THE INFLUENCE OF USER INTERFACE DESIGN AND USER EXPERIENCE TO E-LOYALTY (CASE STUDY OF ONLINE TRANSPORTATION : GO-JEK)

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Abstract. In this technology era, smartphone and internet are two things that could not be separated from human's daily activity. According to APJII (Asosiasi Penyelenggara Jasa Internet Indonesia), smartphone penetration in Indonesia is 43% with nearly 64 million Indonesian people who use their smartphones on their daily basis. M-Commerce in Indonesia also shows a significant growth with two biggest players in Online Transportation are GO-JEK and Grab. Based on the research from Qingfei and Shaobo (2008), as m-commerce companies, both GO-JEK and Grab should keep on developing its features and experiences to match the market's taste. This research intends to analyze the positive influence of User Interface to E-Loyalty and identify whether User Experience moderates the positive influence of User Interface to E-Loyalty or not. This research would utilize Structural Equation Modelling to analyze the framework. Questionnaire was spread to 385 GO-JEK users as samples for this research. The result of this research turns to be Customization, Character, and Convenience influences positively to Satisfaction which leads to E-Loyalty. Customization also influences positively to Switching Cost which affects to E-Loyalty. Therefore, the researcher suggests GO-JEK to emphasize on how to create Satisfaction and higher Switching Cost that would keep the customers loyal.

Keywords : M-Commerce ; Online Transportation ; User Interface ; User Experience ; E-Loyalty

INTRODUCTION

Nowadays, technology has been the most concerning issue to be discussed in Indonesia. According to a survey by APJII (Asosiasi Penyelenggara Jasa Internet Indonesia), Indonesia has nearly 133 million internet users. It counts around 52% of total population and Statista.com predicts that it would grow to 54% of total population in 2023. From the previous research by APJII (Asosiasi Penyelenggara Jasa Internet Indonesia), the total number of mobile phone penetration in Indonesia is 43% and APJII (Asosiasi Penyelenggara Jasa Internet Indonesia) estimates that there are nearly 64 million people in Indonesia who use their smartphones on their daily basis. Based on the data provided, Sagari (2016) stated that Indonesia has an enormous number of users in e-commerce industry in Asia-Pasific area. However, according to Featherman et al. (2010), m-commerce contains more potentials than e-commerce. The growth of m-commerce in Indonesia is getting more intensive and many m-commerce companies in Indonesia have to keep on developing its features and experiences in order to stay competitive and keep their customers loyal (Qingfei and Shaobo, 2008). There are a lot of m-commerce companies in Indonesia, but the two biggest m-commerce companies that are focusing on mobile transportation are GO-JEK and Grab.

According to article published by CNBC Indonesia, GO-JEK and Grab both have two biggest market shares in Indonesia with GO-JEK approximately has 900 thousand drivers and of about 15 millions users weekly and Grab with 95% market share in South East Asia and also 3 million users daily. Based on the research from Qingfei and Shaobo (2008), as m-commerce companies, both GO-JEK and Grab should keep on developing its features and experiences to match the market's taste. The design of User Interface is said to have an influence on customer satisfaction to a product/service that could determine customer loyalty (Suratno, 2016). Meanwhile, according to Gitelson and Crompton (1984), every company needs to win new customers and keep their customers loyal and they have to spend a lot of investments and costs to do those things. Apart from its customer loyalty, User Experience needs a certain strategy that requires a lot of cost to implement and create the "experience" for the users(Ries, 2017). According to Anup Cowkur, GO-JEK tech. developer, GO-JEK spends so much cost in determining features to be the most accurate User Experience and User Interface for users. He says that even GO-JEK team would travel to small towns in Indonesia to receive feedbacks from customers.

From the explanation above, there occurs a big question for this research which is whether User Interface Design influences positively to E-Loyalty of GO-JEK or not and whether User Experience moderates between User Interface and E-Loyalty of GO-JEK or not. Hence, this paper intends to analyze the influence of User Interface Design to E-Loyalty and identify whether User Experience moderates the influence of User Interface Design to E-Loyalty or not. This research would adopt the previous research by Chang and Chen (2008) which previously researched about the positive influence of customer interface quality to E-Loyalty directly. This previous research also stated the antecedents of customer interface quality to E-Loyalty through satisfaction and switching cost (User Experience). The result of this research turns to be Customization, Character, and Convenience influences

positively to Satisfaction which leads to E-Loyalty. Customization also influences positively to Switching Cost which affects to E-Loyalty. Therefore, the researcher suggests GO-JEK to emphasize on how to create Satisfaction and higher Switching Cost that would keep the customers loyal.

