
GAMIFICATION APPEAL AND CUSTOMER ENGAGEMENT INCREASE ONLINE CONSUMER REPURCHASE INTENTIONS

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Abstract

Gamification with the use of non-gaming through points, levels, challenges, rewards, or leaderboards on e-commerce shopping platforms becomes a more interesting activity and motivates customer engagement. This study aims to explore the factors that influence repurchase intention in e-commerce, with a focus on gamification and customer engagement. The participants in this study were individuals from Cirebon City, aged between 15-29 years old, with a sample size of 399 respondents determined using the Slovin formula. The sampling technique used was purposive random sampling. The research data were analyzed using the SEM-PLS (Partial Least-Structural Equation Modeling) method. The research findings reveal that gamification and customer engagement significantly influence Generation Z's intention to repurchase in e-commerce. Gamification strongly drives Generation Z's purchase intention in e-commerce shopping, this is because gamification creates a fun and interactive shopping experience. An interactive gamification strategy can be utilized by e-commerce businesses to encourage Generation Z's buying interest, so that the strategy created is interesting and effective to be of interest to Generation Z, which will increase consumer buying interest.

Keywords: Gamification, Customer Engagement, Repurchase Intention, Online Shopping

INTRODUCTION

Technological advances are developing very quickly, especially in the business industry. One of the consumers who do online shopping rapidly today is Generation Z (Gen Z). Gen Z, who were generally born between 1995 and 2012, grew up in the digital era which makes them very close to technology in various aspects of life, as a result they tend to think digitally and rely heavily on technology (Chan & Lee, 2023). Gen Z is known as a digital native who quickly adapts to new technologies, including in shopping activities. They are used to finding product information and making transactions digitally. The ease of access to the internet and mobile devices makes them prefer shopping that is fast, practical, and interactive. This condition makes Gen Z a potential market in the e-commerce world. In addition, organizations also utilize social media channels to advertise and sell goods or services (Sitthipon et al., 2022). To maximize the potential of digital platforms, many organizations have begun implementing innovations such as gamification to increase customer interaction and engagement.

Gamification involves integrating game-like features, such as points, levels, challenges, rewards, or leaderboards, into non-gaming contexts to increase engagement and encourage active involvement (Safari et al., 2023). For example, learning apps or e-commerce platforms award points that can be redeemed for discounts as a form of incentive. This approach creates a sense of accomplishment and encourages active participation in areas such as education, business, and healthcare. Market-focused companies will continue to understand customer needs and wants and provide the best products and services to stay ahead of the competition (Fatimah et al., 2024). Gamification can increase user and product interaction in an effective way as a promotion. Gamification can increase psychological satisfaction and affect one's motivation (Muhammad et al., 2023). Therefore, companies use the internet and social media to display information in visual form to customers, create an interesting experience and motivate consumers (Fatimah et al., 2022). The existence of online shopping with technology has great potential, many retailers who still use traditional or conventional ways are starting to change their strategies to sell online (Sitthipon et al., 2022).

Online marketplaces that are aligned with retailers' products provide a competitive advantage, especially through social media as an effective information distribution channel. As digital connectivity increases, many conventional retailers have begun to adjust their strategies by adopting online platforms to reach increasingly digital consumers (Hikmawan, 2019). Advances in technology and the increase in internet users have changed people's lifestyles, including the way they shop. Online shopping has changed consumers, so physical stores must innovate to provide the same enjoyable shopping experience. Consumers are now accustomed to convenient, personalized, and practical services from online stores. They also expect the same level of comfort and convenience from physical stores (Ranjan, 2024).

Nauriah, (2023) shows the ranking of e-commerce companies with the largest transaction value in Southeast Asia in 2022, with Shopee ranked first, followed by Lazada and Tokopedia. Other platforms such as Bukalapak, Tiktok Shop, and Blibli are in the lower positions. According to Budi Yahya Setia et al., (2023), in Southeast Asia, the leading e-commerce platforms include Shopee, Lazada, Tokopedia, Bukalapak, and Blibli, with intense competition especially among Shopee, Lazada, and Tokopedia.

This phenomenon is utilized by Shopee, one of the major marketplaces in Indonesia, by adopting a gamification strategy. The application of gamification as a new concept in digital marketing, is a growing trend and can be utilized in service marketing to influence consumer motivation and behavior (Sitthipon et al., 2022). Through gamification, Shopee encourages customers to use the app regularly, thereby increasing loyalty. Each completed game awards Shopee Coins, which can be used as a discount. In addition, the game page displays product advertisements with deep discounts, which encourages consumers to make impulse purchases, even if they had not previously planned to buy the product.

