

# THE DETERMINANTS OF CUSTOMER SATISFACTION AND INTENTION TO USE ON E-COMMERCE LOYALTY PROGRAM

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## ABSTRACT

In this modern age, most people prefer buying stuff online. Based on a survey, the percentage of dissatisfaction for e-Commerce is still high in number. The top reason that can be improved based on customer's response was to increase the quality and frequency of a promotion. One of the strategies to accommodate this problem is through the implementation of a loyalty program system. A loyalty program is a marketing strategy that rewards the customer for their loyalty act. In this study, the factors influencing the perceived usefulness, ease of use, customer satisfaction, and intention to use are conducted from 182 respondents from the three most popular e-Commerce in Indonesia, Tokopedia, Bukalapak, and Shopee. Based on the study results, information quality and system quality influence perceived usefulness. System Quality and SAervice Quality influence Perceived Ease of Use. Information Quality, Reward Variation, Reward Value influence Customer Satisfaction. None of the variables in this research influences Intention to Use.

**Keywords:** *E-Commerce, Loyalty Program, Customer Satisfaction, Intention To Use*

## 1 INTRODUCTION

Lately, e-Commerce has been a major and critical contributor to South East Asia's economic growth. More than 400 million South East Asia population has already been using the internet daily, and they are 10% of the world's population of internet users [1]. Indonesia is the leading contributor to economic growth; in 2019 alone, Indonesia's e-commerce volume reached 20.9 Billion USD and is predicted to reach 82 billion USD by 2025 [2].

A survey with 504 respondents who made a transaction in the last three months showed that Tokopedia, Lazada, Bukalapak, and Shopee are the most popular e-Commerce. The same survey also indicates a significant number (40.67%) of customers are still dissatisfied with their experience shopping online. The majority of the customers participating in this survey said they want more promotion or discount in their preferred shopping platform (30.36%) [3].

Companies and organizations alike apply all sorts of strategies to maintain their customer's retention and interest to keep them satisfied. One way to solve the problem where the customer wants more promotion is to implement a loyalty program system. A loyalty program is a marketing strategy where customers are rewarded for their

loyalty act. The loyalty program also benefits both parties, the customer and the companies. The customer gets more promotion, reward, better treatment, and social satisfaction. At the same time, the company could segment their customer better, provide more personalized services, and increase customer retention and satisfaction [4]. Examples of loyalty programs in Indonesia e-Commerce are Tokopedia's TokoPoints Member, Bukalapak's Pembeli Prioritas (Prioritized Buyer), and Shopee's ShopeeGames.

The best example of why loyalty programs matter and relevant is ShopeeGames. The massive success and popularity of ShopeeGames in garnering much attention to its pick up n play games allow ser to ear points to redeem freebies, coupons, or a substitution for real currency resulted in Shopee ranked first on traffic/access volume by 2<sup>nd</sup> quarter of 2020 [5]. This huge success can also be applied to other loyalty proram to attract more customer to the brand.

While previous studies had cover this area already, this study focused on loyalty program that are fully digital compared to previous studies that uses conventional loyalty program, card based loyalty program or store based stamp loyalty program as its research object.

This study aimed to understand better these loyalty programs' popularity and what factors

influence their popularity amongst its users. We researched Perceived Usefulness, Perceived Ease of Use, Satisfaction, and Intention to Use to e-Commerce's loyalty program. This study is conducted on the three most popular e-Commerce in Indonesia: Tokopedia, Shopee, and Bukalapak. This study will use a combination of the TAM Model and IS Success Model.

## 2 PREVIOUS RESEARCH AND HYPOTHESIS DEVELOPMENT

Previous research studied information quality and service quality. The research is conducted on Metro Yours Cardmember, a loyalty program on Metro Department Store Indonesia. The research proves that information quality and service quality influence satisfaction to a loyalty program [6]. The researcher adds system quality variables to evaluate the system side of e-Commerce's loyalty program compared to previous research that evaluates a conventional card-based loyalty program.

