



# Enhancing Online Purchase Intention Through Artificial Intelligence: Transformation to Digital Customer Experience

**Raeni Dwi Santy<sup>1\*</sup>**

Department of Magister Management, Postgraduate Faculty  
Universitas Komputer Indonesia, Jalan Dipati Ukur 102-106, Bandung, INDONESIA  
[raeny.dwisanty@email.unikom.ac.id](mailto:raeny.dwisanty@email.unikom.ac.id)

**Mahdan Ghifari Qalbi Hamdani<sup>2</sup>**

Department of Management, Faculty of Economics and Business  
Universitas Komputer Indonesia, Jalan Dipati Ukur 102-106, Bandung, INDONESIA  
[hamdanimahdan@gmail.com](mailto:hamdanimahdan@gmail.com)

**Saura Jeane Aquar Rahma<sup>3</sup>**

Department of Magister Management, Postgraduate Faculty  
Universitas Komputer Indonesia, Jalan Dipati Ukur 102-106, Bandung, INDONESIA  
[saura.75222015@mahasiswa.unikom.ac.id](mailto:saura.75222015@mahasiswa.unikom.ac.id)

## ABSTRACT

This study investigates how Artificial Intelligence (AI) and Gamification affect the Online Purchase Intent of Shopee Marketplace users in Bandung City, with Customer Experience as a mediating factor. Employing a quantitative approach, combining descriptive and verification research methods, it aims to uncover the direct and indirect impacts of AI and Gamification on Online Purchase Intent through Customer Experience. Primary data is gathered through questionnaire distribution among 100 Shopee users in Bandung City. Structural Equation Modeling Partial Least Square (SEM-PLS) analysis, using SmartPLS software, is utilized for examination. Results indicate that both AI and Gamification influence Customer Experience, although they do not directly affect Online Purchase Intent. Nonetheless, they significantly impact Online Purchase Intent when mediated by Customer Experience. This study is expected to impact Artificial Intelligence and Gamification in Shopee Bandung, which should be further developed to provide a good experience and foster repeat usage of the Shopee Marketplace. Implementing personalized AI recommendations and engaging gamification features in online marketplaces like Shopee can significantly enhance customer engagement, drive online purchase intent, and sustain

© The Author(s) 2024

L. Warlina and S. Luckyardi (eds.), *Proceedings of the International Conference on Business, Economics, Social Sciences, and Humanities - Economics, Business and Management Track (ICOBEST-EBM 2024)*, Advances in Economics, Business and Management Research 291,  
[https://doi.org/10.2991/978-94-6463-465-5\\_11](https://doi.org/10.2991/978-94-6463-465-5_11)

competitiveness in the e-commerce market.

**Keywords:** Artificial Intelligence, Online Purchase Intention, Customer Experience, Digital Marketplace

## 1. INTRODUCTION

The rise of e-commerce has revolutionized how consumers shop, shifting their preferences from traditional brick-and-mortar stores to online marketplaces. This shift is driven by the numerous conveniences and features offered by online platforms, making them the preferred choice for shoppers (Aparicio et al., 2021). During the second quarter of 2023, Shopee emerged as the leading online marketplace in Indonesia, boasting the highest number of website visits. With an average of 167 million visits per month, Shopee significantly outperformed its competitors in the region (Aulia et al., 2021). In product selection, consumers first choose criteria obtained from sellers, media information, and general experience (Santy et al., 2020). Consumer purchasing interest refers to the inclination of consumers to acquire or opt for a product, driven by their previous experiences in selecting, using, consuming, or simply desiring it (Pahala et al., 2021). The concept of online purchase intent encompasses factors influencing an individual's desire and intention to make purchases through online platforms. These factors include information on the website, trustworthiness, user-friendliness, and perception of site usefulness, and are linked by attention, interest, desire, and action (Sumarliah et al., 2022). Artificial Intelligence, or AI, refers to the ability of computer systems to imitate or mimic human intelligence (Korteling et al., 2021). Artificial Intelligence (AI) possesses the capability to make decisions by leveraging data present within its system. Its functionalities encompass learning, reasoning, and self-correction, mirroring the cognitive processes humans employ when analyzing information before decision-making (L. Chen et al., 2020). The use of AI technology by Shopee in fraud detection, data analysis, visual search, and automatic chatbot usage enables them to provide a better shopping experience for users and improve their operational efficiency. Gamification also provides uniqueness and differentiation from competitors, thus increasing the likelihood of product purchases and enhancing E-Marketplace competitiveness (Eisingerich et al., 2019). Gamification is the utilization of game elements and mechanics outside of traditional gaming scenarios to amplify user motivation, involvement, and interaction. This entails incorporating features like point systems, levels, challenges, rewards, and competitive aspects to foster a more engaging experience and encourage users to accomplish particular objectives. Customer experience is a strategy that exists in the era of the industrial revolution, where the agriculture sector is displaced by the manufacturing sector, along with the increasing economic conditions of society and the automation process, so that people's income increases and they have more free time, so people prefer to buy services rather than just obtaining expected needs both goods and services (Becker et al., 2020). Customer experience encompasses the interactions and impressions that customers have regarding a company's offerings, including its products, services, and brand. Customer experience involves all customer touchpoints with the company, both physically and digitally, from cognitive, emotional, physical, sensory, and social aspects.

