The Influence of Artificial Intelligence (AI) Implementation in the Shopee Application on Consumer Satisfaction in an Islamic Business Perspective with Customer Experience as a Moderating Variable

(Study on Students in Bandar Lampung who use Shopee)

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ABSTRACT

Consumer satisfaction can be interpreted as one of the indicators to see the success of a company by the extent to which consumers feel satisfied with the company, therefore it is very crucial for a company to always pay attention to its customers whether they feel very satisfied, satisfied or not satisfied at all. The purpose of this study is to determine whether the application of artificial intelligence has a positive and significant effect on consumer satisfaction. And how the application of artificial intelligence in the shopee application is based on an Islamic business perspective.

This study uses a quantitative approach method. The data used is primary data by distributing questionnaires online via google form. The population used in this study were students who used those in Bandar Lampung City. A sample of 97 people using the Probability Sampling formula, taken by simple random sampling with the Cochran technique. Data analysis was processed using SmartPLS version 4.

Artificial Intelligence has a positive and significant influence on consumer satisfaction. The Technology Acceptance Model theory explains individual acceptance of information technology systems. Customer experience does not moderate the relationship between AI and consumer satisfaction. However, it is important to pay attention to the application of AI from an Islamic Business perspective because it can affect the law of its use. Thus, the application of AI from an Islamic Business perspective can help provide consumer satisfaction.

Keywords : Artificial Intelligence, Consumer Satisfaction, Customer Experience

A. INTRODUCTION

Online shopping in Indonesia has experienced rapid growth in recent years with the emergence of e-commerce portals such as shopee, lazada, etc. making it easier, faster, and often cheaper than conventional purchasing processes. This rapid growth of e-commerce requires companies to continue to develop competitive strategies.

The large number of marketplaces today is the influence of the high level of internet users in Indonesia. Shopee as one of the most visited marketplaces, is an online buying and selling site that has different interesting features and can make it easier for users to find products that consumers want from other marketplaces such as live chat, hashtags, and shopee live. The shopee application has been downloaded more than 100 million times on the Google Play Store and has a rating of 4.6 with 13,838,904 reviews.

Artificial Intelligence (AI) plays a vital role in enhancing better customer experiences. AI helps improve customer interactions with companies and optimizes customer experiences in ways that are impossible for humans. Artificial Intelligence (AI) has now become a very important and popular topic in the business world. One of the main reasons is AI's ability to enhance customer experiences. By using AI, businesses can provide more personalized and satisfying experiences for customers. AI can be used to collect data about customer preferences and behaviors, which can be used to make more appropriate product or service recommendations. Customers can also be provided with more personalized services, such as automated text messaging or product recommendations tailored to them.

Shopee uses AI to improve the accuracy of matching items and reduce the time it takes to find the items that buyers want, Shopee uses AI to analyze buyers and provide the products that buyers want. Therefore, Shopee also offers items to buyers that buyers want. Therefore, Shopee uses AI to predict customer purchasing behavior, such as whether they will buy an item or not, and provide recommendations for the item. Shopee can also estimate the delivery of the item to the buyer in an efficient and accurate time, using AI. Therefore, Shopee uses AI to recognize product images in the right category. This helps to simplify the process of finding items for buyers. Shopee uses AI to improve efficiency and productivity in its business operations, such as order processing.

With the implementation of AI, the Shopee application can provide more accurate product recommendations to users based on their data and preferences. This can increase customer satisfaction and also help increase seller sales. The implementation of AI in the Shopee application can also improve operational efficiency, for example by speeding up the shipping process and optimizing shipping routes. This can reduce operational costs and increase productivity. AI in the Shopee application can improve user experience by providing more relevant product recommendations, allowing users to find products easily, and shortening shipping times. This can increase customer satisfaction and increase customer loyalty. AI in the Shopee application can also help in data analysis and business decision making. By analyzing user and sales data, Shopee can identify trends and

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patterns that can help in making better business decisions. AI in the Shopee application can also help in fraud detection, thereby minimizing the risk of loss for users and sellers. AI can monitor suspicious activity and improve fraud detection better. The implementation of AI in the Shopee application can help improve efficiency, improve user experience, and increase profits for sellers.

Angga Aditya Permana (2019) in his book entitled Artificial Intelligence Marketing states that AI development can be complicated, and errors in code or logic can cause force closes. For example, errors in integrating AI with other parts of the application can trigger a crash. If the AI model is over-imposed on a particular training dataset and is unable to handle the actual data variations, it can cause force closes when faced with unknown data. Sometimes, AI implementations are not always compatible with all devices or operating system versions. This can cause force closes on some devices or certain conditions. Sometimes, AI implementations are not always compatible with all devices or operating system versions. This can cause force closes on some devices or certain conditions.

Despite being the most visited app and having been downloaded over 100 million times on the Google Play Store with a 4.6 rating and 13,838,904 reviews, Shopee still faces various customer complaints in the review section. Based on user reviews on the Google Play Store, many comments indicate dissatisfaction with issues such as frequent discrepancies between the map tracking location and the actual location, long loading times, frequent app crashes, frequent bugs and delays, difficulties with the chatbot not being able to recognize customer problems, and the need for specific keywords in searches.

