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Customer Perceptions of E-Service Quality and E-Recovery On E-Commerce

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ABSTRACT

This study aims to analyze the relationship between E-service and E-Recovery on Behavioral Loyalty. The population are respondents who use E-Commerce in Indonesia with a causal quantitative method between some variables. Questionnaires are distributed via WhatsApp Messenger randomly as respondents are e-commerce users and match as a data source. The number of respondents used was 171 valid respondents. The instruments used in this study used validity and reliability tests to see valid and reliable instruments. This test also uses the Brand Authenticity Variable Descriptive Statistics test and model fit testing as a prerequisite for hypothesis testing by making SEM (Structural Equation Modeling).

KEYWORDS - E-Commerce, E-Service, E-Recovery, Behavioral Loyalty

1. INTRODUCTION

The development of internet technology makes it easier for business people to get the information they need to support their business activities. Thanks to its immense influence information technology is recognized as one of the greatest innovations, benefiting business, science, society, etc. The application of information technology in activities related to commercial and financial processes has led to the emergence of a new interdisciplinary concept called E-commerce.

E-commerce is defined as "transacting or enabling the marketing, buying and selling of goods and/or services through electronic means, including the internet and private networks"(Kim & Kim, 2010) Through the Goodstats.id survey (2022), the ranking of the online shopping platforms most used by Indonesians in the first half of 2022 has been presented in Figure 1.

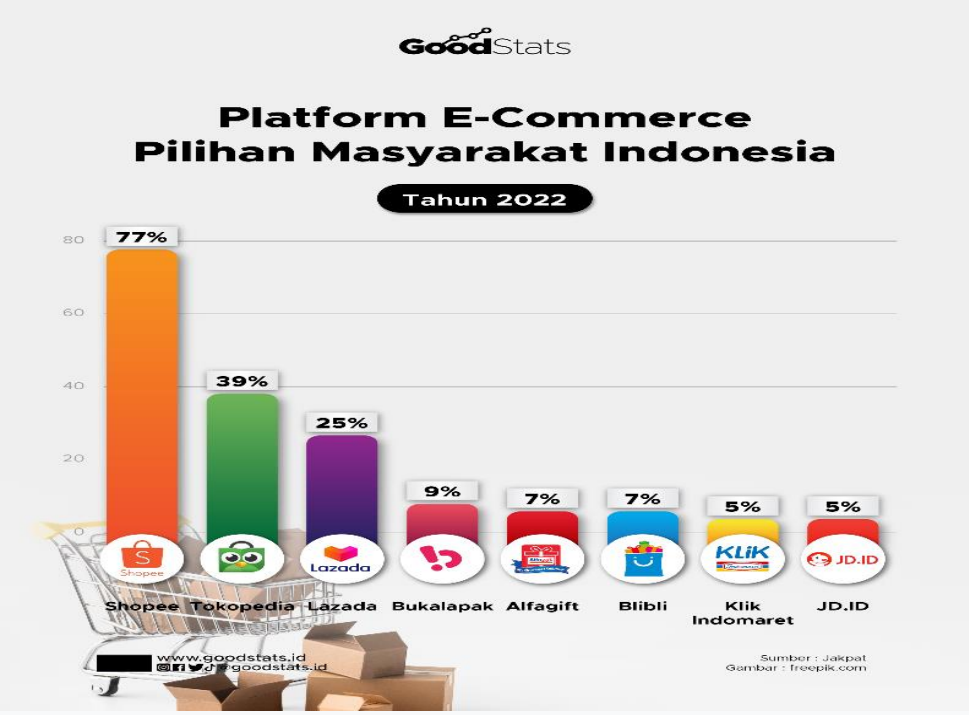

Figure 1.
Indonesian people's choice e-commerce platform

According to (goodstats.id, 2022)E-commerce with 77% of the most widely used by Indonesian people is shopee, and followed by Tokopedia 39%.

Electronic commerce plays a large role in global economic affairs. In accordance with customer expectations, customers usually respond positively by saying positive things and making e-commerce websites or applications to their top choice. All buying, selling and exchanging of valuable data on electronic platforms is considered as electronic commerce. Electronic platforms such as Business-to-Consumer (B2C) directly sell products and services to potential e-buyers.(Miao et al., 2021)

Previous research in traditional marketing settings across multiple services has found a substantial positive relationship between perceived service quality and behavioral intention (Zeithaml, 2000). Goutam et al. (2021), In the research, Technology Readiness and E-Service quality have an impact on purchase intention and loyalty (Goutam et al., 2022)there is a hypothesis that the results of research related to system availability have a positive effect on customer loyalty, but in fact the results are rejected.

