

The Asian Journal of Technology Management Vol. 12 No. 1 (2019): 15-30

## Travel Experience on Travel Satisfaction and Loyalty of BRT Public Transportation

Liza Agustina Maureen Nelloh<sup>1\*</sup>, Sri Handayani<sup>1</sup>, Mulyadi Wiguna Slamet<sup>2</sup> and Adhi Setyo Santoso<sup>3</sup>

<sup>1</sup> Faculty of Social, Podomoro University, Indonesia <sup>2</sup> Faculty of Engineering, Podomoro University, Indonesia <sup>3</sup> School of Business, President University, Indonesia

Abstract. As the only Bus Rapid Transportation (BRT) system public transportation in Jakarta, Indonesia, travel experience factors were important factor to enhance travel satisfaction and loyalty among passengers. However, travel experience is still rare to be tested among public transportation especially for BRT System Company. This study aims to test the travel experience factors (EF's factors) such as individual space, information provision, staff's skills, social environment, vehicle maintenance, off-board service, ticket line service, safety, and waiting time on travel satisfaction and customer loyalty. To test the hypotheses, this study employs Structural Equation Model-Partial Least Square with SmartPLS Version 3.0 among 294 passengers. The results shows that individual space, staff's skills, vehicle maintenance, ticket line service are positively effect on travel satisfaction, then the travel satisfaction has positive influence on customer loyalty. Hence, social environment, off-board service, safety and waiting time have no influence on travel experience. The current findings suggest the government, and management of BRT to maintain the vehicle condition, improve the ticketing service use online system, recruit higher quality drivers, adding more staffs on-board, manage the schedule of buses, and adapt modern system of location. The society must also be educated to create conducive conditions during the travel trip.

Keywords: BRT System Company; Customer loyalty, Partial Least Square, travel satisfaction, travel experience

#### 1. Introduction

Nowadays, the rapid growth of peer-to-peer online transportation like Go-Jek, Uber and Grab has changed the transportation lifestyle in Indonesia (Santoso & Nelloh, 2017). Many alternatives including online transportation and private transportation would switch the customer loyalty of public transportation (Mohamed, 2011; Wahyuningtyas, 2016). As the only Bus Rapid Transit (BRT) public company in Jakarta Indonesia, Transjakarta seek to improve the customer experience in order to get customer loyalty and minimizing the switching behavior among its passengers. Based on the current interview and direct observation with the management Transjakarta, the level of loyalty passengers in using the BRT system company is quite low. In total, there were

50% of target passengers per day. The company has tried to increase its safety and comfort by increasing the service quality and monitor daily travel 24 hours per day from monitoring room.

This means the company has tried to increase its customer experience of travel experience among passengers to increase customer satisfaction and loyalty (Beirão & Cabral, 2007; Carreira, Patrício, Jorge, Magee & Hommes, 2013). Travel experience is believed to be the most important factor to influence product differentiation and loyalty among transportation services, even public transportation as utilitarian transportation (Carreira et al., 2013; Carreira, Patrício, Jorge & Magee, 2014). When new era of Experience Economy has started (Pine & Gilmore, 1998), customer experience got

extensive attention from the scholars to achieve its performance and loyalty (Carreira et al., 2014). Travel experience would be seen as holistic perspective including searching, purchasing, consuming, after-sales service that might involve in multiple service channels such as experience factors (EF's) and experience components (EC's) (Verhoef, Lemon & Parasuraman, 2009). These authors argue that EF's includes the perception of customer experience itself such as service components that provided to drive customer responses (EC's). Thus as a part of EC's, customer satisfaction is the most relevant factor to influence customer loyalty for transport studies (Ali, Kim, Li & Jeon 2018; Kasiri, Cheng, Sambasivan & Sidin 2017; van Lierop & El-Geneidy 2016).

Moreover, to use public transportation as the application of travel experience has been rare to be analyzed because most of the authors were only focusing on service based bus transportation (Carreira et al., 2014; Pavesi, Gartner & Denizci-Guillet, 2016; Unger, Uriely & Fuchs, 2016), even though Carreira et al (2013) compared the service based transportation to public transportation, those authors used qualitative studies to determine items of travel experience itself. Since the scholars were not extensively investigated the influence of travel experience on the outcome lovaltv for public and transportation, this study attempts improve the results of Carreira et al (2013) and Carreira et al. (2014) in BRT system company as the public transportation. The previous study of Carreira et al (2014) analyzed the influence of EF's factors (individual space, information provision, staff's skills, social environment, vehicle maintenance, off-board facilities, and ticket line service) on EC's (positive and negative emotions, general value and satisfaction) that significantly effect on customer loyalty.

Based on the evidence of current empirical problems by A BRT System Company and theoretical gaps of travel experience earlier, the current study attempts to analyze the effect of EF's on customer satisfaction toward loyaly (Ali et al., 2018; Carreira et al., 2014; Kasiri, et al., 2017; van Lierop & El-Geneidy, 2016). Thus it will compare the previous travel experience in mid distance transportation into utilitarian transportation in Jakarta Indonesia. Hence, managerial implication has revealed for transportation service provider, policy makers and public sectors to improve excellence customer through experience to enhance positive perception (EC's) and increase the use of A BRT System Company as the reflection of modern public transportation in Indonesia. The paper is involving literature review and hypothesis development, research method, result and discussion, conclusion and recommendation.

# 2. Literature Study/Hypotheses Development

2.1. Experience Factors (EF's) and Travel Satisfaction

For so long the customer experience is believed to be the customers' perception, evaluation, and interaction throughout cognitive, emotional, behavioral, sensorial, and social components about service provider (Lemon & Verhoef, 2016; Patrício, Cunha, Fisk & Nunes 2004; Verhoef et al. 2009). Service provider that enhanced service reliability would be significant toward passenger experience or travel experience (Leong, Goh, Hess & Murphy, 2016). Most of the transportation research has addressed more of travel experience or experience factors more than the transport quality itself because customers' respond on emotional and behavioral would be the competitive advantage for transportation providers (Carreira et al., 2014).