From these user reviews, it is clear that Shopee developers still need to make many improvements to provide better service. The abundance of negative reviews from Shopee users indicates a lack of customer satisfaction with the app's performance, despite Shopee being the most visited e-commerce app in Indonesia. However, many other customers have also provided positive reviews, indicating that Shopee's service is already quite good. This can be attributed to the fact that individual satisfaction levels vary. According to Tjiptono, customer satisfaction is a feeling of pleasure or disappointment that arises after comparing perceived performance with expectations of a product.

Table 1.1 Shopee user complaints on Playstore

No	Username	Date	Criticism
1	Oscar Pangaribuan	04/28/2024	After updating to the new version, the app always force stops (closes itself and

			then reloads). When opening the video feature, it lags and force stops, but reloads and can't open the feature. I've cleared the cache, force stopped, and also tried other tutorials. Still force stops. This is very strange. The signal is good, but it always force stops (then reloads)
2	Nila Utami	04/24/2024	The application takes a long time to load. Is this a heavy application or is my phone slow? And it makes my phone hot when it takes a long time to load, even though there is still a lot of storage left. Please fix it again, so that users feel comfortable using this app.
3	Nasrullah Marsuki	04/09/2024	Serious bug, the application closes itself, I've tried clearing the cache, logging out and logging in, the bug still doesn't work. I've updated to the latest version, but it's still buggy. Please fix the application. I'm not the only one experiencing this, many other users are also experiencing this bug.
4	The Beauty of Aza	04/06/2024	Heavy shopping applications like to lag even though my cellphone has 8GB RAM. Open other applications smoothly. When I opened Shopee, I noticed that the application was lagging and it was hard to get it back on. Then delivery also takes longer. Customers want fast delivery. Why is there a guarantee for delivery if it takes a long time?
5	Angybear	04/28/2024	The apk exits itself, even though it has only been opened for a few seconds, even though my cellphone specs are quite new and are still very smooth to open other shopping apps. This bug is very annoying, please fix it
6	Holy Zahratulliza	04/27/2024	The more you upgrade, the more it goes down, when you look at it, it immediately goes back to the

(*Gustiyana, Ahmeed, 2024*)

			homepage, and so on. Don't keep replying and saying that the network is unstable. It's just the application that is having problems after the upgrade.
7	Anisaa wants to be an anime	04/28/2024	The application is getting weirder, the more it is updated, the worse it gets, the application often exits by itself, even though I haven't pressed anything, there are so many bugs, even though I still have a lot of memos + my network is good, but why does the application often suddenly exit by itself, it's getting more and more unclear
8	Suhaib Faqoth	04/05/2024	Updated but bad, entering the application is immediately greeted live and can not be turned off even though clicking other menus. And when exiting, the live sound can still be heard until the application has to be closed from the background. Please fix it..!!

Artificial Intelligence (AI) plays a vital role in enhancing better customer experience. AI helps improve customer interactions with companies and optimizes customer experience in ways that are impossible for humans. Artificial Intelligence (AI) has now become a very important and popular topic in the business world. One of the main reasons is the ability of AI to enhance customer experience, although there are still shortcomings in its application.

In Islamic business itself, there are principles that must be carried out by the perpetrators. The basic principles of Islamic business ethics must include: the principle of unity, the principle of justice, the principle of free will, the principle of responsibility and the principle of truth. The seller must be very honest in describing the goods to be sold. The uploaded photos must be real or actual photos. The goods sold must not be damaged, if there is damage, it must be explained. No party should be harmed in the sale and purchase transaction. Justice demands that no party should be harmed in their rights and interests. The application of artificial intelligence in the Shopee application itself is permissible and legitimate because there are no things that conflict with sharia law that prohibit it. This is in accordance with the As Sunnah Argument:

الْحَلَالُ مَا أَحَلَّ اللَّهُ فِي كِتَابِهِ وَالْحَرَامُ مَا حَرَّمَ اللَّهُ فِي كِتَابِهِ وَمَا سَكَتَ عَنْهُ فَهُوَ مِمَّا عَفَا عَنْهُ

"What is halal is what Allah has made lawful in His book, what is haram is what Allah has forbidden in His book, and whatever He has kept silent about is included in what is forgiven." (HR. At Tirmidhi No. 1726)

Based on this argument, Imam Asy Syaukani explained

الْأَصْلُ فِي الْأَشْيَاءِ الْمَخْلُوقَةِ الْإِبَاحَةُ حَتَّى يَقُومَ دَلِيلٌ يَدُلُّ عَلَى النَّقْلِ عَنْ هَذَا الْأَصْلِ

Which means: "Indeed the original law of all creation is permissible, until evidence is established that shows the change of this original law."."
(Imam Asy Syaukani, Fathul Qadir, 1/64. Mawqi' Ruh Al Islam)

Customer experience is the new title for providing value not only to companies but also to customers and good experience generally must involve individuals at various levels. Customer experience refers to a series of interactions that occur between customers and products, which will evoke emotions or trigger actions or reactions. Customer experience also refers to the real experience of customers with brands, products, or services to increase sales and brand awareness.