This strategy not only encourages impulse buying, but also contributes to building customer engagement. Customer engagement has three dimensions, namely cognitive (thoughts and attention), emotional (feelings), and behavioral (real actions from customers) (Dwiviolita & Zuliarni, 2023). Companies are now utilizing this strategy to strengthen relationships with customers, supported by widespread internet access. Customer engagement is key in shaping brand loyalty and encouraging repeat purchases. Improving customer engagement helps businesses achieve various goals, such as increasing sales, reducing costs, improving customer experience, and fostering loyalty (Majeed et al., 2022). Good customer experience is very important in marketing, because it is closely related to increasing engagement, commitment, and intention to repurchase or recommend products (Meeprom et al., 2024).

Providing a positive customer experience is critical to increasing engagement and loyalty, which ultimately affects repurchase intentions. This intention is influenced by various factors such as product experience, benefits, value, price, quality, interest, and previous shopping experience (Muhammad et al., 2023; Djohan et al., 2022). Customers tend to have the intention to repurchase if they feel the benefits of a brand (Djohan et al., 2022).

The problem in this study is that Generation Z's repurchase intention online is easily influenced by the presence of similar competitors. This condition encourages businesses to compete in maintaining customer loyalty, one of which is through the application of non-game-based gamification and increasing customer engagement.

The novelty in this research lies in its focus on repurchase intention using non-game gamification methods, specifically through the use of points or rewards as an attraction. In contrast to previous studies that emphasize game elements in the context of gaming, this study highlights the application of non-game elements combined with customer engagement. This research aims to explore the influence of gamification and customer engagement on Generation Z's repurchase intentions and provide insights for businesses to design more effective strategies to retain customers.

REVIEW OF LITERATURE

Gamification

Gamification is one way to attract consumer attention, so as to increase profits for a company. The presence of game elements with non-game contexts is gamification (Foxman, 2014). The non-game context in gamification is a mission that must be completed in exchange for coins, points, levels, leaderboards, and so on. Gamification is simply used as entertainment in business dynamics around the world as an integral component (Pradesh et al., n.d.). The dynamics determine the individual's reaction to the user's mechanism as an

applied response, so that it can be fulfilled by the effort to get a reward or competition that is included in the basic wants and needs (Aparicio et al., 2021). Despite being entertainment, gamification has significant value in the business sector, especially in e-commerce.

E-commerce is a service oriented to rational behavior applying gamification strategies to a very promising system (Muhammad Nur Afiat et al., 2023). By applying gamification strategies to Shopee e-commerce, it can improve good relationships with consumers, so that consumers choose Shopee as a frequently visited e-marketplace. The role of consumers in business is very crucial; therefore, gamification as a non-game activity with the use of game design elements through encouraging consumer habits can improve quality by increasing customer value, such as consumer loyalty and customer engagement. In gamification there are indicators, namely social interaction, sense of control, targets, milestones, rewards and commands (Lia Novita Sari & Sri Padmanty, 2023).

Customer Engagement

In the field of business, consumer relationships with companies greatly affect the level of sales, therefore companies must maintain communication with consumers. By involving customers, it can increase the sales of a company. Through direct and indirect contributions, companies can have a value-added mechanism from customers (Palmatier et al., 2018). Direct contributions can be seen from customer purchases, while indirect contributions can be seen from customers who provide incentive references and social media conversations regarding a company's product information. Customer engagement with the brand can be observed from those who feel happy about their relationship with the brand because of a strong emotional bond (Palmatier et al., 2018). In maintaining a good relationship with customers, companies must meet customer expectations and aspirations by following existing trends.

Customer engagement can be directly and consistently influenced by needs and desires that must be met in creating experiences, conversations and communication of a brand (Dwiviolita & Zuliarni, 2023). Indicators contained in customer engagement are cognitive, emotional and behavioral (Dwiviolita & Zuliarni, 2023). Cognitive decisions affect customers with a rational mindset who are interested in involvement in actively participating and taking the initiative to engage with the company beyond the purchase to gain benefits (Kwee & Aruan, 2024).