Hence, travel experience would be seen as engaging customers' excellence for service providers, policy makers and regulators including utilitarian transportation or public transportation. The previous study by Carreira et al (2013) defined eleven dimensions of travel experience such as

cleanliness. comfort. easy-accessibility, information provision, off-board service, onentertainment, safety, environment, staff's skills, visibility of the scenery, and waiting time. As the results of exploratory factor analysis by Carreira et. al (2014), only seven dimensions to be used as experience travel in the mid transportation such as individual space, information provision, staff's skills, social environment, vehicle maintenance, off-board facilities, and ticket line service. This study employed seven dimensions of Carreira et al (2014) and two additional dimensions that closely related to utilitarian transportation such as safety and waiting time.

Those dimensions of travel experience would be the antecedents of Experience components (ECs) as psychological responses about the relationship with the service provider, such as cognitive and emotional responses (Carreira et al., 2014; Verhoef et al., 2009). The previous study stated that the cognitive and emotional responses including travel satisfaction (Abou-Zeid, Witter, Bierlaire, Kaufmann, & Ben-Akiva, 2012) as the most important EF's factor (Carreira et al., 2014). Hence, based on the previous study results, there are some hypotheses conducted as follow:

H1: Individual space is significantly effect on travel satisfaction

H2: Information provision is significantly effect on travel satisfaction

H3: Staff's skills is significantly effect on travel satisfaction

H4: Social Environment is significantly effect

on travel satisfaction

H5: Vehicle Maintance is significantly effect on travel satisfaction

H6: Off-board service is significantly effect on travel satisfaction

H7: Ticket line service is significantly effect on travel satisfaction

H8: Safety is significantly effect on travel satisfaction

H9: Waiting time is significantly effect on travel satisfaction

#### 2.2. Customer Loyalty

In transport research, customer loyalty or return customer on the service would be the most important factor of success for transportation service provider (Carreira et. al., 2014). Hence, customer loyalty can be seen as one of the behavioral responses that important to the service providers' competitive advantage (Carreiea et al., 2014). Loyalty can be existed through various factors like psychological factors including EF's factors of travel experience (Carreira et. al., 2014). Furthermore, loyalty is influenced by some psychological factors like travel satisfaction in transportation studies (Ali et al., 2018; Kasiri et al., 2017; van Lierop & El-Geneidy, 2016). Hence, to achieve holistic approach of travel experience, the current study adds some hypotheses that had not been analyzed in the previous study such as: H10: Travel Satisfaction had significant effect on customer loyalty.

Based on the previous study results, the research model can be seen in the Figure 1.

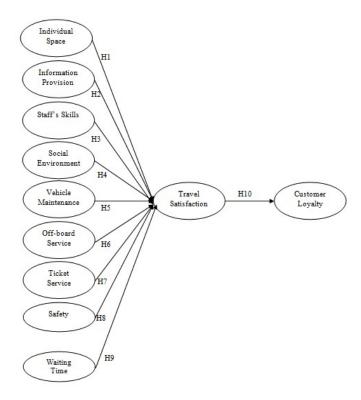


Figure 1.
Research Model

## 3. Methodology

This study attempts to investigate objectively the passengers of a BRT System Company in Jakarta and used personally administered procedures as data collection method. Before the data collection (including interview in preliminary and questionnaires distribution) were held, the researchers had the permission from a BRT System Company in Jakarta. The researchers distribute the questionnaires using Maximum Likelihood perspective and purposive sampling method in different corridors such as Corridor 9 (S. Parman Street), at the universities, Harmony and Pluit Terminal. Thus, the respondents were distributed the questionnaires with online Google form among 300 respondents. However, only 294 respondents are eligible statistical meet the requirement (containing 98% response rate).

Based on Table 1, most of the respondents were female (52%), 17-25 years old (57%), and university students with the latest

education called senior high school (53%). Most of the respondents are had 5-10 million rupiahs for monthly expenditure (65%). Those respondents were not regular user of A BRT System Company, 70% were using A BRT System Company for entertainment such as touring, trial use, having fun, friendship and other purposes). Thus, the most frequencies of using BRT is 2-3 times per week.

Hence to test the hypotheses, this study employed Structural Equation Modeling (SEM) with variance based called Partial Least Square (PLS) and SmartPLS version 3.0 as the analytical tool. The use of Partial least square is to predict the relationship of EF's on satisfaction and loyalty that eliminated the classical assumption of smaller data sizes (Green & Ryans, 1990; Hanseler et al., 2009).

Table 1. Respondents' Profile (N=294)

Variables	Frequency	Perc	ent
Gender			
Male	1	.41	48%
Female	1	.53	52%
Age (years)			
17-25	1	.67	57%
25-30		91	31%
30-40		21	7%
>40		15	5%
Education			
Junior High School		72	24%
Senior High School	1	.57	53%
University		65	22%
Job Titled			
Student	1	.78	61%
Private sectors		77	26%
Government		28	10%
Others		11	4%
Monthly Expenditure (In million Rp)			0%
<5		89	30%
5-10	1	.52	52%
10-20		51	17%
>20		2	1%
Reasons for using Transjakarta			
Working or daily activity		90	31%
Entertainment (tour, trial, etc)	2	205	70%
Frequency of used			
Everyday		71	24%
1-3 per week	1	.87	64%
1-3 per month		81	28%
< 1 per month		26	9%