The consumer experience felt when using the application is also a consideration for consumers today in choosing e-commerce applications such as Shopee. To maintain loyal consumers, a strategy is needed that can provide customer experience to increase consumer satisfaction. According to Meyer and Schwager, it is the consumer's internal and subjective response as a result of direct or indirect interaction with the company. Furthermore, Shaw and Ivens stated that there are two elements in customer experience, namely physical and emotional. In addition, Shaw and Ivens also explained that customer experience is not influenced by one element/aspect alone, but a combination of many aspects, so that these components can be grouped into 5 dimensions of customer experience as a form of application of the approach that companies can take to provide experience to their consumers. As stated by Schmitt, the dimensions of customer experience consist of Sense, Feel, Think, Act, and Relate.

Variable Indicator

No.	Variables	Indicator
1.	*Artificial Intelligence* (Variable X)	1. Expert system 2. Natural Language Systems 3. *Computer Vision* 4. *Intelligent Computer*

(Gustiyana, Ahmeed, 2024)

No.	Variables	Indicator
2.	Customer Satisfaction (Variable Y)	1. Conformity to expectations 2. Interested in returning to visit 3. Willingness to recommend
3.	*Customer Experience* (Variable Z)	1. *Feel,* 2. *Sense* 3. *Think* 4. *Act* 5. *Related*

Table 1.2

B. THEORETICAL

1. Grand Theory (General Theory) Technology Acceptance Model

The theory used in this study is the Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) theory was first developed by Davis in 1989. Jogiyanto explained that "The Technology Acceptance Model (TAM) is a theory about the use of information technology systems that is considered very influential and is generally used to explain individual acceptance of the use of information technology systems". Fradana in Winayu explained that this TAM model more clearly illustrates that the acceptance of the use of information technology is influenced by the perception of usefulness and the perception of ease of use. This theory emphasizes two main concepts: perceived usefulness and perceived ease of use. TAM has been widely used to analyze user acceptance of various types of technology, from software to hardware (Melaningtyas Tesalonika Haning, 2021).

Artificial Intelligence (AI) is a field of computer science that focuses on the development of computers and computer systems that are capable of

performing tasks that normally require human intelligence. AI includes the development of algorithms and techniques to enable computers to "understand" and "learn" from data, and to make decisions or perform intelligent actions. Angga Aditya Permana (2019) said that Artificial Intelligence (AI) is a branch of computer science that deals with the development of systems that are capable of performing tasks that require human intelligence. AI aims to make machines or computer programs able to learn, think, and make decisions on their own without constantly relying on explicit programming.

The basic concept behind AI is to create machines or computer programs that can mimic or replicate human cognitive abilities, such as natural language processing, facial recognition, decision-making, problem-solving, and learning from experience. In some cases, AI can even surpass human capabilities in terms of speed and accuracy.

2. Specific Theory

Specific theory for variable Y, namely Consumer Satisfaction, is The Expectancy Disconfirmation Model Theory (Expectancy Disconfirmation Model) states that consumers form judgments about products or services using their prior expectations about the characteristics or benefits offered by the product or service provided. In the satisfaction literature, expectations are viewed as predictions made by consumers about what is likely to happen during a transaction or exchange, in contrast, in the service quality literature, expectations are viewed as consumers' desires, that is, what they feel the service provider should offer. Furthermore, Parasuraman et al. in testing and refining the scale suggested five underlying dimensions of service quality-reliability, responsiveness, tangibles, empathy and assurance- to be indicators of service quality for all service industries. The function of the service is represented by service quality. When consumers buy a product, they have expectations about how the product will function..

Hypothesis

For this study, the determined hypotheses are outlined as follows:
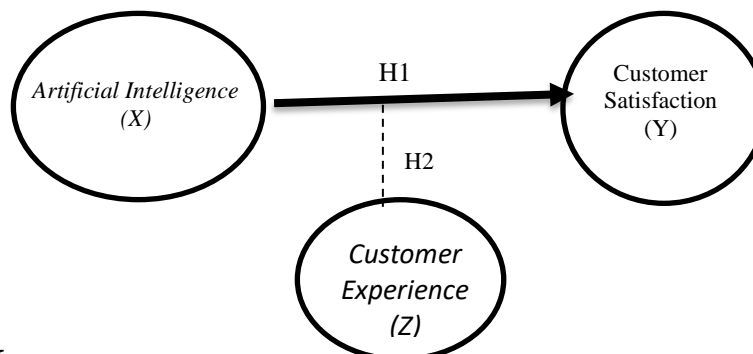
Framework

1. The Influence of Artificial Intelligence on Shopee Consumer Satisfaction among Students in Bandar Lampung

The Technology Acceptance Model (TAM) theory was first developed by Davis in 1989. Jogiyanto explained that "Technology Acceptance Model (TAM) is a theory about the use of information technology systems that is considered very influential and is generally used to explain individual acceptance of the use of information technology systems". Fradana in Winayu explained that this TAM model more clearly illustrates that the acceptance of the use of information technology is influenced by the perception of usefulness and the perception of ease of use. This theory emphasizes two main concepts: perceived usefulness and perceived ease of use. TAM has been widely used to analyze user acceptance of various types of technology, from software to hardware.

