# Predicting Switching Intention Among Generation Y Using DeLone & McLean (Study on Shopee App)

Made Pradnyan Permana Usadi[1] Putu Wahyu Dwinata JS[2] I Putu Oka Permadi[3]
[1]*Universitas Mahasaraswati Denpasar*
[2]*Universitas Mahasaraswati Denpasar*
[2]*Universitas Mahasaraswati Denpasar*
*Email Corespondent : mdpradnyan@unmas.ac.id*

**Abstract:** *The objective of this study is to look at the impact of system quality, information quality, and service quality on satisfaction and switching intention among Generation Y Shopee users. Data analyzed using Partial Least Square. The result shows that system quality, information quality, and service quality significantly has a positive impact on satisfaction. At that point satifaction was moreover found to have a negative impact on intention to switch. Service quality was found to have a more prominent impact. This implies that Shopee needs to focus on improving service quality, since service is considered to have an important part in determining user satisfaction.*

*Keywords : DeLone & McLean, satisfaction, switching intention, generation Y*

## INTRODUCTION

In this Industry 4.0 era, business are required to be able to take advantage of data exchange and automation of company operations through technology, in the hope of being able to generate competitive advantages in global competition. This industry has a major influence on the economic and social activities of society, because technology increases the involvement of everyone so that data and information move faster and affect various other sectors. The Covid-19 pandemic, which previously hit the world's population indirectly, has also created a habit of using technology in all daily human activities. This provides new opportunities for companies to run their business operations online, thus they will be more efficient.

Databoks.katadata.id (2021) mentions Indonesia as the country with the third largest number of internet users in the world, which has a great attraction for e-marketplace providers to enter this industry. Marketplace is basically a meeting place between sellers and buyers, which in the current digital era has developed into an online marketplace or electronic marketplace. Currently, there are so many e-marketplaces operating in Indonesia, but the Dataindonesia.id Survey (2022) suggests that there are three major players in this industry, that is Tokopedia, Shopee, and Lazada.

DeLone & Mclean explained three dimensions in assessing a information

system, that is system quality, information quality, and service quality (DeLone & McLean, 2003). The three main dimensions are the key factors determining the success of a system. Although their research is mostly about website systems, it can be applied in Android or iOS based apps i.e. e-marketplace apps created to replace outdated website models.Several previous studies have shown that system quality plays an important role in creating user satisfaction (Lee et al., 2018; Seta et al., 2018). Research conducted to evaluate the campus learning system in Iran found that system quality had the greatest effect on user satisfaction compared to information quality and service quality (Mahmoodi et al., 2017). However, there are still research results that are different from previous findings who found that system quality had no effect on user satisfaction (Pringgandani et al., 2018).

Service experience can be affected by overall product description and how it is used. Information that is inaccurate or out of date, will doubt the sistem integrity in providing quality services (Tam & Oliveira, 2017). Several empirical studies have shown that data quality encompasses a positive and critical impact on users fulfillment (Martins et al., 2019; Shahzad et al., 2021). There is still a research gap on this topic, where several studies examining e-learning systems show different results that data quality has no impact on user fulfillment (Pringgandani et al., 2018; Seta et al., 2018). An adequate system if it is not supported by good service, it will be in vain. Service quality also plays an important role in determining satisfaction so that it can make users loyal and not think about switching to another company. Several previous studies have found that service quality has a positive effect on satisfaction (Alzahrani et al., 2019; Hadoussa, 2020).

Making customers satisfied is not enough, companies also need to pay attention in how consumers behave after using the product. The question that will arise is whether they will stay and not switch to other brands. This becomes interesting to be investigated further, especially to consumers who have a character with low loyalty to a brand or product such as Generation Y (Gurău, 2012). Considering generation Y is the foremost in fact proficient and innovatively sharp so that they are more open to embrace new technologies and acknowledge e-commerce, analyzing the information as it were from this particular group of respondents was legitimate (Lee et al., 2021)

Shopee as a newcomer for the last five years has managed to catch up with its competitors such as Lazada and Bukalapak.com. Currently, Shopee is the second most visitors e-marketplace in Indonesia, is trying to compete with Tokopedia. Therefore, their prospects are still very attractive. This study intends to explain the effect of system quality, information quality, and service quality on satisfaction and switching intention among Generation Y Shopee users.