In this study it is necessary to analyse the need for research on the relationship between E-Service and behavioral loyalty, (Parasuraman, A., Zeithaml, VA and Malhotra, 2005)because viewing product returns as cases of electronic service failure and recovery, thereby conceptualizing the quality of electronic recovery services, it is necessary to mediate between service failure and customer loyalty.It's because Emotional structure includes both the volitional (motivation) and means (action plan) components for clarifying online shopping and repurchasing (Fazal-e-Hasan, SM, Ahmadi, H., Mortimer, G. & M. and Kelly, 2018)

System availability indicates the correct technical working of the application site(Collier, JE and Bienstock, 2006)While the customer is a value seeker, the decision is in the hands of the customer. As a result of the changes that occur, customers can become regular customers, customers can be lost, or new customers can be added. However, customer loyalty is defined “as a deep commitment to repurchase or re-support a preferred product/service consistently in the future”(Roy et al., 2020)

This leads to be repeated purchases of the same brand or brand group, even when the situation is really situational Influencers and marketing efforts that may lead to a switch to another brand(Roy et al., 2020)In providing services, resolving customer complaints becomes a failure if repeated complaints occur. To prevent customer defection and maintain a healthy relationship with customers, e-commerce must ensure an outstanding

E-Recovery service mechanism. It has been proven that incompetent resolution of service failures leads to dissatisfied customers(Mathew et al., 2020).

The role of perceptions of justice in service recovery is a major theme in many settings related to service recovery. This is based on the fact that there is a significant and strong relationship between both E-Recovery and E-Service(Collier, JE and Bienstock, 2006)(Mathew et al., 2020) Customers experience in the service recovery process can vary (Mattila, 2001)In addition, positive customer emotions were identified as having a significant impact on E-Recovery (Siu, NYM, Zhang, TJF and Yau, 2013)and likely stem from customer interactions with various touchpoints in the E-Recovery process, and perceptions of fairness. Because customer emotions play an important role in satisfaction.

Therefore, this study analyzes the relationship between E-Recovery and customer satisfaction. Because there are not all E-Services can be well received, the availability of interactive assistance and support contacts.
The research objectives are to:
1.To test the effect of the assessment between E-Service, E-Recovery with customer loyalty and the relationship between one another
2. To examine the mediating effect between relationships, system availability, E-Service recovery and on customer loyalty.

2. LITERATUR REVIEW

2.1 E-Services

E-Service Quality is a comprehensive construct that includes pre-web and post-website service aspects. Camilleri, MA (2022), Lee and Lin (2005) (Parasuraman, A., Zeithaml, VA and Malhotra, 2005)defines e-service quality as "the extent to which a website facilitates the efficient and effective shopping, purchasing, and delivery of products and services". dimensions of e-SQ developed by (Parasuraman, A., Zeithaml, VA and Malhotra, 2005)selected for use in this study to measure the quality of consumer electronic services. These dimensions consist of four dimensions of E-Service Quality (efficiency, system availability, compliance/availability, and privacy).

The benefits of the services provided by the Company are quality services(Santos, 2003)argues that the quality of services in e-commerce is a general assessment or assessment for customers of the benefits and quality of electronic services in virtual markets.Quality has been defined in various ways by various researchers. (Zeithaml, 2000)define service quality as a worldwide assessment, identify with service prevalence and clarify it as including outcome assessment; what consumers get from the service and how the service is provided.(Goutam et al., 2022) argues that consumer perceptions of electronic service quality in online shopping are influenced by: website design (level of user-friendliness), reliability (trust and security), responsiveness (polite and helpful customer service) and personalization (differentiating service to meet specific individual needs).

2.2 E-Recovery Service

E-Recovery Service are all-inclusive actions and activities carried out by the company to repair, change and recover losses suffered from service failures (Radu et al., 2019) The perceived quality antecedents of electronic service returns were identified as perceived information quality, digital engagement, perceived service performance, and perceived service orientation. (Mathew et al., 2020) Problems can be solved when services fail through quality of service recovery or e-recovery services. (Widiatmika, IGA & Subawa, 2017)This variable is a service action to increase customer satisfaction due to various issues that cause customer dissatisfaction. Most of the approaches shown to develop a perception of fairness to reduce the difficulties experienced by customers in the event of a failure(Mathew et al., 2020). By Because That, evaluation performance done only If activity main service No fulfil hope customer.

Customer satisfaction is shown when a customer buys goods or services, service recovery refers to the actions taken by the service provider in an attempt to resolve the problem that caused the service failure. (Sheth, JN, Sisodia, RS and Sharma, 2000).

In the context of e-commerce, customer satisfaction can be seen from the experience felt by customers like Which expected, usually customer give bait come back positive say and do things positive in E-commerce website or app as option main If Customer Want to do purchase, so consumer is called consumer loyal

2.3 Behavioral Loyalty

Behavioral Loyalty defined as any manifestation of customer behavior toward a brand or company beyond purchase resulting from motivation(Roy et al., 2020)This point of view demonstrates the importance of brand loyalty for service providers, especially since the services they provide are almost always intangible(Lovelock, 2018)According to (Gremler, 2018), a shrinking customer base makes brand loyalty even more important. In today's environment where customers can shop online, it is important to understand how to increase their brand loyalty, a position that can motivate researchers to develop models to increase customer loyalty.