## 4. Finding and Discussion

4.1. Instrument Validity and Reliability Results
The instruments of this study are derived from well-known previous studies (Carreira et al., 2013; Carreira et al., 2014; Parasuraman, Zeithaml, & Maholtra, 2005; Patricio et al., 2004). The variables of EF's are derived from several studies of transportation (Carreira et al., 2013; Carreira et al., 2014; Cirillo, 2011; Patricio et al., 2004). Thus, travel satisfaction is derived

from the customer satisfaction for transportation literatures (Abou-Zeid et al., 2012; Carreira et al., 2014; Eboli & Mazzulla, 2015). Finally, passengers' loyalty is derived from customer loyalty in transport research (Carreira et al., 2013; Carreira et al., 2014). Before hypotheses testing are held, SmartPLS requires validity and reliability for the instruments like construct validity, convergent validity and discriminant validity (Shin, 2015). The first step of the analysis is assessing construct validity, convergent

validity and reliability (Henseler & Sarstedt, 2013; Shin, 2015). Construct validity is assessed by theoretical background as explained earlier. Secondly, Shin (2015) argued that convergent validity and reliability are assessed through Internal Composite

Reliability (ICR) that must be greater hatn 0.7; Average Variance Extracted (AVE >0.5); and factor loadings (>0.5). Table 2 presents the results of convergent validity and reliability are met the statistical requirement.

Table 2.

The Convergent Validity and Reliability Test

Variables	Indicators	Factor Loadings	AVE	ICR
Individual	Qualify back support	0.899		
Space	Available space on my seat	0.906	0.752	0.024
	Comfortable foot support	0.875	0.752	0.924
	Alterable seats	0.783		
Information	Information board on bus is clear	0.770		
Provision	Monitor Screen of board on bus is clear	0.834		
	Information about destination is clear	0.845	0.647	0.901
	Information about travel rules of bus is clear	0.883		
	Information about delays	0.671		
Staff's skills	The staffs of A BRT System Company is professional	0.844		
	I believe the driver is trustful	0.891	0.732	0.017
	The staff's empathy during the trip	0.844	0.732	0.916
	The staff can set the best condition for all the passengers.	0.842		
Social	Others' passengers have the same interest with me	0.865		
Environment	I can talk with other passengers during the trip	0.879	0.757	0.002
	I help other passenger by giving the information about the	0.077	0.757	0.903
	trip	0.867		
Vehicle	Bus' interior maintenance	0.860		
Maintenance	Bus' exterior maintenance	0.851		
	The bus has an adequate overall preservation	0.869	0.714	0.027
	The bus owns a clean seat	0.823	0.714	0.937
	Bus owns a comfortable temperature	0.870		
	The vehicle of bus has no strange voice	0.794		
Off-board	The terminal has a good maintenance	0.904		
Service	Adequate waiting room conditions	0.942	0.827	0.935
	Good access on the vehicle at the terminal	0.881		
Ticket Line	Felt Comfort at the ticket line	0.869		
Service	People's empathy at the ticket line	0.904	0.000	0.044
	Adequate queue system at the ticket line	0.920	0.800	0.941
	Adequate online ticket service	0.883		
Safety	Vehicle safety on the road	0.955		
,	Adequate road maintenance	0.968	0.910	0.968
	Weather conditions	0.938		
Waiting Time	The punctuality of bus' schedule	0.942		
Ü	Bus frequency is in order	0.953	0.889	0.960
	Traffic condition	0.934		
Travel	I find myself enjoyed on the bus trip	0.872		
Satisfaction	I think to choose A BRT System Company would be a			
	wise decision	0.854		
	I am satisfied with the current trip of A BRT System Company	0.925	0.785	0.936
	I am glad to choose A BRT System Company as my	0.892		
Customer	current transportation trip. I think that I will use A BRT System Company more often.	0.857		
loyalty	I will say positive things about A BRT System Company to			
<i>y y</i>	many people around.	0.923	0.814	0.929
	A BRT System Company would be my first choice of transportation	0.924		

This study presents good result of AVE ranging from 0.647-0.910. Thus, higher factor loading means that all of the instruments are representative of variables in this study (Hair et al., 2010). This study also concludes that all of ICR are exceeded 0.7. This means the items can be used for further analysis. The adequate result of convergent and reliability testing means that the study reach the construct validity of previous theories explained, and adequate data collection method (Shin, Moreover, the discriminant validity is used to test correlation of potentially overlapping variables (Shin, 2015). The correlation of

their own variables must be stronger compare to other relationships. Table 3 presents the result of discriminant validity through cross-loading analysis (Chin, 2010). The analysis shown among stronger results of each indicator compare to other variables' relationship (e.g. the loading of fh1, fh2, fh3 are stronger to the off-board service compare to the loadings of individual space, information provision, safety, social environment, staff's skills, waiting time, customer loyalty, ticket service and travel satisfaction). The highlighted loadings per variables are presented in Table 3.