Information quality, system quality, and service quality also acted as external variables to TAM Model. Information quality has been proven to be influencing perceived usefulness in information systems [7]. System quality also greatly influences perceived usefulness and ease of use on e-Commerce users [8] on a study conducted in Turkey's e-commerce. Service quality has proven to influence perceived ease of use [9] on the study conducted on M-Commerce's customers.

Another study that studies a customer's effort to receive benefits or rewards from a loyalty program influences their satisfaction. The study's effort is timely, materialistic effort and activity outside of a person's daily routine. The higher effort to obtain a reward will lower the satisfaction towards that loyalty program [10]. The same study also researched the value of the reward to each individual. The result is when the reward value is perceived highly for that person, the higher their satisfaction toward the loyalty program [10].

A similar study also researched loyalty programs in a retail company based in India. This study's main focus is to find which kind of benefits or rewards that most customers want. The study results were the more type of benefits or reward variety a loyalty program could give, the higher the customer satisfaction. This study also found that Indian customers prefer a reward type that boosts their ego [11]. This result is also supported by a study conducted in Jakarta, Indonesia, for a loyalty program in a Hotel, that treatment and benefit greatly influence their customer satisfaction [12].

A previous study on Indian retail in Jammu City also studied the influence of a loyalty program's perceived usefulness toward the intention to use that loyalty program. The result is that perceived usefulness influences the customers' intention to use. The greater the usefulness of a loyalty program to an individual, the higher its intention to keep using the loyalty program [13]. The researcher adds perceived ease of use to evaluate the easiness of using an e-Commerce loyalty program; this variable originated from TAM Model.

Another study on Centro Friends loyalty program, a loyalty program for Centro Mall in Indonesia, was conducted. The study's result was the customers' satisfaction towards a loyalty program influences their intention of keeping using that said loyalty program [14]. The same study also found that repeated use of a loyalty program can increase customers' loyalty to that brand.

Based on several previous studies mentioned above, below are the obtained hypotheses:

- H1 : Information Quality influences Perceived Usefulness
- H2 : Information Quality influences Customer Satisfaction
- H3 : System Quality influences Perceived Usefulness
- H4 : System Quality influences Perceived Ease of Use
- H5 : System Quality influences Customer Satisfaction
- H6 : Service Quality influences Perceived Ease of Use
- H7 : Service Quality influences Customer Satisfaction
- H8 : Effort influences Customer Satisfaction
- H9 : Reward Variation influences Customer Satisfaction
- H10 : Reward Value influences Customer Satisfaction
- H11 : Perceived Usefulness has an influence on Intention to Use
- H12 : Perceived Ease of Use has an influence on Intention to Use
- H13 : Customer Satisfaction has an influence on Intention to Use

Based on these hypotheses, Figure 1 shows the constructed research model of this study. The research model is a modification of the DeLone and McLean IS Success Model and Technology Acceptance Model (TAM). Information Quality, System Quality, Service Quality, Effort, Reward Variation, and Reward Value are the independent variables. Perceived Usefulness, Perceived Ease of

Use, and Customer Satisfaction are the mediating variables and are hypothesized to have an influence on Intention to Use