3. METHOD

In this study, researchers have proposed a theoretical framework based on the E-SQ model developed in previous journals suggesting that the System Availability Hypothesis has a negative effect on Behavioral loyalty E-SQ (Goutam et al., 2022) suggestions, we have added one more construct called E-Recovery Service in this research.it purposes to determine whether the E-Recovery dimension affects Behavioral Loyalty. Therefore, researchers have proposed a theoretical model, as shown in figure 2

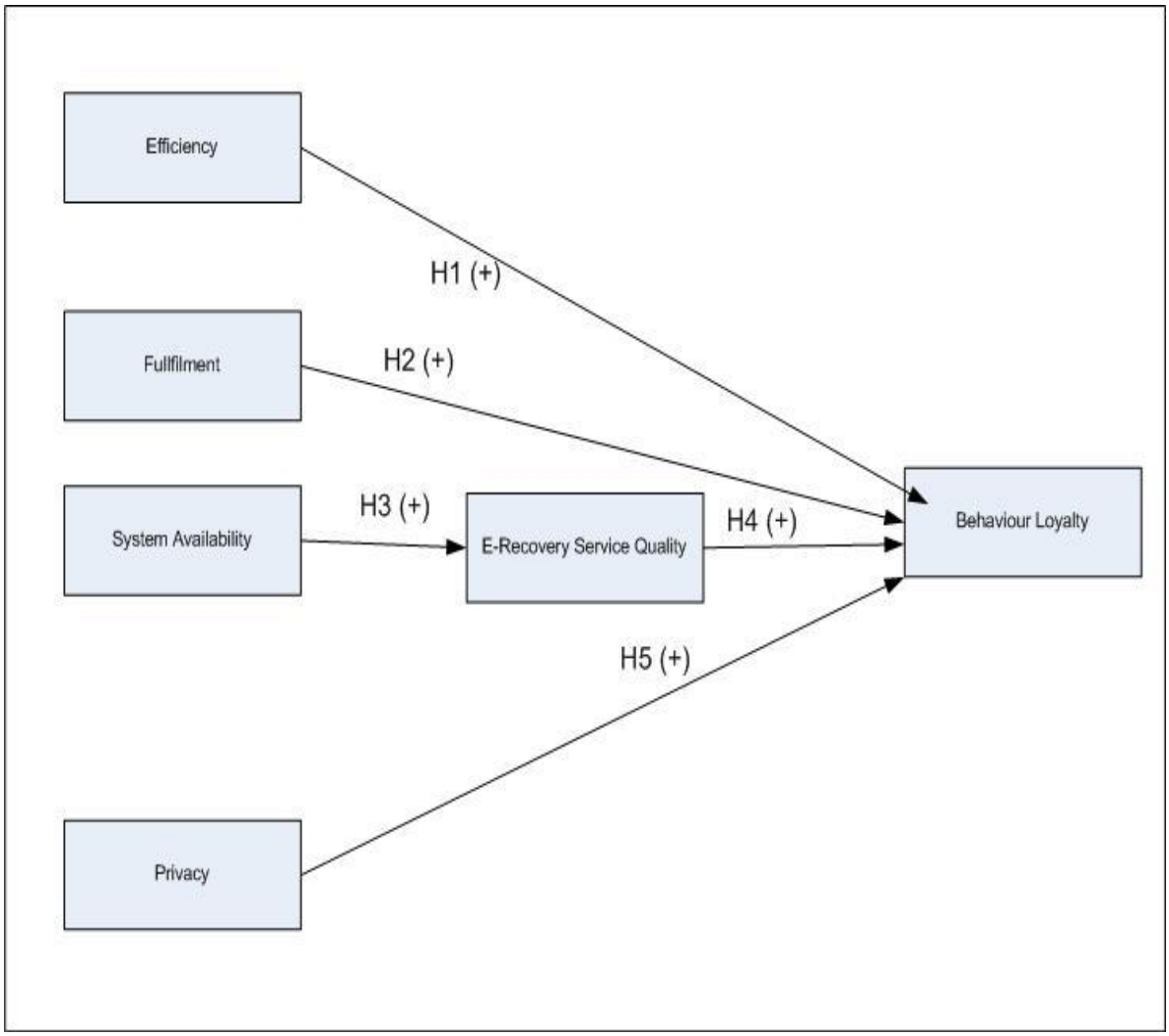

Figure 2 Conceptual Framework

The Impact of Efficiency Problems on Behavioral Loyalty Efficiency as "ease and speed of accessing and using the site". Well-organized website and information, fast transactions and website usability are the key factors in the efficiency dimension.(Kim & Kim, 2010).while behavioral loyalty relates to the capacity of service providers to make their customers say positive things, make them ready to spend more, recommend to others, pay premiums, and stay loyal to the website(Goutam et al., 2022).

The first four dimensions of E-Service refer to core Internet services, while E-Recovery refers to service recovery. In other words, e-service quality depends on consumers' perceptions of e-service quality when consumers do not have problems with the service site (Yang, Z. and Fang, X. (2004),Thus, the research hypothesis that:

H1 has a positive effect between efficiency and behavioral loyalty

Impact of Fulfillment problem with Behavioral loyalty Fulfillment broadly covers all stages of a customer's interaction with a website: How easy the site makes shopping, buying, and shipping. (Parasuraman, A., Zeithaml, VA and Malhotra, 2005) fulfillment and availability is one of the main focus on the area of e-commerce operations, which significantly affects the customers shopping experience (Koufteros, X., Droge, C., Heim, G., Massad, N. and Vickery, 2014) to what extent are the promises made by the website regarding order delivery and product availability fulfilled? Fulfillment It's also about meeting expectations and satisfying the customer - a process that starts with taking the customer's order and ends with the customer getting what they want, when and where they want it.(Jain et al., 2017) Behavioral Loyalty shows whether the customer stays or leaves the e-commerce(Goutam et al., 2022), therefore this hypothesis was developed.