Table 3. Discriminant Validity

Items	Ind. Space	Inf. Provision	Off- board service	Safety	Social Env.	Staff's Skills	Vehicle	Wait. Time	C. loyalty	ticket service	travel sat/
fh1	0.246	0.328	0.904	0.554	0.253	0.335	0.303	0.558	0.225	0.372	0.262
fh2	0.294	0.350	0.942	0.594	0.262	0.329	0.322	0.620	0.236	0.427	0.271
fh3	0.302	0.370	0.881	0.580	0.281	0.359	0.318	0.590	0.219	0.398	0.237
ft1	0.577	0.546	0.405	0.416	0.531	0.584	0.590	0.395	0.502	0.869	0.521
ft2	0.531	0.572	0.403	0.416	0.526	0.565	0.609	0.370	0.509	0.904	0.554
ft3	0.581	0.596	0.396	0.465	0.582	0.599	0.654	0.425	0.568	0.920	0.615
ft4	0.581	0.575	0.369	0.402	0.581	0.548	0.653	0.395	0.566	0.883	0.600
in1	0.547	0.770	0.256	0.252	0.467	0.514	0.487	0.279	0.501	0.400	0.482
in2	0.623	0.834	0.242	0.286	0.547	0.569	0.582	0.296	0.540	0.531	0.536
in3	0.716	0.845	0.390	0.413	0.660	0.645	0.705	0.392	0.567	0.618	0.602
in4	0.662	0.883	0.341	0.352	0.610	0.639	0.659	0.408	0.602	0.573	0.562
in5	0.467	0.671	0.306	0.298	0.403	0.478	0.460	0.331	0.384	0.419	0.369
is1	0.899	0.680	0.254	0.344	0.707	0.633	0.732	0.319	0.635	0.584	0.602
is2	0.906	0.640	0.272	0.386	0.710	0.631	0.718	0.333	0.628	0.552	0.618
is3	0.875	0.684	0.274	0.352	0.707	0.645	0.734	0.321	0.616	0.580	0.625
is4	0.783	0.635	0.272	0.352	0.607	0.580	0.599	0.312	0.512	0.478	0.476
loy1	0.549	0.512	0.204	0.298	0.487	0.535	0.537	0.250	0.857	0.487	0.687
loy2	0.645	0.625	0.221	0.277	0.617	0.623	0.663	0.285	0.923	0.567	0.760
loy3	0.675	0.624	0.249	0.346	0.627	0.604	0.661	0.337	0.924	0.570	0.760
sat1	0.644	0.577	0.237	0.297	0.559	0.565	0.605	0.282	0.720	0.600	0.872
sat2	0.520	0.502	0.254	0.254	0.498	0.537	0.564	0.245	0.663	0.505	0.854
sat3	0.609	0.594	0.233	0.259	0.582	0.593	0.649	0.247	0.750	0.576	0.925
sat4	0.608	0.604	0.278	0.254	0.629	0.629	0.688	0.258	0.756	0.591	0.892
se1	0.722	0.593	0.231	0.302	0.865	0.635	0.768	0.262	0.566	0.536	0.554
se2	0.696	0.604	0.224	0.293	0.879	0.637	0.764	0.264	0.588	0.547	0.561
se3	0.643	0.577	0.305	0.368	0.867	0.614	0.813	0.340	0.523	0.541	0.561
sf1	0.382	0.367	0.632	0.955	0.318	0.377	0.366	0.817	0.314	0.447	0.276
sf2	0.434	0.430	0.588	0.968	0.409	0.398	0.458	0.803	0.369	0.485	0.330
sf3	0.350	0.339	0.597	0.938	0.314	0.335	0.335	0.827	0.278	0.421	0.239
ss1	0.591	0.597	0.292	0.326	0.587	0.844	0.598	0.313	0.561	0.531	0.562
ss2	0.682	0.672	0.338	0.325	0.673	0.891	0.694	0.307	0.643	0.583	0.641
ss3	0.586	0.614	0.343	0.311	0.596	0.844	0.595	0.300	0.495	0.555	0.517
ss4	0.588	0.547	0.309	0.382	0.612	0.842	0.608	0.348	0.518	0.524	0.514
vm1	0.747	0.647	0.317	0.395	0.846	0.673	0.860	0.341	0.600	0.616	0.602
vm2	0.718	0.621	0.270	0.342	0.836	0.684	0.851	0.307	0.565	0.622	0.579
vm3	0.682	0.597	0.329	0.406	0.867	0.640	0.869	0.388	0.544	0.568	0.562
vm4	0.602	0.574	0.255	0.276	0.662	0.550	0.823	0.266	0.566	0.567	0.598
vm5	0.694	0.671	0.320	0.367	0.710	0.593	0.870	0.358	0.631	0.640	0.666
vm6	0.640	0.582	0.256	0.301	0.641	0.573	0.794	0.298	0.584	0.539	0.577
wt1	0.334	0.385	0.599	0.811	0.311	0.344	0.369	0.942	0.317	0.427	0.266

wt2	0.379	0.407	0.622	0.831	0.320	0.356	0.375	0.953	0.318	0.417	0.285
wt3	0.330	0.411	0.610	0.769	0.307	0.344	0.348	0.934	0.279	0.413	0.273

Notes: Cross loadings per variables are stronger than the relationship toward other variables

The adequate results of discriminant validity conclude that there are no overlapping indicators toward other variables (Shin, 2015). Thus, this study has adequate validity and reliability results and can be used for inner model analysis or structural model or testing the hypotheses further (Chin, 2010).

#### 4.2. Goodness of Fit Index

As well as CB-SEM in Lisrel or Amos, PLS specifies the goodness of fit Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI) in the saturated model (Ramayah, Yeap, Ahmad, Halim, & Rahman, 2017). Hu and Bentler (1999) argues that SRMR must be less than 0.8 in order to proof the difference between observed correlation and the model implied correlation matrix or in other words avoiding model misspecification (Ramayah et al., 2017). Thus, the NFI is the part of incremental fit index (Hopper et al., 2008) that must be greater than 0.9 (Hair et al., 2010). This study presents SRMR for saturated model that equals to 0.03 (<0.08) and NFI is equal to 0.859 that classified as marginal fit. This concludes the model of the study is globally accepted (Ramayah et al., 2017).

#### 4.3. Structural Model

At the final step of the two-approach analysis of PLS, the hypotheses that proposed in this study will be analyzed further. As Hensler and Sarstedt (2013) conclusions, they suggested that R-square of the structural model must exceed to 0, and must contain minimum 10% of R-square (Falk & Miller, 1992). This study presents

higher R-square such as 58.9 % for travel satisfaction, and 66.7% for customer loyalty. This concludes the higher R-square of travel satisfaction that explained by EF's factors of travel experience. Moreover this customer loyalty is explained 67.7% by customer satisfaction. Due to higher R-square, this study will analyze the structural model by bootstrapping sampling technique for inner model, path coefficient and t-statistics (p-values) to see the relationship between variables (Ringle et al., 2015).

