

The Effect of Artificial Intelligence and Gamification on Online Purchase Intention Mediated by Customer Experience: Study on Indonesian Marketplace Users

Raeni Dwi Santy¹⁾; Muhammad Iffan^{2*)}

¹⁾ raeny.dwisanty@email.unikom.ac.id, Universitas Komputer Indonesia, Indonesia.

^{2*)} m.iffan@email.unikom.ac.id, Universitas Komputer Indonesia, Indonesia.

*) Corresponding Author

ABSTRACT

Objectives: This study aims to analyze the effect of Artificial intelligence and gamification on online purchase intention, as well as the role of customer experience as a variable that mediates the effect of artificial intelligence and gamification on online purchase intention. The marketing approach in today's era tends to lean towards digital personalization using Artificial intelligence and gamification to improve customer engagement and experience. This is ongoing with the fast rate at which technology has been expanding. The development of artificial intelligence has increased consumer happiness even more, making it even more crucial in the contemporary environment. Also, Gamification has clearly been identified as a method of influencing consumer behavior. The use of game design elements in non-game contexts is known as gamification. Gamification and persuasive technologies have been used for business purposes and to influence customer behavior.

Methodology: The method used in this study is a quantitative method using survey research with marketplace users in Indonesia as the object of the research. Data collection which was used is the cross-sectional method by distributing online questionnaires from Google Forms. The research sample was selected using the purposive sampling method in order to obtain 272 respondents from various users (Tokopedia, Shopee, Lazada, Blibli, and Bukalapak users). The data analysis that is used is the path analysis Structural Equation Model (SEM) by SmartPLS 3.0 software. The first stage in data analysis is to recapitulate data on the characteristics of the respondents. The next step is to measure the validity and reliability using discriminant validity, convergent validity, composite reliability, and Cronbach's alpha. Then, to test the inner model, a Goodness of Fit test was carried out through R-Square and significance testing by interpreting path analysis values, T-values, and P-Values.

Finding: In this research conducted on marketplace users in Indonesia, it was found that Artificial Intelligence and Gamification are determinants of Customer Experience but these two variables cannot directly support Online Purchase Intention. Further findings indicate that Customer Experience can be an important determining factor for Online Purchase Intention. Customer experience can strengthen the online purchase intention among marketplace users.

Conclusion: The result of this study shows that Artificial intelligence and gamification cannot affect online purchase intention directly but artificial intelligence and gamification can affect online purchase intention indirectly through customer experience.

Keywords: Artificial Intelligence; Gamification; Customer Experience; Online Purchase Intention

Submitted:

2022-12-15

Revised:

2023-01-26

Accepted:

2023-02-8

Article Doi:

http://dx.doi.org/10.22441/jurnal_mix.2023.v13i1.015

INTRODUCTION

The marketing era in this decade has transformed from traditional to modern which includes online purchasing and selling (Lutfie & Marcelino, 2020). As stated by Kotler et al. (2017), marketing 4.0 leverages machine-to-machine connectivity and artificial intelligence to increase marketing productivity while leveraging human-to-human connectivity to strengthen customer engagement. Therefore, unlike Marketing 3.0, Marketing 4.0 no longer focuses on a human-oriented approach. The scope of marketing 4.0 includes Artificial Intelligence (AI), Natural Language Processing (NLP), Internet of Things (IoT), sensor technology, automated work, 3D printing, and omni-channel marketing which have been implemented by many industrial sectors, one of which is an online marketplace.

The emergence of e-commerce has changed consumer shopping behavior from offline shopping to online shopping because the online marketplace is supported by various conveniences and features. As a result, consumers choose online marketplace as their main choice when shopping. This makes online marketplace businesses continue to thrive, especially in Indonesia which experiences rapid increases from year to year. Data published by Ginee, a cloud-based e-commerce enabler solution provider from Singapore stated that the number of active users from the top five marketplaces in Indonesia in the first quarter of 2021 were Tokopedia, Shopee, Bukalapak, Lazada, and Blibli with the following market shares:

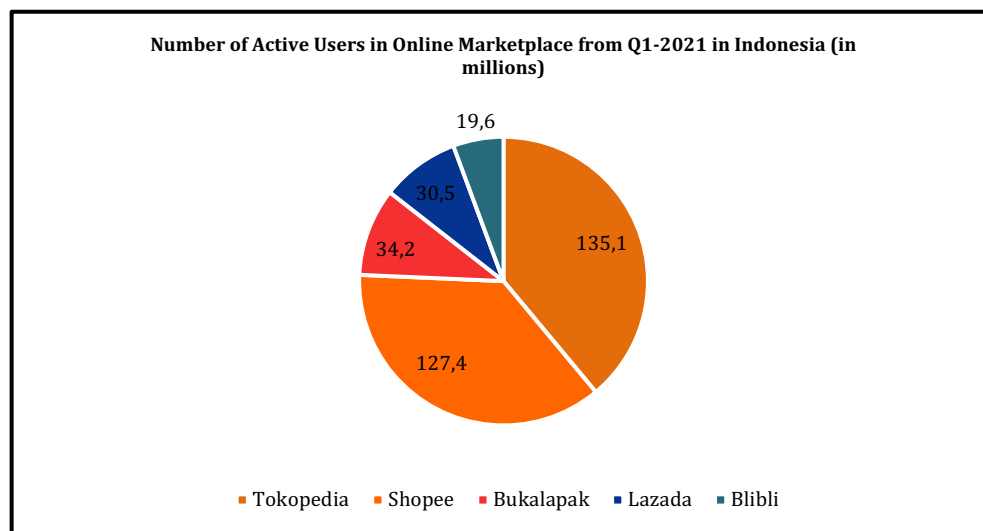


Figure 1. Number of Active Users in Online Marketplace during Q1-2021 in Indonesia (in millions)

The first quarter of 2021 shows that the number of users from the top five marketplaces in Indonesia was 346.8 million users which means that everyone can use more than one marketplace platform. With a large number of users using the platform, sellers are required to be able to accommodate each user personally with more effectiveness and efficiency. The internet of things, big data, artificial intelligence, and cyber-physical systems are a few examples of how technology is used in daily life (Nurjannah et al, 2022). Based on this finding, the use of Artificial Intelligence (AI) in the platform takes part in facilitating the work of both marketers and users. The ease of using AI from the customer's point of view is altering the

product search feature and product recommendations to suit the customer's personal preferences so that customers are expected to be loyal in using their marketplace platform.

