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EXAMINING THE EFFECTS OF E-SERVQUAL AND PERCEIVED VALUE ON CUSTOMER SATISFACTION: THE MODERATING ROLES OF TRUST AND PERCEIVED USEFULNESS IN THE HALODOC APPLICATION

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ABSTRACT

This study aims to identify the influence of e-service quality and perceived value on customer satisfaction, with trust and perceived usefulness acting as moderating variables among users of the Halodoc application. The sample was obtained using a purposive sampling technique, resulting in 185 respondents. The study employed a quantitative descriptive approach and data were analyzed using Partial Least Squares (PLS). The results indicate that e-service quality has a positive and significant effect on customer satisfaction. Similarly, perceived value positively and significantly influences customer satisfaction. However, trust weakens the relationship between e-service quality and customer satisfaction, while perceived usefulness does not moderate the relationship between e-service quality and customer satisfaction. Furthermore, trust does not moderate the relationship between perceived value and customer satisfaction, and perceived usefulness also fails to moderate the relationship between perceived value and customer satisfaction.

Keywords: E-service quality, perceived value, customer satisfaction, perceived usefulness and application Halodoc.

INTRODUCTION

In the last 12 months of 2020, the Statista Global Consumer Survey (2020) reported that Indonesia ranked third globally in the use of digital health applications. The survey indicated that the most commonly used services include nutrition services, heart rate monitoring, and sleep pattern tracking. Although 57% of Indonesia's population has utilized telemedicine services, different findings were reported by Santoso et al. (2021). Their study involving 1,000 Indonesian users who accessed telemedicine for the first time revealed that 46% were dissatisfied with doctors' services and were unwilling to recommend the application to others. The study also highlighted several patient complaints related to healthcare service quality, including high costs, unfulfilled promises, and long waiting times.

When selecting an application, users are often faced with several considerations, one of which is the value offered by the service provider. Perceived value is commonly defined as the difference between customers' expectations and the services received (Theresia & Briliana, 2021). Abror (2021), in a study on the Halodoc application, found a positive and significant relationship between perceived value and customer satisfaction, indicating that users perceive the costs incurred to be balanced with the convenience and benefits obtained, which in turn enhances customer satisfaction.

In the context of online services, customer trust is a critical factor in decision-making related to system usage (Wu et al., 2021). As of 2021, Halodoc recorded approximately 20 million active users, with the majority being women in the productive age range of 25–40 years. During the COVID-19 pandemic, Halodoc was considered highly practical and accessible for obtaining health-related information. Its primary services include doctor consultation via chat and pharmacy delivery services. Halodoc was also viewed as contributing to the reduction of SARS-CoV-2 transmission during the pandemic. However, contrary to these expectations, a review analysis revealed 86 negative user reviews on both the App Store and Google Play Store in October 2022, indicating persistent service-related issues.

Based on the above explanation, this study is grounded in the Technology Acceptance Model (TAM), which explains that the acceptance of information technology is influenced by two key factors: perceived ease of use and perceived usefulness. This framework aligns with the study by Surya and Kur'aini (2022), which found that higher perceived usefulness of health applications increases users' intention to use such platforms. Similarly, Laili and

Wahyudi (2021) identified several factors influencing the acceptance and trust of health applications, with perceived usefulness emerging as one of the most influential factors, particularly when users expect telemedicine platforms to effectively address their health concerns.

In response to the challenges and phenomena identified, this study aims to examine the influence of e-service quality and perceived value on customer satisfaction, with trust and perceived usefulness acting as moderating variables. This research is important for several reasons. First, there is an industry-wide phenomenon suggesting that the quality of telemedicine services in Indonesia remains relatively inadequate. Second, numerous customer complaints related to service quality and perceived value have been identified through Halodoc application reviews. Third, this study seeks to provide empirical evidence regarding the role of trust and perceived usefulness in shaping customer satisfaction. Finally, the findings are expected to offer managerial insights for telemedicine providers in addressing existing service challenges and improving overall customer satisfaction.

LITERATURE REVIEW

Theory of Acceptance Model

Theory of Acceptance Model (TAM) is introduced first by Davis as an explanatory model for something system information to something individual (Cheah et al., 2022). TAM is assessed more Lots liked and easily implemented for online work. TAM itself is dedicated For use of system information as effort convenience and usefulness (Juliani et al., 2021). In general at the same time, Pratama & Suputra (2019) also argue that that perception utility also can become an evaluation to what extent one can trust somebody in use technology as an improvement activity. Variable the second formulated is perception convenience Perceived Ease of Use. This Perception explains how something system information can easily be understood and used without necessarily emitting big business. In relation to framework conceptual research, researchers focus on identifying causes What only those who represent A system information Halodoc accepted by users. Researchers focused on factors such as perceived service quality, perceived value, customer satisfaction, perceived ease of use, and perceived usefulness.