Repurchase Intention

Before buying a product, consumers must first find information about the product. After much consideration, then a purchase occurs between consumers and companies. After purchasing a product, how consumers act is influenced by consumer attitudes themselves (Muhammad et al., 2023). Consumer action is influenced by satisfaction with a product. If consumers are satisfied with a product, then consumers will intend to make repeat purchases in the future.

From at least one purchase experienced by consumers, when consumers have trust and comfort in a company, consumers will use it repeatedly, so that these consumers recommend to others that the company has good value to be used repeatedly and there will definitely be repeat purchases in the future. (Lia Novita Sari & Sri Padmanty, 2023).

Relationship Between Variables and Hypothesis Formulation Gamification's Relationship with Repurchase Intention

Nowadays, technology is very advanced in many ways. One way to attract consumer attention is with something that gives consumers an interesting experience. So, with the gamification service, customers get more fun experiences from a game and can encourage customers to use e-marketplace services repeatedly (Susilo, 2022). For repeat purchases, it must make customers feel happy first when using the gamification features contained on a platform, then with changes in customer behavior, fun can have its own charm, so that it can help companies achieve their goals (Almaudina et al., 2023).

Intermediary ties of gamification and repurchase intention describes the ability of gamification to attract consumers. This is validated, on repurchase intentions in e-commerce impact on gamification and reputation (Sitthipon et al., 2022). With gamification in a company, it can make consumers repurchase a product or service in the future. From the description above, a hypothesis can be drawn:

H1: Gamification has a significant positive effect on repurchase intention

Relationship between Customer Engagement and Repurchase Intention

By engaging customers in repeat purchases, customers become loyal to a company. Customer loyalty is achieved by deeper relationships developed by companies with customers, namely customer engagement (Majeed et al., 2022). Customer engagement can create faithful customers and can benefit the company. In addition, customer faithfully can also be seen from the importance of understanding consumer behavior so that it can create repurchase intentions (Luo et al., 2024). With engagement, customers can make decisions for repurchase intentions and intermediary ties customer engagement and repurchase intentions can create faithful customers.

Better purchase intentions result from customer engagement (Kwee & Aruan, 2024). Customer engagement allows customers to have a good relationship with the company. A good relationship maintained by the company can make the products or services produced by the company purchased by customers repeatedly, thus making customers faithful. From the description above, a hypothesis can be drawn:

H2: Customer engagement has a significant positive effect on repurchase intention

The Relationship of Gamification and Customer Engagement with Repurchase Intention

Increase repeat purchases are expected to create a good experience for customers and make customers faithful. Customer experience should have a little investigation because it will affect repurchase intentions (Elgarhy et al., 2024). In addition to customer experience, gamification and customer engagement should also have a little investigation, especially on repurchase intentions in the e-marketplace. With gamification in e-marketplaces, visitors do not feel bored or saturated when opening the application. A series of very important retail, such as engaging consumers, entertaining consumers, consumer retention, and the occurrence of rapid repurchases are influenced by gamification on mobile platforms (Hsu, 2023). It can be concluded that the existence of gamification on platforms such as shopee and customer involvement in gamification created by shopee can create a sense of repurchase intention quickly in the future.

Player activity here can be seen from the frequency of customers visiting shopee. Followed by manifestations and interaction behaviors from customers such as, writing reviews online, providing feedback and participating in existing events (Djohan et al., 2022). In participating in existing events, it can be in the form of shopee coins that must be checked

in every day. Because the more days, the shopee coins earned are getting bigger and can be profitable for customers. Customers not only search for a product in e-commerce, but customers also evaluate whether e-commerce that is often visited is worth revisiting or not. Therefore, repurchase intention can be influenced by the features and services available in an e-commerce (Djohan et al., 2022). The existence of features that can attract consumers and good service to consumers can create consumer purchase intentions. From the description above, a hypothesis can be drawn:

H3: Gamification and customer engagement has a significant positive effect on repurchase intentions.