In a study conducted by Dr. R. Shridhar and D. Amogh entitled "The Role of Artificial Intelligence in Customer Satisfaction at Raipur City Chhattisgarh". and a study conducted by Yudha Nugrahaa, Yolanda Masnitab and Kurniawati Kurniawatitic entitled "The Role of Responsiveness Chatbot Artificial Intelligence in Forming Customer Satisfaction" which states that artificial intelligence has a positive and significant effect on customer satisfaction. However, based on a study conducted by Erica Titoni, Dhafa Firgana, Bryan Aditya, Tito A. Pribadi and Robby Lianto entitled "The Role of Chatbot Artificial Intelligence in Forming Customer Satisfaction" which states that Chatbot does not have a significant effect on customer satisfaction. In contrast to the study conducted by Erica Titoni and her friends, the study conducted by Mia Syafrina and Iga Puri Permata entitled "Analysis of the Influence of E-Recovery Service Quality and Customer Experience on Chatbots on Shopee E-commerce Consumer Satisfaction in Batam City". In addition,

research conducted by Agus Soetiyono, Yusuf Kurnia and Rudy Kurnia entitled "The Effect of Using Chatbots and Virtual Assistants on Increasing Customer Satisfaction and Its Impact on Purchasing Decision Making" which in their research stated that there is a positive and significant influence between the Artificial Intelligence variable and consumer satisfaction.

Based on previous theories and research, we can see that artificial intelligence can affect consumer satisfaction. So based on the description that has been explained, the following hypothesis can be proposed:

HI: Artificial Intelligence Has a Positive and Significant Influence on Consumer Satisfaction of Students in Bandar Lampung

2. *Custom*omer Experience Moderates the Relationship Between Artificial Intelligence and Consumer Satisfaction

Expectancy Disconfirmation Theory or can be abbreviated as EDT is a theory commonly used to explain how satisfaction or dissatisfaction is formed. EDT theory is a theoretical model that explains that a sense of satisfaction or dissatisfaction is obtained after purchasing a product and then comparing expectations with the actual performance of the product. Expectancy Disconfirmation Theory can also be called Theory The Expectancy Disconfirmation Model, is a development of the previous theory known as Cognitive Dissonance Theory (CDT) which was first introduced by Leon Festinger in 1957. CDT theory is a theory used to match a person's expectations of something with what he experiences about it directly.

Customer Experience is a consumer view resulting from interactions with service providers across touchpoints and how they feel after receiving service from a company. In this case, AI implementation may need to adjust dynamically, and these factors can affect customer experience which has an impact on consumer satisfaction.

According to the research results of Woo-Hyuk Kim, Sang-Ho Lee & Kyung-Sook Kim entitled "Effects of sensory marketing on customer satisfaction and revisit intention in the hotel industry: the moderating roles of customers' prior experience and gender" shows that customer experience moderates the relationship between sensory marketing and customer satisfaction and revisit intention. This is because the results show that previous customer experience is a significant moderator between sensory marketing views and customer satisfaction. Michael Boadi Nyamekye, Diyawu Rahman Adam, Henry Boateng and John Paul Kosiba. "Place attachment and brand loyalty: the moderating role of customer experience

(*Gustiyana, Ahmeed, 2024*)

in the restaurant setting" states that customer experience moderates the relationship between the influence of brand passion and brand love on restaurant brand loyalty. In contrast to previous studies, research conducted by Jefferson Dexter entitled "The Moderating Role of Customer Experience on the Influence of Visual Merchandising on Repurchase Intention KKV" The results of this study state that the moderating role of Customer Experience does not have a significant influence on Visual Merchandising on Repurchase Intention. However, in the research of Hatane Semuel, Andrew Sutanto entitled "The Influence of E-Service Quality on Customer Loyalty with Customer Experience as a Moderating Variable on the Use of the Go-Jek Application in Surabaya" states that customer experience can moderate the relationship between the influence of e-service quality on customer loyalty. Based on research conducted by Annabelle Victoria Santoso "Analysis of the Influence of Digital Marketing on Repeat Purchase with Customer Engagement and Customer Experience as Moderating Variables on Go-Food Food Delivery Services in Surabaya" The results of the study show that Customer Experience moderates the influence of digital marketing on Repeat Purchase. Customers who are satisfied with the service experience provided by GoFood will have a strong intention to make repeat purchases. Customer experience influences customers' decisions to make repeat purchases because customers want services that can meet their expectations.

Based on the explanation of the theory and opinions of the researchers above, it can be seen that customer experience can moderate the relationship between artificial intelligence and consumer satisfaction.

H2: Customer Experience Moderates Artificial Intelligence in the Shopee Application on Consumer Satisfaction of Students in Bandar Lampung

RESEARCH METHODS

1. **Types of research**

   This type of research uses a quantitative method, a descriptive type, namely research to describe more precisely the characteristics of efforts to determine the frequency of occurrence of something or the relationship of something else and provide systematic and accurate information about the characteristics of a particular population or object. This study provides an overview of the effect of the Implementation of Artificial Intelligence in the Shopee application on consumer satisfaction in Bandar Lampung City.

2. **Research Location**

The research location is the location where the research is conducted. This research will be conducted in the city of Bandar Lampung. Bandar Lampung City is a city in Indonesia as well as the provincial capital and the largest city in Lampung province. With a density of 5,332/km², Bandar Lampung City is one of the most densely populated cities on Sumatra Island, and is one of the largest and most densely populated cities in Indonesia, especially outside Java Island.