LITERATURE REVIEW

As it has been mentioned in the Introduction, there are three elements that need to be analyzed in this research which are User Interface Design, User Experience, and E-Loyalty. The indicators of User Interface comprises of Customization, Interactivity, Convenience, and Character according to some sources (Alba et al., 1997; Jarvenpaa and Todd, 1997; Palmer, 2002; Srinivasan, Anderson, and Ponnavolu, 2002; Tsai and Huang, 2007; Wang and Emurian, 2005b; Wolfinbarger and Gilly, 2003; Zviran et al., 2006). Next, according to ISO 9241-210, User Experience is people's perception and their responses to the usage of a product, system, or service. Based on Chang and Chen (2008), User Experience comprises of Customer Satisfaction and Switching Cost. However, the researcher finds out that User Experience actually comprises of four indicators according to Rodden et al. (2010) which are Customer Satisfaction, Switching Cost, Task Success, and Engagement. Lastly, according to Oliver (1999), loyalty is interpreted as a repeated purchase behavior of a person or a customer over a sustained period of time and is affected by a favorable attitude toward the product/service, and it includes both attitudinal and behavioral aspects in it (Casalo et al., 1978). Oliver (1999) defined customer loyalty as "a commitment to re-purchase a certain product or service consistently despite having another influences and efforts from external factors that could cause in switching behavior".

The framework of this research would adopt the previous research by Chang and Chen (2008) which analyzed about the influence of Customer Interface Design to E-Loyalty with Customer Experience as moderating element. Therefore, this research would also adopt the similar framework as Chang and Chen (2008) which is proposed as below:
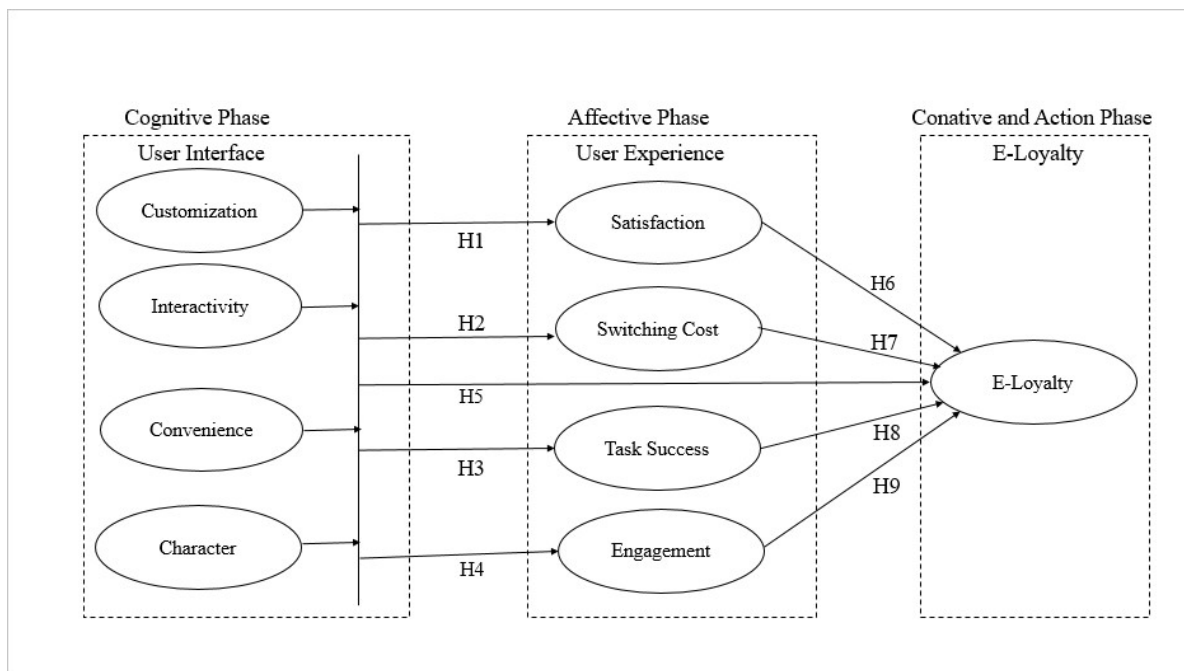