Research Framework

From the description above, it can be described as follows:

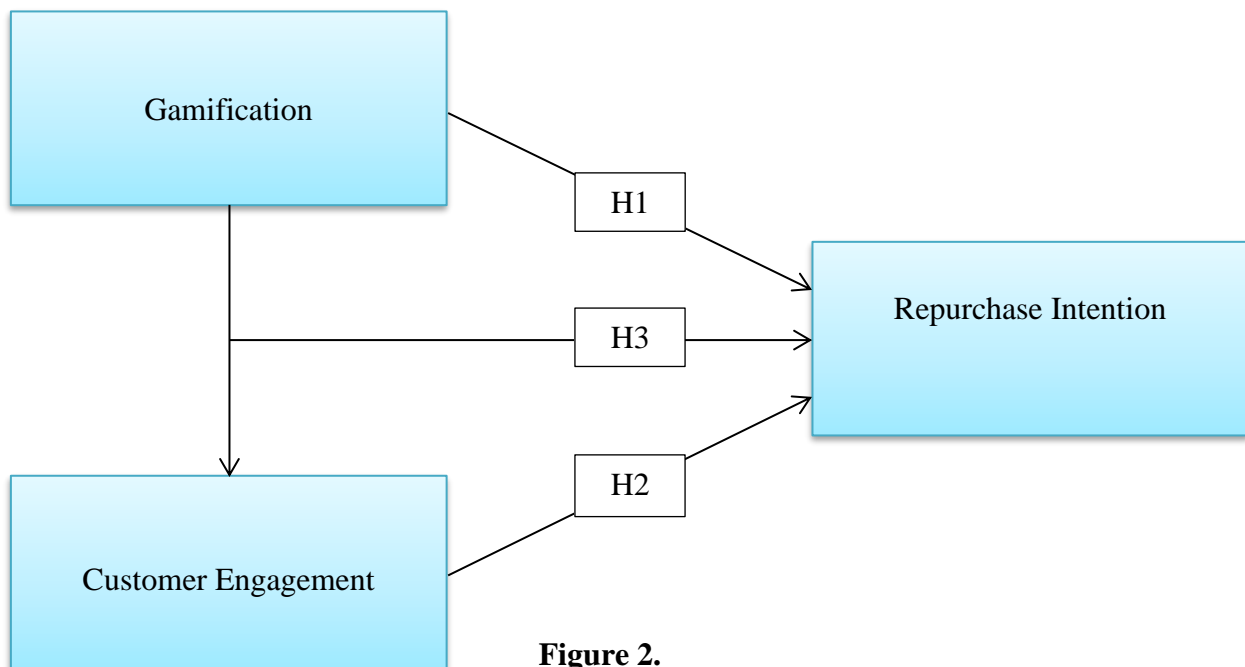


Figure 2.
Research Framework

RESEARCH METHOD

Population and Sample

The approach used in this research is quantitative research methods. Quantitative research methods investigate phenomena that can be measured through statistical, mathematical or computational techniques in the form of numbers such as statistics and percentages on systematic experimental analysis (Downs, 1990). Quantitative research is data that exists or is expressed in the form of numbers obtained from the field. Data collection can be done in a formal and rigid way, so that it can be analyzed quantitatively (Ummah, 2019).

The population used in this study is the population of generation Z (Gen Z) in Cirebon City aged 15 to 29 years which amounted to 88,221 people (Dukcapil Kota Cirebon, 2024). The selection of the Gen Z population in the Cirebon area was carried out because we are

students from one of the universities in Cirebon. This facilitates the process of distributing questionnaires more efficiently, both through social media and help from people around us.

The sample in this study used the Slovin formula, namely $n = N / (1 + (N \times e^2))$, here's how to get the results:

$$n = N / (1 + (N \times e^2))$$

$$n = 88.221 / (1 + (88.221 \times 0,05^2))$$

$$n = 88.221 / (1 + (88.221 \times 0,0025))$$

$$n = 88.221 / (1 + 220,5525)$$

$$n = 88.221 / 221,5525$$

$$n = 398,19455885173$$

Note: The margin of error set is 5% or 0.05.

The result is rounded, so that 399 respondents are obtained who will be used as research respondents. In this study, the sampling approach used was incidental sampling.

Data Analysis Method

The analysis used Structural Equation Modeling-Partial Least Square (SEM-PLS) to examine these data. SEM accounts for measurement error in the observed variables, so as to obtain more precise measurements of the theoretical concepts of interest (Sarstedt et al., 2021). In this study, the Partial Least Squares (PLS) approach was used because it is more flexible in dealing with data with non-normal distributions and relatively small sample sizes, which are often an obstacle in survey-based social or marketing research.

Measurement Variable

These variables were measured using a research questionnaire. Furthermore, respondents' answers were divided into five scores, namely; Strongly Disagree (1), Disagree (2), Moderately Agree (3), Agree (4), and Strongly Agree (5). The following dimensions and indicators were used to measure these variables:

1. Gamification

Gamification is measured through indicators, namely social interaction, sense of control, goals, progress tracking, rewards and hints (Lia Novita Sari & Sri Padmanty, 2023). These indicators were developed into 12 statement items.