**Research Purposes**

Based on detailing of the problem, the goals of this investigate are as takes after:
1) To analyze the impact of information quality on Shopee app satisfaction among Generation Y.
2) To analyze the impact of system quality on Shopee app satisfaction among Generation Y.
3) To analyze the impact of service quality on Shopee app satisfaction among Generation Y.
4) To analyze the impact of Shopee app satisfaction on switching intention to among Generation Y.

## LITERATURE REVIEW
### E-Marketplace

The consumer behavior shift from physically to online buying came with an idea at the time of how to create a virtual space where sellers and buyers meet like a market, which is now known as an e-marketplace. E-marketplace described as virtual place where sellers offer their products to buyers online (Strauss and Frost, 2001). E-marketplace is defined as an electronic interactive business community forum that provides a marketplace for business to consumers, business to business, consumers to business, and consumers to consumers (Brunn et al., 2002). Creating quality and useful system is the main focus to create a competitive advantage and retain users.

### Generation Y

Main characteristics of the generation Y born in the range of 1980 to 2000 is familiar with digital technology (Budiati et al., 2018). Generation Y can easily understand technology quickly and adapt to technological changes, especially those related to individual lifestyles (Arsalan & Latif, 2021). This group of individuals are ordinarily people who were impacted by advanced data technology such as versatile phones, computers and the internet in their teenagers but seldom utilized these advances in their childhood at that time. (Pawlasova & Klezl, 2017).

### DeLone & Mclean Model

DeLone & McLean created a concept of how to measure the success of an information system consisted information quality, system quality, and service quality. System quality is measured by usefulness (usability), usability (responsiveness), reliability (reliability), and flexibility (flexibility) (DeLone & McLean, 2003). Information quality is measured by relevance, accuracy, and completeness. Service quality is measured by quick responsiveness, assurance, empathy, and follow-up service. Based on this concept, if these three factors can run well by the company, then user satisfaction can be realized. will lead to the perception that the system created by the company is able to provide benefits for users.

### Switching Intention

Switching intention is defined as the tendency of consumers to switch to using other companies or brands (Mannan et al., 2017). Brand switching, switching intention, repurchase intention, and satisfaction are related intention refers to the negative impact that arises due to dissatisfaction, while the intention to repurchase is a positive impact of consumer satisfaction. Consumers who have high loyalty are assumed to have low switching intentions (Picón et al., 2014). But in other cases, customers can also switch to other brands or companies even though they are satisfied (García et al., 2020). On the other hand, dissatisfied customers will not necessarily switch to another brand.

### The Impact of Information Quality on Satisfaction

The results of the study by Tam & Oliveira (2017) show that the quality of information has a positive influence on the satisfaction of mobile banking users. Their findings show that managing the quality of the information system as a whole can prevent user complaints from arising. Several other empirical studies also found similar results that the higher the quality of the information, the higher the level of user satisfaction (Martins et al., 2019; Shahzad et al., 2021). Based on the discussion, the hypotheses of this research are:
$H_1$: Information quality has positive and significant impact on satisfaction among Generation Y

**The Impact of System Quality on Satisfaction**

Several studies examining user satisfaction of Learning Management System (LMS) or similar found that system quality is one of the important factors in predicting user satisfaction (Mahmoodi et al., 2017; Seta et al., 2018). Lee at al., (2018) found that the quality of the system has a significant effect on the satisfaction of Learning Management System (LMS) users. Based on the discussion, the hypotheses of this research are:

H2: System quality has positive and significant impact on satisfaction among Generation Y

**The Impact of Service Quality on Satisfaction**

Alzahrani et al. (2017) found that service quality has a positive effect on digital library users satisfaction. They found that quality issue is the most critical success factor. Several studies have found the same thing that service quality has a relationship with user satisfaction (Hadoussa, 2020; Yakubu & Dasuki, 2018). Based on the discussion, the hypotheses of this research are:

H3: Service quality has positive and significant impact on satisfaction among Generation Y.