Table 4, Figure 2, and Figure 3 present the path coefficient, t-statistics and p-values in regards to the structural model result in this study. There are five hypotheses are supported while others are rejected (six hypotheses). According to Hair et al (2010), when T-statistics is greater than 1.96, meaning the it achieve the significant of 5% of P-value. Due to the results by SmartPls Ver. 3.0, the researchers concludes the hypotheses testing. Among the EF's factors, individual space, staffs' skills, vehicle maintenance are factors that believed to influence travel satisfaction. This means H1  $(\beta=0.167)$ , H3  $(\beta=0.181)$ , H5  $(\beta=0.332)$ , and H7 are supported. Thus, again this study presents the travel satisfaction as the main predictor of loyalty (Abou-Zeid et al., 2012) is significantly effect on customer loyalty in BRT System Company. This means H10 (B=0.817) is supported. Hence, information provision (H2), Social Environment (H4), off-board service (H6), safety (H8), and waiting time (H9), are not significant toward travel satisfaction, due to T-statistics < 1.96 (Hair et al., 2010).

Table 4. The Result of Structural Model

	Hypotheses	Path coefficient	T- statistics	P- Value	Result
H1	Individual space is significantly effect on travel satisfaction	0.167	2.104	0.036	Supported
H2	Information provision is significantly effect on travel satisfaction	0.105	1.763	0.078	Not supported
Н3	Staff's skills is significantly effect on travel satisfaction	0.181	2.677	0.008	Supported
H4	Social Environment is significantly effect on travel satisfaction	-0.096	1.152	0.250	Not supported
Н5	Vehicle Maintenance is significantly effect on travel satisfaction	0.332	3.105	0.002	Supported
Н6	Off-board service is significantly effect on travel satisfaction	-0.007	0.143	0.886	Not supported
H7	Ticket line service is significantly effect on travel satisfaction	0.222	4.047	0.000	Supported
H8	Safety is significantly effect on travel satisfaction	-0.083	1.121	0.263	Not supported
Н9	Waiting time is significantly effect on travel satisfaction	-0.002	0.028	0.978	Not supported
H10	Travel satisfaction is significantly effect on customer loyalty	0.817	34.828	0.000	Supported

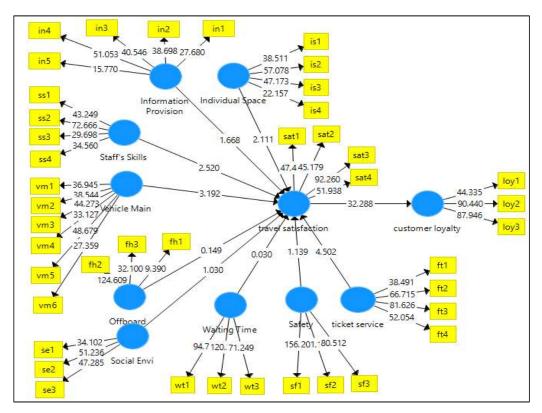


Figure 2.
T-Statistics of the Inner Model (Structural Model)

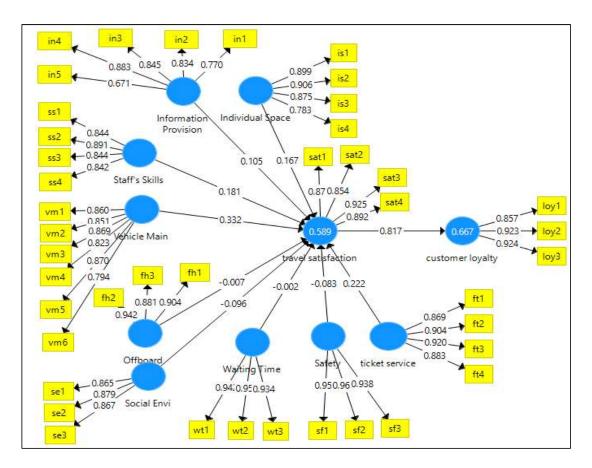


Figure 3.
Path Coefficient and Loading Factors

### 4.4. Discussion

The current study analyzes the impact of EF's in BRT System Company toward travel satisfaction and customer lovalty. Moreover, the two-way approach such as outer model or measurement model, then the inner model or structural model are supported by Partial Least Square. Through PLS, individual space is proven to be the antecedent of travel experience of BRT system company in Jakarta (supporting H1). Other dimension of EF's are called staff's skills in general, vehicle maintenance, and ticket line service had simultaneously influence satisfaction (Supporting H3, H5, and H7). These positive relationships are based on the previous studies of travel experience in transportation research (Carreira et al., 2013; Carreira et al., 2014). In other words, the individual space, staff's skills, vehicle maintenance, and ticket line service are considered by the passengers of BRT system

company. The passengers tend to feel enjoy and satisfied during the trip because of comfortable spaces, the skills of the staffs on board and off-board, the vehicle condition, and the service on ticket line.

This study also proof that travel satisfaction is significantly effect on customer loyalty of BRT System Company (supporting H10). The current result shows about 60% the travel satisfaction is explaining customer loyalty. It supports previous results of travel satisfaction in transport research (Abou-Zeid et al., 2012; Carreira et al., 2014) and confirms many previous study results about satisfaction in recent years (Biscaia, Rosa, Moura, & Sarrico, 2017; Cai & Chi, 2018; Nunkoo, Teeroovengadum, Thomas, & Leonard, 2017; Thakur, 2018; Yusof, Awang, Jusoff, & Ibrahim, 2017). So, when travel experience (individual space, staff' skills, vehicle condition, and ticket service line) are conducive then the customer would satisfied and tend to be loyal toward BRT system company.

