.842	0.863
Emphaty	**0.903**	0.793	0.848
WOM 1	0.829	**0.933**	0.861
WOM 2	0.730	**0.927**	0.747
Repurchase intention 1	0.446	0.205	**0.508**
Repurchase intention 2	0.698	0.782	**0.828**
Repurchase intention 3	0.790	0.839	**0.895**
Repurchase intention 4	0.799	0.661	**0.833**
Repurchase intention 5	0.549	0.460	**0.556**
Repurchase intention 6	0.751	0.653	**0.811**
Repurchase intention 7	0.858	0.851	**0.910**

A further evaluation of the model's is the ability to explain the endogenous constructs measured by the value of Stone-Geisser Q2 (Geisser, 1975, Stone, 1974). All Q2 values for the manifest satisfaction, WOM, and repurchase intention variables are above 0.35 indicate the ability of each manifest variable to explain the endogenous construct is good (Henseler et al., 2009). Finally, the absolute GoF value of the structural model is 0.758 (high) (Table 4).

Table 4
Goodness of fit indices result

	GoF	GoF (Bootsrap)	Standard error	Critical ratio	Lower bound (95 %)	Upper bound (95%)
Absolute	0.750	0.750	0.026	28.530	0.700	0.798
Relative	0.953	0.939	0.015	64.721	0.905	0.966
Outer model	0.999	0.994	0.001	669.336	0.990	0.996
Inner model	0.954	0.944	0.015	64.725	0.909	0.970

4.2 Structural model evaluation

The test results of 80 consumers of online transportation services indicate the value of Pr > F 0.000 which means there is at least one construct that affects the model. Service quality significantly influences WOM with a coefficient of 0.840 and R^2 = 0.705 (hypothesis 1) and affects repurchase intention with a coefficient of 0.633, R^2 = 0.867 (hypothesis 2). WOM also significantly affects repurchase intention with a coefficient of 0.334, R^2 = 0.867 (hypothesis 3). All hypotheses are significant at alpha 0.05. The result in Table 5 indicates that service quality has the greatest influence on repurchase intention (0.913) generated through the indirect influence of word-of-mouth construct (0.280).

This means that the spread of the positive impression and experience by consumers who have been using online transportation services will provide a significant impact on a desire to reuse the transportation services by the same consumer in the future (Kim et al., 2009). The total effect of service quality on word-of-mouth is 0.840. Finally, the total word-of-mouth effect on repurchase intention is 0.334.

Table 5
Direct, indirect, and total effects

	Direct effect	Indirect effect	Total effect
Service quality ⟶ WOM	0.840	-	0.840
Service quality ⟶ Repurchase intention	0.633	0. 280	0.913
WOM ⟶ Repurchase intention	0.334	-	0.334

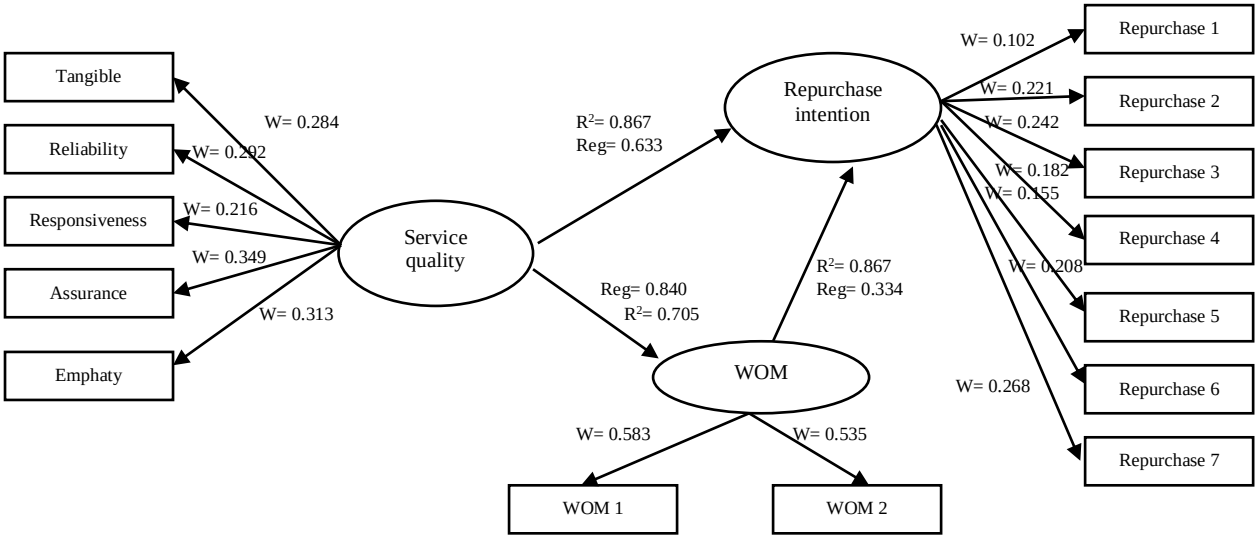

Figure 2. Results of proposed model from PLS-SEM by using XLSTAT

6. Discussions

6.1 Theoretical implications

Results of data processing by using SEM PLS indicated that all tested hypotheses were proved and significant at alpha 0.05. This means that all hypotheses tested in this study support prior empirical literatures. Service quality significantly affects word-of-mouth. This result supports Alexandris et al. (2002), Hutchinson et al. (2009), Liu & Lee (2016), Kuo et al. (2009), Giovanis et al. (2013), Nikookar et al. (2015), and Rajaguru (2016). High service quality in online transportation services will increase consumer desire to spread positive impressions and experiences and recommend those services to others. Service quality also positively affects repurchase intention. This result is consistent with previous research conducted by Kumar (2002), Zhang et al. (2011), and Liu & Lee (2016).