Unfortunately, there are some differences in this study compared to previous research. The study "The Role of Artificial Intelligence on Enhancing Customer Experience" (Daqar et al., 2019) solely explored AI's role in improving customer experience across various industries in Palestine. Meanwhile, "Gamification and Customer Experience in the Hospitality Industry" (Worimegbe et al., 2020) delved into the effects of gamification in the hospitality sector, emphasizing loyalty programs and promotional strategies. Conversely, "The Influence of Artificial Intelligence and Digital Marketing on Consumers' Buying Intention" (Pangkey et al., 2019) focused solely on the impact of AI and digital marketing on consumers' buying intentions, specifically in the context of online transportation among millennials. Furthermore, "Why do people play games on mobile commerce platforms? An empirical study on the influence of gamification on purchase intention" (Yu et al., 2022) examined users' game-playing intentions and the influence of gamification mechanisms on purchase intentions in mobile commerce platforms, albeit without exploring the role of AI or gamification in shaping online purchase intent through customer experience. However, "The impact of customer experience on consumer purchase intention in cross-border E-commerce Taking network structural embeddedness as mediator variable" (N. Chen et al., 2021) Chen's research aimed to investigate how network structural embeddedness acts as a mediator between customer experience and purchase intention within the realm of cross-border e-commerce. Through a combination of online surveys and structural equation modeling, the study aimed to shed light on the intricate dynamics of consumer behavior within this specific context. Furthermore, in the study "The effect of artificial intelligence and gamification on online purchase intention mediated by customer experience: a study on Indonesian marketplace users" (Santy et al., 2023), unfortunately, it is also revealed that although AI and gamification impact customer experience, they do not directly impact online purchase intention. This underscores the pivotal importance of customer experience in influencing purchasing behavior.

The aim of this research is to investigate the impact of AI and Gamification on Online Purchase Intent among Shopee Marketplace users in Bandung City, with Customer Experience serving as a mediator. This study adopted a quantitative approach, combining descriptive and verification research methods. Primary data collection involved surveying 100 Shopee users in Bandung City. Data analysis was conducted using Structural Equation Modeling Partial Least Square (SEM-PLS) with the assistance of SmartPLS software.

## 2. LITERATURE REVIEW

Artificial Intelligence (AI), often referred to as machine intelligence, is a technology that enables machines to simulate human behaviour (Purnama et al., 2021). In the modern era, AI has become increasingly important as it bridges the gap between data science and execution. According to (Pangkey et al., 2019), AI allows for the filtering and analysis of large data sets that were previously impossible to process efficiently. However, AI is not limited to just one dimension. As described by Arviollisa et al. (2021), there are four main dimensions of AI. The first is mechanical intelligence, which includes the machine's ability to perform physical tasks automatically. Next, analytical intelligence allows machines to analyze and process data quickly and accurately. Conversely, intuitive intelligence pertains to a machine's capacity to learn and evolve based on experience. Lastly, empathetic intelligence involves the machine's capacity to sense and understand human emotions. Solakis et al. (2022) also identify several important AI factors in the development of this

technology. From the use of service robots in various industries to chatbots that provide efficient customer service, AI factors encompass various aspects of modern life. Moreover, recent advancements like virtual reality, augmented reality, and mixed reality have utilized AI technology to enhance and enrich user experiences, resulting in more immersive interactions.

Gamification has become an increasingly popular approach in various contexts, particularly in learning and marketing. Chrisnathaniel et al. (2021) explain that gamification can be implemented in the form of game features that reward users who have made purchases. This aims to increase consumer engagement and motivate them to interact more actively with brands or products. However, gamification is not limited to learning and marketing. Gamification involves the integration of game elements into non-game contexts to address various challenges or issues. In other words, gamification can be applied in various contexts to increase motivation, engagement, and user participation in activities that may previously have been considered less interesting. The influence of gamification on user engagement can be measured through three main dimensions (Xi et al., 2019). These dimensions include immersion, achievement, and the social dimension.

Consumer purchase intent plays a pivotal role in consumer behavior, particularly within the realm of online shopping. According to Asdiyansyuri (2020), purchase interest is the stimulation that arises due to an attraction to a product that is seen, which then provides a stimulus for an individual to respond positively to an offer from a seller. In the context of online shopping, purchase interest has several observable indicators (Indiani et al., 2020). These indicators include the intention to shop online, the desire to shop online in the future, and the readiness to provide credit card information. This reflects the consumers' interest and readiness to make purchases through online platforms. With technological advancements and the increasing accessibility of the internet, online purchase interest continues to grow. This is due to the ease and convenience offered by online shopping, where consumers can make purchases from home without having to visit a physical store.

Customer Experience (CX) has become a primary focus for companies in their efforts to understand and fulfil customer needs and satisfaction. According to Barbu et al. (2021), CX can be defined as a psychological construct that views the subjective responses of consumers to the interactions between them and the company, brand image, as well as the products or services offered. In the view of Zare et al. (2020), CX is the result of a combination of emotional or rational perceptions of customers when interacting with a business, both directly and indirectly. To measure CX, several indicators have been identified (Barbu et al., 2021). These indicators include factors such as ease of use, perceived value, customer support, assurance, speed, and the perception of the company's innovation. By measuring these indicators, companies can understand how customers evaluate their experience with the offered products or services.