Figure 1: Conceptual Framework

Based on the framework above, the hypotheses for this research are:
H1   : User Interface Design influences positively to Satisfaction
H2   : User Interface Design influences positively to Switching Cost
H3   : User Interface Design influences positively to Task Success
H4   : User Interface Design influences positively to Engagement
H5   : User Interface Design influences positively to E-Loyalty
H6   : Satisfaction influences positively to E-Loyalty
H7   : Switching Cost influences positively to E-Loyalty
H8   : Task Success influences positively to E-Loyalty
H9   : Engagement influences positively to E-Loyalty

RESEARCH METHOD

This research would conduct a survey using questionnaire and gather data from 385 GO-JEK users. Based on the framework of this research, there is an existence of multiple relationships between independent variables, mediating, and dependent variables. Hence, Structural Equation Modelling (SEM) appears to be the most appropriate and accurate method to address this research furthermore (Zweig and Webster, 2003). The measurement model and the structural model would be assessed using AMOS 5.0 by the maximum likelihood method (Arbuckle, 2003). The fit of models in this research would be evaluated by using chi-square with degrees of freedom, the Comparative Fit Index (CFI), the Goodness of Fit Index (GF), the Adjusted Goodness of Fit Index (AGFI), and Root Mean Square Error of Approximation (RMSEA) are also assessed in addition to the Chi-Square test generated in this research. The validity of the questionnaire then would be analyzed using KMO Bartlett Sphericity test which has to have higher value than 0.5 and significancy below 0.05. The reliability of the questionnaire then would be analyzed using Cronbach Alpha which has to have higher value than 0.6 according to Malhotra et al. (2010).

FINDINGS AND ARGUMENT

For the pilot test of the questionnaire, there happens to be some revamp from the previous framework proposed as there occurs to be variable Engagement is not reliable because its Cronbach Alpha is below 0.6. Therefore, the researcher decides to terminate the Cronbach Alpha value is below 0.6. After the reliability test, Engagement has Cronbach Alpha below 0.6 and therefore Engagement needs to be terminated. The following framework is the revised and final framework including the hypothesis of this research:
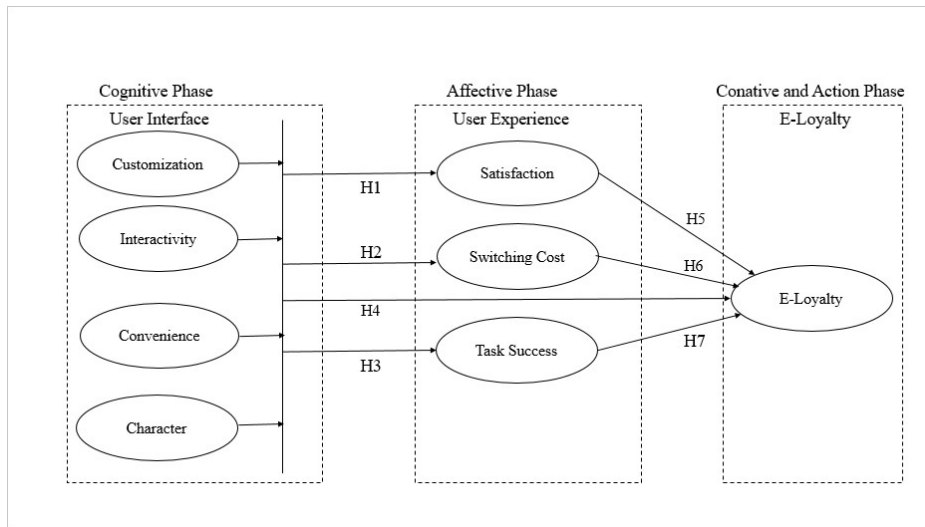

Figure 2 : Revised Conceptual Framework

The table below shows the result of the statistical calculation using AMOS 5.0 with the conceptual framework proposed above:

Table 1. Statistical Result

			Estimate	S.E.	C.R.	P	Label
Customer Satisfaction	<---	Customization	.348	.069	5.002	***	
Customer Satisfaction	<---	Interactivity	.090	.054	1.661	.097	
Customer Satisfaction	<---	Convenience	.405	.067	6.022	***	
Customer Satisfaction	<---	Character	.343	.059	5.852	***	
Switching Cost	<---	Customization	.567	.141	4.014	***	
Switching Cost	<---	Interactivity	.314	.122	2.577	.010	
Switching Cost	<---	Convenience	-.153	.134	-1.140	.254	
Switching Cost	<---	Character	.207	.118	1.753	.080	
Task Success	<---	Customization	.512	.089	5.765	***	
Task Success	<---	Interactivity	.041	.065	.627	.531	