H2 has a positive effect between Fulfillment and Behavioral loyalty

Impact of System availability issues with E-Recovery Mediation System availability indicates the correct technical working of the internet shopping site.(Goutam et al., 2022)Online sellers must be careful that the site does not experience problems such as being constantly down. Technology failures often disillusion customers (e.g. website down or not working properly)(Sousa & Voss, 2009).Due to the large number of competitors, e-retailers must be very careful in making consumers happy by understanding and addressing issues related to system availability.

By adding one E-Recovery variable in which service recovery efforts have a positive effect on post-satisfaction and satisfaction with the entire process and service providers(Mathew et al., 2020) Thus the mediating role of anger in the relationship between service encounter dissatisfaction and customer behavioral intention (Bougie, R., Pieters, R. and Zeelenberg, 2003)There must be a solution that can solve these problems because E-Service Quality not only helps customer intentions to revisit but also has the potential to make consumers use one particular website without switching to other sites and become loyal customers.(Goutam et al., 2022), while E-Recovery is a responsiveness dimension which is defined as "problem handling and effective returns through its website (Parasuraman, A., Zeithaml, VA and Malhotra, 2005).

From the relationship between E-Service quality and E-Recovery, we can look for interconnected hypotheses. Thus the research hypothesis is that:

H3 has a positive effect between System Availability and E-Recovery

Impact of Privacy issues with Behavioral loyalty

The term privacy refers to how secure a web-based shopping site is and protects customer information(Goutam et al., 2022), Information privacy is closely related to the flow of information – what, by whom, why and how information is collected and used.(Airport et al., 2021)(Martin, KD, Borah, A. and Palmatier, 2017). that privacy concerns reflect concerns when information is collected and used by entities for purposes and in ways not intended by individuals(Airport, R., Fernando, M. and Akter, 2019).Information may be related to financial or transactional aspects, and this plays an important role as e-retailers guard against sharing it with other third parties. managing privacy issues has become a major barrier to marketing and a formidable barrier to e-commerce growth(Airport et al., 2021). For example,(Martin, KD, Borah, A. and Palmatier, 2017)demonstrated that customer data vulnerabilities (e.g. data breach vulnerabilities, spillover vulnerabilities) lead to emotional and cognitive breaches that drive consumers to act defensively by falsifying their information or changing their online behavior. Meanwhile, according to Behavioral Loyalty(Ong, CH, Lee, HW and Ramayah, 2018)is the willingness to pay more and word of mouth, classified as an attitude of loyalty. Similarly, Repurchase Intentions

are classified as behavioral loyalty, since effective engagement reflects the level of positive brand relationship from consumers, these emotions result in outcomes such as an increase in the tendency towards loyalty attitudes and behaviours, and positive referrals and recommendations. (Dessart, L., Aldas-Manzano, J. and Veloutsou, 2019), thus the research hypothesis that

H4 has a positive effect between Privacy and Behavioral loyalty

Impact of E-Recovery with Behavioral Loyalty

The ability to achieve effective recovery from failure is an important responsibility of the operations function(Sousa & Voss, 2009). In particular, understanding the impact of E-Recovery on customer loyalty implications is important for the design of service delivery and recovery systems(Miller, J., Craighead, C. and Karwan, K., 2000) in the previous journal (Goutam et al., 2022)System availability has no significant impact on Behavioral Loyalty. Successful recovery can avoid unwanted outcomes, such as online customers switching to other service providers, returning to interpersonal delivery alternatives, deciding to stop using the internet altogether(Sousa & Voss, 2009). Thus the research hypothesis that:

H5 has a positive effect between E-Recovery on Behavioral loyalty

The research design is causal research between variables. In collecting data taken by questionnaire (questionnaire) google form. The questionnaire was distributed via WhatsApp messenger. The questionnaire contained a series of questions on selected indicators where respondents were asked to provide answers to statements that match their perceptions of the use of e-commerce in the buying and selling process that is often used. Online data collection techniques are carried out because of the distribution of e-commerce users who are spread across Indonesian cities. The total number of respondents is 171 respondents using e-commerce spread throughout Indonesia.

Data processing techniques are carried out using the SPSS AMOS (Analysis of Moment Structure) method.