### 3. METHODOLOGY

This study employs both descriptive and verificative methods with a quantitative approach. Descriptive analysis is utilized to elucidate variables such as Artificial Intelligence, Gamification, Online Purchase Intent, and Customer Experience. Verificative analysis, on the other hand, is employed to test Online Purchase Intent considering Artificial Intelligence and Gamification, when mediated by Customer Experience. This research

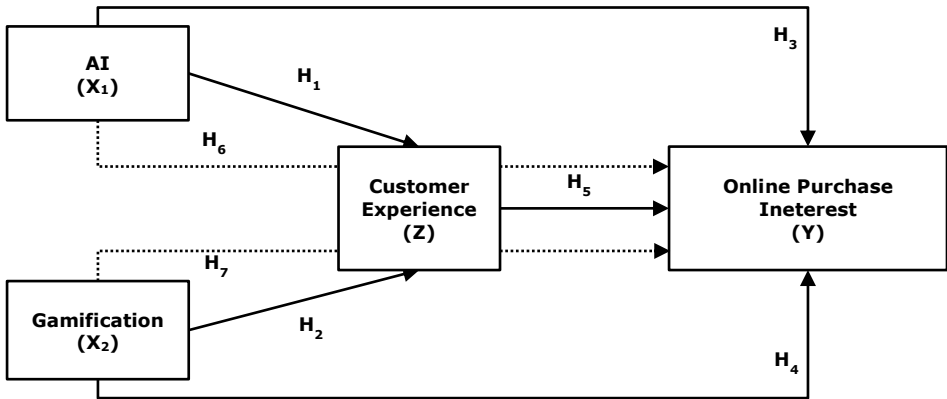
employs non-probability sampling, specifically utilizing a purposive sampling technique, specifically targeting users who have played games on the Shopee Marketplace, totalling 100 respondents. The sample size is calculated using the Cochran formula for situations where the population size is unknown, as depicted in Equation 1.

$$n = \frac{Z^2pq}{e^2} \quad (1)$$

Source: Cochran qtd. in Spineli and Pandis (2020)

The data were obtained through a literature review and questionnaires conducted in the second semester of 2023. Validity and reliability tests were conducted using outer model analysis with Smart Partial Least Squares (SmartPLS 3.2.8) software. This research utilized the inner model (path coefficient and P-Values) with the Partial Least Squares (PLS) method analysis technique, which consists of R-Square and Goodness of Fit (GoF). Further testing involves hypothesis testing among constructs, which includes Direct Effect and Specific Indirect Effect (t-test), as well as Variance Accounted For (VAF) testing.

Drawing from existing literature and prior studies, this research employs online purchase interest as the dependent variable, with artificial intelligence and gamification as the independent variables, and customer experience as the intervening variable. Consequently, the research design illustrated in Figure 1 is established.



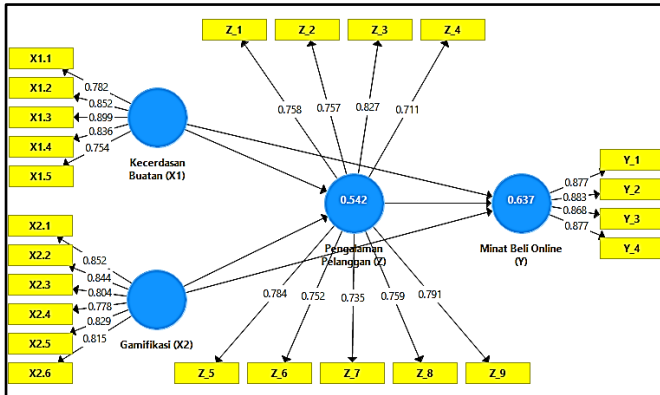
**Figure 1:** Research Design

Based on the research model depicted in Figure 1, the main hypotheses derived from this study are that AI and gamification partially influence customer experience. Additionally, AI, gamification, and customer experience partially influence online purchase interest. Furthermore, the impact of AI and gamification's effect on online purchase intent is mediated by customer experience among users of the Shopee Marketplace in Bandung City.

## 4. DISCUSSION

### 4.1. Outer Model

In the outer model, two assessments were performed: Convergent Validity and Average Variance Extracted (AVE). These analyses were conducted using the Partial Least Squares (PLS) analysis technique with the smartPLS 3.2.8 software, as depicted in Figure 2.



**Figure 2:** Outer Model

Source: Analyzed by the author (2024)

As depicted in Figure 2, the results of the outer model analysis test reveal that the outer loadings exhibit convergent validity values exceeding 0.7 for each indicator. This suggests that all indicators are deemed sufficient or valid and can be utilized for subsequent analysis. Moreover, Figure 5 displays Average Variance Extracted (AVE) values surpassing 0.5 for each variable, satisfying the criteria for each variable.

**4.2. Inner Model (Path Coefficient and P-Values)**

Table 1 illustrates the results of various tests conducted in the inner model, including R-Square and Goodness of Fit (GoF).

**Table 1:** R-Square

<i>Endogenous Variable</i>	<i>R</i>
<i>Customer Experience (Z)</i>	<i>0,542</i>
<i>Online Purchase Interest (Y)</i>	<i>0,637</i>

Source: Analyzed by the author (2024)

According to the R-Square values presented in Table 1, it is evident that in Path I, the explanatory power of the AI and gamification variables for customer experience is 0.542 (54%), which falls within the moderate range of influence (0.33-0.67). This indicates that elements such as Chatbots, layout, fraud detection, and visual search in using AI on Shopee can create an engaging atmosphere and influence the customer experience during AI usage by Shopee users in Bandung City. Additionally, gamification features on Shopee, such as earning coins, receiving rewards, and levelling up, can enrich the customer experience and build a closer relationship between Shopee and its users. These findings are consistent with previous studies such as "Gamification and Customer Experience in the Hospitality Industry" (Worimegbe et al., 2020), this study revealed that the implementation of gamification significantly impacts customer experience. The remaining variance, accounting for 0.458 (45.8%), is attributed to other exogenous variables not investigated in this research, such as Customer Loyalty.

