

The Impact of E-service, Perceived Hedonicity, Perceived Utilitarian and Perceived Enjoyment on Customer Satisfaction and Customer Loyalty in Telecom Industry

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ABSTRACT

The cellular mobile industry in Indonesia is undergoing rapid changes as a result of globalization. As a result of fast growth and severe competition, customer satisfaction and customer loyalty rate are the important challenges faced by telecom companies today. E-service quality measurement has been receiving increasing attention that demonstrated in many contexts of previous studies. The purpose of this paper is to develop a measurement scale for e-service quality in telecom settings. We analyzed self-reports from 157 respondents (51% were female) between the ages of 18 and 45 above. A scale consisting of three user experience (perceived hedonicity, perceived utilitarian, and perceived enjoyment) was developed to measure e-service quality in telecom industry. The scale was proven reliable and valid. The finding revealed that e-service quality was relatively significant in its impact on customer satisfaction and customer loyalty.

Keywords: e-service, hedonicity, utilitarian, enjoyment, customer satisfaction, customer loyalty.

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1. INTRODUCTION

Technology has become an integral part of our daily life, the consumer satisfaction has become a good business practice that business strive to achieve. Nowadays, the usage of internet rapidly growing in every industry (Zhang, Huang & Wang, 2015). The internet has changed customer shopping habits with rapid technological developments accessing the internet has become easier. (Blut, Chowdhry, Mittal, & Brock, 2015). Thus, several industries has been adopted online channels to approach the customers.

Quality is a key in business achievements (Cox & Dale, 2001). Quality of service has an important impact in achieving goals, it includes development of trust, satisfaction, and loyalty (Kao & Lin, 2016). Therefore, service quality has been widely studied in traditional telecommunications service settings and the measurement of quality (Gautam, 2015). However, online services distinguished from traditional services (Amin, 2016). The interaction between customers and business depends on computers or cellphones. From the perspective of human-computer interaction (HCI), the factors that

affect the quality of e-service quality is different from traditional service channels (Cox & Dale, 2001).

Today, one of the important component in HCI is user experience (UX), and it's related to service quality. This goes beyond traditional usage and contains affective aspects such as positive feelings related to the product, the desire to reuse or approve and so on (Law & Schaik, 2010). Customer satisfaction and loyalty are the results of positive User experience, which means that User Experience is an important research field. Therefore, one of the objectives of this study is to build a measurement scale and discuss the quality of electronic services from the User Experience perspective.

The current studies related to e-service quality mainly focus on traditional e-service such as e-retailing and e-banks. Satisfaction and loyalty of electronic services in telecommunications are also important for the industry (Hosaeni, Zadeh, & Bideh, 2013). E-service website in telecom is driven by proliferating range of virtual products and personalized services (Huang, Lin & Fan, 2015). Even though customers have multiple channels (e.g., websites, telephone calls, text messages, applications and service desks) to access services, easy-to-use online channels clearly have advantages over traditional channels.

This study is a replica of Zhou Journal, 2018 concerning on measuring e-service quality. In a journal written by Zhou, the study only measuring the website version of e-service quality. In this study we add some variables, perceived hedonicity, perceived utilitarian and perceived enjoyment. This study aims to build reliable and valid scale to measure mobile e-service quality applications from the user experience perspective in telecom settings, and determine the impact on customer satisfaction and customer loyalty. This study focuses on internet providers and mobile providers company.

The contents of this study is organized as follows. Section 2 reviews the literature on e-service quality and impact on customer satisfaction and customer loyalty, also the objectives of this study. On section 3, we present the material used and the method used for the study, after we discuss the validity and reliability of the questionnaire used to measure

perceptions of e-service quality services in telecom settings. We analyzed the relationship between each factor of user experience that assumed affect customer satisfaction and customer loyalty. On section 4, we provide findings, limitations, and suggestions for future research in the last section.