Overview of M-Health (Mobile Health)

Development technology increases information and starts to penetrate the industry's health. In service conventional health requires customers to visit the center health for care (Hossain, 2016). However, with the development of society already no need to matter again. This Society today already has no foreign under the name “Telemedicine” or “m-Health”. M-Health can be interpreted as utilization of technology information and communication for sending or accepting information about medicine, for improving health service. Basically, m-Health is part of implementation development from health electronic health (e-health) (Ariyanti & Kautsarina, 2017). With the existence of m-Health greatly benefits patients can feel service medical distance far without limits of space and time with utilizing the smartphone they have (Indria et al., 2020). According to Anderson et al., (2017) many benefits that can be obtained from m-health users, namely, increasing access care, accuracy time, increased satisfaction of patients, improved involvement of patients, improved request maintenance and savings cost.

E-Service Quality

Rintasari & Farida (2020) define e-service quality as measurement Where expectation of customer fulfilled will online services provided. In definition, while operating a business, getting customers is not the only important factor, but maintaining customers as well as rejecting measuring success business (Demir et al., 2020). In the medical world, health services are considered one of the important factors especially during the pandemic which requires medical power to move fast and responsive. For some people, health is an important issue and decisions to continue or stop service health are driven by how much big quality services are provided in accordance with what they expect Akter et al., (2013). In this study, the service in question refers to the online service which is in the application Halodoc. Muharam et al., (2021) divides it into four indicators as size quality services, namely Efficiency, Fulfillment, System Availability and Privacy.

Perceived Value

Perceived Value refers to the perception of the customer about what has been received and given to something services (Bernarto & Patricia, 2019). Misra et al., (2022) assume that Perceived Value is benefit what has been given

by a services, as well as what consumers has sacrifice in utilise service In his research, Luo et al., (2022) said the concept of perceived value is How comparison between cost incurred customer with services provided. In the case of m-Health, perceived value is usually shown to customers who do comparison between benefits and advantages of service health that customers will get with customer-oriented business that take out (Setiawan & Jaolis, nd). In other words, Value here can be interpreted as feeling customer in comparison to benefits and efforts moment do online activities. Perceived Value Indicator according to Uzir et al., (2021) divides indicators of perceived value into a number of parts, namely Price, Quality, Emotional and Social.

Trust

Trust is related concepts with what is planted customer in purchase something product or services (Wijetunga, 2017). Juwaini et al., (2022) defines trust as a condition where an individual depends on something. Trust plays an important role in marketing and in general significantly influences maintenance lasting relationships between users and a site (Ronald et al., 2018). Arfi et al., (2021) also added that officer medical own m-health user data access for needs administration, then from That Trust in m-Health users is very high required for walking business said. Zhang et al., (2022) found existence four indicator for measure trust customer in m-health cases, as including Ability, Benevolence, Integrity, and Predictability.

Perceived Usefulness

Perceived Usefulness refers to how much the Lots system can fulfil users' needs and expectations in their work (Danurwindo et al., 2021). In other words, Perceived Usefulness is also defined as the extent to which users believe that using the system can increase productivity and positively influence users' intention to use the system (Amin et al., 2014). Besides that, deeper use of certain applications can increase users' productivity. In the health technology industry, the TAM model has often been used to test a person's intention to use a technology (Kamal et al., 2020). Meanwhile, according to Rahmiati et al. (2019), perceived usefulness refers to how much a system increases users' productivity. Perceived Usefulness indicators, according to Han-Lu et al. (2022), found three indicators in evaluating perceived usefulness, namely: the benefits of a system (application) in users' daily lives, using online service applications helps users increase productivity, and using online service applications helps users handle health problems.

Customer Satisfaction

Satisfaction is often assessed by whether consumers receive what they expect from a product, goods, or services (Ayu et al., 2021). The higher the level of customer satisfaction, the better the level of service received by customers (Wuisan, 2021). Customer satisfaction refers to a condition that mainly consists of two things: expectations before buying and perceptions of performance after making a purchase. In m-Health, customer satisfaction is achieved through customers' evaluation of the health services they have received (Kautish & Arorazb, 2022). Customer satisfaction indicators, according to Nugroho et al. (2019), found three indicators in evaluating customer satisfaction, namely: feeling satisfied when using the system provided by the company, which can be interpreted as the service being in accordance with expectations; feeling pleased when conducting transactions because of a good shopping experience; and feeling confident in making decisions when choosing a system service.