TABLE 1. Respondent Characteristics

Characteristics of Respondents	Frequency	Percentage
Gender		
-Man	83	48.5
-Woman	88	51.5
Age		
< 20 years	9	5.3
20 - 25 Years	57	33.3
26 - 30 Years	63	36.8
> 30 Years	42	24.6
Last education		
SMA/SMK	24	14.0
D3	25	14.6
S1	108	63.2
S2	14	8.2
Work		
Student	2	1.2
Student	27	15.8
Employee	120	70.2
Self-employed	16	9.4
Other	6	3.5
Ecommerce frequently used		
Tokopedia	59	34.5
Shopee	96	56.1
Bukalapak	1	.6
Lazada	9	5.3
JD.ID	3	1.8
Other	3	1.8

frequency in using E-commerce		
1-2 days once	42	24.6
Once every 3-4 days	48	28.1
Once every 5-6 days	36	21.1
every day	33	19.3
Another:	12	7.0

Source: Respondent Primary Data

From Table 1 it can be seen that the E-commerce used by respondents is Shopee 56.1%, Tokopedia 34.5%, Lazada 5.3%, JD.ID 1.8%, Bukalapak 0.6% and others 1.8%. While the frequency of using E-Commerce is once every 3-4 days, which means it is quite intense in using E-Commerce.

4. RESULT AND DISCUSSION

4.1 Instrument Testing

4.1.1 Validity Testing

A series of questions on selected indicators where respondents were asked to provide answers to statements that match their perceptions of consumption(Joseph F. Hair, 2010)The statistical tool used to test validity in this study is factor loading, whether or not an indicator is valid is determined by the size of the research sample.

This study used a sample of 171 respondents, so that the factor loading value that determines whether the sample is valid or not is 0.45 as can be seen in table 2.

TABLE 2
Factor Loading based on Sample

Factor Loading	Sample Size
0.30	350
0.35	250
0.40	200
0.45	150
0.50	120
0.55	100

Source :(Joseph F. Hair, 2010)

An indicator is considered valid with the following criteria:
If Factor Loading > 0.45 then the statement item is valid.
If Factor Loading < 0.45 then the statement item is not valid.

4.1.2 Reliability Testing

Reliability testing was carried out to test the consistency of answers from respondents who measured a variable l(Joseph F. Hair, 2010)The analytical tool for checking reliability is Cronbach's Coefficient, which is the basis for deciding whether the indicator is reliable or not, namely:

If the Cronbach's Alpha Coefficient > 0.60 then all questionnaire statements prove to be consistent and reliable
If the Cronbach's Alpha Coefficient < 0.60 then all statements in the questionnaire are contradictory or unreliable.

4.2 Research variable Testing the Validity and Reliability of Efficiency Variables

Validity testing for variables **efficiency** consisting of 7 indicators shows that all measurement indicators are proven valid because they produce a factor loading > 0.45. The reliability test on the 7 valid indicators gave a

Cronbach alpha value of 0.892 > 0.6 which means that the 7 indicators to measure efficiency have proven to be reliable. From this it can be concluded that all indicators measuring the efficiency variable have been proven valid and reliable, so all of them are used to test research hypothesis. For more results from other variables can be seen in table 3.

TABLE 3
Validity and Reliability Testing

Variable	Validity Testing		Reliability Testing	
	Factor loading	Conclusion	Cronbach Alpha	Conclusion
efficiency				
EFF1	0.809	Valid	0892	Reliable
EFF2	0.824	Valid		
EFF3	0.771	Valid		
EFF4	0.783	Valid		
EFF5	0.714	Valid		
EFF6	0.754	Valid		
EFF7	0.822	Valid		
System Availability				
SA1	0.831	Valid	0.746	Reliable
SA2	0.782	Valid		
SA3	0.816	Valid		
SA4	0.588	Valid		
Fullfilmment				
FF1	0.866	Valid	0.765	Reliable
FF2	0.883	Valid		
FF3	0.731	Valid		
Private				
PRIV1	0.795	Valid	0.779	Reliable
PRIV2	0.877	Valid		
PRIV3	0.829	Valid		
e-Recovery				
ERSQ1	0.834	Valid	0.847	Reliable
ERSQ2	0.857	Valid		
ERSQ3	0.845	Valid		
ERSQ4	0.778	Valid		
Behavioral Loyalty				
BL1	0.808	Valid	0.871	Reliable
BL2	0.838	Valid		
BL3	0.850	Valid		
BL4	0.841	Valid		
BL5	0.731	Valid		

Source: SPSS & AMOS

4.2.1 Variable Descriptive Statistics Brand Authenticity

The results of the processing of descriptive statistics for the magnitude of efficiency as a whole give a good answer to see, namely4,191. The standard deviation value of 0.582 indicates that most of the respondents' answers are in the range of 4-5. Respondents' perceptions according to the 7 measurement indicators of the Efficiency variable produce a good response where almost most of the indicators produce an average value of more than 4 except for indicator 5 (EFF5) which produces an average value of less than 4, which is 3.976. For more clarity the results of other variables can be seen in table 4.