**The Impact of Satisfaction on Switching Intention**

As is known, loyalty will be created when consumers are satisfied with the services or products offered. Consumers who have a high level of loyalty in theory will have a lower intention to switch as long as they are still satisfied. However, in reality, consumers who are satisfied and look loyal are also not always able to resist their intention to switch to using the services of other companies (Kumar et al., 2013). Apart from that, many empirical studies in the science of consumer

behavior have proven the relationship between satisfaction and switching behavior. A study on banking users in Cambodia found that user satisfaction has a negative and significant effect on intention to switch (Kim & Jindabot, 2021). Several previous empirical studies also found the same thing (Mannan et al., 2017; Quoquab et al., 2018). Based on the discussion, the hypotheses of this research are:

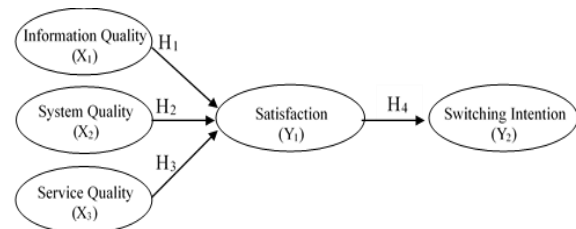H4: Satisfaction has negative and significant impact on switching intention among Generation Y



Figure 1. Research Model

**RESEARCH METHOD**

This study aims to explain the effect of the independent variables, namely the quality of information, system quality, and service quality on satisfaction and switching intention. This research was conducted in Indonesia.

**Data**

The qualitative data used in this study consisted of information related to empirical studies, the respondent's identity, and respondents' opinions regarding information quality, system quality, service quality, satisfaction, and switching intention. For quantitative data, consisting of data on the market share of players in the Indonesian e-marketplace industry. These data were obtained from primary sources i.e. respondents, and secondary sources i.e. Databoks.katadata.id and scientific articles related to the variables studied.

**Variables**

Independent variables consist of information quality $(X_1)$, system quality $(X_2)$, and service quality $(X_3)$. Dependent variable consists of satisfaction $(Y_1)$ and switching intention $(Y_2)$.

The following is the operational definition of each of these variables:

1) Information quality (Ulbrich et al., 2011)
   a. The app provide accurate product description information $(X_{1.1})$
   b. The app provide complete information $(X_{1.2})$
   c. Understandable information format $(X_{1.3})$
   d. The app provide the latest information $(X_{1.4})$

2) System quality (Ulbrich et al., 2011)
   a. App system has easy navigation $(X_{2.1})$
   b. App system is able to respond to commands quickly $(X_{2.2})$
   c. App system offers product customization $(X_{2.3})$
   d. App system provides shopping cart facilities $(X_{2.4})$
   e. App system ensures the security of personal information $(X_{2.5})$

3) Service quality (Ulbrich et al., 2011)
   a. The app provide responsive customer support services $(X_{3.1})$
   b. The app provide warranty service to make returns $(X_{3.2})$
   c. The app provide services to track products shipped $(X_{3.3})$
   d. The app provide personalized service to customers $(X_{3.4})$

4) Satisfaction (Yakubu & Dasuki, 2018)
   a. Satisfied with the app function $(Y_{1.1})$
   b. Satisfied with the app service $(Y_{1.2})$
   c. Generally satisfied with the app $(Y_{1.3})$

5) Switching intention (Quoquab et al., 2018)
   a. Often think about switching from the current app $(Y_{2.1})$
   b. Will not continue to get service from the current app $(Y_{2.2})$
   c. Will switch to another app if having problem with current app $(Y_{2.3})$

**Population and Sample**

The population in this study are all e-marketplace users who have used the Shopee app. The sample used in this study was 100 respondents. Sample was decided based on a purposive sampling by including criteria, such as matured between 22 to 42 years, active Shopee users with a recurrence of purchasing items at slightest once a month. The required number of samples has met the suggested prerequisites for Partial Least Square analysis, which ranged from 30 to 100 (Ghozali, 2011:5).

**Data Collection**

Data is collected using Google Forms service, in the form of online surveys which are then distributed through social media and messengers directly to respondents or through messenger groups. Several colleagues from the research team were also invited to participate in assisting the dissemination of the survey. Respondents were asked to fill out the survey completely and answer honestly. This survey was conducted for two weeks.

**Data Analysis**

Descriptive and inferential statistics were conducted in this study. Descriptive statistics to describe the demographic of respondents presented through tables, average calculations, and percentage calculations. Whereas inferential statistics are utilized to test hypothesis using Partial Least Square (PLS) analysis with Smart PLS 2.0.M3 software.

## RESULT AND DISCUSSION
### Respondents Characteristics

The overview results appear that 72 percent of respondents are ruled by ladies, whereas 28 percent are men. The larger part of respondents are aged 22 to 32 years, which is 74 percent, the rest are respondents with an age extend over 32 to 42 years. Based on the most recent instruction, the larger part of respondents are S1 at 81 percent, taken after by S2 at 11 percent, and Diploma at 8 percent. Respondents who buy items at Shopee with a recurrence of twice a week are 4 percent, respondents with a recurrence of once a week are 44 percent, and the rest is once a month.