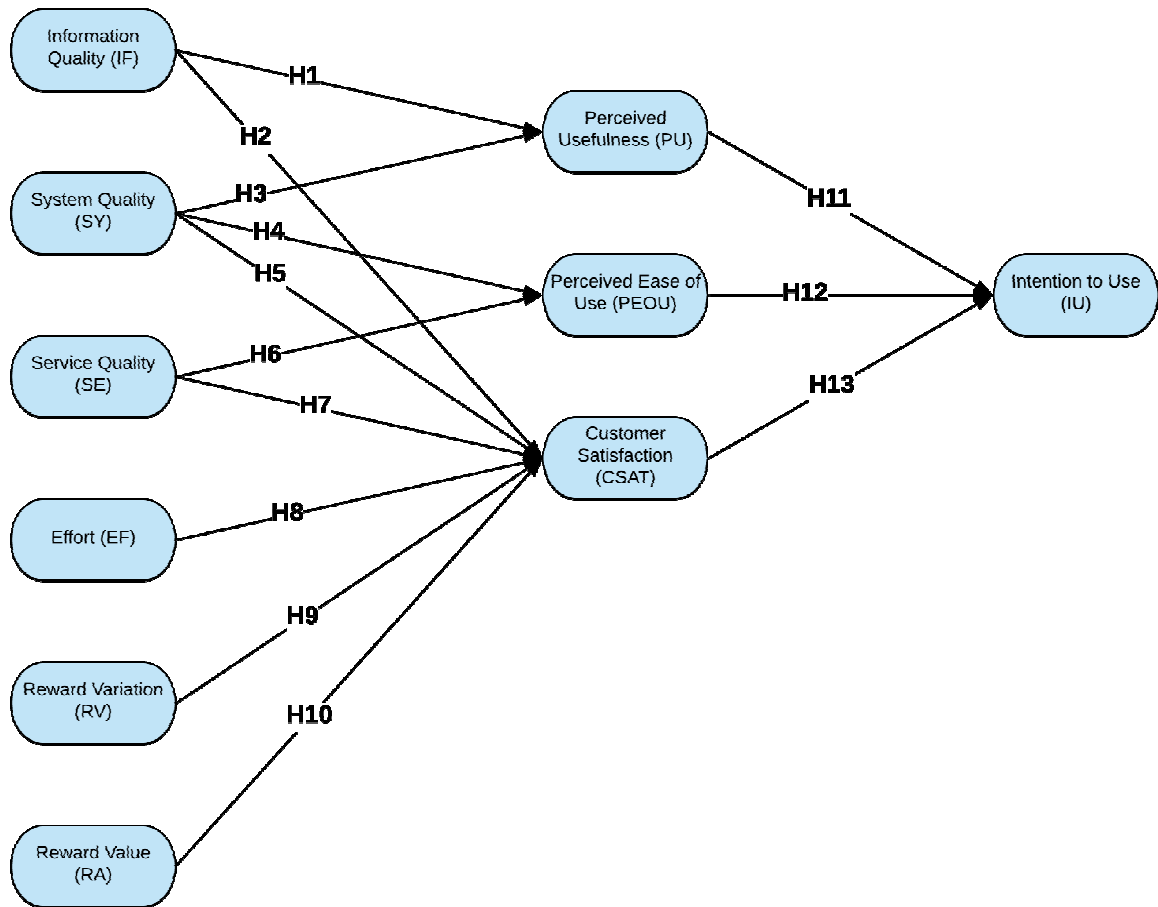


Figure 1: Research Model

**3 METHODOLOGY**

After the hypotheses, we develop a questionnaire survey based on indicator measurement presented in Section 3.1. Section 3.2 detailed the Data Gathering process. Section 3.3 and section 3.4 describe the method used on validity and reliability test, respectively.

**3.1 Measurement**

This study's analytical method is Partial Least Square Structural Equation Modeling (PLS-SEM). Table 1 shows the indicators used in this study.

*Table 1: Variable and Indicator Measurement*

Variable	Initial	Indicator
Information Quality	IF1	Information Availability
	IF2	Information Accuracy
	IF3	Information Usability
	IF4	Information Relevance
	IF5	Information Easy to Understand
System Quality	SY1	System Easy to Use
	SY2	System's Speed
	SY3	System's Stability
	SY4	System Availability
	SY5	System Flexibility
Service Quality	SE1	Customer Services Availability
	SE2	Customer Services Usability
	SE3	Customer Services Empathy
	SE4	Customer Service Responsiveness
Effort	EF1	Timely Effort
	EF2	Materialistic Effort
	EF3	Non-Routine Activity Effort
Reward Variation	RV1	Social Benefits
	RV2	Materialistic Benefits
	RV3	Personal Satisfaction
Reward Value	RA1	Reward Predictability
	RA2	Achieving Needs or Wants