Moreover, referring to the R-Square values presented in Table 1, it is evident that in Path II, the capacity of the AI and gamification variables to elucidate online purchase intention through customer experience is 0.637 (63.7%), which falls within the moderate range of influence (0.33-0.67). This suggests that AI and gamification on Shopee impact the customer experience, triggering online purchase intention, as the comfortable atmosphere and good relationship with Shopee form a positive experience that encourages customers to revisit or recommend to others. These findings are corroborated by prior research, such as "The Influence of Artificial Intelligence and Digital Marketing on Consumers' Buying Intention" (Pangkey et al., 2019), which demonstrated that AI has a significant positive impact on consumer purchase intention. Additionally, the study "Why do people play games on mobile commerce platforms? An empirical study on the influence of gamification on purchase intention" (Yu et al., 2022) demonstrated that gamification positively influences users' engagement with E-Commerce platforms, leading to increased purchases. The remaining variance, accounting for 0.363 (36.3%), is attributed to other exogenous variables not investigated in this study, such as User Convenience.

Subsequent testing includes the Goodness of Fit (GoF) test, which assesses both structural and measurement models, offering a straightforward measure of the overall fit of the model predictions, as illustrated in Table 2.

**Table 2:** Goodness of Fit (GoF)

	<b>Saturated Model</b>	<b>Estimated Model</b>
<b>SRMR</b>	0,078	0,078
<b>d ULS</b>	1,812	1,812
<b>d G</b>	0,926	0,926
<b>Chi-Square</b>	495,463	495,463
<b>NFI</b>	0,748	0,748

Source: Analyzed by the author (2024)

According to the results presented in Table 2, it is evident that the value of the Standardized Root Mean Square Residual (SRMR) is 0.078, which is below the threshold of 0.1. This indicates that the model in this study fits well. SRMR is a metric utilized to gauge model fit in PLS-SEM.

**4.3. Hypothesis Testing Among Constructs**

The hypothesis testing conducted in this study encompassed several tests, including Direct Effect and Specific Indirect Effect (t-test), as well as Variance Accounted For (VAF) testing, as outlined in Table 3.

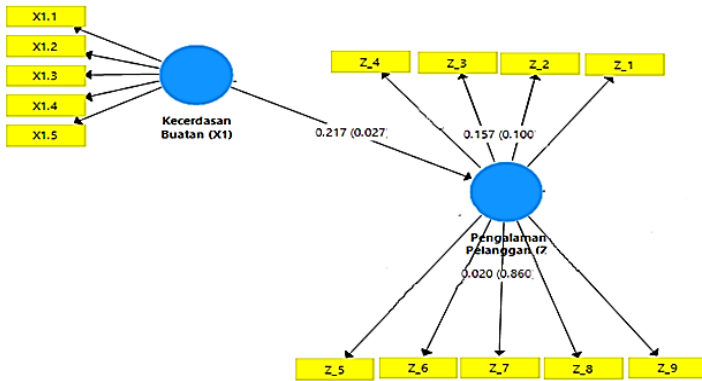
**Table 3:** The results of the Bootstrapping Direct Effect

<b>Path Coefficients</b>					
	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T-Statistics</b>	<b>P-Values</b>
<b>X<sub>2</sub> → Y</b>	0.020	0.014	0.114	0.177	0.860
<b>X<sub>2</sub> → Z</b>	0.563	0.566	0.092	6.098	0.000
<b>X<sub>1</sub> → Y</b>	0.157	0.157	0.096	1.648	0.100

Path Coefficients					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Values
$X_1 \rightarrow Z$	0.217	0.221	0.098	2.221	0.027
$Z \rightarrow Y$	0.674	0.660	0.083	8.139	0.000

Source: Analyzed by the author (2024)

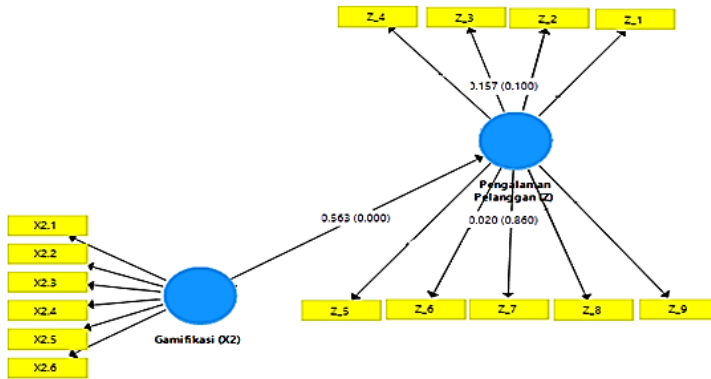
There are hypothesis testing results in Table 3 showing the direct influence from  $H_1$  to  $H_5$ , where the Path Coefficient value is 0.217, indicating a positive or one-directional influence. Furthermore, the T-Statistics ( $t_{count}$ ) value is  $2.221 > 1.984$ , indicating that  $t_{count} > t_{table}$  ( $H_1$  accepted). These results imply a significant impact of AI on customer experience, as evidenced by the low p-value of 0.027, which is less than the threshold of 0.05, as depicted in Figure 3. Moreover, the  $t_{count}$  value of 2.221 falls within the rejection region of  $H_0$ , suggesting that AI positively influences customer experience among Shopee users in Bandung City. This discovery aligns with a previous study titled "The Role of Artificial Intelligence on Enhancing Customer Experience" (Daqar et al., 2019), which illustrated a positive correlation between AI and customer experience. With intelligent AI, complexity turns into simplicity. Shopee is enhanced by AI designed to be responsive and intuitive, interpreting consumer desires quickly and accurately. Faster product searches, deeper exploration, and smoother shopping journeys emerge, resulting in an impressive shopping experience. Figure 4 also displays the output results from the SmartPLS 3.2.8 software.