Another strategy used by the marketplace is gamification which can strengthen relationships with customers and increase customer engagement through positive interactions (Lucasen and Jansen, 2014). Gamification is present in the midst of the development of the game industry with the segmentation of the younger generation. This is complemented by the fact that marketplace users are dominated by the age group of 18-34 years (Salsabila and Roni, 2020). The implementation of gamification can be done by adapting game design elements to non-game activities. For example, the online marketplace implemented challenges and quests, points, rewards, levels, and badges (see Figure 2). Elements of these games can motivate buyers and sellers to increase the frequency of buying and selling transactions (Puspa Rinjeni et al, 2020).

Gamification programs are still actively carried out by marketplaces in early 2022. For example, Tokopedia with Tokopedia Seru created the "Tap-Tap Tokopedia" program where customers will open gift boxes containing GoPay coins and various vouchers as well as the "Panen Telur" program and "TopQuest". In another marketplace, Shopee created the "Shopee Lucky Prize" where customers who have already made a purchase transaction are given the opportunity to break eggs containing rewards such as Shopee coin vouchers. Likewise, Bukalapak, Lazada, and Blibli implement similar programs within their application. Figure 2 is the gamification display for each marketplace.

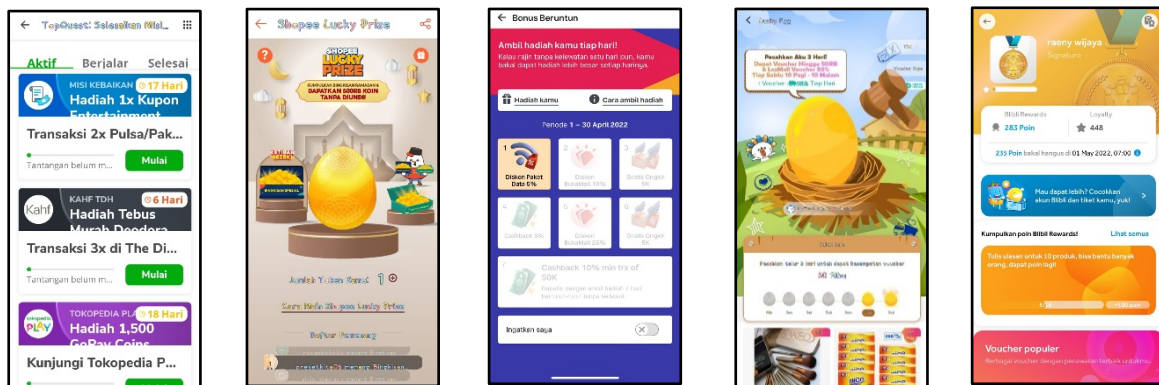


Figure 2. Gamification Display on the Tokopedia, Shopee, Bukalapak, Lazada and Blibli Marketplace Applications

The application of AI and interactive but also fun gamification greatly influences good customer experience and it is hoped that customer loyalty will be built (Dexter and Rashard, 2014). Customers want products that can really please and satisfy them, are suitable for their lifestyle, as well as provide valuable experiences (Abadi et al, 2020). Therefore, if the customer experience of the marketplace is positive, it will have an impact on the purchase intentions of marketplace users (Chen and Yunpeng, 2020).

This study aims to analyze the effect of artificial intelligence and gamification on online purchase intention with customer experience as mediating variable of the effect of artificial intelligence and gamification on online purchase intention.

LITERATURE REVIEW

Artificial Intelligence (AI)

AI is the embodiment of machines that display aspects of human intelligence and continue to be used in services and are a source of today's innovation (Huang and Rust, 2018). AI describes a machine (computer) that simulates the cognitive and affective functions of the human mind (Verma et al, 2021).

In its application to the marketplace on the customer side, AI technology uses algorithms developed to analyze customer behavior (Jain and Keshav, 2020). The algorithm works on the results of collecting customer cookie data to find out patterns of customer behavior which in turn can provide personalized recommendations. Personalized recommendations allow customers to increase the probability of a purchase decision. AI in the marketplace can be measured by mechanical intelligence, analytical intelligence, intuitive intelligence, and empathetic intelligence (Huang and Rust, 2018).

Gamification

Gamification is the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals (Burke, 2014). Gamification uses game elements, such as design techniques, thinking, and mechanics by involving users to solve non-game problems (Wagner and Liu, 2015). Gamification is the process of enhancing the affordability of existing services in a gamified experience to support the creation of certain values (Houtari and Hamari, 2017).

Gamification and games of the two dictions often bias their meanings. Even though gamification and games are certainly different. Gamification results from game adaptation. While games in general have regular game situations and have meaning and purpose to be played (Derryberry and Serious, 2007). The game is divided into four types, namely simulator, teaching game, meaningful game, and purposeful game. Gamification can be measured by social interaction, sense of control, goals, progress tracking, rewards, and prompts (Eisingerich et al, 2019).

Customer Experience

In general, customer experience is defined as customer reactions and responses to certain stimulation (Becker and Elina, 2020). Customer experience is a customer's cognitive and affective assessment of all direct and indirect encounters with companies related to their buying behavior (Klaus and Stan, 2012).

