

Recommendation Quality and Perceived Serendipity as Predictors of Customer Loyalty: The Mediating Role of Decision Satisfaction

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ABSTRACT

The purpose of this study is to examine whether recommendation quality can predict customer loyalty, a) recommendation quality; b) perceived serendipity can predict decision satisfaction, decision satisfaction can predict customer loyalty, and decision satisfaction can mediate the prediction of a) recommendation quality; b) perceived serendipity on customer loyalty. The sample taken in this study was 188 respondents. The sampling technique used in this study is convenience sampling. The results generated from this study are: recommendation quality can predict customer loyalty positively, a) recommendation quality; b) perceived serendipity can predict decision satisfaction positively, decision satisfaction can predict customer loyalty positively, decision satisfaction can positively mediate the prediction of a) recommendation quality; b) perceived serendipity on customer loyalty.

Keywords: Recommendation quality, perceived serendipity, decision satisfaction, customer loyalty

1. INTRODUCTION

During the last decades, the digital era has brought developments on technology in entertainment industry, including creating a new business model in the form of OTT (Over-the-Top). The OTT service enables customer to access various contents, such as movies or series, through subscription. Generally, each OTT service provider offers different kinds of content, such as Korean movies, Japanese animation (Anime), cartoon, Hollywood movies, etc. The variation has been an attraction for customers, which then motivate them to subscribe more than one provider. However, the more providers that the customers subscribe, the less likely that they will keep subscribing, because they will start to learn which provider that they use frequently, and thereby stop subscribing the providers that they don't use as frequent.

Therefore, it is essential for a firm to attract customers to subscribe and consequently, every firm has to attain, and retain, customer loyalty to improve customers' tendency to keep subscribing the service.

Customer loyalty is a firm's ability to attain the customers of its competitors [1] and have been an essential factor to increase sustainability [2]. More importantly, consistently instilling loyalty in the mind of consumers can prevent them from purchasing the competitors' product [3]. Therefore, a higher customer loyalty will mean a higher tendency on

customers to keep subscribing the OTT service that the firm offers.

There are several variables that can predict customer loyalty, including recommendation quality, perceived serendipity, and decision satisfaction. Recommendation quality was found to have a positive and significant impact on customer loyalty, because a good recommendation system of a service can improve customer loyalty [4].

Meanwhile, perceived serendipity was found to have a positive impact on customer loyalty with decision satisfaction as a mediating variable [5]. A content that exceeds customers' expectation will increase their satisfaction, thereby will motivate them to re-subscribe it. Furthermore, decision satisfaction was found to have a positive impact on customer loyalty and mediates the prediction of perceived serendipity on customer loyalty [5]. Moreover, satisfaction was found to mediate the prediction of recommendation quality on customer loyalty [4].

This study is aimed to examine whether recommendation quality and perceived serendipity can predict customer loyalty, with the mediating role of decision satisfaction.

2. THEORETICAL FRAMEWORK

This study is based on the Theory of Reasoned Action (TRA) and Technology Acceptance Model (TAM). TRA

explains how a consumer has a certain purchase behaviour [6]. TAM is an improvement model of TRA [7]. The idea of TAM is to explain that the acceptance of technology in general can broadly explain the consumer's technology usage behaviour [8]. Perceived usefulness has been a key point in technology acceptance behaviour [8], thereby this study will examine perceived usefulness in the form of recommendation quality and perceived serendipity that play a great role in Over-the-Top service on increasing customer loyalty.

2.1. Customer Loyalty

Customer loyalty is defined as "... the relationship between relative attitude and repeat patronage" [9]. Meanwhile, it is also defined as "... a deeply held commitment to rebuy or repatronize a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause switching behaviour" [10]. Moreover, customer loyalty can be defined as customers' commitment to repurchase in the future [11].