Relationship between Variables and Hypotheses

The Influence of E-Service Quality on Customer Satisfaction

Putra and Murwanti (2019) argue that service quality and customer satisfaction have a very close relationship in the health industry. Customer satisfaction is obtained when the results match customer expectations. This can be interpreted as providing good service that makes customers satisfied and happy (Khadka & Maharjan, 2017). This is in line with Stribbell and Duangekanong (2022), who stated that service quality can be measured by knowing how much customers like the services provided. Ataburo et al. (2017) found that when a business provides high-quality e-services, customer satisfaction tends to increase, which ultimately influences purchase decisions and repeat purchase intentions for a product or service. In line with this, the Halodoc application needs to continuously improve its service quality in order to achieve user satisfaction. Based on connectedness between variables and phenomena that have been explained, then the proposed hypothesis in the form of:

H1: E-Service Quality has an effect significant towards Customer Satisfaction

The Influence of Perceived Value on Customer Satisfaction

The relationship between value and customer satisfaction can be confirmed by comparing consumers' evaluations before and after they purchase a product or service (Demir et al., 2020). To support this theory, Bernardo and Patricia (2019) conducted research on a restaurant in Tangerang, and the results indicated that perceived value has a significant influence on customer satisfaction. Zerlina (2020) found a significant positive relationship between perceived value and customer satisfaction. Suhardi et al. (2022) also found that the higher the customer's perceived value, the higher the resulting satisfaction. In the online health industry (m-Health), perceived value is related to what customers feel compared to what they have sacrificed. In line with this, if services in the Halodoc application provide a good experience when customers purchase a product or service, it will increase customers' perceived value and also increase their level of satisfaction.Based on connectedness between variables and phenomena that have been explained , then the proposed hypothesis in the form of:

H2: Perceived Value has an effect significant towards Customer Satisfaction

The influence of Trust moderates between E-Service Quality and Customer Satisfaction

Andriyani et al. (2022) stated that customer trust does not come by itself, but requires effort through thorough and good planning. From an e-service perspective, trust refers to the extent to which a person believes in a company's built-in reliability and integrity (Juwaini et al., 2022). Venkatakrishnan et al. (2023) found that trust successfully strengthens the relationship between e-service quality and customer satisfaction. This explains that when a company increases customers' trust, customers are more likely to use the company's services, so customer satisfaction also increases. Likewise, in the m-Health industry, achieving user satisfaction in an application is not determined only by service quality. Trust in the system also strengthens customers' decisions to use the application. Based on connectedness between existing variables and phenomena, then the proposed hypothesis as following:

H3: Trust moderates influence between E-Service Quality and Customer Satisfaction

The influence of Perceived Usefulness moderates between E-Service Quality and Customer Satisfaction

Lee et al. (2015) reported that perceived usefulness and perceived ease of use have a positive effect on customer satisfaction. However, a 2017 study found that perceived usefulness did not affect e-service quality or customer satisfaction in the use of Batu City's Regional Finance Information System (SIKD). Majid et al. (2014) also showed that perceived usefulness can moderate the relationship between e-service quality and customer satisfaction. In their study on Malaysia Airlines, both perceived ease of use and perceived usefulness were important factors that strengthened the link between service quality and customer satisfaction. This suggests that TAM can act as a moderator that makes the relationship between service quality and customer satisfaction stronger. Based on connectedness between existing variables and phenomena, then the proposed hypothesis as following:

H4: Perceived Usefulness moderates influence between E-Service Quality and Customer Satisfaction

The influence of Trust moderates between Perceived Value and Customer Satisfaction

Trust is built between parties who do not know each other well through the interaction or transaction process (Maesaroh & Aji, 2021). Based on Gao's research (2019), customer satisfaction increases when it is supported by customers' trust. In other words, trust benefits business success, and it is considered an important factor in influencing customers (Yasa, 2022). However, Maqableh et al. (2021) found that trust does not have a moderating effect on continuance intention toward Facebook addiction among Facebook users. Based on connectedness between existing variables and phenomena, then the proposed hypothesis as following:

H5: Trust moderates influence between Perceived Value and Customer Satisfaction.