2. LITERATURE REVIEW

2.1 E-Service

E-service quality is one of strategic implication for business aiming to survive in the electronic platform. This is an important strategy for success and it's even more important than website usage that provided with more choices with lower price. On purpose to deliver service quality, companies need to have a solid understand grounding about the perception of customers in regard to the quality of their services and the way the customers evaluate them. According to Zeithaml (2000), is broadly defined as the entire stages of a customer's interaction with internet website. On the other hand, it is the level to which internet websites or platform enable easily, effective and efficient transaction, payment and delivery. Several studies on service quality in physical encounters have concluded that some factors are responsible for customer's satisfaction and which, in turn, are likely to lead to behavioral intention to purchase. Previous studies have demonstrated the factors that influence service quality and customer satisfaction on the way traditional telecommunication services channels. Payments and savings (fees, rents and offers) and communication (customer service, user friendly websites that are employee friendly) are factors that influence the perception of customer service quality. Considering factors that influence the perception of customer service are determined based on seven dimensions, namely: network quality, value added services, price plans, employee competencies, billing systems, customer service and service convenience.

Other study in telecommunication service found that SERVQUAL model was utilized for measuring the consumer's perception. According to Parasuraman (1988) recommended a five dimensional model of service which includes reliability, empathy, responsiveness, tangibles and assurance as the instruments for measuring service quality, and in a study of telecom service in India,

the author added transmission quality and competitiveness as factors of measurement. Through several studies, we found that all involved employee performance. In previous studies, the SERVQUAL scale was used in the context of e-service based on various characteristic such as; reliability is defined as capacity to execute the benefit reliably and accurately (Armstrong, 2012), if a company provide a good service, a company and it staff should be ready to perform customer's queries about product or services offered (Ojo, 2010); Assurance explained as information to have conviviality of workers and their capability to motivate confidence and trust. When company provide good and caring services to customers, they would willing to do business.

2.2 User Experience and Customer Satisfaction

Web-Based UX

They're numerous factors influencing service quality in telecommunication service industry. The User Experience (UX) is closely related to service quality. UX includes traditional usability and can be described as personal perception and personal responses from the use or anticipated use of a product (Borsci, Federici, Bacci, Gnaladi, 2015). They key difference between UX and service quality is the emotions involved in the UX. The amount of interaction with the product can affect the UX and interactive experience of a user is affected by perceived quality. The websites dimensions were mainly related to website design, information and technological support. In telecommunication industry, using e-service can improve customer service. Customers are increasingly making more online purchases due to flexibility, by providing web-based service the provider should consider main factor that related to UX. As the primary communication interface, websites should be well designed and users friendly. In the other words, websites should be easy to use so that customer can efficiently navigate them. The information that's provided on the website must be clear and updated. The UX lead to experience that user can get while using the

websites and it's used to determined credibility and quality of the websites.

Mobile Application UX

Mobility was noticed as an external constraint in the mobile environment, the involvement of mobile information access might not so important to be guaranteed in reality. Thusly, perceive mobility was identified as the next stage of mobile context is perceive as being able to afford time and connections (Tamky, 2008 in June lu, Changliu& June wei Journal of computer information systems, 2016). Using a system acceptance perspective, we believe that mobility is a perception is a level that an individual believes when using a mobile application will improve his ability to do work and activities while traveling. In mobile application, perceived mobility represents an comprehensive feeling of the effect of mobile system characteristics. Such as perception would be even more applicable and instrumental to acceptance that IS acceptance.

In the mobile context, perceived mobility shows the overall feeling of the impact of the characteristics of a mobile system. The perspective that might be more relevant for the acceptance of the use of IS that determines the expectations of performance and effort expectancy (ease of use). However, mobility has never been mentioned in making theoretical models such as ECT, TAM, or UTAUT. The importance of mobile economy today, perceived mobility must be sufficient attention to the theory of development. Moreover, the total evidence (Cassab H, MacLachlan, 2006 in June lu, Changliu& June wei Journal of computer information systems, 2016). Perceived technical quality changed the appearance as the key to hedonic perception. The explanation is to improve the features and capabilities that are embedded in the system to help the user to a greater opportunity that comes from the excitement of the user experience. Increased mobility is a result of increasing mobilization and application systems, which cannot be denied undoubtedly increasing perceived enjoyment since mobile application users can access data service options anytime and anywhere. This model also states that intention is continuously influenced by user satisfaction and post-acceptance perceptions. It is also stated that

user satisfaction is determined based on the confirmation of the user's expectations of the main usage and the expected confirmation that is influenced by post-usage perceptions. This model has been used by many studies on IS related to post-usage satisfaction problems.