2.2. Recommendation Quality

Recommendation quality is commonly known as "... the capability of the recommender system to provide recommendations that match users' interests." [12]. Meanwhile, it is also known as "how closely the recommended products match individual consumers preferences" [13]. Furthermore, recommendation is defined as "(online) computer-based software capable of automatically identifying appropriate choices from a large number of alternative products, on the basis of some specified criteria" [14].

2.3. Perceived Serendipity

Perceived serendipity is "the extent to which a user believes a service is helpful to discover pleasant video contents beyond original expectations that may not match the user's original search criteria" [5], another study defined it as "... a measure of the extent to which the recommended items are both attractive and surprising to the users" [15]. Furthermore, perceived serendipity is defined as "... the extent to which a user believes that a website helps her to discover useful products beyond her original expectation in a search process" [16].

2.4. Decision Satisfaction

Decision satisfaction is commonly known as "... the extent to which a user is satisfied with the choice of content through a search experience" [5]. Meanwhile, it can also be defined as "... a state variable in the specific sense that a consumer can be either in the state of "hell" (very dissatisfied) or "nirvana" (very satisfied)" [17].

2.5. Recommendation Quality on Customer Loyalty

Previous studies found that recommendation quality has a direct and positive impact on customer loyalty [4][13]. That is because the good and precise quality of a website's recommendation system for every customer will increase their loyalty. Hence, the first hypothesis is formulated as follow:

H₁: Recommendation quality can be used to predict customer loyalty positively.

2.6. Recommendation Quality and Perceived Serendipity on Decision Satisfaction

Recommendation quality has a positive relationship with decision satisfaction [4][12][18]. A good recommendation system can assist customers and satisfy them in choosing the products. Therefore, a hypothesis can be formulated as follow:

H_{2a}: Recommendation quality can be used to predict decision satisfaction positively.

Moreover, perceived serendipity was found to have a positive relationship with decision satisfaction [5][16][19]. The experience of discovering unexpected results from a search can increase satisfaction. Hence, the next hypothesis is formulated as follow:

H_{2b}: Perceived serendipity can be used to predict decision satisfaction positively.

2.7. Decision Satisfaction on Customer Loyalty

Decision satisfaction was found to have a positive relationship with customer loyalty [4][5][20][21]. Customers' loyalty toward a brand will increase as they feel satisfied with the products that the brand has to offer. Therefore, the third hypothesis is formulated as follow:

H₃: Decision satisfaction can be used to predict customer loyalty positively.

2.8. Recommendation Quality and Perceived Serendipity on Customer Loyalty through Decision Satisfaction

Recommendation quality has a positive impact on customer loyalty through decision satisfaction [4][12]. The positive impact would mean that the better the recommendation system, the higher the customers' satisfaction will be, which will potentially motivate them to re-subscribe. Hence, a hypothesis is formulated as follow:

H_{4a}: Decision satisfaction mediates the prediction of recommendation quality on customer loyalty.

Meanwhile, a similar relationship was found on perceived serendipity, whereas perceived serendipity has a positive impact on customer loyalty through decision satisfaction

[5]. Showing some interesting and unexpected search results to customers, will increase their satisfaction, which will then motivate them to re-subscribe. Therefore, the last hypothesis is formulated as follow:

H_{4b}: Decision satisfaction mediates the prediction of perceived serendipity on customer loyalty.

Based on the relationship between variables and the hypotheses above, the research model in this study is as follow:

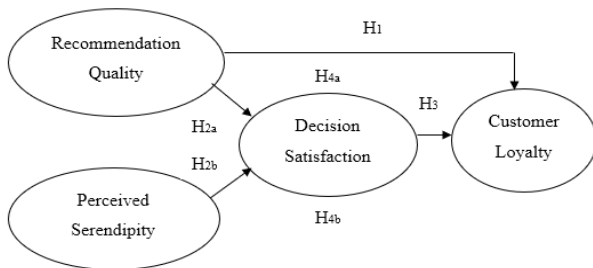


Figure 1 Research Model

3. METHOD

This research is a descriptive cross-sectional study using quantitative method. Data collection was conducted by using questionnaire which was distributed online via Google Form. Convenience sampling method was conducted on 188 respondents, resulting in 188 primary data, which then were used as the samples in this study.