Geographically, this city is the main gateway to Sumatra Island, precisely approximately 165 km northwest of Jakarta, has an important role in land transportation routes and logistics distribution activities from Java to Sumatra and vice versa. Bandar Lampung City has a land area of 169.21 km² which is divided into 20 Districts and 126 Villages with a population of 1,166,066 people (based on the results of the 2020 population census). Meanwhile, according to the Ministry of Home Affairs, the population of Bandar Lampung City was 1,096,936 people in mid-2023.

3. Variables and Measurement Scales
Research Variables

Research variables according to(Sahir, 2022)is a component that has been determined by a researcher to be studied in order to obtain an answer that has been formulated in the form of a research conclusion. Variables are the main component in research, therefore research will not run without any variables being studied. Because variables are the main object in research to determine variables, of course, it must be with theoretical support that is clarified through the research hypothesis.

a. Free Variables are also called independent variables or variables that affect other variables, free variables are the cause of changes in other variables. In our study, the free variable is artificial intelligence.

b. The dependent variable is also called the dependent variable or the variable that is influenced by the independent variable, the dependent variable is the result of the independent variable. In our study, the dependent variable is consumer satisfaction.

c. Moderating variables are variables that theoretically influence (strengthen and weaken) the relationship between independent and dependent variables. The moderating variable in this study is Customer Experience.

Measurement Scale

The questions directed at respondents are questions that use an ordinal scale with answers that can get a score as shown in the following assessment table:

Answer Options	Score
Strongly Disagree	1
Don't agree	2

266

Neutral	3
Agree	4
Strongly agree	5

Table I.3

Population

Population is all the subjects being studied and sample is a portion of the population to be studied. Population according to(Amalia Yunia Rahmawati, 2020)generalization area consisting of: objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then conclusions drawn.

Sample

A sample is a part of the number and characteristics possessed by the population. If the population is large, and researchers cannot study everything in the population, for example due to limited funds, manpower and time, then researchers can use samples.

4. Method of collecting data

Questionnaire

A questionnaire is a data collection technique carried out by providing a set of written questions and statements to respondents to answer. A questionnaire is an efficient data collection technique if the researcher knows the variables being measured and knows what the respondents expect. Questionnaires can be in the form of closed and open questions or statements that can be given to respondents directly or sent by post or the internet. The questionnaire in this study was given to students in Bandar Lampung who used the Shopee application.

Library Method

Literature study is an activity of collecting data and information from various sources, such as books containing various theories that are very much needed, magazines, manuscripts, historical stories and documents. In this study, literature study is used to find theories related to research. Theories in this study were obtained from books, journals and various websites that are relevant to the research. This method is used to study and understand the effect of the application of artificial intelligence in the Shopee application on consumer satisfaction in Bandar Lampung.

5. Validity Test, Reliability Test, and Hypothesis Test

Validity Test

Validity test is a measurement of a research instrument and explains whether the instrument is valid or legitimate and can be used or not to measure

research variables. Validity test can be done by calculating the correlation value between the data on each question with the total score.

Valid values are Loading Factor values >0.70 but if the data Loading Factor is <0.70 then the data is invalid. In the research we conducted and after conducting a validity test using the SmartPLS application, the data we obtained were:

QUESTION	X	Y	Z
X.1	0.867		
X.2	0.835		
X.3	0.892		
X.4	0.894		
Y.1		0.894	
Y.2		0.862	
Y.3		0.896	
Y.4		0.871	
Y.5		0.869	
Z.1			0.862
Z.2			0.859
Z.3			0.827
Z.4			0.787
Z.5			0.862
Z.6			0.718

Table 1.4

Reliability Test

Reliability test is a tool used to measure the consistency of the questionnaire which is an indicator of a variable or construct. A valid value in the reliability test is >0.6 but if the data is <0.6 then the data is invalid. In the research we conducted and after conducting a reliability test using the SmartPLS application and only looking at Cronbach's alpha, the data we obtained were:

VARIABLES	CRONBACH'S ALPHA
X	0.895
Y	0.926
Z	0.903

Table 1.4

Hypothesis Testing

Hypothesis testing is a tool used to determine the results of temporary assumptions or statements used to solve a problem in research whose truth has been tested. By using the SmartPLS application and we have tested that:

	ORIGINAL SAMPLE (O)	P VALUES
X→Y	0.437	0.002
Z x X→Y	-0.040	0.359

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<center>Table 1.5</center>

The T-Statistic results show that the implementation of artificial intelligence (X) has a positive and significant effect on consumer satisfaction (Y). The path coefficient value (original sample) is 0.437 with a P-value of 0.002. Because the T-statistic value is greater than 1.96 and the P-value is less than 0.05, the hypothesis that the implementation of AI has a significant effect on consumer satisfaction can be accepted.

The results of the moderated regression analysis show that the interaction between customer experience and AI implementation is not significant in influencing consumer satisfaction. The interaction coefficient value of -0.040 with a P-value of 0.359 indicates that the second hypothesis (H2) is rejected. This means that customer experience does not moderate the relationship between AI implementation and consumer satisfaction.

D. RESULTS AND DISCUSSION

1. A Brief History of Bandar Lampung City

Bandar Lampung was officially made the name of the city in 1983. At that time, Government Regulation Number 24 of 1983 was issued which formalized the use of the name Bandar Lampung City. Quoted from the Book "Social History of the Lampung Region, Bandar Lampung City" published by the Department of Education and Culture in 1984, the submission of the name Bandar Lampung had actually been made since 1965.But it was delayed for more than 18 years due to something.