Customer Satisfaction	RA3	Re-Engagement
	CSAT1	Overall Quality
	CSAT2	User's Expectation
Perceived Usefulness	CSAT3	User's Rating
	PU1	Efficiency
	PU2	Actual Usefulness
Perceived Ease of Use	PU3	Save Time
	PEOU1	Easy to Understand UI
	PEOU2	Ease to Use Feature
Intention to Use	PEOU3	Easy to Remember Feature
	IU1	Wanting to Use
	IU2	Daily Usage
	IU3	Usage Frequency

**3.2 Data Gathering**

The number of respondents in this study is 182 individuals, based on the minimum sampling number advised by Hair et al. [15] is 175 individuals. This number is obtained by the number of questions in the questionnaire multiplied by 5 (35 x 5). Random Sampling and a Liker Scale Measurement are used. The questionnaire is distributed via Google Forms to the user who benefited from or uses loyalty program from Tokopedia, Shopee, or Bukalapak last year.

**3.3 Validity Test**

Table 2 showed the validity test with the Average Variance Extracted (AVE) value of each variable. IF the AVE value of a variable is greater than 0.5, it can be concluded the variable is valid. Table 3 showed discriminant validity testing using the Cross Loading value of each item against the construct.

*Table 2: Average Variance Extracted*

Variable	Average Variance Extracted (AVE).
Information Quality	0.612
System Quality	0.514
Service Quality	0.759
Effort	0.615
Reward Variation	0.690

Reward Value	0.641
Perceived Usefulness	0.708
Perceived Ease of Use	0.695
Customer Satisfaction	0.712
Intention to Use	0.697

IU3	0.957
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### 3.4 Reliability Test

Reliability testing is conducted by looking at Cronbach's Alpha test result and Composite Reliability test result. An alpha above 0.5 and composite reliability above 0.7 are considered reliable [16]. Table 4 shows this study test results.

Table 4 Cronbach's Alpha and Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability
Information Quality	0.839	0.887
System Quality	0.759	0.839
Service Quality	0.895	0.927
Effort	0.682	0.827
Reward Variation	0.775	0.870
Reward Value	0.721	0.842
Perceived Usefulness	0.794	0.879
Perceived Ease of Use	0.780	0.872
Customer Satisfaction	0.797	0.881
Intention to use	0.790	0.827

Table 3: Cross Loading

Initial	Value
IF1	0.818
IF2	0.845
IF3	0.836
IF4	0.742
IF5	0.655
SY1	0.715
SY2	0.834
SY3	0.715
SY4	0.744
SY5	0.847
SE1	0.861
SE2	0.866
SE3	0.883
SE4	0.875
EF1	0.804
EF2	0.842
EF3	0.700
RV1	0.836
RV2	0.799
RV3	0.856
RA1	0.753
RA2	0.841
RA3	0.805
PU1	0.851
PU2	0.860
PU3	0.813
PEOU1	0.851
PEOU2	0.774
PEOU3	0.871
CSAT1	0.873
CSAT2	0.821
CSAT3	0.836
IU1	0.721
IU2	0.809

## 4 RESULT AND DISCUSSION

Figure 3 and Table 5 showed the results of the hypothesis testing in this study. Bootstrapping Resampling was used to obtain the result on the analysis, this method is used to accommodate the low sample size acquired by the researcher.

Both Information Quality and System Quality have a significant influence on Perceived Usefulness. Both System Quality and Service Quality have a significant influence on Perceived Ease of Use. Information Quality, Reward Variation, Reward Value has a significant influence on Customer Satisfaction. None of the variables has a significant influence on Intention to Use.