Task Success	<---	Convenience	.320	.076	4.194	***
Task Success	<---	Character	.317	.067	4.696	***
E-Loyalty	<---	Character	.124	.060	2.060	.039
E-Loyalty	<---	Convenience	.079	.066	1.195	.232
E-Loyalty	<---	Interactivity	.098	.052	1.884	.060
E-Loyalty	<---	Customization	-.022	.078	-.278	.781
E-Loyalty	<---	Customer Satisfaction	.255	.072	3.550	***
E-Loyalty	<---	Switching Cost	.241	.030	7.997	***
E-Loyalty	<---	Task Success	.066	.045	1.469	.142

Based on the table of significance above, here are the conclusions and explanations of the hypotheses as it has been stated in the framework:

Table 2. Hypothesis Testing

Hypothesis	Details	Result
H1	User Interface Design influences positively to Satisfaction	Do not reject
H2	User Interface Design influences positively to Switching Cost	Do not reject
H3	User Interface Design influences positively to Task Success	Reject
H4	User Interface Design influences positively to E-Loyalty	Reject
H5	Satisfaction influences positively to E-Loyalty	Do not reject
H6	Switching Cost influences positively to E-Loyalty	Do not reject
H7	Task Success influences positively to E-Loyalty	Reject

Based on the table above, we can see some of the accepted hypotheses. Customization, Convenience, and Character influence positively to Customer Satisfaction while Interactivity does not. This could be because Customization means that GO-JEK has been offering a lot of products and features that fulfill daily needs of its users. Convenience also means that GO-JEK has been offering a good quality service and user-friendly application that could be used by its users. Lastly, GO-JEK also has been offering a great design, logos, fonts, texts, which are comprised in Character to its users. But in terms of Interactivity, it does not provide any Customer Satisfaction because mostly people use GO-JEK in business/professional needs not leisure needs. Some previous researchers also doubt that users actually buy a products/use services are influenced by the interactivity (Aladwani and Palvia, 2002; Alba et al., 1997; Jarvenpaa and Todd, 1997). Moving on, except for Customization, all of the variables in User Interface Quality do not positively influence Switching Cost. Customization might influence positively to Switching Cost because GO-JEK has been offering a lot of features that competitor does not have. Thus, GO-JEK could offer a distinctive and competitive advantages that the competitor could not offer to their users. Moreover, except for Interactivity, all of the variables in User Interface Quality do positively influence Task Success. Moving on to the E-Loyalty which is the main goal of this research, from the statistical result, both Customer Satisfaction and Switching Cost positively influence E-Loyalty. This implies that Customer Satisfaction and Switching Cost are two concerns from User Experience that must be emphasized and propelled more in GO-JEK application. Reflecting upon the independent variables that influence positively to Customer Satisfaction and Switching Cost, it can be seen that Customization, Convenience, and Character influence positively to Customer Satisfaction. While for the Switching Cost, only Customization influences positively to it. This indicates that Customization could influence positively to both User Experience. However, Task Success is also influenced by Customization, Convenience, and Character but it does not influence positively to E-Loyalty as it ends on the completed order from the users to the application only.

Table 3. Fundamental References

Author	Publication Date
Chang and Chen	11 June 2008
Rodden et al.	15 April 2010

CONCLUSIONS

Based on the result above, this research needs to answer its questions and objectives. The first answer to the first question is User Interface Quality does not influence positively to E-Loyalty. However, User Interface Quality might influence positively to User Experience through Customization, Convenience, and Character to Customer Satisfaction and Switching Cost (Customization only).

This result is very prominent because according to the statistical test, User Experience influences positively to E-Loyalty except for Task Success and it is also the answer to the second research question. User Experience moderates the influence between User Interface Quality to E-Loyalty through Customer Satisfaction and Switching Cost. Hence, this research has already answered its research questions and fulfilled its research objectives. To conclude, Customization, Character, and Convenience influence positively to Customer Satisfaction which also influences positively to E-Loyalty. In other side, Customization also influences positively to Switching Cost which positively influences E-Loyalty.