### Hypothesis Testing Results

There are three criteria in outer model testing. As displayed in Table 1, the test comes about appear that all variable pointers are said to be valid and reliable.

**Tabel 1. Validity and Reliability Test**

| Indicators | Outer Loadings *) | AVE *) | Composite Reliability **) | Cronbach's Alpha **) |
|---|---|---|---|---|
| X1.1 | 0,927 | | | |
| X1.2 | 0,798 | 0,720 | 0,911 | 0,869 |
| X1.3 | 0,862 | | | |
| X1.4 | 0,800 | | | |
| X2.1 | 0,835 | | | |
| X2.2 | 0,730 | | | |
| X2.3 | 0,769 | 0,776 | 0,912 | 0,856 |
| X2.4 | 0,768 | | | |
| X2.5 | 0,783 | | | |
| X3.1 | 0,869 | | | |
| X3.2 | 0,769 | 0,688 | 0,898 | 0,848 |
| X3.3 | 0,786 | | | |
| X3.4 | 0,887 | | | |
| Y1.1 | 0,821 | | | |
| Y1.2 | 0,829 | 0,692 | 0,871 | 0,778 |
| Y1.3 | 0,845 | | | |
| Y2.1 | 0,902 | | | |
| Y2.2 | 0,873 | 0,776 | 0,912 | 0,856 |
| Y2.3 | 0,866 | | | |

Source: Data processed (2022)

Note: *) indicator is valid if outer loadings and AVE > 0.50.**) indicator is reliable if composite reliability and cronbach alpha > 0.70

Table 2 explain the model framework for the impact of information quality, system quality, and service quality on satisfaction provides R-Square value of 0,738 which can be interpreted that the variability of the satisfaction variable can be explained by the variability of information quality, system quality, and service quality variables of 73,8 percent, the remaining 26,2 percent is clarified by other factors outside the examined. Furthermore, the model of the influence of satisfaction on the intention to switch gives an R-square value of 0,688 which can be interpreted that the variability of the satisfaction variable can be explained by the variability of the intention to switch variable of 68,8 percent, the remaining 31,2 percent is explained by other variables outside the study. Overall, it can be seen that the dependent variable has an R-Square value greater than 0.67 which indicates that the independent latent variable has a substantive effect on the dependent latent variable.

**Tabel 2. R-Square**

| Variable | R-Square |
|---|---|
| Y1 | 0,738 |
| Y2 | 0,688 |

Source: Data processed (2022)

To measure how well the observed values are generated by the model and also the estimated parameters, it is necessary to calculate the Q-Square ($Q^2$) as follows.

$$
\begin{aligned}
Q^2 &= 1-(1-(R_1)^2\ 1-(1-(R_2)^2 \\
&= 1-(1-(0,738)\ (1-(0,688) \\
&= 1-(0,262)\ (0,312) \\
&= 0,918
\end{aligned}
$$

$Q^2$ criteria must have a value with a range between 0 to 1, where closer to 1 means better the model. Based on the calculation, the $Q^2$ value is 0.918, thus it can be concluded that the model has good predictive relevance.

## Tabel 3. Path Coefficients

| Variable | Corr. Coefficient | T-Statistics | Description |
|----------|-------------------|--------------|-------------|
| X1→Y1 | 0,305 | 2,432 | Significant |
| X2→Y1 | 0,306 | 2,559 | Significant |
| X3→Y1 | 0,310 | 3,460 | Significant |
| Y1→Y2 | -0,830 | 26,442 | Significant |

Source: Data processed (2022)

Based on Table 3, it can be explained that the information quality has a significant impact on satisfaction with a correlation coefficient of 0.305 (T-Statistics 2,432 > 1.96). Thus, the hypothesis 1 that information quality has a positive and significant impact on satisfaction is accepted. System quality was found to have a significant impact on satisfaction with a correlation coefficient of 0.306 (T-Statistics 2,559 > 1.96). Thus, the hypothesis 2 that system quality has a positive and significant impact on satisfaction is accepted. Service quality was found to have a significant impact on satisfaction with a correlation coefficient of 0.310 (T-Statistics 3,460 > 1.96). Thus, the hypothesis 3 that service quality has a positive and significant impact on satisfaction is accepted. Satisfaction was found to have significant impact on switching intention with a correlation coefficient of -0.830 and all significant at 5 percent (T-Statistics 26,442 > 1.96). Thus, the hypothesis 4 that satisfaction has a negative and significant impact on switching behavior is accepted.