Before being named Bandar Lampung, this city was called the City of Tanjungkarang-Telukbetung. This name was given because at that time Bandar Lampung City consisted of Tanjungkarang City and Telukbetung City. In 1982, there was a regional expansion with the inclusion of three new sub-districts. Namely Kedaton District, Panjang District and Sukarame District. Previously, these three sub-districts were under the auspices of South Lampung Regency. The joining of these three new sub-districts made the name Tanjungkarang-Telukbetung no longer relevant. Meanwhile, adding the name of the three sub-districts was considered too long. Therefore, the name Bandar Lampung was chosen. Bandar here was taken because it was considered a port city, namely the gateway for people and goods to enter and exit. Agricultural products from other regencies were exported through Bandar Lampung City before being sent to other provinces, especially Java Island. Therefore, Bandar Lampung is a port for the Lampung Province area.

<center>269</center>

2. Respondent Characteristics

The data used in this study uses primary data obtained from respondents who have filled out the questionnaire, with a population of all students studying in Bandar Lampung and using the Shopee application, then the number of samples is determined using the Cochran formula so that the results are as many as 97 students studying in Bandar Lampung as samples.

Respondent Overview

In this study, the object of research chosen by the researcher is students studying in Bandar Lampung, totaling 97 students. The researcher hopes that 97 students studying in Bandar Lampung can find out the effect of the application of artificial intelligence on customer satisfaction in Bandar Lampung. In this study, respondents were asked to fill out a questionnaire containing questions related to indicators of artificial intelligence, customer satisfaction and customer experience.

Overview of the Variables Studied

The description of the variables Artificial Intelligence (X), Consumer Satisfaction (Y) and Customer Experience (Z) is as follows:

Artificial Intelligence Variable (X)

No	Variables	Average
	Artificial Intelligence	
1	X.1	3.79
2	X.2	3.40
3	X.3	3.77
4	X.4	3.68

Table 1.9

Artificial Intelligence (X) Discussion Results

Based on the table above, the results of the answer description test with an average answer for the artificial intelligence variable between 3.40 and 3.79. The data illustrates the variation in respondents' perceptions of the application of artificial intelligence that affects their satisfaction in using the Shopee application. This range of values indicates differences in views among respondents regarding the factors of the application of artificial intelligence that affect them. This range indicates that respondents consider the application of artificial intelligence to be quite supportive or positive (values above 3.0)

Consumer Satisfaction Variable (Y)

270

(Gustiyana, Ahmeed, 2024)

No	Variables	Average
Customer Satisfaction		
1	Y.1	3.68
2	Y.2	3.66
3	Y.3	3.72
4	Y.4	3.65
5	Y.5	3.51

Table 1.10

Consumer Satisfaction Discussion Results (Y)

In the consumer satisfaction variable, the average value per question is between 3.51 and 3.72. The data illustrates the variation in respondents' perceptions of their satisfaction in using the Shopee application. This range of values indicates differences in views among respondents regarding the satisfaction factors that influence them. The range indicates that respondents consider consumer satisfaction to be supportive or positive (values above 3.0)

Consumer Satisfaction Variable (Y)

No	Variables	Average
Customer Experience		
1	Z.1	3.66
2	Z.2	3.64
3	Z.3	3.86
4	Z.4	3.68
5	Z.5	3.45
6	Z.6	3.29

Table 1.11

Customer Experience Discussion Results (Y)

In the customer experience variable, the results of respondents' answers show an average range of values per question between 3.29 and 3.86. The data illustrates the variation in respondents' perceptions of the moderating role of customer experience in the application of artificial intelligence that influences their satisfaction in using the Shopee application. This range of values shows that there are differences in views among respondents regarding customer experience factors in the application of artificial intelligence that influence them. This range shows that respondents consider the application of customer experience in artificial intelligence to be quite supportive or positive (values above 3.0)

Hypothesis Testing

Hypothesis testing is an important part of research, after the data is collected and processed. The hypothesis is used to determine whether the independent variable has a significant effect on the dependent variable. Significant if <0.05 but will not be significant if >0.05. In the results of the hypothesis testing, the results were 0.748 (positive) and 0.000 (significant). So it can be concluded that XI (Store Atmosphere) has a positive and significant effect on Y (Consumer Satisfaction). So that Consumer Satisfaction can be significantly influenced by Store Atmosphere, then Consumer Satisfaction will experience a real increase.

Discussion

Based on the analysis conducted by the researcher, the following discussion results were obtained:

I.   The Influence of Artificial Intelligence on Consumer Satisfaction of Students in Bandar Lampung Who Use Shopee

Based on the results of the T test, it shows that Artificial Intelligence (X) on Consumer Satisfaction (Y) has a T-statistic value showing a value of 3.136> 1.660 and a p value of 0.002 <0.05. These results prove that Artificial Intelligence has a positive and significant effect on Consumer Satisfaction. So H1 which states that Artificial Intelligence has an effect on Consumer Satisfaction in Students in Bandar Lampung City who use the Shopee application is supported.