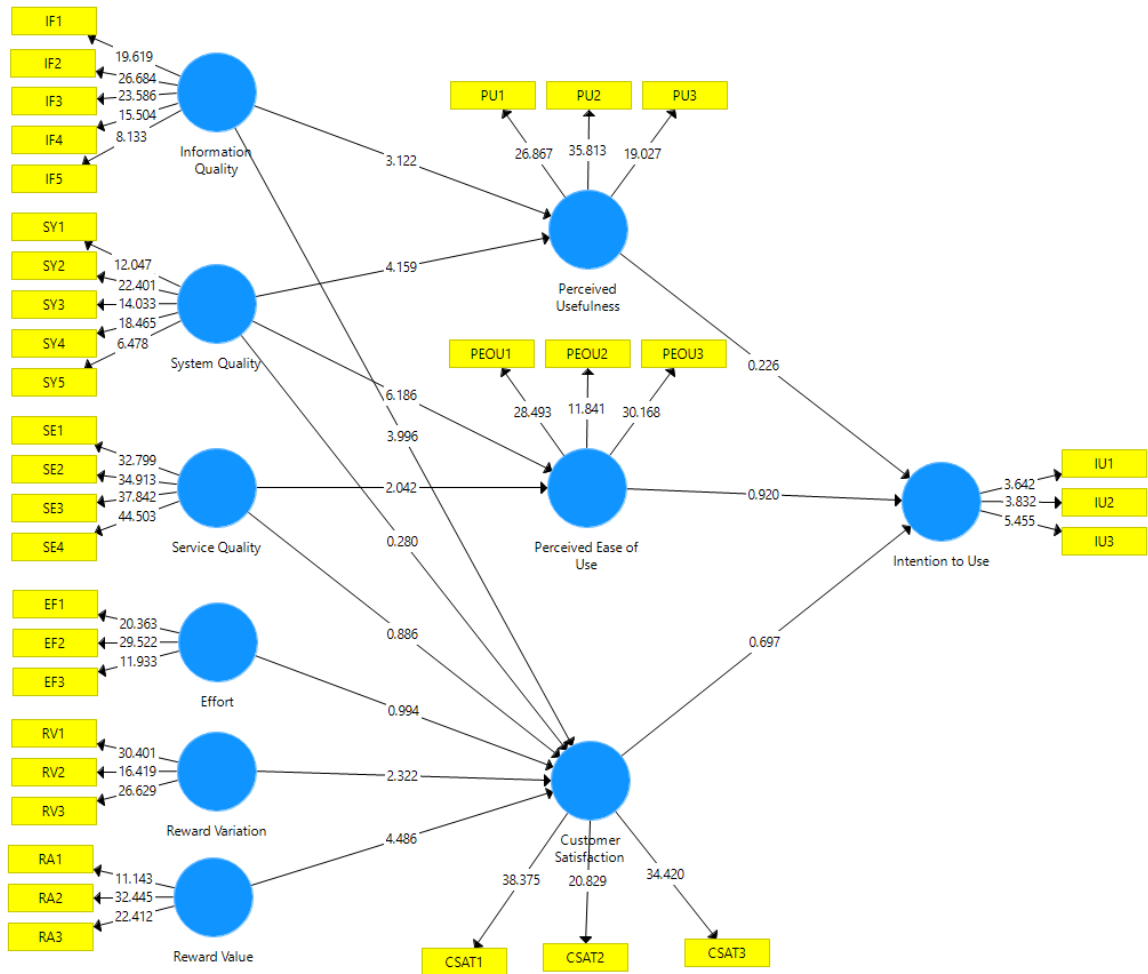


Figure 2: Result Model

Table 5: Hypotheses Result

		H	p-value	$\beta$	Result
Perceived Usefulness ( $R^2 = 0,477$ )	Information Quality	H1	0,002	3.122	Accepted
	System Quality	H3	0.000	4.159	Accepted
Perceived Ease of Use ( $R^2=0,425$ )	System Quality	H4	0,000	6.186	Accepted
	Service Quality	H6	0.041	2.042	Accepted
Customer Satisfaction ( $R^2=0,643$ )	Information Quality	H2	0,000	3.996	Accepted
	System Quality	H5	0.780	0.280	Rejected
	Service Quality	H7	0.376	0.886	Rejected