The influence of Perceived Usefulness moderates between Perceived Value and Customer Satisfaction

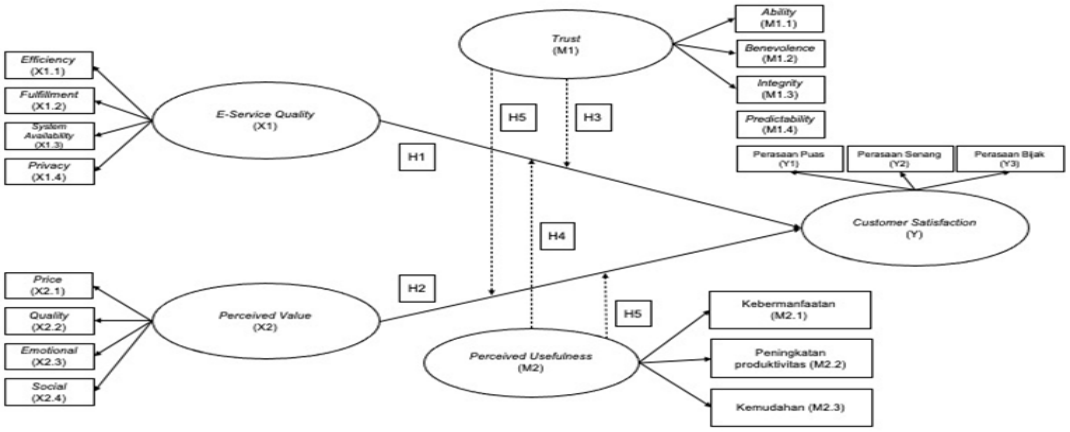
Perceived usefulness refers to how strongly customers believe that using Information Technology (IT) provides real benefits and value for them. In recent years, many researchers have examined what factors influence consumers when they do activities online. Kholifah (2022) reported several results on the moderating role of perceived usefulness. The study found that perceived usefulness can strengthen the relationship between technology competencies and student satisfaction. However, it did not strengthen the relationship between motivation and customer satisfaction. This explains that even without perceived usefulness, student motivation can still increase,

and the same applies to the level of satisfaction. Based on connectedness between existing variables and phenomena, then the proposed hypothesis as following:

H6: Perceived Usefulness moderates influence between Perceived Value and Customer Satisfaction

Analysis Model

Figure 1. Analysis Model



Source: FH Lee & Wu Model, (2011), Data Processed by Researchers, 2022

RESEARCH METHODS

This study uses a quantitative approach with Partial Least Squares-Structural Equation Modeling (PLS-SEM). The researchers collected data by distributing online questionnaires via Google Forms to Halodoc application users. The criteria required respondents to have used services in the Halodoc application at least once. The study was conducted from September 2022 to January 2023. The population consisted of Halodoc application users. The researchers used non-probability sampling with a purposive sampling technique. The minimum sample size was calculated as 18 indicators multiplied by 10, resulting in at least 180 respondents. In the field, the researchers successfully collected data from 185 respondents.

RESULT AND DISCUSSION

RESULT

Data Analysis Using SEM-PLS

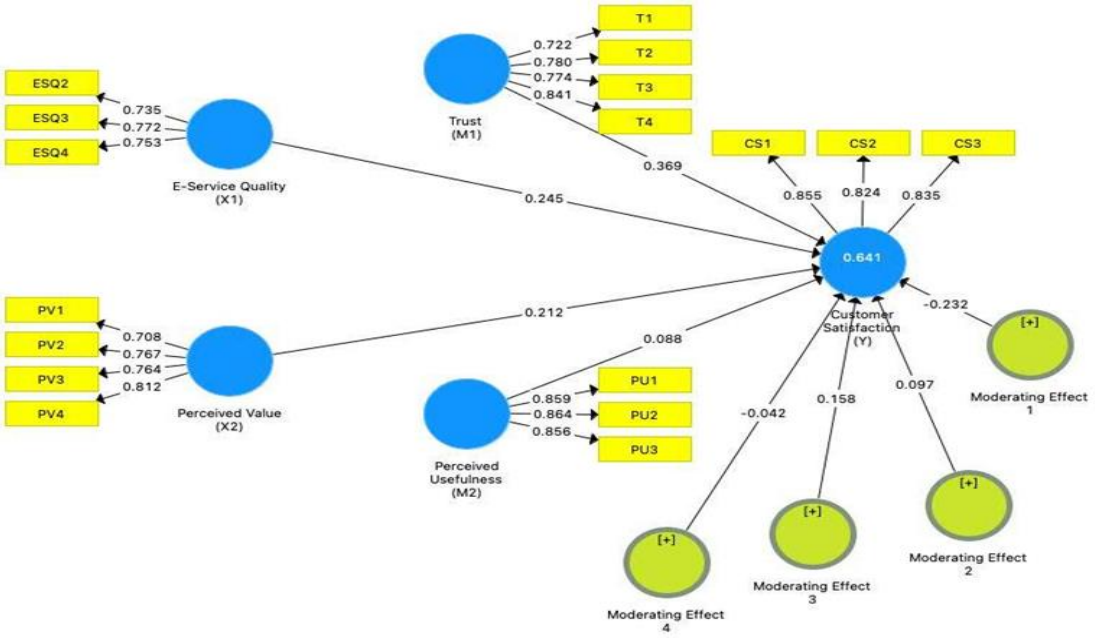
In testing hypothesis research, this research uses Partial Least Square (PLS) analysis with SmartPLS program assistance. This is a structural model that shows existence connection between the variables used in This study:

Measurement Model Analysis (Outer Model)

Convergent Validity

First step in do measurement model analysis (outer model) is perform convergent validity with see outer loading value and AVE value generated in the outer model evaluation:

Figure 2. PLS Structural Model



Outer Loading

Table 1. Loading Factor

Item	E-Service Quality	Perceived Value	Customer Satisfaction	Trust	Perceived Usefulness	Information
X1.1	0.694					Invalid
X1.2	0.710					Valid
X1.3	0.734					Valid
X1.4	0.733					Valid
X2.1		0.708				Valid
X2.2		0.767				Valid
X2.3		0.764				Valid
X2.4		0.812				Valid
Y1			0.854			Valid
Y2			0.825			Valid
Y3			0.835			Valid
M1.1				0.722		Valid
M1.2				0.780		Valid
M1.3				0.774		Valid
M1.4				0.841		Valid
M2.1					0.859	Valid
M2.2					0.864	Valid
M2.3					0.856	Valid

Source: Data Respondents processed, 2023

Based on Table 1, one indicator has an outer loading below 0.70, namely X1.1, with an outer loading value of 0.694. This indicates that the indicator does not meet one of the convergent validity requirements. Therefore, this indicator must be eliminated because it is considered invalid. The following section presents the repeated outer loading test after eliminating indicator X1.1. As shown in Table 1, all indicators are declared valid because they have outer loading values above 0.70.

Outer Loading Correction

Table 2. Loading Factor Correction

Item	E-Service Quality	Perceived Value	Customer Satisfaction	Trust	Perceived Usefulness	Information
X1.2	0.735					Valid
X1.3	0.772					Valid
X1.4	0.753					Valid
X2.1		0.708				Valid
X2.2		0.767				Valid
X2.3		0.764				Valid
X2.4		0.812				Valid
Y1			0.855			Valid
Y2			0.824			Valid
Y3			0.835			Valid
M1.1				0.722		Valid
M1.2				0.780		Valid
M1.3				0.774		Valid
M1.4				0.841		Valid
M2.1					0.859	Valid
M2.2					0.864	Valid
M2.3					0.856	Valid

Source: Data Respondents processed, 2023

Table 3. Average Variance Extracted (AVE)

Indicators	Average Variance Extracted (AVE)	Information
E-Service Quality (X1)	0.568	Valid
Perceived Value (X2)	0.583	Valid
Customer Satisfaction (Y)	0.702	Valid
Trust (M1)	0.609	Valid
Perceived Usefulness (M2)	0.739	Valid

Source: Data Respondents processed, 2023

Apart from outer loadings, an AVE value greater than 0.50 is also a requirement for convergent validity. Based on Table 5.3, the AVE value of each variable can be declared valid because each variable has an AVE value greater than 0.50.

Discriminant Validity

The second test conducted in the measurement model analysis is discriminant validity. Discriminant validity can be assessed using cross-loading values. An indicator is considered to have discriminant validity when its cross-loading on its own construct is higher than its cross-loadings on all other constructs. The cross-loading values for each indicator in this study are as follows:

Table 4. Cross Loading Values

Indicator	E-Service Quality	Perceived Value	Customer Satisfaction	Trust	Perceived Usefulness
X1.2	0.735	0.505	0.507	0.511	0.505
X1.3	0.772	0.433	0.513	0.399	0.433
X1.4	0.753	0.536	0.480	0.489	0.536

X2.1	0.456	0.708	0.489	0.483	0.708
X2.2	0.461	0.767	0.535	0.557	0.767
X2.3	0.539	0.764	0.522	0.570	0.764
X2.4	0.531	0.812	0.554	0.604	0.812
Y1	0.644	0.600	0.855	0.648	0.600
Y2	0.528	0.547	0.824	0.535	0.547
Y3	0.490	0.581	0.835	0.646	0.581
M1.1	0.463	0.563	0.540	0.722	0.563
M1.2	0.431	0.531	0.574	0.780	0.531
M1.3	0.530	0.526	0.499	0.774	0.526
M1.4	0.509	0.639	0.651	0.841	0.639
M2.1	0.541	0.525	0.512	0.651	0.859
M2.2	0.415	0.489	0.468	0.593	0.864
M2.3	0.415	0.490	0.513	0.585	0.864

Source: Data Processed by Researchers, 2023

Based on Table 4, the indicators for each variable stated fulfil condition discriminant validity with cross loading indicator value to the variables own the greatest value compared to cross loading value on the indicator variables other.