**Figure 3:** AI influences Customer Experience ( $H_1$ )

Source: Analyzed by the author (2024)

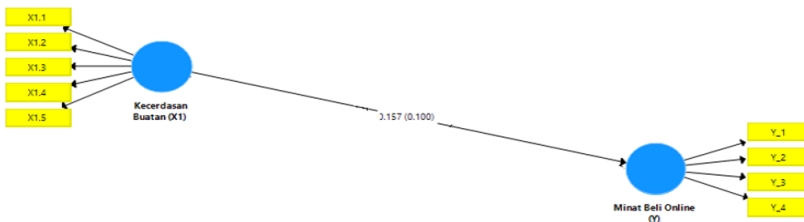




**Figure 4:** Gamification influences Customer Experience (H<sub>2</sub>)

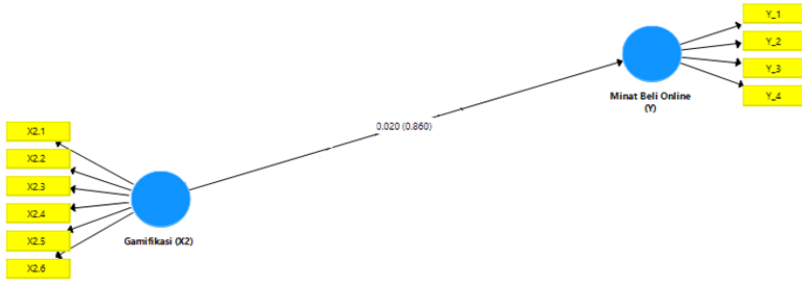
Source: Analyzed by the author (2024)

Additionally, the results of hypothesis testing in Table 3 reveal that the Path Coefficient value is 0.563, signifying a positive value or a unidirectional influence. Additionally, the T-Statistics ( $t_{count}$ ) value is 6.098, exceeding the  $t_{count} > t_{table}$  (H<sub>2</sub> accepted). These results indicate that gamification significantly influences customer experience, as the P-Values are  $0.000 < 0.05$ , as seen in Figure 4. Furthermore, with a  $t_{count}$  of 6.098 falling within the rejection area of  $H_0$ , it demonstrates that gamification positively impacts customer experience among Shopee users in Bandung City. This resonates with previous studies like "Gamification and Customer Experience in the Hospitality Industry" (Worimegbe et al., 2020), where research findings showcased a noteworthy impact of gamification implementation on customer experience within the hotel and restaurant tourism industry. By integrating gaming elements into customer interactions in particular business contexts or platforms, gamification aids in cultivating valuable skills such as teamwork, communication, critical thinking, problem-solving, creativity, initiative, broad perspective, planning, confidence, and mutual motivation. Figures 5, 6, and 7 also display the output results from the SmartPLS 3.2.8 software.



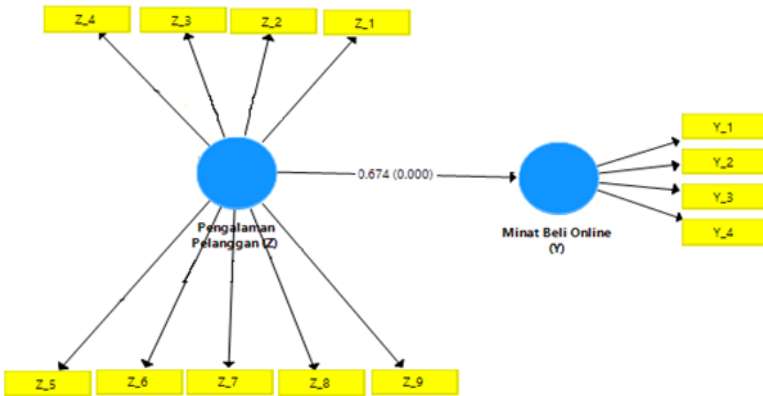
**Figure 5:** AI does not affect Online Purchase Intent (H<sub>3</sub>)

Source: Analyzed by the author (2024)



**Figure 6:** Gamification does not affect Online Purchase Intent ( $H_4$ )

Source: Analyzed by the author (2024)



**Figure 7:** Customer Experience affects Online Purchase Intent ( $H_5$ )

Source: Analyzed by the author (2024)

Additionally, the hypothesis testing results in Table 3 display that the magnitude of the Path Coefficient is 0.157, indicating a positive value or a one-way effect. Then, the T-Statistics value ( $t_{count}$ ) is 1.648 < 1.984, where  $t_{count} < t_{table}$  ( $H_3$  rejected). These findings suggest that there is not a significant impact of AI on online purchase intent, as indicated by the p-value of 0.100, which is greater than the threshold of 0.05, as illustrated in Figure 5. Furthermore, the  $t_{count}$  of 1.648 is in the acceptance area of  $H_0$ , indicating that AI does not exert a positive effect on the online purchase intent of Shopee users in Bandung City. This result contradicts the previous study "The Influence of Artificial Intelligence and Digital Marketing on Consumers' Buying Intention" (Pangkey et al., 2019), which demonstrated that AI has a positive and significant effect on consumer purchase intent. It suggests that despite AI's potential influence, the quality of products or services offered by sellers remains a crucial factor in attracting buyers' interest. Poor quality or services and mismatched products can reduce purchase interest even with the use of AI, so AI does not have much influence on someone's purchase intent while shopping.

Additionally, similar hypothesis testing results are evident in Table 3, where the Path Coefficient value is 0.177, indicating a positive value or a one-way effect. Then, the T-Statistics value ( $t_{count}$ ) is 0.177 < 1.984, where  $t_{count} < t_{table}$  ( $H_4$  rejected). These findings suggest that gamification does not exert a significant impact on online purchase intent, as

evidenced by the p-value of 0.860, which is greater than the threshold of 0.05, as depicted in Figure 6. Furthermore, the  $t_{count}$  of 0.177 is in the acceptance area of  $H_0$ , indicating that gamification does not have a positive effect on the online purchase intent of Shopee users in Bandung City. This result contradicts the previous study "Why do people play games on mobile commerce platforms? An empirical study on the influence of gamification on purchase intention" (Yu et al., 2022), which demonstrated that gamification influences online purchase intent in Shopee and Taobao marketplace customers engaged with the Stackopolis gamification program. Gamification does not influence online purchase intent because consumers often have many options to choose from, and not everyone is interested in or driven by gamification. Some consumers are more influenced by factors such as price, discounts, and product reviews than by games.