Customer experience is created not only from using the product but more than that which refers to all aspects that the customer feels along the way and then combines them into a holistic experience (Zomerdijk and Voss, 2010). An example of the efforts made by the marketplace in building a better customer experience includes online flow states, customized and personalized

offers, and visual designs that make the shopping experience more enjoyable (Ertemel et al, 2021). Customer experience can be measured by product experience, outcome focus, moments of truth, and peace of mind (Klaus and Stan, 2012).

Online Purchase Intention

Purchase intention is defined as the consumer's intention to purchase products from a company in the future (Yu and Hung-Tai, 2011; Saxena, 2011). Purchase intention is described as a situation when consumer acceptance is formed and intends to make a transaction (Ling et al, 2011). Customers are more likely to have a favorable brand commitment that prompts them to actually make a purchase when they have a high buying intent (Achmad et al, 2022). Purchase decision is a decision-making process that begins with problem identification, evaluation, and selection of the most appropriate solution (Genoveva & Samukti, 2020). Instead of concentrating only on purchasing decisions, marketers must pay attention to the complete buying decision-making process, especially purchase intention (Ramli et al, 2020).

Purchase intention in this study refers to the willingness to perform a certain behavior (Ajzen, 1991) which in this study is translated as online buying behavior by marketplace users. Purchase intention can be measured by purchase intention, future purchase estimates, and intention to purchase (Liang et al, 2020). Purchase intention is a behavioral aspect of consumption behavior (Wardhani & Chen, 2021). Furthermore, it appears that consumers have a strong desire to make a purchase which can provide motivation that is continuously recorded (Soelton et al, 2020).

The Effect of Artificial Intelligence on Customer Experience

Research conducted by Ayunda et al (2021) on users of Gojek's ride-hauling and online food ordering services, AI plays a very important role in improving customer experience. Daqar & Smoudy (2019) proved that there is a positive relationship between artificial intelligence and customer experience. Based on the results of these studies, the following hypothesis can be drawn:

H₁: Artificial Intelligence has an effect on Customer Experience

The Effect of Gamification on Customer Experience

There is research that discusses that the application of gamification has a significant influence on customer experience in the hotel and restaurant tourism industry (Maxwell et al, 2020). Vdov (2020) stated that respondents that participated in the digital gamified system resulted in the majority of users having a positive customer experience. The following is the hypothesis of the effect of gamification on customer experience.

H₂: Gamification has an effect on Customer Experience

The Effect of Artificial Intelligence on Online Purchase Intention

Artificial Intelligence has a major role in online purchase intention in research conducted on Amazon Fashion users with Echo Look as the AI stimulus (Liang et al, 2020). Burke (2014)

demonstrates how artificial intelligence influences consumer purchasing decisions favorably, and also demonstrates how the incorporation of artificial intelligence improves consumers' intent to buy. Based on the results of previous research, the hypothesis is determined as follows:

H₃: Artificial Intelligence has an effect on Online Purchase Intention

The Effect of Gamification on Online Purchase Intention

Aulia et al's research (2021) shows that gamification also has an impact on online purchase intentions which was conducted on Shopee marketplace customers and Taobao online shopping customers with the Stackopolis gamification program. Yu & Huang (2022) showed that gamification has a favorable effect on users who access e-commerce platforms with the intention to make purchases. The relationship between perceived value and platform purchase intent is mediated by game use intention. The following is the hypothesis of the effect of gamification on online purchase intention.

H₄: Gamification has an effect on Online Purchase Intention

The Effect of Customer Experience on Online Purchase Intention

Previous research conducted on customers in e-commerce platforms shows that customer experience has a significant impact on purchase intention (Chen and Unpeng, 2020). When consumers have been successfully triggered by interesting stimuli while browsing content (e.g., creative activities, clear information, and engaging interactions), they are more likely to have a good customer experience (Yu and Hung-Tai, 2011). The following is the hypothesis of the effect of customer experience on online purchase intention.

H₅: Customer Experience has an effect on Online Purchase Intention

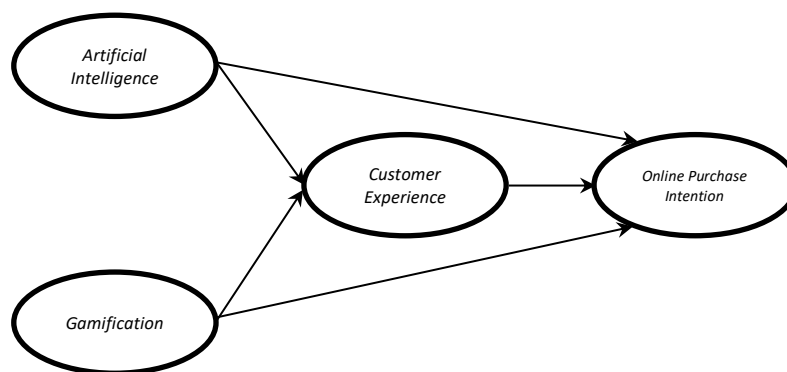


Figure 3. Conceptual Framework

METHOD

The research method used in this study was a quantitative method with a path analysis approach which includes Structural Equation Modeling (SEM). The path analysis model used in this study is a recursive model in which all arrows point in one direction and there is no looping or

reciprocal causation. Exogenous variables are Artificial Intelligence and Gamification. The endogenous variable is Online Purchase Intention while the mediating variable is Customer Experience.

The population used is an unknown number of active online marketplace users in Indonesia (Tokopedia, Shopee, Bukalapak, Lazada, and Blibli). The marketplaces were chosen as the subject because it has the largest number of market shares in Indonesia which can be interpreted to be quite representative within the scope of research. The sampling method is purposive sampling. Due to the unknown or unlimited population of the five marketplace users, the sampling technique used was to adjust the Issac and Michael tables with an error rate of 10%, totaling 272 respondents (Sugiyono, 2010).