Table 5. Relationship between AVE Root and Correlation of Other Variables

Indicators	**Average Variance Extracted (AVE)**	**AVE Root**	**Correlation Between Variables**				
			Customer Satisfaction (Y)	E-Service Quality (X1)	Perceived Usefulness (M2)	Perceived Value (X2)	Trust (M1)
Customer Satisfaction (Y)	0.702	0.838	1				
E-Service Quality (X1)	0.568	0.754	0.664	1			
Perceived Usefulness (M2)	0.739	0.860	0.580	0.533	1		
Perceived Value (X2)	0.583	0.764	0.689	0.651	0.584	1	
Trust (M1)	0.609	0.780	0.731	0.617	0.710	0.727	1

Source: (Data Processed by Researchers, 2023)

Based on Table 5, the square root of the AVE for each variable is higher than the correlations between that variable and the other variables in the model. Therefore, it can be stated that all variables used in this study meet discriminant validity.

Reliability Test

In this research a reliability test can seen through Cronbach's Alpha ≥value of 0.60 and Composite Reliability ≥0.70, as in the table following:

Cronbach's Alpha

Table 6. Cronbach's Alpha

Variables	**Cronbach's Alpha**	**Information**
E-Service Quality (X1)	0.619	Reliable

Perceived Value (X2)	0.761	Reliable
Customer Satisfaction (Y)	0.789	Reliable
Trust (M1)	0.785	Reliable
Perceived Usefulness (M2)	0.824	Reliable

Source: Data Processed by Researchers, 2023

Based on Table 6, it can be known that results from all over variables study own Cronbach's Alpha value is higher from 0.60 where can interpreted that all variables in the study This stated reliable.

Composite Reliability

Table 7. Composite Reliability

Variables	Composite Reliability	Information
E-Service Quality (X1)	0.798	Reliable
Perceived Value (X2)	0.848	Reliable
Customer Satisfaction (Y)	0.876	Reliable
Trust (M1)	0.861	Reliable
Perceived Usefulness (M2)	0.895	Reliable

Source: Data Processed by Researchers, 2023

Based on Table 7, all variables in this study have composite reliability values above 0.70. This indicates that all variables are acceptable and can be declared reliable.

Structural Model Analysis (Inner Model)

R-Square Value

Based on processing of data that has been done with the SmartPLS program, obtained R-Square results as following:

Table 8. R-Square

Variables	R Square
Customer Satisfaction (Y)	0.641

Source:(Data Processed by Researchers, 2023

Table 8 shows that the R-square value for the customer satisfaction variable is 0.641. This means that 64.1% of the variation in customer satisfaction can be explained by customers' perceptions of e-service quality (X1) and perceived value (X2). The remaining 35.9% is explained by other factors outside the model that were not included in this study.

F-Square Value

The second inner model analysis test is the F-square test, which is conducted to determine the predictive effect of latent variables in the research model. Based on the data processing performed using the SmartPLS program, the F-square results are as follows:

Table 9. F-Square Coefficient

Track	F Square	Effect Size
E-Service Quality (X1) - Customer Satisfaction (Y)	0.084	Weak
Perceived Value (X2) - Customer Satisfaction (Y)	0.047	Weak

Source: Data Processed by Researchers, 2023

Based on Table 9, the F-square values for both paths indicate weak effects because they are close to 0.02. This can be interpreted to mean that e-service quality (X1) and perceived value (X2) have weak effects on customer

satisfaction (Y), with an effect size of 0.084 for e-service quality (X1) on customer satisfaction (Y) and 0.047 for perceived value (X2) on customer satisfaction (Y).