Furthermore, there are also hypothesis testing results in Table 3 indicating that the Path Coefficient value is 0.674, indicating a positive value or a one-way effect. Then, the T-Statistics value ( $t_{count}$ ) is  $8.139 > 1.984$ , where  $t_{count} > t_{table}$  ( $H_2$  accepted). These findings imply that customer experience has a noteworthy impact on online purchase intent, as evidenced by the p-value of 0.000, which is less than the threshold of 0.05, as depicted in Figure 7. Furthermore, the  $t_{count}$  of 8.139 is in the rejection area of  $H_0$ , suggesting that customer experience positively affects online purchase intent among Shopee users in Bandung City. This result aligns with the previous study "The effect of artificial intelligence and gamification on online purchase intention mediated by customer experience: a study on Indonesian marketplace users" (Santy et al., 2023), demonstrating a significant impact of customer experience on online purchase intent among marketplace users in Indonesia. Personalized customer experiences, where brands understand preferences and needs, can increase purchase intent. Relevant product recommendations and tailored messages make customers feel valued and attended to.

The subsequent testing conducted involves the Specific Indirect Effect (t-test), which is employed to examine the indirect influence of  $H_6$  to  $H_7$ , as indicated in Table 4.

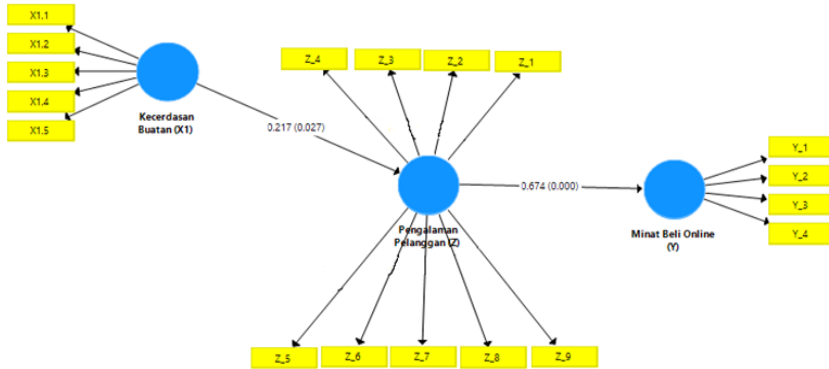
**Table 4:** The results of the Bootstrapping Indirect Effect

Specific Indirect Effect					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Values
$X_1 \rightarrow Z \rightarrow Y$	0.146	0.148	0.071	2.069	0.039
$X_2 \rightarrow Z \rightarrow Y$	0.380	0.383	0.080	4.729	0.000

Source: Analyzed by the author (2024)

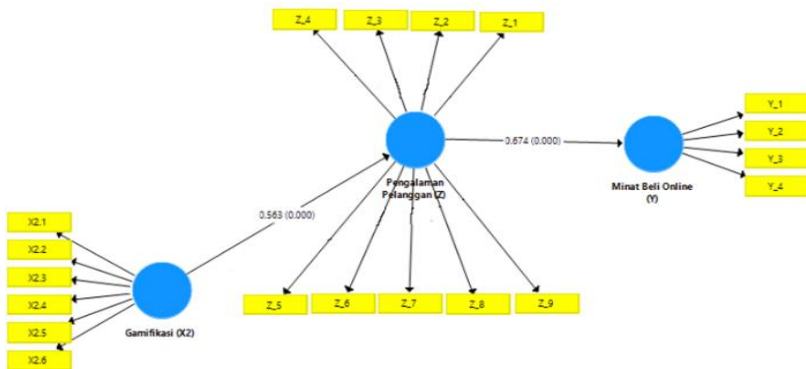
Results from Table 4 show that when tested indirectly through intervening variables, namely  $H_3$  and  $H_4$ , the Path Coefficient is 0.146, signifying a positive influence. Furthermore, the T-Statistics ( $t_{count}$ ) value of  $2.069 > 1.984$ , where  $t_{count} > t_{table}$  ( $H_6$  accepted). This signifies a significant impact of AI on online purchase intention mediated by customer experience, with a p-value of 0.039, which is less than 0.05, as illustrated in Figure 8. The T-statistics value of 2.069 falls within the rejection region of  $H_0$ , indicating that AI positively affects online purchase intention when mediated by customer experience among Shopee users in Bandung City. AI has rapidly evolved and become a key technology in various aspects of life, including business and e-commerce. Online purchase intention, as a

motivation for online transactions, is a crucial focus in marketing and sales strategies for e-commerce companies. One way AI influences online purchase intention is through customer experience mediated by AI technology. Figure 9 also displays the output results of SmartPLS 3.2.8.