This research is a cross-sectional study in which the respondents who are the research sample are sent a Google Form link to fill out a questionnaire. The link to the questionnaire includes a cover letter explaining the purpose of the survey instrument and the survey itself. After completing the questionnaire, respondents were notified that the researchers maintain data confidentiality in accordance with research ethics. Each questionnaire item was measured using a five-point Likert scale. The variables used in the questionnaire were adapted from various sources. In the Artificial Intelligence section of the questionnaire, the items were adapted from Huang and Rust (2018), gamification questionnaire items were adapted from Eisingerich et al. (2019), customer experience questionnaire items were adapted from Philip and Stan (2012), and online shopping intentions were adapted from Liang et al. (2020).

To process the data, SmartPLS 3.0 software is used which displays the outer model and inner model calculations in the study. The outer model is used to measure the validity and reliability of item statement items in research. While the inner model is to answer the research hypothesis by looking at the T-values and P-values. The analysis uses the PLS Algorithm and Bootstrapping.

RESULTS AND DISCUSSION

Results

Based on the questionnaire results, 272 respondents were obtained. The respondents are 52.57% males and 47.43% females with the age of 13-25 years. The employment status of the respondents are students and the majority of the average monthly income is less than IDR 1,500,000. While the application used for online shopping is Shopee with more than 3 years of shopping experience. The detailed demographics are shown in Table 1.

Table 1. Characteristics of Respondents

	Characteristics	Total	Percentage
Gender	Male	143	52.57
	Female	129	47.43
Age	13-25 y.o.	217	79.78
	26-41 y.o.	29	10.66
	42-57 y.o.	26	9.56

	Characteristics	Total	Percentage
Occupation	Unemployment	11	4.04
	Part-time	2	0.73
	Students	203	74.63
	Private employee	34	12.50
	Professional	2	0.73
	State Civil		
	Apparatus/Military/Police	2	0.73
	Private worker	8	2.94
	Entrepreneur	10	3.68
Income (month)	< Rp 1.5 million	169	62.13
	Rp 1.5-2.5 million	39	14.34
	Rp 2.5-3.5 million	10	3.68
	>Rp 3.5 million	54	19.85
Marketplace used	Tokopedia	121	44.48
	Shopee	249	91.54
	Bukalapak	29	10.66
	Lazada	11	4.04
	Blibli	6	2.20
Experience in online shopping	<1 year	28	10.29
	1-3 year(s)	121	44.48
	>3 years	123	45.22

Next is to calculate the outer model or measurement model by measuring the validity and reliability tests on the item statement items in the study. Discriminant validity, convergent validity, composite reliability, and Cronbach's alpha are the measurements of the model used (Abdilah and Hartono, 2015). Discriminant validity uses cross-loading if the indicator value is greater than the other variables (Ghazali, 2014). The value loading factor which is one of the measurements of validity must have a minimum value of 0.70 to be valid (Ghazali, 2014). If the value is less than 0.70, the statement item must be discarded or not used (Hair et al, 2014). Convergent validity is seen by the Average Variance Extracted (AVE) value with the required value of 0.5 (Kwong and Kay, 2013). Meanwhile, the reliability test uses a composite reliability value with a minimum required value of 0.6 (Ghazali, 2014). There are other alternatives besides composite reliability, namely Cronbach's alpha with the required minimum value of 0.7 (Kwong and Kay, 2013).

The first step is to look at the loading factor value in the model, taking into account whether all research items are valid or not. The following is the loading factor value for the first model using SmartPLS 3.0:

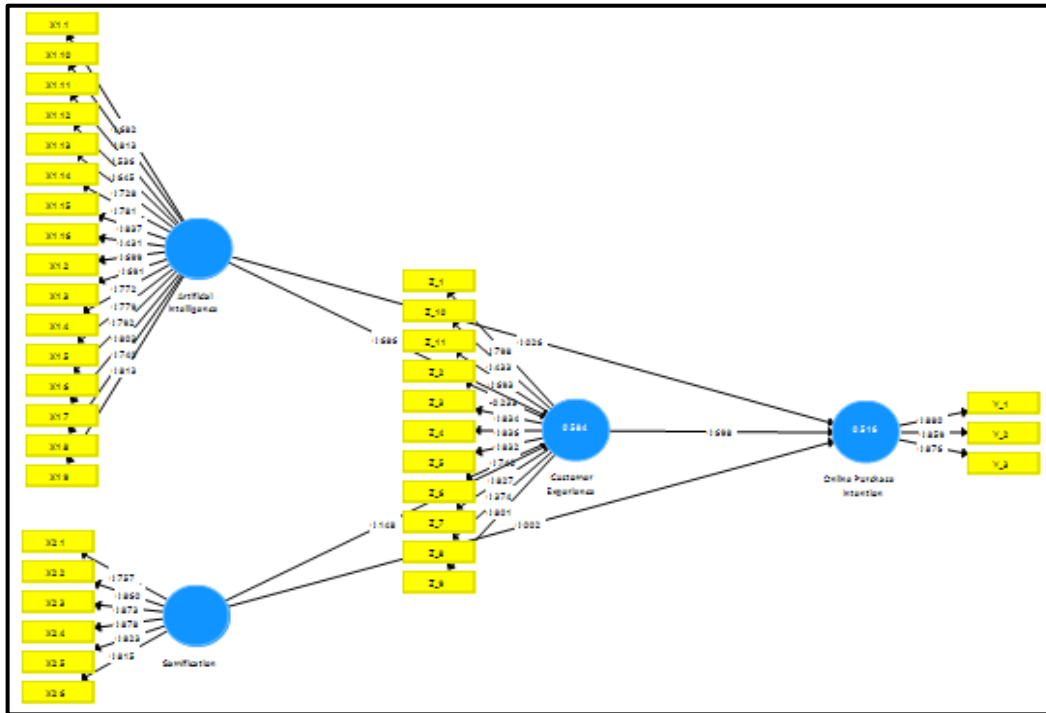


Figure 4. First Model Path Diagram and Loading Factor Value

Based on Figure 4, there are ten loading factors that have a value below 0.70, namely in items X1.1, X1.2, X1.3, X1.11, X1.12, X1.16, Z_2, Z_8, Z_10, Z_11, so it should be eliminated from the model. After the items whose loading factor values are below 0.70 are discarded, the model was tested again to see whether all item measurements comply with the requirements or not as shown in the second model (see Figure 5).