From the conclusion above, it can be seen that there are some prominent things that must be considered in order to maintain loyalty to its users. Therefore, the researcher has provided some recommendations for GO-JEK in the future so that GO-JEK might keep its users loyal. The recommendations are based on the statistical result that have been analyzed. Some of the recommendations suggested are:

1. Improve Customization through Several Features
   Based on the data analysis, Customization is proven to be the most prominent feature in User Interface Quality to be emphasized. According to Srinivasan et al. (2002), customization is an ability of an e-retailer to design its products, services, and transactional environment to their individual customers. Moreover, from the customer perspective, customization would be perceived as an increased choice and allows the e-retailer to focus more on what customer wants and what customer needs (Tsai and Huang, 2007). This means that GO-JEK has been offering a lot of features and perceived values for its users through its features. Until now, GO-JEK has been offering a lot of services such as GO-RIDE, GO-FOOD, GO-SEND, GO-MART, GO-PAY, etc. This means that GO-JEK has been creating an environment where all of its customers could use its services and this makes them feel comfortable using it. Through this all, GO-JEK might include some seamless experiences such as giving a lot of promos and discounts to its customers more often in order to keep them using GO-JEK as their main application to fulfill their daily needs. Also, GO-JEK also could do more research and developments regarding feature that needs to be added in the application and its features need to fit the market/customer needs. The purpose of this is to make GO-JEK users more loyal to the application and eventually increase the conversion rate of GO-JEK gradually. If GO-JEK could maintain its Customization well, then it would significantly influence the Customer Satisfaction also which would affect the E-Loyalty. Hence, GO-JEK needs to emphasize more on its Customization because it is the initial requirement of the E-Loyalty of its users.

2. Maintain User-Friendly Application
   According to the statistical test, Convenience also influences positively to Customer Satisfaction. Srinivasan et al. (2002) defines convenience as the extent to which users see application as simple, intuitive, and user friendly. Wang and Emurian (2005) also stated that a convenient application should provide the ease of navigating the application, facilitate in a quick transaction, and minimize the customer effort to use the application. This means that Convenience is related to the technical issue of GO-JEK application. GO-JEK needs to maintain its technical issue to prevent any problems occurring while its users are using it. For instance, there has been some technical issues after raining on GO-JEK application because the server would be error caused by exceeds demand and therefore causing traffic error in the application. The other example sometimes there has been any cases of "double ordering" and it often causes a lot of complaints from its users. GO-JEK needs to solve these kinds of problems through a great algorithm made by their well-qualified engineers and eventually it would make the users feel convenient in using the application. As Convenient would influence positively to Customer Satisfaction and will affect E-Loyalty, GO-JEK needs to put concern on these kinds of fields.

3. Create Appealing Design for Its Application
   Lastly, based on the test, it could be inferred that Character also influences positively to Customer Satisfaction. Wang and Emurian (2005) stated that character would involve the graphical design features on an application that are perceived by users as their first impression in using it and comprises all of the images of the application using inputs such as text, style, graphics, colours, logos, slogans, themes, and pictures (Aladwani and Palvia, 2002; Srinivasan et al., 2002; Wang and Emurian, 2005b; Zviran et al., 2006). This means that GO-JEK needs to make creative design about its application so that it would be eye catching and fits their target market. For the researcher's recommendation, GO-JEK is already appealing in terms of design and logos because it could easily be remembered in users' mind. Hence, GO-JEK needs to maintain its creativity and do quality control of its Character in terms of advertising and design offered to its users. In the end, a good Character would influence positively to Customer Satisfaction which would maintain the E-Loyalty of its users.

4. Increase Switching Cost through Customization
   Reflecting upon the statistical result, Switching Cost also significantly influences E-Loyalty. Burnham et al. (2003) define switching costs as the onetime costs that customers associate with the process of switching from one provider to another. This means that GO-JEK needs to create a high switching cost in order to prevent their users moving to other competitors. According to the test, Switching Cost is influenced by Customization and therefore, Customization needs to be emphasized

again. Compared to another competitor, GO-JEK has been offering a lot more features than its competitor does and therefore, GO-JEK has created an environment where moving to other competitor means the particular user would not be able to use the feature that GO-JEK offers. This would eventually make the users more loyal to GO-JEK because GO-JEK has competitive advantage in offering service for its users. The researcher then suggest GO-JEK to keep maintaining its customization, creating distinctive features that match the market's taste and ensuring that it could not be done by other competitor so that GO-JEK would be appealing enough and offers differences to its users that would make them loyal to use the application.

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