Thus, this finding confirms the importance of integrating Artificial Intelligence technology into e-commerce applications such as Shopee to improve consumer satisfaction. The use of AI can cover various aspects, such as personalizing product recommendations, improving customer service through chatbots, and optimizing the search and transaction process. In today's digital era, the ability to provide experiences tailored to individual preferences and needs is crucial in maintaining consumer loyalty. For students in Bandar Lampung City, who tend to be active users of e-commerce applications, the presence of AI that can improve the efficiency and convenience of online shopping will be highly appreciated and support their overall satisfaction.

The results of this study are supported by several previous studies that show the positive and significant influence of the application of artificial intelligence (AI) on consumer satisfaction.

Research by Dr. R. Shridhar and D. Amogh titled "The Role of Artificial Intelligence in Customer Satisfaction at Raipur City Chhattisgarh" found that the artificial intelligence variable has a direct

272

(*Gustiyana, Ahmeed, 2024*)

effect on customer satisfaction. This research is in line with the finding that the use of AI in the Shopee application also significantly increases customer satisfaction.

Research by Yudha Nugrahaa, Yolanda Masnitab, and Kurniawati Kurniawati entitled "The Role of Responsiveness Chatbot Artificial Intelligence in Forming Customer Satisfaction" shows that extrinsic value and online convenience of chatbots affect consumer satisfaction. Consumers are satisfied with the chatbot service, which also provides a pleasant experience. This supports the finding that AI in the Shopee application, such as chatbots, contributes positively to consumer satisfaction.

Research by Laura M. Aguiar-Costa, Carlos AXC Cunha, Wallysson KM Silva, and Nelsio R. Abreu entitled "Customer satisfaction in service delivery with artificial intelligence: A meta-analytic study" in 2017 showed that services with AI have a positive and significant effect on customer satisfaction. All correlations in this study were considered significant and homogeneous. This finding supports the results of the study that AI in the Shopee application has a significant and positive impact on consumer satisfaction.

Research by Salsi Kirana Sya'bani, Nur Aziezah, Hikmah Rahmah, Ridwan Siskandar, and Aep Setiawan entitled "The Effect of Effectiveness of AI Robot Based on Images Preprocessing on User Satisfaction in Detecting Tomato Ripeness" found a strong relationship between the effectiveness of the AI system and user satisfaction. This shows that the more effective the AI system, the higher the level of user satisfaction. The similarity with this study lies in the use of AI as the main variable that influences consumer satisfaction.

Thus, the results of this study are consistent with the findings of previous studies which show that the application of artificial intelligence in various e-commerce contexts and other services has a positive and significant effect on consumer satisfaction.

2.   Customer Experience Moderates the Relationship Between Artificial Intelligence and Consumer Satisfaction of Students in Bandar Lampung Who Use Shopee

Based on the results of the Moderated Regression Analysis (MRA) Test, it shows that the moderating role of Customer Experience (Z) on the influence of the Implementation of Artificial Intelligence (X) on

Consumer Satisfaction (Y) has a T-Statistic value of 0.1917 <1.96 and P-Values of 0.359> 0.05. These results prove that customer experience does not moderate the relationship between artificial intelligence and consumer satisfaction. So H2 which states that customer experience moderates the relationship between the implementation of artificial intelligence on consumer satisfaction in Students in Bandar Lampung City who use the Shopee application is rejected.

These findings suggest that while Artificial Intelligence has a positive and significant impact on customer satisfaction, customer experience does not strengthen or weaken the impact. In this context, the implementation of AI itself is strong enough to increase customer satisfaction without being influenced by the customer experience they experience while using the application. For students in Bandar Lampung City who use Shopee, this means that the AI features implemented by Shopee directly contribute to their satisfaction, regardless of the variations in user experience they may experience. Therefore, the main focus should remain on the development and improvement of AI technology itself to ensure that customer satisfaction remains high.

The results of this study are in line with several previous studies showing that customer experience does not always moderate the relationship between various factors and expected outcomes. For example, a study by Hatane Semuel and Andrew Sutanto entitled "The Effect of E-Service Quality on Customer Loyalty with Customer Experience as a Moderating Variable on the Use of the Go-Jek Application in Surabaya" found that customer experience does not moderate the relationship between e-service quality and customer loyalty, because the T-statistic value does not reach 1.96 and P-values are not less than 0.05, so their hypothesis (H3) is not accepted.

Another study by Vera Septaria and Rusma Rizal in "The Influence of Brand Image and Brand Experience on Behavioral Intention through Customer Experience as Moderation" shows that customer experience as a moderating variable does not have a significant influence on the relationship between brand image and behavioral intention or brand experience and behavioral intention. This can be seen from the T-statistic value which is less than 1.9775 and P-values which are more than 0.05 in both relationships.

Research by Selly Apriliana in "Factors Affecting Customer Interest in Using Mobile Banking with Customer Experience as a Moderating Variable: Applying the UTAUT 2 Model" also found that customer experience was unable to moderate the relationship between effort

(Gustiyana, Ahmeed, 2024)

expectancy and customer interest, with a significant value of 0.002 <0.05 and a coefficient value of 0.028.

Jefferson Dexter's research in "The Moderation Role of Customer Experience on the Influence of Visual Merchandising on Repurchase Intention KKV" found that the moderating role of customer experience did not have a significant influence on the relationship between visual merchandising and repurchase intention, with a T-statistic value of 1.707 (less than 1.96) and a P-value of 0.089 (above 0.05). The results of this study indicate that the hypothesis of customer experience as a moderating variable that influences visual merchandising on repurchase intention is rejected.