Customer Experience

Experiences today are discussed and rarely determined, customer experience is the interaction that occurs between customers and companies in all business relationships that occur. The experience becomes very personal and involves customers at a different level in terms of emotional, physical, sensory and spiritual rationality. This depends on the expectations that the customer has and the encouragement or desire that comes from the interaction with the company. According to Hongxiang (2011), quality from experience is the most important element because it will produce customer satisfaction. Statistics have shown that around 82% of customers have switched to other networks because they are not satisfied with the offerings of products or services provided by the company, and 90% of those left without any complain to customer service department. At the same time, one customer can communicate the dissatisfaction they feel to 13 different customers and that will give bad effect to the company.

Discussing the online context of all companies, they are focused on building competitive advantage and customer loyalty by creating exceptional experience for customers (Badget et al., 2007). At present, online sales grow by 21.1% and reach US \$ 1 trillion globally (eMarketer, 2013). Growth significantly follows developments from countries (AlGhamdi et al., 2012). Technological developments have developed rapidly and produce devices in smaller sizes such as smartphones and tablets that allow users to access the internet wherever they are. The rapid growth in internet usage and the increasing number of smartphone uses provide unprecedented growth in mobile commerce (Lu and Su, 2009). The generation of smartphones allows for transactions using virtual wallets such as credit cards, loyalty cards) that use NFC technology. Mobile devices are expected to be the main platform for searching the internet (O'Dell, 2010). Shopping with smartphones has

become a customer routine (Siwicki, 2014) and customers become familiar with the flexibility and convenience provided. Companies need to understand the best way to serve customers in smartphones that relate to the priority strategy of customer engagement with the company (Klaus and Nguyenn 2013). The development of how to interact now, late has a positive impact on the customer decision-making process (Lou et al., 2011). Online customer experience facilitates customer engagement in not a long time (Brodie et al., 2013). In other words, the innovation of digitalization is on customer touchpoints such as social media and mobile devices, allowing marketers to build relationships with further communication with the company (Sashi, 2012) and better access to their favorite brands that will keep them active in the community (Brodie et al. 2013). In previous research (Rose et al. 2012) has discussed some experiences about online customer experience and discussing the desire to repurchase is one of the factors that influence the increase in online customer experience. (Chiu et al, 2012) also consider the determinants of repurchase in the context of online customer experience, and prove that increasing online customer experience is a factor that increases the number of regular customers to increase interest in purchases. Coupled with (Luo et al. 2011) who found positive results that enhance online customer experience in an effort to increase customer loyalty, repurchase. Customer satisfaction for repurchase is the result of customer satisfaction (Kuo et al, 2013). Significant developments in cellular technology have made a lot of experience for customers in enhancing their online experience, which ultimately makes the product or service, the company will create opportunities to help customers in their business (Moth, 2012). Through the exploration of several journal, the key factor of repurchasing was an experience. Online customer experience created through some phase of engagement. The experience that have created build interaction between customers and company, a unique relationship between both side create various experiences that will effect the intention of repurchasing product or service.

2.3 Utilitarian and Hedonic

The ease of use becomes very important in predicting and determining decisions in using information systems (Davis 1989, in Zhan 2016). When potential customers find an e-commerce web or application and start browsing activities in later and efficiency in accessing relevant information and how much they can operate the platform they use. In general, the convenience offered by the company and felt by the user is a form of lust, care and respect for the customer (Egger, 2001). Then (Harkbarth, et al. 2003) found a link between ease of use and system experience, and found a significant positive relationship between the two. The website must be user-friendly, easy to use and should help the customer to solve the problem, the usefulness elements of the website are related to utilitarian features.

Utilitarian value is the whole for consumers of a product, such as benefits and weaknesses functionally. Customer utilitarian behavior is task-oriented and rational (Batra and Ahtola, 1991; Sherry 1990 in Zhang, 2016). The value of utility value depends on shopping as a state of internal work and the utilitarian value is determined by specific shopping tasks and driven by consumer demand. As follows, consumers are looking for the most efficient method of resolving their expenses (Babin et al., 1995 in Zhang 2016). Customers want to get the product they want only in a short time, and compilation of things that are successfully obtained, they will be satisfied (Babin et al., 1994 in Zhang 2016). So, the utilitarian value of product discovery is relevant to the results of their perceptions, not about shopping as entertainment. For this reason, utilitarian values treat and understand consumers very well in order to find consumer spending. According to Rintamaki et al. (2006) the element of utilitarian value is saving and comfort. Utilitarian values will increase when consumers find the product being sold, and they find the price offered is lower than their competency, then the product can be more efficiently obtained from the purpose of their expenditure. Therefore, the compilation of consumers gets the desired product, utilitarian value is realized. Supported easily they get the desired product, the value of utilitarian will increase.