TABLE 4
Variable Descriptive Statistics Brand Authenticity

Indicator	N	Minimum	Maximum	Average	Standard Deviation
EFF1	171	1.00	5.00	4,269	0.726
EFF2	171	1.00	5.00	4,222	0.701
EFF3	171	2.00	5.00	4,280	0.713
EFF4	171	2.00	5.00	4,052	0.776
EFF5	171	1.00	5.00	3,976	0839
EFF6	171	1.00	5.00	4,204	0.796
EFF7	171	1.00	5.00	4,333	0.668
efficiency	171	1.86	5.00	4,191	0.582
SA1	171	2.00	5.00	3,771	0.881
SA2	171	1.00	5.00	3,450	1.107
SA3	171	1.00	5.00	3,695	0.888
SA4	171	1.00	5.00	3,906	0.940
System Availability	171	1.75	5.00	3,706	0.722
FF1	171	1.00	5.00	3,871	0.793
FF2	171	1.00	5.00	3,865	0.781
FF3	171	1.00	5.00	3,906	0.855
Fulfilment	171	1.67	5.00	3,881	0.669
PRIV1	171	1.00	5.00	3,789	0.983
PRIV2	171	1.00	5.00	3,783	0991
PRIV3	171	1.00	5.00	4,029	0.856
Private	171	1.33	5.00	3,867	0.787
ERSQ1	171	1.00	5.00	3,771	0.804
ERSQ2	171	1.00	5.00	3,801	0.823
ERSQ3	171	1.00	5.00	3,725	0.888
ERSQ4	171	1.00	5.00	4,035	0.825
e-Recovery	171	1.00	5.00	3,833	0.692
BL1	171	1.00	5.00	4,111	0.706
BL2	171	1.00	5.00	4,111	0.706
BL3	171	2.00	5.00	4,093	0.745
BL4	171	2.00	5.00	4,193	0.705
BL5	171	1.00	5.00	4,140	0.776
Behavioral Loyalty	171	2.00	5.00	4,129	0.591

Source: SPSS & AMOS

4.2.2 Model Fit Testing

Testing the suitability of the model (model fit) is a test that must be carried out as a prerequisite before testing the research hypothesis carried out with the SEM model shown in Figure. 3

The results of the processing of the model fit test are presented in Table 5. The data in the table shows 8 criteria for testing the fit model resulting in 2 criteria fulfilling the fit model test, namely RMSEA and CMIN/DF, no less than 2 criteria produce marginal fit models namely IFI and CFI and 4 other indicators produce unfit models named - p-value chi-square, GFI, NFI and TLI respectively and CMIN/DF, no less than 2 criteria produce marginal fit models namely IFI and CFI and 4 other indicators produce unfit models namely - p-value chi-square, GFI, NFI and TLI respectively.

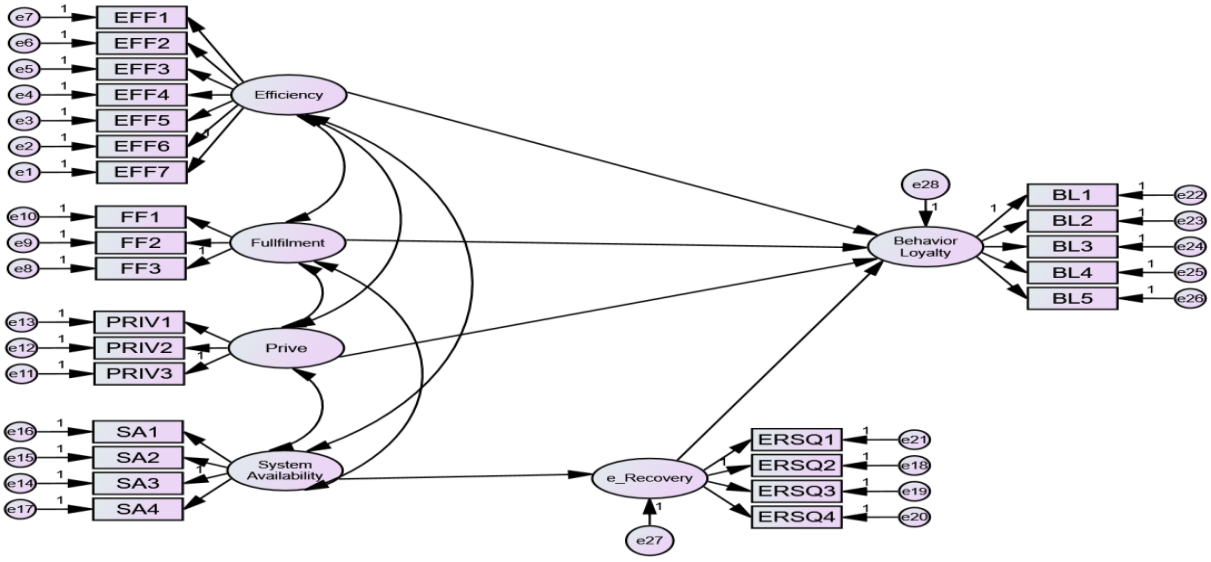

Figure 3. SEM Research Model

TABLE 5
Model Suitability Testing Indicator

Type Measurement	Measurement	Model Fit Decision	Results processed	Decision
Absolute fit measures	Chi-square	low Chi Square	772,807	
	p-value Chi-Square	≥ 0.05	0.000	Poor fit
	GFI	≥ 0.90	0.725	Poor fit
	RMSEA	≤ 0.10	0.100	fit models
	NFIs	≥ 0.90	0.729	Poor fit
	IFI	≥ 0.90	0.811	Marginal fit
	TLI	≥ 0.90	0.783	Poor fit
	CFI	≥ 0.90	0.808	Marginal fit
Parsimonius fit measure	CMIN/DF	Between 1 to 5	2,683	fit models

Source:(Joseph F. Hair, 2010)

Improvements to the model are carried out using modification indices with the SEM model as follows:
The processing results for testing the fit model are shown in table 6. Information from the table shows 2 criteria for producing a fit model, namely RMSEA CMIN/DF, up to 3 criteria produce models that are marginally compatible, namely IFI, TLI and CFI, and 3 other indicators produce models that are not compatible. chi-square, GFI, and NFI p-values, respectively. Because some of the criteria result in the conclusion of fit and marginal fit models, the hypothesis testing can be continuing.

