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GAME ON! HOW GAMIFICATION SHAPES CUSTOMER ENGAGEMENT AND STRENGTHENS LOYALTY

Kevin Fero Fernando[1,*], Willyam Dominick Soegiarto[2], Muhammad Adam Al Ghazali[3], Givvara Reihan[4], Anita Safitri[5], Ika Diyah Candra Arifah[6]

[1,2,3,4,5,6] Bisnis Digital, Universitas Negeri Surabaya, Indonesia

*) Corresponding Author (Email: kevin.22051@mhs.unesa.ac.id)

ABSTRACT

The significant rise of e-commerce activities in Indonesia has intensified competition, compelling platforms to seek innovative retention strategies. The purpose of this study is to analyze the influence of gamification on customer engagement and customer loyalty on the XYZ Platform platform. Employing a quantitative approach, this research utilized a survey method with purposive sampling. Data were gathered from 30 active XYZ Platform users in Surabaya and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0. The results demonstrate that gamification has a positive and significant effect on both customer engagement and customer loyalty. Specifically, game mechanics offering perceived economic benefits and clear rewards successfully trigger cognitive, affective, and behavioral engagement. Furthermore, the study reveals that gamification strengthens loyalty by creating psychological switching barriers and leveraging loss aversion regarding accumulated virtual assets. This implies that gamification is not merely a supplementary feature but a vital strategy for transforming passive users into committed customers. These outcomes present useful recommendations for e-commerce platforms to design effective gamified experiences that foster sustainable long-term relationships.

Keywords: *Customer Engagement; Customer Loyalty; E-Commerce; Gamification; User Retention*

I. INTRODUCTION

Indonesia's e-commerce sector has undergone substantial expansion in recent years (Kemendag RI, 2024). The COVID-19 pandemic that has occurred since 2020 has further accelerated digital transformation and changed people's shopping behavior from conventional to online (Randes & Veri, 2025). According to data from the Central Statistics Agency, the value of e-commerce transactions in Indonesia

reached IDR 1100.87 trillion in 2023, a significant increase compared to 2022 which was 783 trillion (BPS, 2025). This growth creates very tight competition among marketplace platforms such as XYZ Platform, Shopee, Lazada, and Bukalapak (Meilina, 2025) .

In this fast-paced digital era, it is not enough to attract consumers' attention. E-commerce platforms need to create strategies that are able to maintain customer engagement in a sustainable manner and build long-term customer loyalty. Customer engagement is understood as the degree of sustained participation and interaction that occurs between customers and businesses (Brodie et al., 2011), while customer loyalty reflects a customer's commitment to consistently repurchase and advocate the brand to other consumers (Oliver, 1999). Engaged and loyal customers not only make repeat purchases, but also become brand advocates who contribute to long-term business growth.

One of the strategies that is increasingly popular implemented by digital platforms is gamification. Gamification describes the incorporation of game elements into non-gaming contexts with the aim of increasing user motivation, engagement, and loyalty (Deterding et al., 2011). By integrating elements such as points, levels, missions, rewards, and competitions, companies can foster higher levels of user engagement and interactivity. Research conducted by (Heksarini & Safira Putri, 2022) It shows that gamification is significantly related to customer engagement and customer loyalty.

XYZ Platform, being among the largest e-commerce platforms in Indonesia has implemented various gamification features in its application, ranging from spin wheels and bonuses. However, the extent of the effectiveness of this gamification strategy in increasing customer engagement and customer loyalty has not been empirically researched, particularly within the scope of Indonesian e-commerce. This research holds importance because it involves comprehensively examining the relationship between gamification, customer engagement, and customer loyalty can help e-commerce platforms optimize their strategies to increase competitive advantage and sustainable growth.

Recent trends in digital marketing suggest that applying game components to non-gaming settings, or gamification, has become a widely embraced method for improving customer interactivity. Hollebeek et al. (2014)introduced the concept of gamified loyalty-program engagement (GLPE) and demonstrated that the implementation of gamification within loyalty programs significantly increases customer participation, which in turn has the potential to strengthen customer loyalty. Their study highlights that although the academic interest in gamification is rapidly expanding, research specifically addressing engagement within loyalty program contexts remains relatively underdeveloped. Other scholars have examined the psychological foundations of gamification. Bitrián et al. (2021) found that gamification satisfies key psychological needs competence, autonomy, and relatedness thereby increasing user engagement in digital environments. Their

findings align with motivational theory, suggesting that gamification is not merely a superficial design element but a mechanism capable of stimulating deeper cognitive and emotional engagement.

Gamification has also been associated with loyalty outcomes across several industries. Li & Aumeboonsuke (2025) showed that gamified campaigns especially those involving immersive experiences, achievement systems, and social interaction strengthen brand loyalty through enhanced consumer experience and brand engagement. More recent marketing studies strengthen this argument by confirming that gamification indirectly contributes to loyalty outcomes through customer engagement. Punwatkar & Verghese (2025), for instance, reported that gamification positively affects brand loyalty via its influence on customer engagement, implying that engagement serves as an essential psychological mechanism driving loyalty intentions.