**Figure 8:** AI influences online purchase intention through its mediation of customer experience (H<sub>6</sub>)

Source: Analyzed by the author (2024)



**Figure 9:** Gamification influences online purchase intention through its mediation of customer experience (H<sub>7</sub>)

Source: Analyzed by the author (2024)

Results from Table 4 indicate that the Path Coefficient value is 0.380, signifying a positive influence. Additionally, the T-Statistics ( $t_{count}$ ) value of 4.729 > 1.984, where  $t_{count} > t_{table}$  (H<sub>7</sub> accepted). This indicates a significant influence of gamification on online purchase intention mediated by customer experience, with a p-value of 0.000, which is less than 0.05, as shown in Figure 9. The T-statistics value of 4.729 falls within the rejection region of H<sub>0</sub>, suggesting that gamification positively affects online purchase intention when mediated by customer experience among Shopee users in Bandung City. In the digital era, innovative marketing strategies become increasingly important in attracting consumer attention and maintaining their purchasing interest. One emerging approach with the popularity of digital technology is gamification. Gamification incorporates game elements

like competition, points, rewards, and challenges into non-game contexts to stimulate participation and engagement. When considering online purchase intention mediated by customer experience, gamification has proven to be an effective tool in enhancing purchase interest and increasing customer interaction.

The next testing involves the Variance Accounted For (VAF) test, which is used to determine the extent to which the intervening variable (customer experience) mediates the relationship between the independent variables (AI and gamification) and the dependent variable (online purchase intention). The VAF test is calculated using the formula provided in Formula 2.

$$VAF = \frac{\text{indirect effect}}{\text{direct effect} + \text{indirect effect}} \quad (2)$$

Source: Preacer dan Hayes in Cavalcanti et al., 2022

Based on the results from Formula 2 and the direct and indirect Path Coefficient values in Tables 3 and 4, it is evident that the influence of AI on online purchase intention through customer experience is considered partially mediated, as it falls within the range of 20% to 80%. This indicates that a portion of the impact of AI on online purchase intention can be attributed to customer experience. This model highlights the significant role of customer experience as an intermediary between AI and online purchase intention. This finding aligns with previous studies such as "The Role of Artificial Intelligence on Enhancing Customer Experience" (Daqar et al., 2019) and "The Impact of Customer Experience on Consumer Purchase Intention in Cross-Border E-Commerce Taking Network Structural Embeddedness as Mediator Variable" (N. Chen et al., 2021), both studies indicate a positive relationship between AI and customer experience, and they demonstrate that customer experience significantly impacts purchase intention. Thus, AI has made advancements, including in the realms of business and e-commerce. Online purchase intention, as a motivation for online transactions, is a crucial focus in marketing and sales strategies for e-commerce companies. One way AI influences online purchase intention is by enhancing customer experience through the application of AI technology.

Furthermore, based on the results from Formula 2 and the Path Coefficient values in Tables 3 and 4, it is evident that the influence of gamification on online purchase intention through customer experience is also considered a partially mediated variable because it falls within the range of 20% to 80%. This demonstrates that a portion of the impact of gamification on online purchase intention can be explained by customer experience. This model emphasizes the significant role of customer experience as an intermediary between gamification and online purchase intention. This finding aligns with previous studies such as "Why do people play games on mobile commerce platforms? An empirical study on the influence of gamification on purchase intention" (Yu et al., 2022) and "The impact of customer experience on consumer purchase intention in cross-border E-commerce Taking network structural embeddedness as mediator variable" (N. Chen et al., 2021), suggests that gamification positively influences users' engagement with e-commerce platforms for making purchases, while customer experience significantly affects purchase intention. Thus, innovative marketing strategies become increasingly important in attracting consumer attention and maintaining their purchasing interest, with gamification being one emerging approach amid the popularity of digital technology, facilitated through customer experience.

## 5. CONCLUSION AND RECOMMENDATION

The research proposes several important suggestions to improve the online shopping journey and bolster purchase intent among users of online marketplaces. These include improving the automation features of AI for personalized recommendations, streamlining the point collection system in gamification to make earning rewards easier, diversifying product offerings, and optimizing attention-grabbing strategies on online platforms. By implementing these recommendations, platforms like Shopee can foster stronger customer engagement, improve online shopping experiences, and sustain business growth in the competitive e-commerce market. To boost online purchase intent via Artificial Intelligence (AI) and Gamification within the digital marketplace, Shopee ought to prioritize the integration of personalized recommendations and engaging gamification features. By enhancing AI algorithms to offer tailored product suggestions based on user preferences and browsing behaviour, Shopee can increase the likelihood of purchases. Additionally, incorporating interactive gamification features such as challenges and quizzes can make the shopping experience more engaging and enjoyable for users. Seamless integration of AI and gamification throughout the platform's user journey, coupled with continuous innovation in these areas, will foster stronger customer engagement, drive online purchase intention, and sustain Shopee's competitiveness in the e-commerce market.

## REFERENCES

- Aparicio, M., Costa, C. J., & Moises, R. (2021). Gamification and reputation: key determinants of e-commerce usage and repurchase intention. *Heliyon*, 7(3). doi: 10.1016/j.heliyon.2021.e06383
- Arviollisa, P. A. D., Chan, A., & Nirmalasari, H. (2021). Pengaruh Artificial Intelligence Terhadap Customer Experience (Studi Pada Pengguna Gojek Bandung, Jawa Barat). *AdBispreneur*, 6(2), 115. doi: 10.24198/ADBISPRENEUR.V6I2.31076
- Asdiyansyuri, U. (2020). Analisis Pengaruh Religiusitas, Etika Bisnis Islam Terhadap Minat Beli Online Mahasiswa (Studi Kasus Pada Stie Amm Mataram). *Jurnal Kompetitif: Media Informasi Ekonomi Pembangunan, Manajemen Dan Akuntansi*, 6(2). doi: <https://e-journal.unizar.ac.id/index.php/kompetitif/article/view/273>
- Aulia, D., Sulistya Rini, E., & Author, C. (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*, 8(8), 546–558. doi: 10.52403/IJRR.20210874
- Barbu, C. M., Florea, D. L., Dabija, D. C., & Barbu, M. C. R. (2021). Customer experience in fintech. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1415–1433. doi: 10.3390/JTAER16050080
- Becker, L., & Jaakkola, E. (2020). Customer experience: fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630–648. doi: 10.1007/S11747-019-00718-X
- Cavalcanti, A. L., Felix, B., & Mainardes, E. W. (2022). Do tensions lead to positive career satisfaction results? *Revista de Administracao Mackenzie*, 23(3). doi: 10.1590/1678-6971/eRAMR220200.en