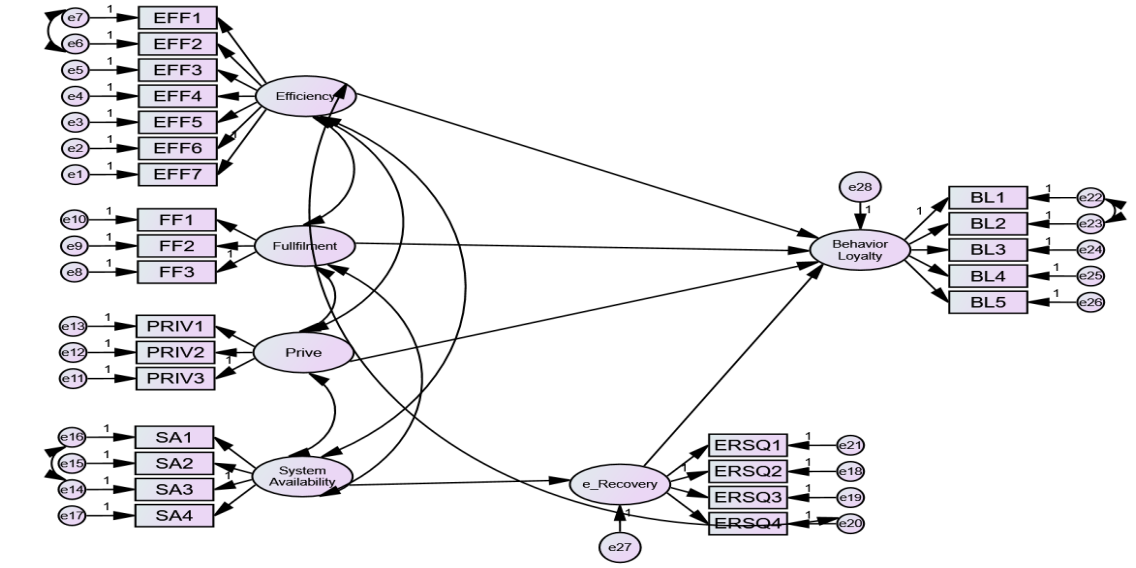

Figure 4. Research Revision SEM Model

TABLE 6
Model Suitability Testing Indicator

Type Measurement	Measurement	Model Fit Decision	Results processed	Decision
Absolute fit measures	Chi-square	low Chi Square	638,277	
	p-value Chi-Square	≥ 0.05	0.000	Poor fit
	GFI	≥ 0.90	0.775	Poor fit
	RMSEA	≤ 0.10	0.086	fit models
	NFIs	≥ 0.90	0.743	Poor fit
	IFI	≥ 0.90	0.862	Marginal fit
	TLI	≥ 0.90	0.839	Marginal fit
	CFI	≥ 0.90	0.860	Marginal fit
Parsimonius fit measure	CMIN/DF	Between 1 to 5	2,247	fit models

Source: SPSS & AMOS

5. ANALYSIS AND DISCUSSION

5.1 Hypothesis test

The processing results for testing the hypothesis are shown in table 7

TABLE 7
Research Hypothesis Testing

	Hypothesis Description	Estimates	CR	p-values	Conclusion
H1	There is a significant relationship between efficiency and behavioral loyalty	0.558	5,903	0.000	The hypothesis is supported
H2	There is a significant relationship between fulfillment and behavioral loyalty	-0.205	-1,983	0.023	The hypothesis is supported
H3	There is a significant relationship between System Availability and E-Recovery	1.208	6,394	0.000	The hypothesis is supported
H4	There is a significant relationship between Privacy and Behavioral loyalty	0.101	1,210	0.113	The hypothesis is not supported
H5	There is a significant relationship between E-Recovery and Behavioral loyalty	0.247	2,655	0.004	The hypothesis is supported

Source: SPSS & AMOS

5.2 Hypothesis 1

H1 aims to test the positive effect between efficiency and behavioral loyalty

Hypothesis 1 aims to examine the effect of efficiency on behavioral loyalty. The processing results are indicated by an estimated coefficient value of 0.558, which means that increasing efficiency will increase behavioral loyalty and conversely decreasing efficiency will reduce behavioral loyalty. The p-value of the t statistic is 0.000 <0.05, so How (null hypothesis) is rejected and Ha (alternative hypothesis) is accepted so that the hypothesis stating that efficiency affects behavioral loyalty is proven.