## Discussion
### The impact of information quality on satisfaction

The comes about hypothesis testing on the impact of information quality on satisfaction resulted in a correlation coefficient value of 0.305 and appeared that information quality had a significant positive impact on satisfaction. This implies that the higher the information quality provided by the Shopee app, the higher satisfaction level of Generation Y

users. This explains that this generation is sensitive to information and this needs to be highlighted by e-marketplace companies to be able to provide clear and accurate information so as to create satisfaction with the system. These comes about back the concept of DeLone and McLean (2004) as well as other empirical studies result (Tam & Oliveira, 2017; Rahi & Ghani, 2018; Martins et al., 2019; Shahzad et al., 2020).

### The impact of system quality on satisfaction

The results of hypothesis testing on the effect of system quality on satisfaction produce a correlation coefficient value of 0.306 and indicate that the quality of the system has a significant positive effect on user satisfaction. This means that the higher the quality of the system in the Shopee app, the higher the user satisfaction of Generation Y. These results support the concept of Information System Success Model DeLone and McLean (2004) who found a positive and significant effect on system quality on e-commerce site user satisfaction. These comes about are also upheld by a few studies which found that system quality plays an imperative part in deciding client fulfillment of e-learning on campus (Lee et al., 2018; Seta et al., 2018).

### The influence of service quality on user satisfaction

The results of hypothesis testing on the effect of service quality on user satisfaction produce a correlation coefficient value of 0.310 and indicate that service quality has a positive and significant effect on user satisfaction. This means that the higher the quality of services offered by the Shopee app, the higher the user satisfaction in Generation Y. Service quality correlation coefficient is the highest of the other two factors. Respondents is more sensitive to services quality provided by Shopee app.

This evidence supported by a study that found service quality has a stronger influence in determining user satisfaction in Bukalapak app (Mahendra et al., 2020). Information technology can also help to be innovative and responsive to higher education institutions to changes in this industry, where service quality is one of the determinants in determining satisfaction when using the system (Hadoussa, 2020).

**The Impact of satisfaction on switching intention**

The results of the hypothesis test on the effect of satisfaction on the intention to change the correlation coefficient value of -0.830 and indicate that satisfaction has a negative and significant effect on the intention to switch. This means that the higher the Shopee app satisfaction, the lower the Generaton Y users switching intention to another app. Vice versa, if user satisfaction is low, the intention to switch to another app is high. This result is reliable with a few discoveries who found that customer fulfillment encompasses a negative impact on switching intention (Kim & Jindabot, 2021; Mannan et al., 2017) In theory, the company can satisfy the needs and desires of its consumers, so it is likely that consumers will not switch to other companies (Kotler et al., 2005:459–488).

## CONCLUSION AND SUGGESTION
## Conclusion

Based on the comes about of the dialog of the inquire about that has been carried out, it can be concluded that:
1) Information quality has a significant positive effect on satisfaction, meaning that the better the quality of the Shopee app information, the higher the level of Generation Y user satisfaction.
2) System quality has a significant positive effect on satisfaction, meaning that the better the quality of the Shopee app system, the higher the level of Generation Y user satisfaction.
3) Service quality has a significant positive effect on satisfaction, meaning that the better the service quality of the Shopee app, the higher the level of Generation Y users satisfaction.
4) Satisfaction has a significant negative effect on intention to switch, meaning that the higher satisfaction of Shopee app Generation Y users, the lower their intention to switch to another app.

## Suggestion

Service quality has the greatest influence in determining satisfaction compared to information quality and system quality. This explains that Shopee application users are more concerned with service quality in choosing a place where they will shop online. Users want user support services that are responsive and able to personalize each user according to their preferences. Ensure continuous evaluation of service quality which is much needed to always meet user expectations. Suggestions for Shopee needs to improve continuously in service quality, both from customer service or complaint handling, which is expected to be able to encourage the level of user satisfaction of the app. It also be an advantage for Shopee to always prioritize these factors to always satisfy its users, because ultimately keeping users from switching to other e-marketplace apps is much more effective and efficient.

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