Q-Square

The next evaluation test is the Q-square test, which is used to assess predictive relevance. A model is considered to have good predictive relevance if the Q-square value is greater than 0. Conversely, if the Q-square value is less than 0, the research model is considered to have insufficient predictive accuracy. Based on the data processing performed using the SmartPLS program, the Q-square results are as follows:

Table 10. Q-Square

Variables	Q-Square
Customer Satisfaction (Y)	0.423

Source: (Data Processed by Researchers, 2023)

Based on Table 10, this model has good predictive relevance because its Q-square value is greater than 0, namely 0.423. This means that the research model can predict 42.3% of customer satisfaction among Halodoc application users, while the remaining 57.7% is explained by other factors outside the research model

Hypothesis Testing

Following is results from hypothesis testing research where something hypothesis can accepted if own T-Statistic value > 1.96 and P-Value value must be ≤0.05. The following are the results of the hypothesis testing:

Table 11. Path Coefficients and T-Statistics Values

	Influence	Path Coefficient	T Statistics	P Values	Information
H_1	E-Service Quality (X1) - Customer Satisfaction (Y)	0.245	3,767	0,000	Positive Significant
H_2	Perceived Value (X2) - Customer Satisfaction (Y)	0.212	2,388	0.017	Positive Significant

Source: Data Processed by Researchers, 2023

Based on Table 11, the path coefficient from e-service quality to customer satisfaction is positive (0.245). This indicates a direct relationship between the two variables. This means that when e-service quality in the application improves, customer satisfaction among Halodoc users also increases. The t-statistic is 3.767, which is higher than 1.96, and the p-value is 0.000, which is below 0.05. Therefore, e-service quality has a significant effect on customer satisfaction, and the first hypothesis is supported.

The path coefficient for the effect of perceived value on customer satisfaction is positive (0.212). This indicates a direct relationship between perceived value and customer satisfaction. This means that when customers perceive higher value, customer satisfaction among Halodoc users also increases. The t-statistic is 2.388, which is above 1.96, and the p-value is 0.017, which is below 0.05. Therefore, perceived value has a significant effect on customer satisfaction, and the second hypothesis is supported.

Testing Hypothesis Moderation

Testing hypothesis moderation show for influence variables moderation of a nature strengthen or weakening in This research:

Table 12. Moderation Test Results

	Influence	Path Coefficient	T Statistics	P Values	Information
H_3	Moderating Effect 1 (E-Service Quality (X1) - Trust (M1) - Customer Satisfaction (Y))	-0.232	2,179	0.030	Negative Significant

H_4	Moderating Effect 2 (E-Service Quality (X1) - Perceived Usefulness (M2) - Customer Satisfaction (Y))	0.097	0.076	0.123	Not Significant
H_5	Moderating Effect 3 (Perceived Value (X2) – Trust (M1) - Customer Satisfaction (Y))	0.158	0.154	0.101	Not Significant
H_6	Moderating Effect 4 (Perceived Value (X2) - Perceived Usefulness (M2) - Customer Satisfaction (Y))	-0.042	-0.042	0.111	Not Significant

Source: Data Processed by Researchers, 2023

Based on Table 12, the path coefficient for the moderating effect of trust on the relationship between e-service quality and customer satisfaction is negative, with a value of -0.32. The t-statistic for this path is greater than 1.96, namely 2.179, and the p-value is less than 0.05, which is 0.030. Based on these results, it can be concluded that trust has a significant moderating effect with a negative direction, and the third hypothesis can be accepted.

Furthermore, moderating effects 2 and 3 have positive effects on customer satisfaction, while moderating effect 4 has a negative effect on customer satisfaction. However, these three moderating effects are not significant because their t-statistics are less than 1.96 and their p-values are greater than 0.05. In other words, the hypotheses for moderating effects 4, 5, and 6 cannot be accepted.

DISCUSSIONS

The Influence of E-Service Quality on Customer Satisfaction

The results show that e-service quality has a positive and significant effect on customer satisfaction among Halodoc users. This means that better e-service quality in Halodoc leads to higher customer satisfaction. This result aligns with Sudjatmoko et al. (2022), who reported a positive relationship between e-service quality and customer satisfaction. It is also consistent with Uzir et al. (2021), who found that e-service quality has a positive and significant impact on customer satisfaction. These findings suggest that telemedicine providers should focus on improving service quality because strong e-service performance directly supports customer satisfaction. In this study, the e-service quality dimensions that contribute to customer satisfaction are efficiency, fulfillment, system availability, and privacy.

The Influence of Perceived Value on Customer Satisfaction

The results show that perceived value has a positive and significant effect on customer satisfaction. This means that when Halodoc users perceive higher value from the application, their satisfaction also increases. This finding supports Bernarto and Patricia (2019), who found that perceived value positively and significantly affects customer satisfaction. It also aligns with Tu and Chi (2013), who reported a positive and significant relationship between perceived value and customer satisfaction. These findings suggest that positive customer experiences shape customers' evaluations of the service provider. When customers feel they receive higher value from the service, their satisfaction tends to increase. In this study, the perceived value dimensions that affect customer satisfaction are price value, service quality, emotional value, and social value.