If the services provided by online transportation services exceed consumer expectations, then they will reuse the transportation services in the future. Finally, word-of-mouth also exhibits a positive influence on repurchase intention (Kim et al., 2009; Cantallops & Salvi, 2014; Liu & Lee, 2016) which means consumers who spread positive impressions and experiences about services and companies have an opportunity great for re-using online transport services in the future. Each manifest variable of tangible, reliability, responsiveness, assurance, and empathy have significantly influence the service quality with coefficients of 0.284, 0.292, 0.216, 0.349, and 0.313 respectively. This result is consistent with Parasuraman et al. (1998). Manifest variables of WOM 1 and WOM 2 also significantly influence WOM with coefficient of 0.583 and 0.535 respectively. This result is in accordance with Zeithaml et al. (1996). Finally, all manifest variables of repurchase intention also significantly influence the repurchase intention with coefficients of 0.102, 0.221, 0.242, 0.182, 0.155, 0.208, and 0.268 respectively. This result supports Liu & Lee (2016) as well.

6.2 Managerial implications

The high influence of service quality on repurchase intention is provided by mediating variable of word-of-mouth. This means that the higher service quality received by consumers will be the higher the spread of positive information about the company and this will give an impact on the higher consumer desire to re-use the same services (Cantallops & Salvi, 2014). The challenge for managers is not only to focus on how to gain new customers, but also to ensure that their old customers are using the same services. This can only be undertaken through maintaining and improving the high quality of services.

Furthermore, the manifest variables that have the most influence on service quality are assurance and empathy. This result is in accordance with Liu & Lee (2016). Assurance is the knowledge, attitude and behavior of drivers of online transportation services and their ability to gain consumer trust. While empathy is caring and individual attention given by the driver to the consumers. The importance of these two indicators implies to the managers that these two indicators are more important to consumers than the physical appearance of the motorcycles, facilities and the drivers. Therefore, managers need to provide training to drivers so that they hold knowledge, care, attention, and good, friendly, and polite attitudes to the consumers. This turn outs very important because the company does not interact and see directly when transportation services are used by consumers. The ability of drivers to master these two indicators will greatly determine the level of customer satisfaction and the positive word-of-mouth level. The word-of-mouth is one of the great tools for a company's marketing strategy initiated by the consumer itself. Companies do not need to spend on promotional costs, but can automatically increase sales of services and increase the number of customers. According to Liu & Lee (2016), companies need to do special research on word-of-mouth levels and utilize it as an effective tool for corporate marketing strategies.

7. Limitations and future studies

This study basically analyzes at the influence of mediating variable of word-of-mouth variable on repurchase intention of online transportation services. The addition of other variables for further studies is highly recommended. In addition, SERVQUAL dimensions adopted in this study have some shortcomings (Brady & Cronin, 2001). The use of other dimensions of service quality for advanced studies is also suggested to observe at the different effects of each service level.

Appendix A

Table A.1
Variables selected for the model analysis

Dimensions	Attributes
Tangible	The physical condition of the motorcyle is in a good condition
	The condition of the driver is neat
	The condition of the driver is healthy
	The physical condition of the facilities is in a good condition
	The physical condition of the facilities is complete
	The facilities provided are vary
	The facilities provided are safe
	The facilities provided are comfortable
	The physical condition of the facilities is clean
	The physical condition of the motorcycle is clean
	The physical condition of the driver is clean
	The facilities provided are complete
Reliability	The driver capability can be trusted
	The driver drives me to the destination
	The driver focuses in driving to the destination
	The driver comes according to my location
	The driver drives me according to the location I am heading
	The driver controls the direction of my location
	The driver is very reliable in finding the fastest direction to take me to the destination
Responsiveness	The driver is responsive to my call
	I do not wait long for pick-up
	The arrival of the driver at the pick-up location is very fast
	The driver is very initiative and reliable driving me to the destination without asking a lot of questions
Assurance	The driver gives me a standard SNI helmet
	The driver drives carefully
	The driver is relaxed in driving the motorcycle
Emphaty	The driver wants to help bring my stuff
	Online transportation service understands my needs and provides a variety of services to suit my needs
Word-of-mouth	I will invite my relatives to use online transportation services
	I will share information about online transportation services to others through social media.
Repurchase intention	I always use this online transportation service as a top priority
	I will keep using this online transportation service service over others
	I always prioritize this online transportation service for future use
	I will always use online transportation service even though there are many other competitors
	I will keep using this online transportation service although other brands are more famous
	I will remain loyal to this online transportation service without thinking of other competitors
	If there is a shortage of this online service transportation service, I do not directly switch brands

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