The results of this study support previous research (Goutam et al., 2022)who say Efficiency has found a substantial positive relationship between perceive service quality and behavioral intention. (behavioral loyalty) means that ease of access and menus on e-commerce makes it easy to find needs in the buying and selling process, so that behavioral intentions on e-commerce used make users loyal to the e-commerce application Ease of access, fast web pages, fast transaction settlement, and reliability of transactions make e-commerce the majority used by users, Shopee 56.1% and Tokopedia with a percentage of 34.5% being e-commerce that has good efficiency from responde.

5.3 Hypothesis 2

H2 aims to test the positive effect between fulfillment and Behavioral loyalty

Hypothesis 2 aims to examine the effect of fullfillment on Behavioral loyalty. Processing results are indicated by an estimated coefficient value of -0.205, which means that increasing Fullfillment will increase Behavioral loyalty and conversely decreasing Fulfilment will decrease Behavioral loyalty. The p-value of the t statistic is 0.023 <0.05, so How (null hypothesis) is rejected and Ha (alternative hypothesis) is accepted so that the hypothesis stating that fulfillment has an effect on Behavioral loyalty is proven.

The results of this study support previous research (Goutam et al., 2022)where fulfillment positively influences with behavioural intention. Fulfillment is a key process in e-commerce which requires smooth coordination among all(Jain et al., 2017).

That means fulfillment of the availability of goods in the e-commerce and the delivery time of the goods according to what is stated, as well as the attractive promos offered. In this case, users become loyal to the e-commerce.

Fulfilment regarding the availability of goods and delivery times for transactions makes the majority of e-commerce used by users, Shopee 56.1% and Tokopedia with a percentage of 34.5% being e-commerce that has good fulfillment from respondents

5.4 Hypothesis 3

H3 aims to test the positive effect of system availability on e-recovery.

Processing results are expressed with an estimated coefficient value of 1.208 meaning that an increase in system availability will increase E-Recovery and conversely a decrease in system availability will decrease e-recovery. The p-value of the t statistic is 0.000 <0.05 then How (null hypothesis) is rejected and Ha (alternative hypothesis) is accepted so that the hypothesis to prove System availability has an effect on E-Recovery is proven.

That means system failure (system availability) like the previous journal(Goutam et al., 2022)can be recovered by settlement and compensation mechanisms due to system errors for users, this has a positive effect on customer loyalty. according to previous tests with E-Recovery where service recovery efforts have a positive effect on satisfaction(Mathew et al., 2020)

E-Recovery regarding the system failure recovery process, and settlement of compensation as compensation in e-commerce which is mostly used by users, Shopee 56.1% and Tokopedia with a percentage of 34.5% being e-commerce has a positive effect

5.5 Hypothesis 4

H4 aims to test the positive effect of privacy on behavioral loyalty.

The processing results are indicated by an estimated coefficient value of 0.101, which means that increased privacy will increase behavioral loyalty and vice versa, decreased privacy will decrease behavior loyalty. The p-value of the t statistic is 0.113 > 0.05, so How is accepted, so the hypothesis that privacy affects behavior loyalty not proven/rejected

That means personal information, debit or credit card numbers are not significant to user shopping behavior. This means that e-commerce users still lack trust.

The importance of increasing trust and privacy enablement as a mechanism for reducing privacy concerns and consumer backlash through related organizational and regulatory efforts(Airport et al., 2021)

The findings show that good service quality helps in developing loyal customers and recommending them to others buying repeatedly from the same website.

5.6 Hypothesis 5

Hypothesis 5 aims to test the positive effect of E-Recovery on behavioral loyalty.

Processing results are expressed by an estimated coefficient value of 0.247, which means that increasing e-recovery will increase behavior loyalty and conversely decreasing e-recovery will decrease behavior loyalty. The p-value of the t statistic is 0.004 <0.05, so How is rejected and Ha is accepted so that the hypothesis that E-Recovery has an effect on behavioral loyalty is proven.

That means the recovery process related to system problems and the resolution of system failures for the majority of users, Shopee 56.1% and Tokopedia with a percentage of 34.5% can have a positive effect on customer behavior to recommend the experience of shopping with e-commerce to others.

6. CONCLUSION

This research examines the relationship between E-Service and E-Recovery Service with Behavioral Loyalty among E-commerce users in Indonesia. 5.3%, JD.ID 1.8%, Bukalapak 0.6% and others 1.8%.

On the previous test (Goutam et al., 2022) that the effect of System Availability on Behavioral Loyalty was rejected, so this study was intended to see how the results were by adding one more variable construct, namely E-Recovery Service and it was found that some of the E-Service Quality (except privacy) had a positive effect on the presence of E-Recovery Service on Behavioral Loyalty.

From the results of testing the effect of privacy on Behavioral Loyalty are negative. This means that e-commerce users are still worried about personal data that is at risk of being leaked and misused by irresponsible parties.

The security is aspect in processing e-commerce user's data need to be improved by companies and the government so that users can trust it so as to increase user intentions to use e-commerce.

7. SUGGESTION

Based on from the test results, it is necessary to test E-Service Quality and E-Recovery for respondents who use e-commerce other than the majority, Those are like Shopee and Tokopedia.
It perhaps make a different result for those e-commerce,nowadays Shopee and Tokopedia have many loyal subscribers. And it's going to be useful for next research in Indonesia.
It perhaps different for research in other countries with the same method research.

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