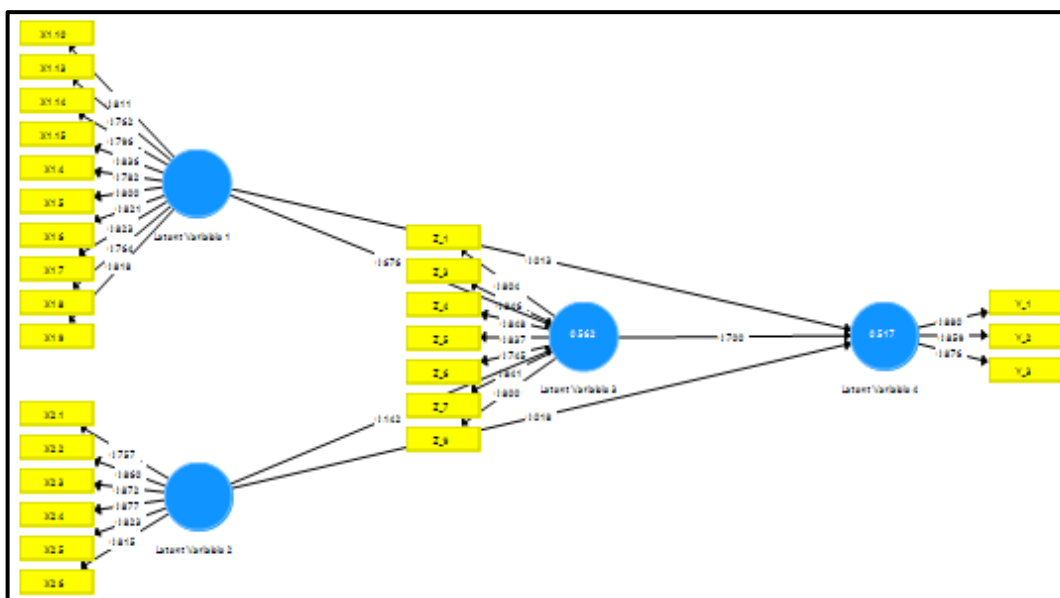


Figure 5. Model of the Two Path Diagrams and Loading Factor Values

Based on Figure 5, all items in the model have a loading factor value above 0.70 which is in accordance with the requirements of the study (Ghazali, 2014). Then, the values of the loading factor on the variables were compared using the cross loading as shown in Table 2.

Table 2. Cross Loading

	AI	GM	CX	OPI
X1.4	0.782	0.305	0.567	0.398
X1.5	0.800	0.382	0.611	0.477
X1.6	0.821	0.324	0.623	0.480
X1.7	0.823	0.338	0.555	0.419
X1.8	0.764	0.379	0.469	0.370
X1.9	0.818	0.389	0.582	0.444
X1.10	0.811	0.441	0.588	0.426
X1.13	0.762	0.353	0.530	0.366
X1.14	0.796	0.315	0.642	0.452
X1.15	0.836	0.338	0.670	0.466
X2.1	0.319	0.757	0.267	0.241
X2.2	0.347	0.860	0.307	0.276
X2.3	0.306	0.872	0.323	0.239
X2.4	0.278	0.877	0.308	0.252
X2.5	0.497	0.823	0.508	0.367
X2.6	0.390	0.815	0.403	0.246
Z 1	0.603	0.389	0.804	0.567
Z 3	0.630	0.394	0.846	0.624
Z 4	0.654	0.330	0.848	0.614
Z 5	0.635	0.333	0.837	0.612
Z 6	0.513	0.461	0.745	0.535
Z 7	0.622	0.358	0.841	0.594
Z 9	0.565	0.273	0.800	0.564
Y 1	0.505	0.251	0.677	0.880
Y 2	0.445	0.317	0.578	0.859
Y 3	0.457	0.311	0.617	0.876

The results in the cross-loading table above show that the value of the loading factor on the variables that make it up is greater than the other variables so it can be stated that the indicator items used already have good discriminant validity in compiling their respective variables (Ghazali, 2014). Meanwhile, the Average Variant Extracted (AVE) value for each variable is shown in Table 3.

Table 3. Average Variant Extracted

Variable	AVE
AI	0.643
GM	0.697
CX	0.670
OPI	0.760

Based on Table 3, all AVE values are more than 0.5 which is in accordance with the validity requirement (Kwong and Kay, 2013). Therefore, when viewed from convergent validity and discriminant validity, it can be stated that all items in the measurement are declared valid. For the reliability test, it is seen based on the respective values of composite reliability and Cronbach's alpha. The results of the reliability test are shown in Table 4.

Table 4. Reliability Test

	Composite Reliability	Cronbach's Alpha
AI	0.947	0.938
GM	0.932	0.914
CX	0.934	0.917
OPI	0.905	0.843

Based on Table 4, the Composite Reliability in the test results has met the requirements (more than 0.6) and the Cronbach's alpha values also have met the requirements (more than 0.7). It can be concluded that all items have high construct consistency in measuring latent variables (construct).

Next is the inner model using SmartPLS 3.0, Goodness of fit test is carried out through R-Square (R^2), and the significance test is through path coefficient estimation (path coefficient values, T-values, and P-values), as well as specific calculations of the effect of exogenous variables on endogenous variables through intervening variables.