2. Customer Engagement

Customer engagement is measured through indicators, namely cognitive, emotional and behavioral (Dwivioluta & Zuliarni, 2023). Then these indicators are developed into 6 statement items.

3. Repurchase Intention

Repurchase intention is measured through indicators, namely making repeated purchases, recommending to others, and making repeat purchases in the future (Lia Novita Sari & Sri Padmanty, 2023). Furthermore, the indicator was developed into 6 statement items.

RESULTS AND DISCUSSION

Descriptive Analysis

The results of the questionnaire with 399 respondents can be described as follows: The following description is the result of the questionnaire from 399 respondents:

Table 1.
Respondent Demographics

Category	Possible Answers	F	%
Gender	Female	255	63,9
	Male	144	36,1
Age	15-19 years	33	8,3
	20-24 years old	332	83,2
	25-29 years old	36	9
Education	Junior High School	8	2
	High School	73	18,3
	Higher Education	318	79,7

Source: Processing data 2025

Based on Table 1, out of a total of 399 respondents, the majority are female, 332 people, with an age range of 20-24 years old and a college education level. This dominance of female respondents, especially among Generation Z, can be explained because women tend to have more diverse needs and wants. They are also more actively looking for products or services that provide a pleasant experience, so they are more likely to use a platform repeatedly.

Model Measurement Test Results

Outer model analysis is carried out to ensure that the measurement model used is correct. The right measurement model is analyzed using validity and reliability. In order for the research data to be valid and reliable, this study uses several analysis tests, namely outer loading, average variance extracted (AVE), Cronbach's alpha, and construct reliability. The findings are presented in Table 2.

Table 2.
Measurement Model

Variables	Indicator	Outside Loading	AVE	Cronbach's Alpha	Composite Reliability
Gamification	X1.1	0,817	0,704	0,961	0,966
	X1.2	0,818			
	X1.3	0,863			
	X1.4	0,878			
	X1.5	0,882			
	X1.6	0,913			
	X1.7	0,859			
	X1.8	0,893			
	X1.9	0,883			
	X1.10	0,777			

	X1.11	0,757			
	X1.12	0,705			
Customer Engagement	X2.1	0,799	0,641	0,887	0,914
	X2.2	0,889			
	X2.3	0,825			
	X2.4	0,729			
	X2.5	0,750			
	X2.6	0,801			
Repurchase Intention	Y1	0,810	0,658	0,895	0,920
	Y2	0,805			
	Y3	0,841			
	Y4	0,835			
	Y5	0,711			
	Y6	0,856			

Source: Processing data 2025

Table 2 shows the results of the validity and reliability tests of the research instruments. An indicator is said to be valid if the outer loading value is greater than 0.70 and the Average Variance Extracted (AVE) value is greater than 0.50. The analysis results show that all indicators in this study meet these two criteria, so it can be concluded that all indicators are valid and able to represent the measured constructs. Meanwhile, to test reliability, two indicators are used, namely Cronbach's Alpha and Composite Reliability. A construct is declared reliable if both values are above 0.70. Based on the test results, all variables in this study have adequate Cronbach's Alpha and Composite Reliability values, so that this research instrument can be said to be reliable or consistent in measuring the intended variables.

Analysis Model Structure

In latent variables or variables that cannot be assessed directly, it is predicted to have cause-and-effect interactions in structural model testing using model analysis. R square and f square show the results of the parts in the model analysis. The results of data analysis for R square and adjusted R square are as follows

Table 3.
Output of r square and adjusted r square

Model	R Square	Adjusted R Square
X1 and X2 to Y	0,869	0,869

Source: Processing data 2025

The R square coefficient of 0.67 indicates that the model has a "strong" category, a value of 0.33 is "medium", while a value of 0.19 is considered "weak" (Muhammad et al., 2023) . Table 3 illustrates the value of R square and adjusted R square for the gamification model (X1) and customer engagement (X2) on repurchase intention (Y) exceeds 0.35, which means shows that the independent variable has an influence on the dependent variable with a strong category. The f square value is used to assess the magnitude of influence in a model.

An f square value between 0.02 indicates a small influence, a value between 0.15 indicates a moderate influence, and a value greater than 0.35 indicates a large influence. The mediation coefficient is squared, so that the upsilon-V statistical result is the mediation effect for F Square (Wiraguna & Nabila, 2024). In this study, the value of f square can be seen:

Table 4.