Despite these promising findings, the literature still reveals notable gaps. Many studies focus only on a portion of the relationship either gamification and engagement, or gamification and loyalty without developing an integrated causal model that connects gamification features, multidimensional engagement, and both attitudinal and behavioral loyalty (Hollebeek et al., 2021). Moreover, engagement is frequently conceptualized as a single construct rather than differentiated into cognitive, affective, and behavioral dimensions, which limits theoretical clarity on which aspects of engagement matter most for loyalty. Consequently, the present study titled Game On! How Gamification Shapes Customer Engagement and Strengthens Loyalty aims to address these limitations by developing an integrative framework that links gamification features with multidimensional engagement and long-term loyalty outcomes.

Based on this background, this study aims to analyze the influence of gamification on customer engagement and customer loyalty on the XYZ Platform platform. This study is anticipated to offer a theoretical contribution to the advancement of gamification literature in the field of e-commerce, as well as provide practical implications for XYZ Platform and other e-commerce business people in designing more effective strategies.

II. LITERATURE REVIEW

Gamification

Gamification describes the incorporation of game elements into non-gaming contexts with the aim of increasing user motivation, engagement, and loyalty (Deterding et al., 2011). The concept of gamification has been adopted in various fields, including education, health, marketing, and e-commerce (Koivisto & Hamari, 2019). Gamification differs from actual games in that the goal is not to play, but rather to achieve specific goals such as increasing engagement or changing user behavior.

The effectiveness of gamification has a lot to do with the theory of human motivation. Self-Determination Theory developed by Ryan & Deci (1985) Explains that humans have three basic psychological needs, namely autonomy, competence, and relatedness. Effective gamification must meet these three needs to create sustainable engagement and loyalty (Mutreja et al., 2025). Intrinsic motivation comes from within the individual, driven by personal satisfaction and pleasure in doing activities, while extrinsic motivation comes from external factors such as reward and recognition (Ryan & Deci, 1985). Within the scope of e-commerce, gamification is used to achieve several business goals such as increasing the frequency of visits, extending session duration, driving repeat transactions, and increasing brand loyalty (Putra Rahmadhan et al., 2023).

In the XYZ Platform e-commerce application, gamification comes in the form of Reward-Based Gamification. This approach leverages the user's extrinsic motivation by offering real rewards. Gamification features on XYZ Platform such as spin wheel where users can get discount vouchers and bonus features, where users can get them through transactions using bonus vouchers, bonsu in the form of cashback points which can later be used for deductions or discounts when purchasing (XYZ Platform, n.d.).

Given the focus of this research on reward-based mechanisms in XYZ Platform, the measurement of gamification variables needs to be reviewed from users' perceptions of the value of the incentive. Therefore, the study adopted three main indicators to measure the effectiveness of gamification. First, the Perceived Economic Benefit highlights the value of the financial gain that users perceive, where the accumulation of coins or discounts is considered a real cost savings that motivate participation (Hsu & Chen, 2018). This aspect is supported by the Reward Visibility indicator, which ensures the transparency of the game mechanics so that users can clearly understand the rules of the game and reward achievement targets without confusion (Hofacker et al., 2016). Finally, Susceptibility to Reward describes the psychological disposition of the user who is sensitive to rewards, where the "promise of rewards" of the application is able to trigger a strong enthusiasm to act immediately and pursue the bonus offered (Hsu & Chen, 2018).

Customer Engagement

Customer engagement can be described as a psychological condition that arises from an interactive customer experience as well as the co-creation of value with a specific focus object, such as a brand or app (Brodie et al., 2011). This concept is different from customer satisfaction which tends to be the opposite, engagement requires active participation from users. High customer engagement provides various benefits for companies. Engaged customers usually possess greater loyalty and higher switching costs so that they are not easy to switch to competitors (Verhoef et al., 2010). Engaged customers also make more frequent purchases and

spend more money throughout their relationship with the brand, increasing customer lifetime value (Kumar et al., 2010). In addition, engaged customers typically show a stronger tendency to recommend the brand to people around them, creating highly valuable organic marketing (Libai et al., 2010).

It is important to distinguish between Customer Engagement and traditional concepts such as customer satisfaction. If customer satisfaction is often passive and evaluative (assessing past experiences), engagement demands active participation and future onboarding from users (Pansari & Kumar, 2017). Customer engagement refers to the extent of an individual's participation in an organization's value offerings and activities, stimulated by both the customer and the organization (Vivek et al., 2012). Within an e-commerce application, this implies that users are not only "satisfied" after purchasing an item, but also have the initiative to open the app, check out new features, or participate in loyalty programs without coercion.

Refers to a multidimensional framework Hollebeek et al. (2014), Customer Engagement measurement in this study integrates aspects of user thoughts, feelings, and actions. The Cognitive Engagement dimension reflects the user's mental activity and concentration, which is seen as they actively think of strategies or tactics to maximize point earnings. This response is strengthened by Affective Engagement, which is a positive emotional bond such as a feeling of joy when winning a lottery or a sense of pride over a membership level increase. The final manifestation of this engagement is Behavioral Engagement, which is measured through the user's investment of time and physical effort, such as the routine of opening the app every day to complete daily missions (check-in) beyond just the usual shopping transaction activity (Brodie et al., 2011).