Utilitarian values will be found by customers who need navigation that is obtained and goals that are born from those who succeed without being concentrated with the experience itself (Babin et al., 1994 in Zhang, 2016). Customers who have a concern for utilitarians consider that time is a resource that must be properly managed, they give a high value to the right time allocation. In addition, they prefer to buy products online because they buy and buy costs obtained from online purchases (Huang, 2005). Web designers must consider the aspects of information available on the web that facilitate web visitors to find information (Woldfinbarger and Gilly, 2001 in Jeng Wu, 2017). Utilitarian values are found to have an important role in internet retailers (Bilgihan and Bujisic, 2015). So, the web appearance must be attractive and must meet the benefits felt by the user in order to get a good customer experience.

At E-Commerce, consumers are looking for utilitarian and benefits from hedonic. As explained above, utilitarian values occur when consumers get the desired product in the shopping process while hedonic values come from experiences of pleasure and pleasure experienced by consumers during the shopping process (Holbrook and Hirschman, 1982 in Jeng Wu, 2017). According to Bellenger et al., 1976 in Jeng Wu, 2017) the hedonic value comes from the benefits received by consumers who cover the pleasure, emotional and satisfaction aspects that result from the shopping experience. The studio further stated that utilitarian is no longer sufficient to support online purchases, indeed initially consuming online shopping to look for unique experiences in e-commerce (Bilgihan et al., 2014), but the experience that was broadcast directly bought assistance in purchasing and carrying out full enjoyment given to customer satisfaction (Szymanski, 2000). So Utilitarian and Hedonic have a positive impact on the website (Babin and Attaway, 2000). The elements on the website are important antecedents to online experience, such as the visual design of the website. With the ease of balance of utilitarian and hedonic features on e-commerce websites can create a pleasant experience for consumers.

2.4 Enjoyment

Enjoyment perceived by consumers is considered a hedonic level or intrinsic value of e-commerce and shows a feeling of pleasure compilation is no longer an important problem (Salehi et al., 2013). The website must contain different elements so that the user has the desire for the website. Companies must listen to their audience and provide space to be involved, users involved and involved make a purchase or continue to return to the website. That (Jun Lu, Chang Liu &Juni Wei, 2016) asked for the top level after gaining experience in using a mobile application or website.

2.5 The aims of this study

The rapid growth of internet technology has caused a change in the way consumers shop. E-service is an increasingly common activity so e-SQ is often studied. Many researchers find a positive relationship between e-SQ, customer loyalty and customer satisfaction and in this paper we want to review and measure the effect of e-service, perceived hedonicity, perceived utilitarian, and perceived enjoyment on customer satisfaction and customer loyalty.

2.6 Framework research model

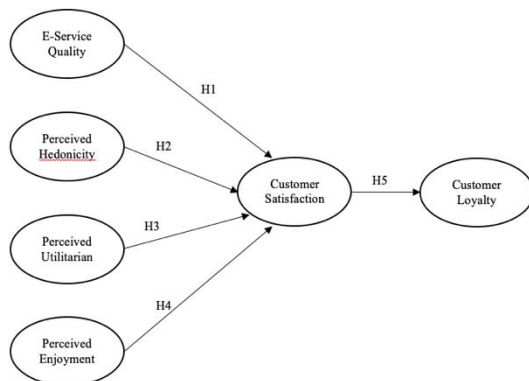


Figure 1 Research Model

Hypothesis Development

H1; E-service quality has positive effect on customer satisfaction

H2; Perceived Hedonicity has positive effect on customer satisfaction

H3; Perceived Utilitarian has positive effect on customer satisfaction

H4; Perceived Enjoyment has positive effect on customer satisfaction

H5; Customer satisfaction has positive effect on customer loyalty

3. METHOD

3.1 Samples

The sampling method used in this study is nonprobability sampling with quota sampling technique. Quota sampling according to Sugiono (2010) is a technique for determining samples from populations that have certain criteria until the desired amount (quota) is fulfilled. After the quota is met the data collection is stopped. The number of samples used in this study were 157Indihome customers and Telkomsel customers.