F Square Output

Variables	Repurchase Intention
Gamification	0,754
Customer Engagement	0,143

Source: Processing data 2025

Table 4 shows that the effect size or f-square value for the research variables shows that the gamification variable on repurchase intention has a strong influence and the customer engagement variable has a weak influence on repurchase intention. The independent variable gamification on repurchase intention has a large influence, and for customer engagement on repurchase intention has a small influence.

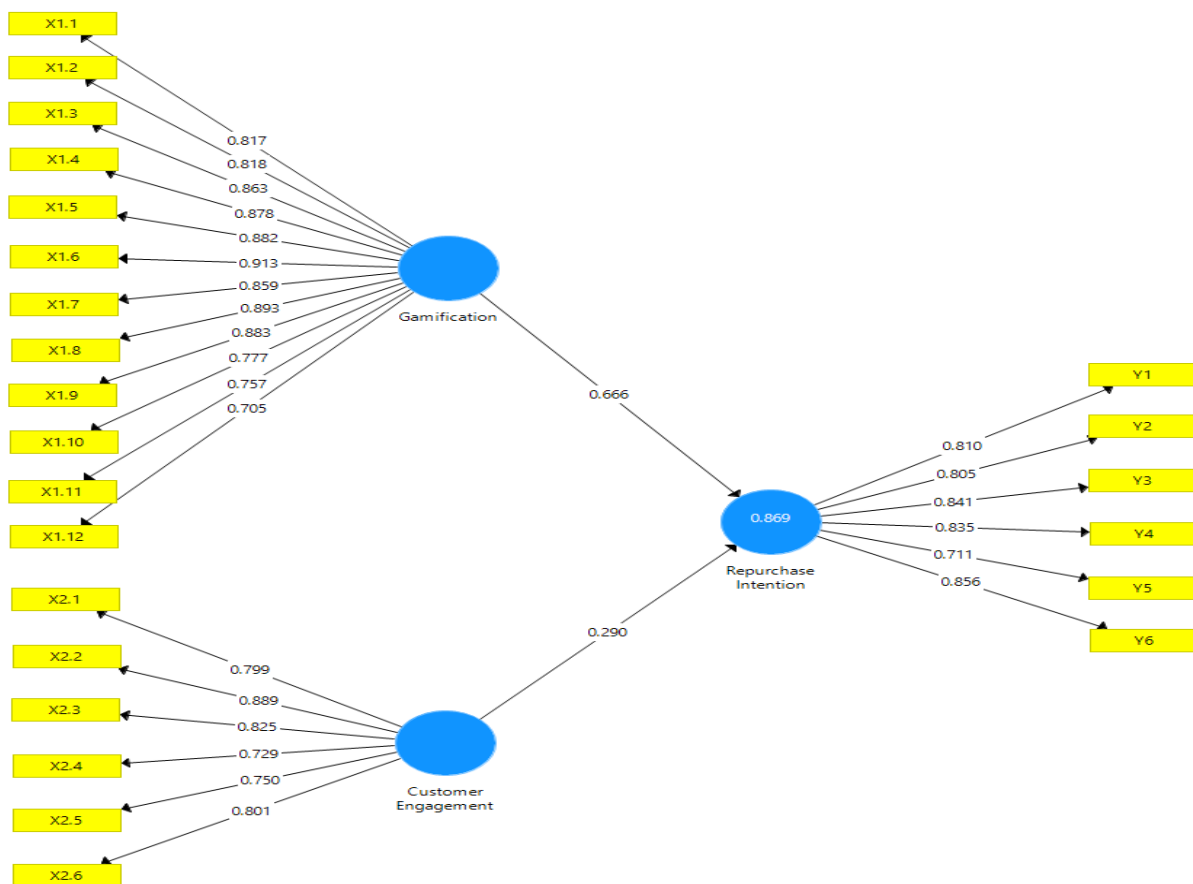


Figure 3.
 Path Analysis Output

Hypothesis Testing

Table 5.
Summary of Hypothesis Testing

Hypothesis	Independent variable	Path Analysis	t value	P Value
H1	Gamification -> Repurchase Intention	0,666	9,152	0,000
H2	Customer Engagement -> Repurchase Intention	0,290	3.952	0,000
H3	Gamification -> Customer Engagement -> Repurchase Intention	0,869	-	-

Source: Processing data 2025

The data results above show that the path coefficient for gamification shows a direct effect on repurchase intention of 0.666. The customer engagement variable has a direct influence on repurchase intention of 0.290. So it can be concluded that what has the greatest direct influence on repurchase intention is the gamification variable.