The goodness of Fit is used to determine the suitability of a structural model by looking at the value of R^2 which is the value of the determinant coefficient to explain the predictive power of endogenous variables that can be explained by exogenous variables (Sobur, 2020). The criterion for the R^2 value is measured based on the interval range with the following criteria, <0.67 which is a good criterion; $0.33-0.67$ is a moderate criterion; and $0.19-0.33$ is a weak criterion (Ghazali, 2014). The following is the output of the R^2 value using SmartPLS 3.0:

Table 5. R-Square

Endogen Variable	R-Square
CX	0.562
OPI	0.517

Based on Table 5, the R^2 value for Customer Experience is 0.562 which means that Artificial Intelligence and Gamification have an influence of 56.2%, of which the rest is influenced by other variables not examined in this study. While for Gamification, it is equal to 0.517 which means that Artificial Intelligence and Gamification have an influence of 51.7% of which the rest is influenced by other variables not examined in the study. The two endogenous variables have moderate criteria because they are in the interval range of $0.33-0.67$ (Ghazali, 2014).

The path coefficient value explains whether or not there is an influence of exogenous variables on endogenous variables and their significance by looking at the values of T-statistics and P-

Values. In addition, the answers to each hypothesis will be explained in the SmartPLS 3.0 output results in Table 6.

Table 6. The path coefficient

Variable		T-Stat.	P-Val.	Prov. Hypothesis
Exogen	Endogen			
AI	→ CX	9.444	0.000	Accepted
GM	→ CX	2.691	0.007	Accepted
AI	→ OPI	0.159	0.874	Rejected
GM	→ OPI	0.310	0.756	Rejected
CX	→ OPI	10.919	0.000	Accepted

Provision:

H_0 is accepted and H_a is rejected: if $t_{count} < t_{table}$

H_0 is rejected and H_a is accepted: if $t_{count} > t_{table}$

$T_{table} = \Sigma \text{ Respondent-2; sig } 0.05 (270; 0.05) = 1.650.$

In the Specific Indirect Effect, based on the results obtained regarding the answers to the hypothesis, it is proposed that Artificial Intelligence on Online Purchase Intention and Gamification on Online Purchase Intention in marketplace users in Indonesia was rejected because the $t_{count} < t_{table}$ and p-values $> 0, 05$. However, when passing the mediation variable, namely Customer Experience, there is a change to a significant effect, which is seen based on the output of SmartPLS 3.0 as follows:

Table 7. Specific Indirect Effect

	T-Stat.	P-Val.
AI ⇒ CX ⇒ OPI	7.423	0.000
GM ⇒ CX ⇒ OPI	2.665	0.008

Discussion

For the first hypothesis (H_1), the t_{count} value of Artificial Intelligence on Customer Experience is 9.444 which is greater than t_{table} ($9.444 > 1.650$) and is significant because the p-values are < 0.05 , so it is interpreted that there is a significant influence of Artificial Intelligence on Customer Experience because the p-values are < 0.05 for marketplace users in Indonesia. These results indicate that H_1 is accepted and in accordance with the research of Ayunda et al. (2021) which shows that Artificial Intelligence has an effect on the Customer Experience of Gojek users in Bandung. When companies want to do more detailed personalization on a larger scale, artificial intelligence becomes very important. Marketers will turn to Artificial Intelligence to provide a much better customer experience. Customers will be much more satisfied, interested, and preferential in the products or services provided. Companies that prioritize a positive customer experience will learn more about what their customers like. Customers can be recommended products or services by artificial intelligence. A personalized website or an effective customer service interaction can achieve such large-scale personalization.

For the second hypothesis (H_2), the t_{count} for Gamification on Customer Experience is 2.691 which is greater than t_{table} ($2.691 > 1.650$) and it is significant because the p-values are < 0.05 , so it is interpreted that there is a significant influence of Gamification on Customer Experience because p-values are < 0.05 for marketplace users in Indonesia. These results indicate that H_2 is accepted and in accordance with the research of Maxwell et al. (2020) which shows that Gamification has an effect on Customer Experience in the hotel and restaurant tourism industry in Nigeria. Companies utilize gamification to accomplish their objectives. Typically, companies use gamification to encourage the desired activity by turning the customer experience into a game. Customers eventually perform these actions out of habit which leads to continuing engagement activities. The motivation that must be used in packaging the "game" is the employment of persuading statements, appealing visual displays, and the rewards offered. The desire to participate in the game is vital since it not only offers functional benefits like price breaks, coupons, and bonuses but also emotional benefits by involving the customer's sentiments. Customers that use the product will have a favorable experience since they will feel proud and happy that it has reached a specific level. This will boost loyalty and promote trust.

For the third hypothesis (H_3), the t_{count} value on Artificial Intelligence on Online Purchase Intention is 0.159 which is greater than t_{table} ($0.159 < 1.650$) and is not significant because the p-values are > 0.05 , so it is interpreted that there is no significant influence of Artificial Intelligence to Online Purchase Intention because the p-value is > 0.05 for marketplace users in Indonesia. These results indicate that hypothesis 3 is rejected and contradicts the research of Liang et al. (2020). Although in this study artificial intelligence is not the main determinant of online purchase intention, basically artificial intelligence has a role in increasing online purchase intention in terms of selling products in the marketplace. With the help of artificial intelligence, marketers now have a practical method for swiftly and successfully responding to data from prospective customers and using it to customize products and customer experiences. Customers who have not yet decided whether to make a purchase will automatically receive extra incentives to do so while other customers may be pointed in the direction of relevant goods and services based on data-driven insights.

For the fourth hypothesis (H_4), the t_{count} value for Gamification on Online Purchase Intention is 0.310 which is greater than t_{table} ($0.310 < 1.650$) and it is not significant because the p-value is > 0.05 , so it is interpreted that there is no influence and significance of Gamification on Online Purchase Intention because the p-value is > 0.05 for marketplace users in Indonesia. These results indicate that hypothesis 4 is rejected and contradicts the research of Aulia et al. (2021). Despite the fact that gamification was not the primary factor in this study's analysis of online purchase intentions, it can be said that artificial intelligence plays a part in boosting these intentions when it comes to the sale of products online. Gamification can boost customer engagement and online purchase intent in a marketplace. Gamification is made available to users so that they would be interested in and driven to play games and continue interacting with the app or website. The purpose of this feature will be to motivate consumers to accumulate as many points as they can which may also indirectly enhance online purchase intention and promote impulsive buying.