The current investigation also concludes that travel experience in BRT System is not significant on customer satisfaction. In this point of view, information provision, social environment, off-board service, safety, and waiting time are not the antecedents of travel satisfaction on BRT system company. This means customers are not enjoying the bus because the information is not clear enough, social environment is not conducive, the low service of facilities in the off-board service, the perceived safety is still low, and the customers tend to wait the bus and make them late. The findings are closely related to previous study of Ringle, Sarstedt, & Zimmermann (2011) about the case of low customer experience and satisfaction among airlines users

### 5. Conclusion

In general, the study concludes that there are still travel experience that must be improved by the company such as information provision, social environment, off-board service, safety, and waiting time. However, not all the travel experience are negative to customers, and they still enjoy the travel with BRT company system. Some factors such as space of individual customers during the trip, staffs' skills, vehicle condition maintenance, and the ticket line service are positive toward customer satisfaction. Thus, those factors would influence on customer loyalty at BRT company system. This study pertain theoretical and practical implications as follow.

## 5.1. Theoretical Implication

Firstly, this study extends the travel experience concepts in different point of view such as BRT system as the representative of modern public transportation or utilitarian transportation that still scarce to be investigated in the transport research. The study had tested EF's

factors as travel experience factors in EC's as the outcome of traveling, and loyalty simultaneously in BRT system. This study answered the questions on how importance the travel experience on utilitarian transportation (Carreira et al., 2013). Based on this study, most influential effect of EF's on behavioral responses is service on ticket, vehicle maintenance and condition, staffs skills on service, and individual space on public transportation.

Secondly, the current study performed additional dimension of travel experience that had not been analyze earlier at the previous study of Carreira et al. (2014) such as waiting time and safety. For customer experience in BRT system, safety and waiting time had empirically considered to be the most problematic problems. These are the reasons why the current study performed waiting time and safety as the additional factors of EF's factors (Carreira et al., 2013). Thus, this study contributed to the transportation research to consider safety and waiting time as the EF's factor for utilitarian transportation.

Finally, this study confirmed transportation research about the main influential emotional factors on customer loyalty such as travel satisfaction (Ali et al., 2018; Kasiri et al., 2017; van Lierop & El-Geneidy, 2016). This result would be meaningful insight to the utilitarian public transportation studies to maintain travel experience during the trip to get more customer loyalty. This contribution had confirmed in transportation study, travel satisfaction would be the most important factor to create customer loyalty (Ali et al., 2018; Carreira et al., 2013; Kasiri et al., 2017; van Lierop & El-Geneidy, 2016).

## 5.2. Practical Implication

The current findings has investigate that the current passengers were having negative experiences on provision of information for both bus and off-board, social environment, service and facilities on the off-board, safety and waiting time. These EF's factors lead to

dissatisfying customers of BRT System Company. However, some EF's factors lead to customer satisfaction such as individual space, staff's skills, and vehicle maintenance and ticket line service. Thus, customer satisfaction significantly effect on customer loyalty. These investigations would bring to some practical implications on government, policy makers, providers of BRT System Company in Jakarta, Indonesia. Firstly, the main factor to influence customer satisfaction is vehicle maintenance. means vehicle maintenance had positive impression. This BRT System Company is proven to improve the quality of its vehicle condition such as replacing the old bus with top branded buses. In regards to this, the researchers developed some interview on direct spot on the bus during the trip. The customers are happy with the bus, the temperature, and the overall quality of the bus are conducive that make them comfort. So they said on the low price like BRT, they felt happy and satisfied with the vehicle condition. So, this study suggests the management and providers of BRT System Company to maintain and improve the quality of its vehicle periodically to maintain the positive emotions toward the facilities.

This factor had also influential path on satisfaction that brought to conclusion for government, policy makers, providers (management), and manufacturers maintain the vehicle such as interior maintenance of the seat, buses' exterior cleanliness, the bus adequate preservation, comfortable temperature, and the machines that would led to strange voices to the customers. Since, the customer felt enjoy, worth it, and satisfied with the vehicle or bus, these facilities must be pertain and maintain periodically to achieve better behavioral responses like satisfaction and loyalty (Carreira et al., 2014).

Thus, the ticket line service has become the second influential factor on travel satisfaction. Based on the current investigation such as interview on the spot, mostly customers are happy with the new

system of E-ticket and the taping system. So, the management should improve the quality of E-ticket so that customers can also buy the ticket on the off-board not only at the convenience stores. The company can improve it by collaborating with the local banks or other financial technologies so that the customers are easily to buy tickets. Hence, the staff's skills are also significant on travel satisfaction and prove that management has improved the quality of service into the service excellence.

The staffs on the bus are professional to give information and understand the current need of the customers. However, the management should more improve the quality like the uniform and grooming of the staffs. Lastly, the customers are satisfied with the individual space. This means, beside peak hour, the customers enjoy the ride because the sit are comfortable. In this case, the management should improve and maintain the comfort of the bus. Due to the positive relationship, the government and policy spent more on the makers should maintenance of vehicle or bus to attract new customers as well, or to switch the society to use this BRT System Company. They have to convince the society by improving the comfort facilities of the BRT systems to be like more modern service, so even the middle-up income customers will use BRT system on public transportation.

The practical implication revealed that the government and policy makers should maintain comfortable ticket line to prevent long queue passengers, improving service quality at the ticket line and E-ticket service maintenance. The service providers must convince the customers that the service for E-ticket is adequate in most of BRT service providers. While the online platform and systems had rampant the market, the BRT service providers must always provide an online or E-ticket service properly. When the government and policy makers, also the BRT service provider would provide vehicle and terminal that had the proper online system especially the E-ticketing, it would persuade

the society to switch from other transportation mode to use BRT public transportation.