Influence Trust Moderation on E-Service Quality and Customer Satisfaction

The results for Moderating Effect 1 (e-service quality, trust, and customer satisfaction) show that trust moderates the relationship between e-service quality and customer satisfaction. This result is consistent with prior studies. Venkatakrishnan (2023) found that trust moderates the link between e-service quality and customer satisfaction. Sudirman et al. (2021) reported similar findings in their study of students in Kendari City, showing that trust can moderate this relationship. However, in this study, the moderation effect is weakening. This may happen because customers already have a high level of trust in the company. As a result, improvements in e-service quality may add less impact on customer satisfaction through trust. Most respondents in this study were Generation Z. This group tends to be more selective when choosing digital applications. Once Generation Z users decide to use an

application, they often build trust early. Therefore, changes in service quality may have a smaller additional effect on customer satisfaction through trust (Nasution C, 2019).

Influence Moderation of Perceived Usefulness on E-Service Quality and Customer Satisfaction

Based on the results of Moderating Effect 2, perceived usefulness does not moderate the relationship between e-service quality and customer satisfaction. This result supports Utama (2017), who also reported no moderating effect of perceived usefulness on customer satisfaction. One possible reason is the respondent profile, as most participants were from Generation Z. According to Djimesha and Prasastyo (2020), Generation Z tends to prefer technologies that are versatile and easy to use rather than focusing primarily on their perceived usefulness. This explanation aligns with the results of this study, in which 41.1% of respondents stated that their primary reason for using the Halodoc application was its perceived convenience.

Influence Trust Moderation on Perceived Value and Customer Satisfaction

Based on the results of Moderating Effect 3, the findings indicate that trust does not moderate the relationship between perceived value and customer satisfaction. This result is consistent with the study conducted by Maqableh et al. (2021), which also found no moderating effect of trust. Similarly, Alsaad et al. (2016) reported that trust was not able to function as a moderating variable in e-commerce research. Although trust does not exhibit a moderating effect in the relationship between perceived value and customer satisfaction, this does not imply that trust should be neglected in business operations. Companies must continue to focus on building customer trust through transparent communication, consistent service delivery, and responsive handling of customer complaints and issues, as trust remains a critical factor in sustaining long-term customer relationships.

Influence Moderation of Perceived Usefulness on Perceived Value and Customer Satisfaction

Based on the results of Moderating Effect 4, perceived usefulness does not moderate the relationship between perceived value and customer satisfaction. This finding is consistent with Kholifah (2022), who also reported that perceived usefulness did not moderate the relationship between motivation and customer satisfaction. In that study, motivation was reflected in the positive feelings experienced by users. This is similar to one key dimension of perceived value, which is a positive customer experience. This result suggests that the lack of moderation from perceived usefulness does not reduce the positive link between perceived value and customer satisfaction. This means that even without perceived usefulness as a moderator, higher perceived value can still increase customer satisfaction.

CONCLUSIONS AND PRACTICAL IMPLICATION

CONCLUSIONS

Based on the analysis, discussion, and hypothesis testing in this study, several conclusions are identified. E-service quality has a positive and significant effect on customer satisfaction, meaning that better e-service quality in the Halodoc application increases customer satisfaction. Perceived value also has a positive and significant effect on customer satisfaction, which means that higher perceived value leads to higher satisfaction with the Halodoc application. Trust moderates the relationship between e-service quality and customer satisfaction, but perceived usefulness does not. Trust also does not moderate the relationship between perceived value and customer satisfaction, and perceived usefulness does not moderate the relationship between perceived value and customer satisfaction.

IMPLICATIONS

The research results indicate that e-service quality has a significant effect on customer satisfaction. The findings show that the system availability indicator within the e-service quality variable has the lowest mean score, suggesting the need for improvements in application reliability and smoothness of use. Enhancing system stability and minimizing technical disruptions are therefore essential to improve user satisfaction. The findings also confirm that perceived value significantly influences customer satisfaction. Within perceived value, the quality indicator has the lowest mean score, which suggests that the company needs to improve its customer service quality. Better responsiveness, higher accuracy, and more consistent service can increase customers' perceived value. In addition,

the results indicate that trust weakens the relationship between e-service quality and customer satisfaction. This means that customer trust does not strongly increase the effect of service quality on satisfaction. In addition, the results show that perceived usefulness does not exhibit a moderating effect in the examined relationships.

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