3.2 Questionnaire Measures

To find out the influence of User Experience elements on customer loyalty and customer satisfaction on the My Indihome and My Telkomsel mobile application, we use an online questionnaire that we share with Indihome and Telomsel customers. This questionnaire consists of thirty one quantitative questions. Using the Likert scale as a calculation, scale 1 strongly disagrees to 7 strongly agree). This questionnaire item consists of questions related to functionality, performance, quality, hedonicity, utility, enjoyment, and items to measure satisfaction and loyalty.

3.3 Data Analysis

In this research, the data analysis used is quantitative descriptive analysis. After the data has been collected, it will be tabulated and explained using a frequency table of the percentage of variables and respondents 'answers to provide an objective picture of the respondents' demographics and behavior. Testing the data obtained is done by using a validity and reliability test. Validity test is done using the product moment correlation formula and reliability testing is done using the Cronbach method (Alpha / Reliability analysis).

4. RESULT

157 questionnaires were collected. It is known that the majority of respondents are women by 51% (n = 80) and male respondents by 49% (n = 77). 48.4% (n= 76) of respondent are aged between 18-25 years, 24,2% (n=38) are aged between 26 -30

years, 15.9% (n=25) are aged between 41-45 years, 7% (n=11) are aged between 36 – 40 years, 2.5% (n=4) are aged between 31 – 35 years, and 1.9% (n=3) are aged > 45 years. Table 1 below show the demographic and behavior respondent.

4.1 Respondents Demographic

Table 1 Demographic and behavior respondent

Variable	Frequency	Percentage (%)
Gender		
Male	77	49%
Female	80	51%
Age		
18 - 25 years old	76	48.4%
26 - 30 years old	38	24.2%
31 - 35 years old	4	2.5%
36 - 40 years old	11	7%
41 - 45 years old	25	15.9%
> 45 years old	3	1.9%
Respondents behaviors in terms of mobile application usage		
At least one time per day	31	20%
At least one time per week	47	30%
At least one time per month	68	43%
Several time per year	11	7%

4.2 Validity Test

Validity test is used to measure the validity or invalid of a questionnaire. Table 2 below show the result of questionnaire validity test. We first conducted an exploratory factor analysis to verify whether the key components of the questionnaire; e-service quality, perceived hedonicity, perceived utilitarian, perceived enjoyment, customer satisfaction and customer loyalty could be extracted. Validity refers to the degree in which our test or other measuring device is truly measuring what we intended it to measure. The validity of the questionnaire was conducted using pearson product moment correlations using SPSS. The 30 items (see table 2) used to measure the validity of questionnaire. A preliminary analysis showed that the inter-item-corelation was $r=0.156$, indicating that no items that invalid. There are 7 alternatives answers to the likert scale of 1 to 7, namely: 7= strongly agree until 1= strongly disagree. The smaller the number rate is closer to disagree response. If the significant value < 0.05 , the instrument declared invalid.