- Chen, L., Chen, P., & Lin, Z. (2020). Artificial Intelligence in Education: A Review. *IEEE Access*, 8. doi: 10.1109/ACCESS.2020.2988510
- Chen, N., & Yang, Y. (2021). The impact of customer experience on consumer purchase intention in cross-border E-commerce Taking network structural embeddedness as a mediator variable. *Journal of Retailing and Consumer Services*, 59. doi: 10.1016/j.jretconser.2020.102344
- Chrisnathaniel, H., Hartini, S., & Rahayu, S. P. (2021). Analisis Gamification Shopee.com Sebagai Media Pemasaran Terhadap EWOM, Positive Emotion, & Repurchase Intention (Pada Aplikasi Shopee.com). *JURNAL NUSANTARA APLIKASI MANAJEMEN BISNIS*, 6(1), 15–32. doi: 10.29407/NUSAMBA.V6I1.14630
- Daqar, M. A. M. A., & Smoudy, A. K. A. (2019). The Role of Artificial Intelligence on Enhancing Customer Experience. *International Review of Management and Marketing*, 9(4), 22–31. doi: 10.32479/IRMM.8166
- Santy, R. D., & Iffan, M. (2023). The Effect of Artificial Intelligence and Gamification on Online Purchase Intention Mediated by Customer Experience: Study on Indonesian Marketplace Users. *MIX: JURNAL ILMIAH MANAJEMEN*, 13(1), 227–243. doi: 10.22441/jurnal\_mix.2023.v13i1.015
- Eisingerich, A. B., Marchand, A., Fritze, M. P., & Dong, L. (2019). Hook vs. hope: How to enhance customer engagement through gamification. *International Journal of Research in Marketing*, 36(2), 200–215. doi: 10.1016/j.ijresmar.2019.02.003
- Indiani, N. L. P., & Fahik, G. A. (2020). Conversion of online purchase intention into actual purchase: The moderating role of transaction security and convenience. *Business: Theory and Practice*, 21(1), 18–29. doi: 10.3846/BTP.2020.11346
- Korteling, J. E. (Hans), van de Boer-Visschedijk, G. C., Blankendaal, R. A. M., Boonekamp, R. C., & Eikelboom, A. R. (2021). Human- versus Artificial Intelligence. *Frontiers in Artificial Intelligence*, 4. doi: 10.3389/frai.2021.622364
- Pahala, Y., Widodo, S., Kadarwati, Azhari, M., Mulyati, Lestari, N. I., Madjid, S. A., Sidjabat, S., Limakrisna, N., & Endri, E. (2021). The effects of service operation engineering and green marketing on consumer buying interest. *Uncertain Supply Chain Management*, 9(3). doi: 10.5267/j.uscm.2021.5.011
- Pangkey, F. M., Furkan, L. M., & Mulyono, L. E. H. (2019). Pengaruh Artificial Intelligence dan Digital Marketing terhadap Minat Beli Konsumen. *JMM UNRAM - MASTER OF MANAGEMENT JOURNAL*, 8(3), 258–269. doi: 10.29303/JMM.V8I3.448
- Purnama, B., & Sofana, I. (2021). *Implementasi Artificial Intelligence dan Machine Learning* (1st ed.). Bandung: Informatika. Retrieved from <https://opac.ut.ac.id/detail-opac?id=39939>
- Santy, R. D., & Atika, S. D. (2020). Purchasing Decisions in Terms of Perceived Quality and Product Knowledge. *Proceedings of the International Conference on Business, Economic, Social Science, and Humanities – Economics, Business and Management Track (ICOBEST-EBM 2019)*, 112, 94–99. doi: 10.2991/AEBMR.K.200108.023
- Solakis, K., Katsoni, V., Mahmoud, A. B., & Grigoriou, N. (2022). Factors affecting value co-creation through artificial intelligence in tourism: a general literature review.

*Journal of Tourism Futures, ahead-of-print*(ahead-of-print). doi: 10.1108/JTF-06-2021-0157/FULL/PDF

- Spineli, L. M., & Pandis, N. (2020). Statistical heterogeneity: Notion and estimation in meta-analysis. *American Journal of Orthodontics and Dentofacial Orthopedics*, 157(6), 856-859.e2. doi: 10.1016/j.ajodo.2020.03.009
- Sumarliah, E., Khan, S. Z., & Khan, R. U. (2022). Modest wear e-commerce: examining online purchase intent in Indonesia. *Research Journal of Textile and Apparel*, 26(1). doi: 10.1108/RJTA-11-2020-0121
- Worimegbe, P. M., Worimegbe, T. M., & Abiola-Oke, E. (2020). Gamification and Customer Experience in the Hospitality Industry. *Journal of Tourism and Services*, 11(21), 71–87. doi: 10.29036/JOTS.V11I21.165
- Xi, N., & Hamari, J. (2019). The relationship between gamification, brand engagement and brand equity. *Proceedings of the Annual Hawaii International Conference on System Sciences, 2019-January*, 812–821. doi: 10.24251/HICSS.2019.099
- 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. doi: 10.1016/J.CHB.2021.106991
- Zare, M., & Mahmoudi, R. (2020). The effects of the online customer experience on customer loyalty in e-retailers. *International Journal of Advanced Engineering, Management and Science*, 6(5), 208–214. doi: 10.22161/IJAEMS.65.2

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