The data showed that 100 respondents (53.2%) are male and 88 respondents (46.8%) are female. 27 respondents (14%) are younger than 20 years old, 137 respondents (73%) are 21-30 years old, 19 respondents (10%) are 31-40 years old, and 5 respondents (3%) are older than 40 years old. Moreover, 113 respondents (60%) are students, 40 respondents (21%) work as private employee, 29 respondents (16%) are entrepreneur, and 6 respondents (3%) work as other occupations. Meanwhile, 36 respondents (19%) live in West Jakarta, 63 respondents (34%) live in East Jakarta, 48 respondents (26%) live in Central Jakarta, 29 respondents (15%) live in North Jakarta, and 12 respondents (6%) live in South Jakarta.

Furthermore, in Rupiah, 48 respondents (25%) have monthly expenses around 1.000.000 - 2.000.000, 64 respondents (34%) have it around 2.000.000 - 3.000.000, 56 respondents (30%) have it around 3.000.000 - 4.000.000,

and 20 respondents (11%) have monthly expenses more than 4.000.000. Lastly, within a week, 32 respondents (17%) use OTT service for an average of less than two hours, 100 respondents (53%) use it for an average of 2 - 5 hours, 50 respondents (27%) use it for an average of 5 - 8 hours, and 6 respondents (3%) use it for an average of more than 8 hours.

The variables in this study were measured by using the indicators from previous studies as expressed in Table 1 below.

Table 1 The Operationalization of Variable

Variable	Indicator	Reference	Scale
Customer Loyalty	5	[4] [22] [23]	Interval
Recommendation Quality	6	[4]	
Perceived Serendipity	4	[5]	
Decision Satisfaction	5	[4] [5]	

4. RESULTS

Based on the validity analysis, the data used in this study were considered as valid with the AVE and outer-loading value being higher than 0.5 and 0.7 respectively. Moreover, the value of Fornell-Larcker and cross-loading for discriminant validity analysis have exceeded the criteria of the analysis. Meanwhile, the data was considered reliable as well with the value of Cronbach’s alpha and composite reliability being higher than 0.6 and 0.7 respectively.

The Coefficient of Determination analysis (R²) of decision satisfaction is 54.8%, which implies that recommendation quality and perceived serendipity can explain 54.8% of the variation in decision satisfaction variable, and the remaining 45.2% of variation can be explained by other variables. Moreover, the R² of customer loyalty is 63.1%, which implies that recommendation quality, perceived serendipity, and decision satisfaction explain 63.1% of the variation in customer loyalty variable, and the remaining 36.9% of variation can be explained by other variables.

The Q² value of decision satisfaction is 0.335 and 0.355 for customer loyalty. Hence, this study has predictive relevance. The results of data analysis are illustrated in Table 2 as follows:

Table 2 The Results of Hypotheses Testing

Variable	Path Coefficient	t-Statistics	p-Values
<i>Recommendation Quality</i> → <i>Customer Loyalty</i>	0.380	5.919	0.000
<i>Recommendation Quality</i> → <i>Decision Satisfaction</i>	0.193	2.685	0.007
<i>Perceived Serendipity</i> → <i>Decision Satisfaction</i>	0.609	8.820	0.000
<i>Decision Satisfaction</i> → <i>Customer loyalty</i>	0.518	7.464	0.000
<i>Recommendation Quality</i> → <i>Decision Satisfaction</i> → <i>Customer Loyalty</i>	0.315	2.972	0.000
<i>Perceived Serendipity</i> → <i>Decision Satisfaction</i> → <i>Customer Loyalty</i>	0.100	4.796	0.003

Furthermore, the effect of size testing (f^2) showed that in explaining customer loyalty, decision satisfaction has a high impact with the f^2 being 0.502, perceived serendipity has a high impact as well, with the f^2 being 0.526, and recommendation quality has a medium impact with the f^2 being 0.270. Meanwhile, in explaining decision satisfaction, recommendation quality has a small impact with the f^2 being 0.053.