For the fifth hypothesis (H_5), the t_{count} value on Customer Experience on Online Purchase Intention is 10.919 which is greater than t_{table} ($10.919 > 1.650$) and is significant because the p-values are < 0.05 , so it is interpreted that there is a significant influence of Customer Experience on Online Purchase Intention because p-values are < 0.05 for marketplace users in Indonesia.

These results indicate that H₅ is accepted and is in accordance with Chen and Yunpeng's research (2020) which shows that customer experience influences purchase intention of e-commerce users in China. One of the most important aspects of business is to provide a positive experience. The better it is, the more positive feedback it will receive which results in a positive image for the company. Satisfied customers can boost company sales and become loyal customers. They will spread the word about the product and faithfully support it. Customer experience can influence consumer perceptions and purchasing decisions. This can be accomplished by consistently providing the best service possible.

This research can assist e-commerce companies in attracting customer purchase intention to buy products or services offered by utilizing artificial intelligence and gamification. This research also emphasizes the importance of a positive customer experience to build a good corporate and product image in achieving customer loyalty.

CONCLUSION

In conclusion, Artificial Intelligence has a significant influence on Customer Experience in marketplace users in Indonesia. Gamification also has a significant influence on Customer Experience for marketplace users in Indonesia. However, Artificial Intelligence has no influence on Online Purchase Intention for marketplace users in Indonesia. Gamification also has no influence on Online Purchase Intention for marketplace users in Indonesia. Lastly, Customer Experience has a significant influence on Online Purchase Intention among marketplace users in Indonesia. The study has concentrated on a subset of the target population. As a result, there is potential to include a larger sample of the population in order to obtain more accurate results. Further research is needed to examine more comprehensively the factors that influence customer experience and online purchase intention.

REFERENCES

- A. Derryberry and I. Serious, "Serious Games: Online Games for Learning," *Serious Games*, no. 9, pp. 1–15, 2007, [Online].
- Abadi, R. R., Nursyamsi, I., & Syamsuddin, A. R. (2020). Effect of Customer Value and Experiential Marketing to Customer Loyalty with Customer Satisfaction as Intervening Variable (Case Study on Gojek Makassar Consumers). *The Asian Journal of Technology Management*, 13(1), 82–97.
- Abdillah, W., Hartono. (2015). *Partial Least Square (PLS)*. Yogyakarta: Andi. Page 195.
- Achmad, A., Saputra, A. I., Ardiansyah, A. F., & Hendriana, E. (2022). The Effectiveness of Social Media Advertisement in The Indonesian Sneakers Industry: Application of The Extended Advertising Value Model. *MIX: Jurnal Ilmiah Manajemen*. 12 (1): 1-13. http://dx.doi.org/10.22441/jurnal_mix.2022.v12i1.001.
- Ajzen, Icek. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, Volume 50, Issue 2, 179-211.
- Aulia, Dita., Sulistya Rini, Endang., Fadli. (2021). The Influence of Gamification, E Service Quality and E-Trust on Online Purchase Decision with Online Purchase Intention as

- Intervening Variable at the Marketplace Shopee in Medan City. *International Journal of Research and Review*, Vol. 8 Issue 8, 546-558.
- Ayunda Dipta Arviollisa, Putri., Chan, Arianis., Nirmalasari, Healthy. (2021). The Effect of Artificial Intelligence (AI) on Customer Experience (Study of Gojek Users in Bandung, West Java). *Journal of Thought and Research in Business Administration and Entrepreneurship*, Vol.6, No. 2, 115-124.
- Bhagat, R., Chauhan, V., & Bhagat, P. (2022). Investigating the impact of artificial intelligence on consumer's purchase intention in e-retailing. foresight, (ahead-of-print).
- B. Burke. 2014. "How Gamification Motivates People to Do Extraordinary Things" Harvard: Bibliomotion, Inc.
- B. Eisingerich, Andreas., Marchand, André., P. Fritze, Martin., Dong, Lin. (2019). Hook vs. hope: How to enhance customer engagement through gamification. *International Journal of Research in Marketing*, Volume 36, Issue 2, 200-215.
- Becker, Larissa., Jakkola, Elina. (2020). Customer experience: fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48, 630-648.
- Chen, Nan., Yunpeng Yang., (2020). The impact of customer experience on consumer purchase intention in cross-border E-commerce-Taking network structural embeddedness as mediator variable. *Journal of Retailing and Consumer Services*, Volume 59, March 2021, 102344.
- Daqar, M. A. A., & Smoudy, A. K. (2019). The role of artificial intelligence on enhancing customer experience. *International Review of Management and Marketing*, 9(4), 22.
- Dexter, Jonathan., Yazdanifard, Rashard. (2014). Applying gamification to the service industry as an effective way of gaining and retaining customers. Retrieved from <https://www.researchgate.net/publication/26082530>.
- Ertemel, A. V., Civelek, M. E., Eroğlu Pektaş, G. Ö., & Çemberci, M. (2021). The role of customer experience in the effect of online flow state on customer loyalty. *PloS one*, 16(7).
- Genoveva, G., & Samukti, D. R. (2020). Green Marketing: Strengthen the Brand Image and Increase the Consumers' Purchase Decision. *MIX: Jurnal Ilmiah Manajemen*. 10 (3): 367-384. <http://dx.doi.org/10.22441/mix.2020.v10i3.004>.
- Ghozali, Imam. (2014). *Structural Equation Modeling—Metode Alternatif dengan Partial Least Squares (PLS)*. Semarang: Diponegoro University.
- Hair, Joseph F., G. Tomas M. Hult., Christian M. Ringle., Marko Sarstedt. (2014). *A primer on Partial least Structural Equation Modeeling (PLS-SEM)*. California. USA: SAGE Publications, Inc..
- Huang, M., & Rust, R. T. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 2–6.
- Jain, Piyush., Aggarwal, Keshav. (2020). Transforming Marketing with Artificial Intelligence. *International Research Journal of Engineering and Technology (IRJET)* Volume: 07 Issue:07, 3964-3976.