For the results of the t value for all variable relationships, it is obtained from the t table of 0.869 so it can be concluded that all hypotheses in this study are accepted, which means that either directly all independent variables, through indirect means, directly affect the dependent variable.

Gamification has a significant influence on repurchase intentions, especially in Generation Z who are highly connected to technology and love interactive experiences. Implementing gamification elements such as point systems, prizes, challenges or rewards can create a more enjoyable and motivating user experience, thus encouraging greater engagement with the platform. In addition, these elements strengthen customer loyalty by providing attractive incentives that encourage consumers to return to make purchases. Generation Z, which tends to value dynamic interactions and instant gratification, finds gamification a relevant and effective strategy to increase repurchase interest.

The results of this study differ from the results of previous research (Muhammad Nur Afiat et al., 2023), which shows that although gamification has a positive effect on the use of e-commerce applications, it does not have a significant effect on repurchase intentions. And the results of this study are supported by the journal (Sithipon et al., 2022), which states that gamification can be considered as one of the effective strategies to increase customer repurchase intentions on e-commerce platforms by increasing customer satisfaction. This suggests that repurchase intention in the presence of gamification is not consistent across the board, as it can be shaped by factors such as cultural context, type of e-commerce platform, or how gamification elements are implemented. Thus, it can be understood that gamification has great potential to influence consumer behavior if strategically applied according to customer needs and preferences.

Customer engagement plays an important role in driving repeat purchase intent, especially among Generation Z. As a generation that grew up in the digital age, Generation Z is more responsive to personalized, relevant and experiential interactions. When e-commerce platforms are able to create interactive and engaging experiences, it can build an emotional connection with customers, which in turn encourages them to make repeat

purchases. This high level of customer engagement is a key factor for business success, especially in attracting and retaining Generation Z, who have high expectations of dynamic and innovative experiences in online shopping.

The results of this study are consistent with the results seen in previous research (Dwiviolita & Zuliarni, 2023), customer engagement significantly and positively impacts repurchase intentions, which are evaluated through three main dimensions namely customer equity, value equity, brand equity, and relationship equity which are supported by the journal (Kwee & Aruan, 2024), which states that emotional engagement with customers has the strongest influence on repurchase intentions, seen from the variable indicators which show the highest loadings. So it can be obtained that it is important for companies to prioritize customer engagement by creating interesting activities, fostering closeness with customers, and providing a positive experience so that it has an impact on repurchase intentions.

Gamification has a role to play in increasing Generation Z customer engagement, which directly affects repurchase intentions. Growing up in the digital age, Generation Z tends to gravitate towards interactive and fun experiences that capture their attention. Gamification creates deeper engagement through activities that encourage active participation and make customers feel more connected. This high level of engagement helps create a closer relationship between customers and the services they use, encouraging them to stay engaged on an ongoing basis. As a result, customers not only feel satisfied with the experience offered, but are also encouraged to make repeat purchases. Thus, gamification is a relevant and effective strategy to build customer engagement and increase their loyalty, especially among Generation Z.

The results of this study are in line with the results of research by Habib, H. M. H., Hidayat, K., & Mawardi, M. K.,(2023) which reveals that the relationship between gamification and customer engagement has a positive and significant effect on repurchase intention. A series of very important retail, such as engaging consumers, entertaining consumers, consumer retention, and rapid repurchase are influenced by gamification on a mobile platform (Hsu, 2023). Therefore, gamification and customer engagement play an important role in shaping consumer repurchase intentions. Thus, it is important for companies to increase gamification and engage consumers in the sale of goods or services created by a company.

CONCLUSION

This study involved 399 Generation Z respondents aged 20-24 years old who are university students. The results show that gamification and customer engagement have a positive effect on repurchase intentions on e-commerce platforms. Gamification exerts a more dominant influence through elements such as rewards, challenges, and points that can create an interesting and motivating shopping experience.

Customer engagement also strengthens the relationship between consumers and the platform through active interaction and engaging content. Generation Z, as active users of technology and social media, shows a positive response to this strategy. Therefore, businesses are advised to choose e-commerce platforms that integrate gamification to encourage young consumers repurchase interest online.

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