Lastly, Goodness-of-Fit (GoF) testing was conducted manually by using simple measure, whereas the result is 0.598, which is classified as high.

5. DISCUSSION

The result of Hypothesis 1 (H_1) testing implied that recommendation quality can be used to predict customer loyalty positively, which makes it consistent with the finding in previous studies [4][13]. OTT services offer various contents, such as movies and series for customers to watch. The contents are updated periodically, which may confuse customers during the searching because of its high variability. Hence, a good recommendation system is essential to help customers find the contents that they seek. Such recommendation system will increase customer loyalty and motivate them to re-subscribe the OTT service. Meanwhile, the result of Hypothesis 2a (H_{2a}) testing showed that recommendation quality can be used to predict decision satisfaction positively. This positive result is consistent with those of previous studies [4][12][18]. A good recommendation system can satisfy customers by assisting them in finding the best content for each customer. The satisfaction from choosing the right content can be increased by improving the recommendation system.

Similar with H_{2a} , the result of H_{2b} testing implied that perceived serendipity can be used to predict decision satisfaction positively, which makes it consistent with the results of previous studies [5][16][19]. When customers specifically search for a content in an OTT service, the desired content will show up along with other contents that have similar genre and new contents that may relate with the search. Discovering such contents exceeds customers' expectation and surprises them as well, thereby it will be pleasant for them and increase their satisfaction.

The result of Hypotheses 3 (H_3) testing showed that decision satisfaction can be used to predict customer loyalty positively. This positive result is consistent with the results of previous studies [4][5][20][21]. After choosing a content to watch, the customers will feel whether the content fulfils their expectation. Customers who find interested in the content will be satisfied for choosing to watch it, such satisfaction will then increase the customers' loyalty and motivate them to re-subscribe.

Furthermore, a mediating role of decision satisfaction in the prediction of recommendation quality on customer loyalty was found from Hypotheses 4b (H_{4b}) testing. The result is consistent with those of previous studies [4][12]. It is relatively difficult for customers to find the best content among the various contents that OTT service offers, thereby

an assistance from recommendation system will be necessary for that matter. The system will provide several recommendations which would suit the customers best. Customers will be satisfied if they feel assisted by the recommendation system, because they get to find the best content for them. Consequently, the increase in satisfaction will increase customer loyalty and motivate them to re-subscribe.

Lastly, the result of Hypotheses 4b (H_{4b}) testing showed that decision satisfaction mediates the prediction of perceived serendipity on customer loyalty, which makes it consistent with the results of previous studies [5]. The search bar in an OTT service will show title, genre, or the actor / actress that is relevant with customers' search. Moreover, it will also show new contents that is not expected by customers. Customers will feel satisfied if the new contents match their taste, thereby increasing their loyalty and motivate them to re-subscribe.

6. CONCLUSION

Based on the results of hypotheses testing, the conclusions of this study are as follows:

1. Recommendation quality can be used to predict customer loyalty positively.
2. Recommendation quality and perceived serendipity can be used to predict decision satisfaction positively.
3. Decision satisfaction can be used to predict customer loyalty positively.
4. Decision satisfaction mediates the prediction of recommendation quality and perceived serendipity on customer loyalty positively.

These results implied that this study has fulfilled its purpose. However, there are several limitations in this study, thereby this study suggests future research with some considerations as follows:

1. Future research will need to improve the research model by examining more variables and how they predict customer loyalty, such as customer engagement, quality of service experience, habit [24], contents form and contents channel [25].
2. Future research will need to increase the amount of sample in order to increase its generalizability and to reach broader geographic area in which the usage of OTT service and / or the number of OTT provider have been increasing.

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