- K. Huotari and J. Hamari. (2017). "A Definition for Gamification: Anchoring Gamification in The Service Marketing Literature," *Electron. Mark.*, Vol. 27, No. 1, 21–31.
- Klaus, Philipp., Maklan, Stan. (2012). Towards a better measure of customer experience. *International Journal of Market Research*. Vol. 55 Issue 2, 227-246.
- Kotler, Philip., Kartajaya, Hermawan., Setiawan, Iwan. (2017). *Marketing 4.0: Moving from Traditional to Digital*. Jakarta: PT. Main Library Gramedia.
- Kwong, Ken., Kay Kwong (2013). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS*. Marketing Bulletin, 24, Technical Note 1.
- Liang, Yuli., Lee, Seung-Hee., E. Workman, Jane. (2020). Implementation of Artificial Intelligence in Fashion: Are Consumers Ready?. *Clothing and Textiles Research Journal*, Vol. 38(1) 3-18.
- Ling, K.C., Daud, D., Piew, T.H., Keoy, K.H., & Hassan, P.F. (2011). Perceived Risk, Perceived Technology, Online Trust for the Online Purchase Intention in Malaysia. *International Journal of Biometrics*, 6(6), 167-182.
- Lucasen, G., Jansen, S. (2014) Gamification in Consumer Marketing – Future of Fallacy? *Procedia -Social and Behavioral Sciences*, 194-202.
- Lutfie, H., & Marcelino, D. (2020). Creating Online Purchase Decision and Brand Image Based on Advertising Effectiveness with Epic Model. *MIX: Jurnal Ilmiah Manajemen*. 10 (3): 346-366. <http://dx.doi.org/10.22441/mix.2020.v10i3.003>.
- Maxwell Worimegbe, Powel., Mariam Worimegbe, Temitope., Abiola-Oke, Elizabeth. (2020). Gamification and Customers Experience in the Hospitality Industry. *Journal of Tourism and Services*. Vol. 11 Issue. 21, 71-87.
- Nurjannah, N., Erwina, E., Basalamah, J., & Syahnur, M. H. (2022). The Impact Of E-CRM And Customer Experience on E-Commerce Consumer Loyalty Through Satisfaction in Indonesia. *MIX: Jurnal Ilmiah Manajemen*. 12 (1): 56-69. http://dx.doi.org/10.22441/jurnal_mix.2022.v12i1.005.
- Puspa Rinjeni, Tri., Lemantara, Julianto., Poerna Wardhanie, Ayouvi. (2020). Implementation of Gamification in Marketplace Applications for Website-Based Processed Coffee Bean Sales. *Komunika Journal*, Vol. 9 No. 1, 52-63.
- Ramli, Y., Permana, D., Soelton, M., Hariani, S., & Yanuar, T. (2020). The Implication of Green Marketing That Influence the Customer Awareness Towards Their Purchase Decision. *MIX: Jurnal Ilmiah Manajemen*. 10 (3): 385-399. <http://dx.doi.org/10.22441/mix.2020.v10i3.005>.
- Salsabila Putri, Aurelia., Zakaria, Roni. (2020). Mapping Analysis of the Largest e-Commerce in Indonesia based on the Digital Economy Power Model. *IDEC National Seminar and Conference*. 2020, ISSN: 2579-6429.
- Saxena, Anant. (2011). Blogs And Their Impact On Purchase Intention: A Structural Equation Modelling Approach. *Paradigm: A Management Research Journal*, 15(1-2), 102-110.
- Setiaman, Sobur. (2020). *Partial Analysis of Structural Equation Models with Smart PLS* Software version 3.

- Soelton, M., Rohman, F., Asih, D., Saratian, E. T. P., & Wiguna, S. B. (2020). Green Marketing That Effect the Buying Intention Healthcare Products. *European Journal of Business and Management*. 12 (15).
- Sugiyono. (2010). *Educational Research Methodology* (Qualitative, Quantitative Education and R&D). Bandung: Alfabeta. Page 128.
- Suh, A., Wagner, C., & Liu, L. (2015). The Effects of Game Dynamics on User Engagement in Gamified Systems. 2015 48th. *Hawaii International Conference on System Sciences*. <https://doi.org/10.1109/hicss.2015.87>
- Vdov, K. (2020). The effect of gamification on customer experience in the digital environment.
- Verma, Sanjeev., Sharma, Rohit., Deb, Subhamay., Maitra, Debojit. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *International Journal of Information Management Data Insights*, Volume 1, Issue 1.
- Wardhani, A. K., & Chen, D. K. J. (2021). The Effect of YouTube Media of Online Review, Visualization and Trust on Intention to Buy Smartphone. *MIX: Jurnal Ilmiah Manajemen*. 11 (1): 36-46. <http://dx.doi.org/10.22441/mix.2021.v11i1.003>.
- Yu Hsu, Hsuan., Tsou, Hung-Tai. (2011). Understanding customer experiences in online blog environments. *International Journal of Information Management*. 31(6), 510-523.
- Yu, N., & Huang, Y. T. (2022). Why do people play games on mobile commerce platforms? An empirical study on the influence of gamification on purchase intention. *Computers in Human Behavior*, 126, 106991.
- Zomerdijk, L. G.; Voss, C. A. (2010). Service Design for Experience-Centric Services. *Journal of Service Research*. 13(1), 67–82.