Table 2 Result of Questionnaire validity test

Result of Questioner Validity Test			
Statement	Value of <i>r</i>	<i>r</i> table	Conclusion
E-Service Quality (X1) & (Y1)			
The application provides all the functions that I need	0,832	0,1567	Valid
The application loads quickly	0,841	0,1567	Valid
The application does not crash, get interrupted, fail or flash back	0,780	0,1567	Valid
The important functions or content were presented well in a prominent place on the app	0,822	0,1567	Valid
The application is easy to use	0,811	0,1567	Valid
The navigation or structure of the homepage is clear, and I can use it to find my target quickly	0,844	0,1567	Valid
The procedures or steps were simple and clear when using, for	0,808	0,1567	Valid
The interface is aesthetically pleasing	0,816	0,1567	Valid
The text introducing mobile services and promotions is clear and	0,818	0,1567	Valid
The types of services provided by the application are plentiful	0,827	0,1567	Valid
Important information such as charges and promotions is correct, and there is no out-of-date information on the app	0,844	0,1567	Valid
I can find what I need by searching the mobile app	0,88	0,1567	Valid
The types of products provided by the mobile app are plentiful, and it can satisfy my needs	0,792	0,1567	Valid
The guides across the different mobile service pages are well designed and help me find important information that I need	0,829	0,1567	Valid
I obtain a timely response from online customer service when I	0,81	0,1567	Valid
The online customer service representatives on the application can always solve my problems effectively	0,808	0,1567	Valid
Perceived Hedonicity (X2) & (Y1)			
I evaluate the application service as exciting.	0,915	0,1567	Valid
I evaluate the service app as delightful.	0,901	0,1567	Valid
I evaluate the service app as playful.	0,798	0,1567	Valid
I evaluate the service app as entertaining	0,688	0,1567	Valid
Perceived Utilitarian (X3) & (Y1)			
I evaluate the service app useful.	0,856	0,1567	Valid
I evaluate the service app as practical	0,883	0,1567	Valid
I evaluate the service app as functional.	0,904	0,1567	Valid
I evaluate the service app as helpful for me	0,881	0,1567	Valid
Perceived Enjoyment (X4) & (Y1)			
I find using the app to be enjoyable	0,924	0,1567	Valid
The actual process of using the app is pleasant	0,887	0,1567	Valid
I have fun using these application	0,83	0,1567	Valid
Customer Loyalty (Y2) & (Y1)			
I intend to continue using the application service app in the	0,896	0,1567	Valid
I intend to reuse the application	0,9	0,1567	Valid
I would recommend this application to others	0,903	0,1567	Valid

Following the result of validity test, the degree of freedom calculated ($Df = N - 2$), the amount of sample was 157, thus the df is 155. Liken the value of r and r table, all of the items in questionnaire are declared 100% valid.

4.3 Reliability Test

SPSS Statistics produces many different tables, the important one in reliability test is the reliability

statistics table that provide the actual value for each items. The closer the coefficient is to 1.0, the Cronbach's Alpha, as shown in reliability result for greater is the internal consistency of the variables.

Table 3 Result of Reliability Test

Result of Reliability Test		
Statement	Cronbach Alpha	Remarks
E-Service Quality (X1) & (Y1)		
The application provides all the functions that I need	0,914	Reliable
The application loads quickly	0,876	Reliable
The application does not crash, get interrupted, fail or flash back when	0,902	Reliable
The important functions or content were presented well in a prominent place on the app	0,896	Reliable
The application is easy to use	0,915	Reliable
The navigation or structure of the homepage is clear, and I can use it to find my target quickly	0,894	Reliable
The procedures or steps were simple and clear when using, for example for services	0,899	Reliable
The interface is aesthetically pleasing	0,9	Reliable
The text introducing mobile services and promotions is clear and	0,906	Reliable
The types of services provided by the application are plentiful and satisfy my needs	0,915	Reliable
Important information such as charges and promotions is correct, and there is no out-of-date information on the app	0,936	Reliable
I can find what I need by searching the mobile app	0,884	Reliable
The types of products provided by the mobile app are plentiful, and it can satisfy my needs	0,906	Reliable
The guides across the different mobile service pages are well designed and help me find important information that I need	0,895	Reliable
I obtain a timely response from online customer service when I ask for help	0,894	Reliable
The online customer service representatives on the application can always solve my problems effectively	0,955	Reliable
Perceived Hedonicity (X2) & (Y1)		
I evaluate the application service as exciting.	0,948	Reliable
I evaluate the service app as delightful.	0,888	Reliable
I evaluate the service app as playful.	0,815	Reliable
I evaluate the service app as entertaining	0,922	Reliable
Perceived Utilitarian (X3) & (Y1)		
I evaluate the service app useful.	0,938	Reliable
I evaluate the service app as practical	0,949	Reliable
I evaluate the service app as functional.	0,937	Reliable
I evaluate the service app as helpful for me	0,961	Reliable
Perceived Enjoyment (X4) & (Y1)		
I find using the app to be enjoyable	0,94	Reliable
The actual process of using the app is pleasant	0,907	Reliable
I have fun using these application	0,943	Reliable
Customer Loyalty (Y2) & (Y1)		
I intend to continue using the application service app in the future	0,945	Reliable
I intend to reuse the application	0,948	Reliable
I would recommend this application to others	0,949	Reliable

According to reliability output below, all of the Cronbach's alpha for each items are >0.6 as the bottom line of reliability. All items appeared to be worthy of retention: the greatest increase in alpha would come from deleting various items, but removal of this item would increase alpha only by 0.05. All items with the total scale to a good

degree, higher than 0.6. Thus, it can be concluded that all items or variables measured is 100% reliable.