Secondly, the negative impacts of other EF's of BRT System Company include information provision, social environment, off-board service, safety, and waiting time. Hence, the company should improve the passengers' experience. Foremost the company should improve perceived safety and waiting time. Most of the respondents are students with middle-up income; they tend to use it for fun or leisure purpose. They wouldn't use it for the daily activities because the perceived safety tend to be low.

The company may add more staffs on board with convincing uniform at the front, in the middle and at the back of the bus. Based on the interview, the customers sometimes avoid using the BRT System Company because they felt afraid of thieves on the bus. Thus, the driver must drive safely, sometimes the customers still complaint about the unsafe drivers. The company has monitoring center at the head-quarter office, but instead of monitoring, the recruitment system must be improved to recruit high qualified drivers. Thus, the bus scheduling besides peak hour must be maintain more carefully. The respondents are more on middle up income and university students that tend to live in instant life. They prefer other alternatives like peer to peer transportation online because they felt more quick to arrive at the destination. So, if the company wants to improve the customer experience, don't make them wait, they live in the metropolitan city and put their time as the highest priority.

Another travel experience that must be improved is the off-board service. In the reality, the off-board facilities are made by steel checkered plate that make the customers feel not safe and discomfort. The government and the management of BRT System Company must build the off-board by concrete structure to improve the safety and comfort of the passengers. This will also protect the passengers from the bad weather

like hard rain. The rigid structure would improve the perception of safety and modern life style in Jakarta as the capital city of Indonesia. Hence when the rigid structure the off-board is adequate, management must improve the information provision like televisions that provide information about delays or rules on the bus etc. Thus, the government and management should expand the business by giving the information through the Apps or Website which the passengers can access the GPS of buses, live every time. This will be easier for passengers to access from their phone or home or workplace. Lastly, for social environment, it will not be easy to solve even from the government because it depend on the character of society. Sometimes the respondents are reluctant to use BRT in Jakarta because they afraid of their safety to be in the bus with many strangers they didn't know. The management would see this as inertia of many passengers to use BRT should anymore and give announcements on the television or social media to be polite during the trip using BRT System Company in Jakarta.

Thirdly, the findings revealed that travel satisfaction to be the dominant factor and the only factor of EC's to influence customer loyalty. This led to the managerial recommendation especially BRT service provider to put customer as the significant position even though in public transportation area. This profound customer satisfaction would be the main factor of BRT System Company to achieve customer loyalty and lowering the switching behavior earlier (Ali et al., 2018; Carreira et al., 2013; Kasiri et al., 2017; van Lierop & El-Geneidy, 2016). The BRT service provider must improve the holistically toward the experience to improve customer satisfaction such as vehicle maintenance, ticket service, information provision, staff's skills, offboard service, social environment, safety, waiting time and individual space (Carreira et al., 2014).

Moreover, travel experience must improved due to insignificant results in this study. As we know that public transportation especially BRT system would be representative of the capital city Indonesia. The innovation of vehicle like comfortable and modern double decker bus would be one of the implications for the stakeholders of BRT System Company in Jakarta Indonesia. The double decker bus would answer the insignificant effect of waiting time. Also, this kind of bus is eligible to large number of passengers at the rush hours to prevent long waiting passengers on the off-board. Thus, the modern facilities must be improved like the online platform to inform bus' schedule and GPS navigation for buses due to the insignificant effect of information provision and waiting time. The off-board facilities as well, to be maintained properly by maintenance and modern design, likewise the society especially middle up income would have some positive perception toward off-board facilities. When middle up income societies switch to BRT system, then it is believed to reduce traffic in the capital city.

Furthermore, the BRT service provider must conduct a proper recruitment and training systems for driver and staffs to improve the perception of safety and staff's skills to enhance positive satisfaction and lovalty. The answer training system would insignificant effect of social environment. Even though there are many unfriendly and vicious behaviors in the BRT public transportation, the skillful staffs are needed to assist the passengers to act properly. So, the training systems would be important to make good environment and assertive staffs in handling some vicious behavior during the trip. These innovation strategies would be considered by the government, policy makers, service provider BRT and manufacturers to improve the travel experience in BRT System Company in Jakarta, Indonesia.

#### 5.3. Limitations and Further Research

This study has its own limitation and brought to the further research. First, at the demographic sample, most of the respondents were using this BRT on entertainment purposes and not the regular/daily user. The results must be further analyzed to investigate the regular/daily user of BRT System Company to get objective conclusion of the findings. Hence the future study shall investigate different demographic behavior of BRT such as middle up income versus lower income, daily user versus trial user to get the holistic perspective of travel experiences in BRT system. Secondly, this study would be severe different on the hypotheses results that need to be more investigated on the further study involving large number of samples, and more variation of demographic data (instead of university students only) to get more holistic perspective of travel experience (Carreira et al., 2014). Thirdly, this study must include other EC's instead of travel satisfaction such as emotions and general value (Carreira et al., 2013; Verhoef et al., 2009) and get more integrated model of travel experience in the field of Bus Rapid Transportation or other public transportation. Finally, this study uses the sample of BRT's passengers in general. However, based on the interview with the management, the BRT System Company in Jakarta Indonesia has improved their service that classifying BRT on several basis such as Small BRT, Large BRT, Royal BRT for higher income passengers, and OK OC Trip traditional (connect with local transportation). The further study is needed to identify the travel experience separately based on the object of the public service to improve the theoretical and practical implications on BRT System Company in Jakarta Indonesia.