Thus, this study is supported by previous findings showing that customer experience does not always moderate the relationship between various variables and expected outcomes in the context of e-commerce and other digital services.

3.   Application of Artificial Intelligence to Consumer Satisfaction Reviewed from an Islamic Business Perspective

The Islamic business view of artificial intelligence is reviewed from the Islamic service theory, where in service must pay attention to the basic principles of service, one of which is paying attention to the principle of service quality, Service is one level of excellence that can be applied to meet customer expectations. by strengthening the quality of service in accordance with what has been explained in Islamic law, namely providing the best service so that the creation of pleasure for all can be created. As explained by the word of Allah SWT in QS An-Nisa verse 29

يٰٓاَيُّهَا الَّذِيْنَ اٰمَنُوْا لَا تَأْكُلُوْٓا اَمْوَالَكُمْ بَيْنَكُمْ بِالْبَاطِلِ اِلَّآ اَنْ تَكُوْنَ تِجَارَةً عَنْ تَرَاضٍ مِّنْكُمْۗ وَلَا تَقْتُلُوْٓا اَنْفُسَكُمْۗ اِنَّ اللّٰهَ كَانَ بِكُمْ رَحِيْمًا

Meaning: "O you who believe! Do not devour each other's wealth in a false way, except in trade that is based on mutual consent between you. And don't kill yourself. Indeed, Allah is Most Merciful to you."

The verse explains the command to make transactions based on mutual consent, which means that consumers like what the seller provides, both in terms of products and services. Therefore, it is a must for every business actor to provide the best service in order to create conditions as explained in the verse above.

The application of artificial intelligence (AI) in e-commerce can be seen from the perspective of Islamic business through several key principles underlying business ethics in Islam, especially on platforms such as Shopee, which have strong relevance to Islamic business principles. Some of the key principles that are in line with the use of AI in Islamic business include:

1)   Customer Oriented (Customer Oriented)

Islamic business emphasizes the importance of paying attention to customer needs and satisfaction. This implies the importance of fairness and balance in providing services to customers. AI technology can help in personalizing the customer experience, providing recommendations that are tailored to individual needs, and ensuring that customers receive fair and satisfactory service.

2)   Transparency

The principle of transparency is highly emphasized in Islamic business. The use of AI must be done with transparency, where customers are given clear information about how their data is used. Transparency in data management and business operations helps build trust and ensures that business is conducted honestly and fairly.

3)   Healthy Competition

Islam encourages healthy competition and opposes unfair business practices. In this context, AI can be used to increase efficiency and innovation in e-commerce, without monopolizing the market or using unfair practices against competitors. Healthy competition will encourage all business actors to improve the quality of their services.

4)   Fairness

Fairness is one of the main pillars of Islamic business. The application of AI in e-commerce must ensure that all customers are treated fairly. AI algorithms must be designed in such a way that they do not discriminate against certain users and provide equal service to all customers.

By adhering to these Islamic business principles, the application of artificial intelligence in e-commerce such as Shopee not only improves service efficiency and customer satisfaction but also ensures that business operations remain ethical and in accordance with Islamic teachings. This will build long-term trust between the company and its customers, which is the core of sustainable business success.

(Gustiyana, Ahmeed, 2024)

E. CONCLUSION

Based on the results of data analysis conducted by researchers through distributing questionnaires to students studying in Bandar Lampung and using the Shopee application, several conclusions can be presented as follows:

1. Based on the research results, the application of artificial intelligence (AI) in e-commerce, especially the Shopee application, has a positive and significant effect on consumer satisfaction. This means that the more sophisticated and efficient the artificial intelligence technology used in e-commerce applications, such as personalized product recommendations, chatbots for customer service, and optimization of the transaction process, can increase consumer satisfaction. This artificial intelligence technology is able to provide a better, faster, and more tailored shopping experience to the individual needs of consumers, so that consumers feel more satisfied and tend to continue using the application.

2. The results of the Moderated Regression Analysis (MRA) test show that Customer experience does not moderate the relationship between the application of artificial intelligence and consumer satisfaction. This means that there is a relationship between the application of artificial intelligence and consumer satisfaction, but this relationship is not influenced by customer experience. It can be concluded that although artificial intelligence technology used in e-commerce applications, such as Shopee, has a direct positive and significant effect on consumer satisfaction, variations in customer experience do not strengthen or weaken this influence. In other words, consumer satisfaction resulting from the application of artificial intelligence does not depend on the level of customer experience they experience while using the application.

3. The conclusion of this study shows that the implementation of artificial intelligence in the Shopee application has a positive and significant effect on consumer satisfaction, in line with the principles of Islamic business. Artificial intelligence technology used to personalize product recommendations, chatbots for customer service, and optimize transaction processes provide real benefits and increase efficiency in service and a better shopping experience for consumers. The principles of fairness, honesty, and transparency recommended in Islamic business are reflected in the use of this technology, ensuring that all consumers receive fair service and accurate information. Thus, the integration of artificial intelligence in e-commerce can significantly increase consumer satisfaction while still adhering to Islamic business ethics and values.

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