4.4 Correlation Test

Correlations estimate the strength of the linear relationship between two variables. Correlation coefficients range from -1.0 (a perfect negative correlation) to positive 1.0 (a perfect positive correlation). The closer a correlation coefficient gets to zero, the weaker the correlations is between two variables. All measures were recorded on 7 points of likert scales anchored by strongly disagree(1) to strongly agree (7).

Table 4 Result of Correlation Test

Correlations		
		Customer Satisfaction (Y1)
E-service Quality (Y1)	Pearson correlation	0.824**
	Sig. (2-tailed)	0.00
	N	157
Perceived Hedonicity (X2)	Pearson correlation	0.820**
	Sig. (2-tailed)	0.00
	N	157
Perceived Utilitarian (X3)	Pearson correlation	0.880**
	Sig. (2-tailed)	0.00
	N	157
Perceived Enjoyment (X4)	Pearson correlation	0.870**
	Sig. (2-tailed)	0.00
	N	157
**. Correlation is significant at the 0.01 level (2-tailed).		
Correlations		
		Customer Loyalty (Y2)
Customer Satisfaction (Y1)	Pearson correlation	0.892**
	Sig. (2-tailed)	0.00
	N	157
**. Correlation is significant at the 0.01 level (2-tailed).		

The bivariate pearson correlation produces a sample correlation coefficient, r measures the strength and direction of linear relationships between pairs of continuous variables. The pearson correlation evaluates whether there is a statistical evidence for a linear relationship among the same pairs of variable among the population.

According on the output table, known that the significance level are 0.00 where the standard alpha value is 0.05, which means that correlation is highly significant. On the other hand, pearson shows the correlation coefficient. Pearson varies between +1 and -1, where +1 is a perfect positive correlation and 0 means there's no linear correlation at all. The correlation for e-service quality and satisfaction is 0.824, it indicates a strong positive correlation. The same calculation also applied to other variables. Thus, it can be concluded that all the dependent variable has a strong correlation to the independent one. Based on (**) symbol, from the output we know that each variable has (**) symbol, it indicates that there's a correlation between variables which calculate with 1% significant level standard.

5. DISCUSSION

The research aims to measure the effect of e-service on customer satisfaction and customer loyalty in terms of user experience on mobile application. The fast of development of telecom industry, e-service quality is becoming more important in improving customer satisfaction and customer loyalty. As in many other context in previous research, we found that e-service quality has a positive impact on customer satisfaction and customer loyalty. The rest of variables shows a significant level higher than 0.05, which means there's a strong impact to customer satisfaction and customer loyalty. First, a structured questionnaire was designed and used in a self-report based survey to collect respondents' perceived hedonicity, utilitarian and enjoyment to recommend for the improvement of mobile application. A four dimension of UX e-service scale including 30 items was constructed, and the analysis showed that the scale was valid and reliable in measuring e-SQ with mobile application in telecomm industry. Second, according on the output we recommend the company to increase the customer loyalty as well as e-service quality to gain customer satisfaction. Improving the user interface lead to satisfaction and mouth-to-mouth marketing power also the provided content should be considered to match with customer's need. For further research, we recommend to investigate other variables that can impact both of independent variables.

6. LIMITATIONS

This study has several limitation. First, limitation of factors considered to the total amount of samples. Considering the company we use for this research is the leader in its industry. We are aware the amount of our samples can't be represent to all the customers. If we have longer period to collect more respondents, the result will be more realible to use as one of improvement consideration. Second, during the distribution of questionnaires we limitate our respondents based on location. We only distributed it to customers who live in DKI Jakarta (the capital city of Indonesia) as we're very aware that most of Indonesian loves to have direct communication for telecomm services, they haven't absorb the usage of mobile application.

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