	Effort	H8	0.321	0.994	Rejected
	Reward Variation	H9	0.020	2.322	Accepted
	Reward Value	H10	0.000	4.486	Accepted
Intention to Use (R <sup>2</sup> =0,010)	Perceived Usefulness	H11	0.821	0.226	Rejected
	Perceived Ease of Use	H12	0.358	0.920	Rejected
	Customer Satisfaction	H13	0.486	0.697	Rejected

**4.1 Theoretical Implication**

Based on the result obtained in this study, information quality significantly influences a loyalty program's perceived usefulness with a p-value of 0.002. This result showed the importance of the quality of information for a fully digital e-Commerce loyalty program. This result is further supported by an empirical study about information quality influencing perceived usefulness on an information system [7].

It was found that information quality has a great influence on customer satisfaction towards a loyalty program. The same result also obtained a study about loyalty programs in Metro Department Store Indonesia [6].

This study's system quality also significantly influences the perceived usefulness and ease of using an e-Commerce loyalty program with p-values of 0.000 and 0.041, respectively. This study also further supported a study conducted to evaluate customers' attitudes towards e-Commerce in Turkey [8]. In this study result, system quality does not influence customer satisfaction on an e-Commerce's loyalty program. Past research does not exist for this result.

This study also found that service quality in the context of customer service quality influences the perceived ease of use of a loyalty program. This result is further backed by a study of Salameh [9] in Jordanian M-Commerce. In contrast, service quality did not have an influence on customer satisfaction based on this study result. The probable cause of this outcome could be that e-Commerce's customers tend to solve their problem using a knowledge base such as Frequently Asked Question (FAQ) before contacting the customer service, which is the context of service quality of this study. This statement is supported by a study that showed customers gained 19% more satisfaction if they

solve their problem than being a help or guided by customer services [17].

In this study, it is found that effort does not influence customer satisfaction towards a loyalty program. This result contradicts Danaher's study that shows effort greatly influences customer satisfaction towards a loyalty program because the effort can outweigh the benefit received it is perceived as "not worth it" [10]. The possible cause of this outcome is the research object. A previous study was conducted to the effort of a conventional loyalty program, while the research object of this study is a fully digital loyalty program offered by e-Commerces. One of the most prominent pros in shopping online through e-Commerce compared to a retail store is the low effort on the customer sides [18]. The same thing could be said for its loyalty program because it is part of the e-Commerce itself.

Additionally, this study also proved that reward variation influences customer satisfaction towards a loyalty program. The more type of benefit can be obtained via a loyalty program, the higher its users' satisfaction will be [11]. Bose's previous study also has the same result on a loyalty program from a retail store in India. This study also found that reward value influenced customer satisfaction towards a loyalty program. The higher the value of the benefit felt for an individual, the higher their satisfaction. The satisfaction would rise significantly if the obtained said benefit customer only has to expand a small amount of effort [10]. These results also further supported a study on a loyalty program in Holiday Inn Express Indonesia where benefit and treatment greatly enhance customer satisfaction towards a loyalty program.

This study also shows that perceived usefulness, ease of use, and customer satisfaction do not influence customer intention to use a loyalty program. These results contradict the result

obtained by Sharma & Bhardwaj, where perceived usefulness influences intention to use a loyalty program in retail stores in India [13]. It could be caused by most individuals not ready for a fully digital loyalty program and still prefer card-based loyalty programs much more [19]. Based on a survey, most individuals use a loyalty program to save money and receive a reward [19].