## References

Abou-Zeid, M., Witter, R., Bierlaire, M., Kaufmann, V., & Ben-Akiva, M. (2012). Happiness and travel mode switching: findings from a Swiss

- public transportation experiment. *Transport Policy, 19*(1), 93-104.
- Ali, F., Kim, W. G., Li, J., & Jeon, H. M. (2018). Make it delightful: Customers' experience, satisfaction and loyalty in Malaysian theme parks. *Journal of Destination Marketing & Management*, 7, 1-11.
- Beirão, G., & Cabral, J. S. (2007). Understanding attitudes towards public transport and private car: A qualitative study. *Transport policy, 14*(6), 478-489.
- Biscaia, A. R., Rosa, M. J., Moura e Sá, P., & Sarrico, C. S. (2017). Assessing customer satisfaction and loyalty in the retail sector. *International Journal of Quality & Reliability Management, 34*(9), 1508-1529.
- Cai, R., & Chi, C. G. Q. (2018). The impacts of complaint efforts on customer satisfaction and loyalty. *The Service Industries Journal*, 38(15-16), 1095-1115.
- Carreira, R., Patrício, L., Jorge, R. N., Magee, C., & Hommes, Q. V. E. (2013). Towards a holistic approach to the travel experience: a qualitative study of bus transportation. *Transport Policy*, 25, 233-243.
- Carreira, R., Patrício, L., Jorge, R. N., & Magee, C. (2014). Understanding the travel experience and its impact on attitudes, emotions and loyalty towards the transportation provider—A quantitative study with mid-distance bus trips. *Transport Policy, 31*, 35-46.
- Chin, W. W. (2010). How to write up and report PLS analyses. In Handbook of partial least squares (pp. 655-690). Springer, Berlin, Heidelberg.
- Cirillo, C., Eboli, L., & Mazzulla, G. (2011). On the asymmetric user perception of transit service quality. *International Journal of Sustainable Transportation*, 5(4), 216-232.
- Eboli, L., & Mazzulla, G. (2015). Relationships between rail passengers' satisfaction and service quality: a framework for identifying key service factors. *Public Transport*, 7(2), 185-201.
- Falk, R. F., & Miller, N. B. (1992). A primer

- for soft modeling. University of Akron Press.
- Green, D. H., & Ryans, A. B. (1990). Entry strategies and market performance causal modeling of a business simulation. *Journal of Product Innovation Management*, 7(1), 45-58.
- Hair Jnr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: a global perspective.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (pp. 277-319). Emerald Group Publishing Limited.
- Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modeling. *Computational Statistics*, 28(2), 565-580.
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. Articles, 2.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural equation modeling: a multidisciplinary journal, 6(1), 1-55.
- Kasiri, L. A., Cheng, K. T. G., Sambasivan, M., & Sidin, S. M. (2017). Integration of standardization and customization: Impact on service quality, customer satisfaction, and loyalty. *Journal of Retailing and Consumer Services*, 35, 91-97.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Leong, W., Goh, K., Hess, S., & Murphy, P. (2016). Improving bus service reliability: The Singapore experience. Research in Transportation Economics, 59, 40-49.
- Mohamed, I. S. (2011). An empirical study on factors determining e-Business usage on business performance in Malaysian service industry.
- Nunkoo, R., Teeroovengadum, V., Thomas,

- P., & Leonard, L. (2017). Integrating service quality as a second-order factor in a customer satisfaction and loyalty model. *International Journal of Contemporary Hospitality Management*, 29(12), 2978-3005.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). ES-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of service research*, 7(3), 213-233.
- Patrício, L., Cunha, J. F., Fisk, R. P., & Nunes, N. J. (2004, September). Customer experience requirements for multiplatform service interaction: bringing services marketing to the elicitation of user requirements. In *Proceedings. 12th IEEE International Requirements Engineering Conference*, 2004. (pp. 26-35). IEEE.
- Pavesi, A., Gartner, W., & Denizci-Guillet, B. (2016). The Effects of a Negative Travel Experience on Tourists' Decisional Behavior. International *Journal of Tourism Research*, 18(5), 423-433.
- Pine, B. J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard business review*, 76, 97-105.
- Ramayah, T., Yeap, J. A., Ahmad, N. H., Halim, H. A., & Rahman, S. A. (2017). Testing a confirmatory model of facebook usage in smartpls using consistent PLS. *International Journal of Business and Innovation (IJBI)*, 3(2), 1-14.
- Ringle, C. M., Sarstedt, M., & Zimmermann, L. (2011). Customer satisfaction with commercial airlines: The role of perceived safety and purpose of travel. *Journal of Marketing Theory and Practice*, 19(4), 459-472.
- Ringle, C. M., Wende, S., and Becker, J. M. (2015). SmartPLS 3. Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.
- Santoso, A. S., & Nelloh, L. A. M. (2017). User satisfaction and intention to use peer-to-peer online transportation: A replication study. *Procedia Computer Science*, 124, 379-387.
- Shin, D. H. (2015). Effect of the customer

- experience on satisfaction with smartphones: Assessing smart satisfaction index with partial least squares. *Telecommunications Policy, 39*(8), 627-641.
- Thakur, R. (2018). The role of self-efficacy and customer satisfaction in driving loyalty to the mobile shopping application. *International Journal of Retail & Distribution Management*, 46(3), 283-303.
- Unger, O., Uriely, N., & Fuchs, G. (2016). The business travel experience. *Annals of Tourism Research*, 61, 142-156.
- van Lierop, D., & El-Geneidy, A. (2016). Enjoying loyalty: The relationship between service quality, customer satisfaction, and behavioral intentions in public transit. Research in Transportation Economics, 59, 50-59.
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of retailing*, 85(1), 31-41.
- Wahyuningtyas, S. Y. (2016). The Online Transportation Network in Indonesia: A Pendulum between the Sharing Economy and Ex Ante Regulation. *Competition and Regulation in Network Industries*, 17(3-4), 260-280.
- Yusof, Y., Awang, Z., Jusoff, K., & Ibrahim, Y. (2017). The influence of green practices by non-green hotels on customer satisfaction and loyalty in hotel and tourism industry. *International Journal of Green Economics*, 11(1), 1-14.

30