The other possible cause could be a different attitude of a customer towards a conventional card-based loyalty program compared to full digital e-Commerce's loyalty program. This study also adopts many references based on previous studies on the conventional loyalty program because of the limited quantity of studies on the digital loyalty program. The last possible cause could be the number of samples (182) used in this study unable to fully represent the population of the three most popular and biggest e-commerce in Indonesia.

#### 4.2 Practical Implication

E-commerces that look to develop a new loyalty program or enhance the existing one can use this study for reference which aspect they need to improve.

Information quality proves to affect perceived usefulness and customer satisfaction. Information quality can be a focus to give the customer more real experience of the loyalty program. It should keep customer expectations to a certain level to imagine what they will experience if the information is conveyed well enough. It also will lead to less confinement in the customer parts in using the loyalty program,

System quality proves to effects perceived usefulness and perceived ease of use. E-commerces should improve their loyalty program system quality to maintain system stability, giving customers a much more stable and consistent experience when using the loyalty program.

Service quality proves to effects perceived ease of use. E-commerce can improve their customer service quality to further improve their skills in aiding the customer in trouble related to a loyalty program. Also, e-commerce can improve their knowledge base section, FAQs, or discussion forum to increase customer satisfaction by letting customer solve their problem [17]. It also cost less to operate and maintain.

Reward variation proves to has an effect on customer satisfaction on a loyalty program. E-commerces can focus on increasing their benefit type. A survey customer prefers a reward type where they will receive materialistic or monetary

benefits [19], for example, such rewards: freebies, free shipping, and discount coupons.

Reward value proves to has an affect towards customer satisfaction on a loyalty program. This could be achieve by increasing the discounts or increasing the benefits received when a customer attained a certain level of loyalty rank. Although it is fully understandable thath each individual has their own level of value in the reward which are not discussed in this study. E-commerce should conduct a short survey in order to get their customer preference of value.

Reward value is the most major factor that affects customer satisfaction, with Reward variation comes at second place. E-commerce should focus on these two aspects first.

#### 4.3 Research Limitation

This study has its limitation that could affect the outcome of the tests. First, this study's research model is built based on reference, mostly using the conventional loyalty program as their research object. This study uses an e-commerce loyalty program as its research object. Difference customer attitude may be present.

Secondly, this study is limited only to Indonesian e-commerce and does not takes international e-commerce into considerations. Cultural and attitude differences between countries may also affect the outcome of this study. This study does not consider its respondents' demography, such as income, living location, and monthly expenses.

Lastly, the number of samples used in this study may not represent the population of the three largest and most popular e-commerce in Indonesia, namely Tokopedia, Shopee, and Bukalapak.

### 5 CONCLUSION

This study aimed to understand better these loyalty programs' popularity and what factors influence their popularity amongst its users. We researched Perceived Usefulness, Perceived Ease of Use, Satisfaction, and Intention to Use to e-Commerce's loyalty program. By referencing previous exisiting studies and facts the researcher developed a research model to measure the variables.

Based on the analysis results, this study's findings concluded that Information Quality and System Quality have a significant influence on Perceived Usefulness. E-Commerces that aim to improve the usefulness of their loyalty program can focus on improving both aspects.



System Quality and Service Quality significantly influence perceived Ease of Use in the context of customer service quality. E-Commerce aims to improve their loyalty program to more pick-up n use to focus on these two aspects.

Customer Satisfaction is significantly influenced by Information Quality, Reward Variation, and Reward Value. Reward Value is the most contributing factor, followed by Reward Variation. E-Commerce that aims to increase its customer satisfaction towards their loyalty program should increase the benefits the loyalty program offers and its value.

Lastly, Perceived Usefulness, Perceived Ease of Use, and Customer Satisfaction does not influence Intention to Use on a loyalty program. However, most individuals use a loyalty program to save money and receive a reward [19].

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