Customer Loyalty

Customer loyalty represents a sustained commitment from consumers to repeatedly purchase or subscribe to their preferred offerings, regardless of situational pressures or rival marketing strategies that could lead to switching (Oliver, 1999). Loyalty develops through four stages: cognitive loyalty (based on price/quality information), affective loyalty (based on liking), conative loyalty (intention to buy), to action loyalty where consumers have inertia or strong habits to continue using the product (Oliver, 1999).

In the era of digital economy and e-commerce, the concept of loyalty faces greater challenges due to the ease with which customers can switch applications with just a touch of a finger. Therefore, (Griffin & Herres, 2002) Expanding the view of loyalty not only in terms of repeat purchases, but also in terms of retention and psychological resilience (retention). Loyal customers are those who show regular purchasing behavior, buy between product and service lines, recommend to others, and show immunity to competition.

Customer loyalty indicators in the context of gamification are focused on two main behavioral manifestations driven by point and status ownership. First, Repeat Purchase measures the consistency of users to make repeat transactions on XYZ Platform consciously to benefit from the economic value gained through vouchers or coins that (Oliver, 1999) has obtained. Second, the loyalty aspect is deepened through the Retention indicator which is explained by the concept of Switching Cost or moving barriers, users feel reluctant to switch to competitor platforms due to psychological fear of loss (Loss Aversion) in the form of loss of virtual assets, such as point accumulation and level progress that has been built so far (Burnham et al., 2003).

The Influence of Gamification on Customer Engagement

"Implementing gamification within e-commerce platforms has demonstrated its effectiveness in boosting customers" psychological and behavioral engagement. Based on research conducted by Heksarini & Safira Putri (2022) on marketplace users in Samarinda, it was found that gamification strategies have a positive and significant influence on customer engagement. This happens because elements of the game, such as social features and the points system, are able to keep users connected to the app.

In line with these findings, Gullshenas & Shirazi (2026) in their research emphasized that gamification works by harnessing basic human motivations, such as competition, achievement, and intrinsic pleasure. Game design elements such as badges, leaderboards, and interactive challenges transform regular interactions into emotionally rewarding experiences. The results of their statistical analysis showed a very strong relationship. Gamification facilitates engagement by providing instant feedback and a sense of accomplishment, which encourages users to voluntarily invest their time and attention in the app. Thus, the more attractive the gamification mechanism applied, the higher the level of active customer participation. Based on the description above, the hypothesis proposed is :

H1: *Gamification has a positive effect on customer engagement on XYZ Platform.*

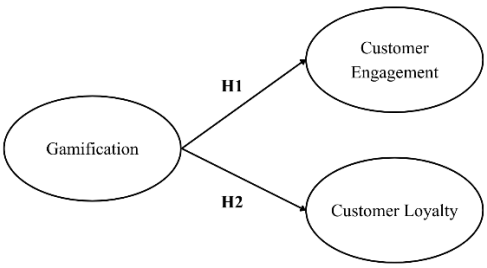
The Influence of Gamification on Customer Loyalty

The relationship between gamification and customer loyalty is not only transactional but also emotional. Heksarini & Safira Putri (2022) state that gamification differs from traditional loyalty programs in that it provides additional social and motivational benefits through the use of products, not just an outpouring of costs. Their research proves that gamification is the main indicator that affects customer loyalty to always use the app when shopping, due to the increased transaction motivation by the game element.

Furthermore, Gullshenas & Shirazi (2026) found that gamification has a positive direct influence on loyalty. Gamification helps create "Brand Love" and emotional attachment, which strengthens long-term retention. Mechanisms such as point or status accumulation create switching barriers, where customers are reluctant to switch to competitors because they don't want to lose the virtual progress or profits they have built within the platform. Thus, gamification serves as a strategic tool to retain customers through a combination of economic incentives and psychological satisfaction. Based on the description above, the hypothesis proposed is:

H2: *Gamification has a positive effect on customer loyalty on XYZ Platform.*

Resereach Framework



Source: Made by Researchers

Figure 1. Research Framework

III. METHOD

This study employs a quantitative approach using a survey method to examine the impact of gamification on customer engagement and customer loyalty on XYZ Platform. The research population is active users of the XYZ Platform application in Surabaya who have used the platform for at least 3 months.

A purposive sampling method is applied, guided by the criteria that respondents are at least 18 years old and have made transactions in the last 3 months. This specific sampling approach was selected to ensure that all respondents possessed adequate, recent experience with the platform's gamification features, thereby providing highly relevant data. The target number of respondents is 30 people who are selected purposively based on these criteria (Sugiyono, 2023). While this represents a relatively small sample size, data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the SmartPLS 3 application. This analytical method was deliberately chosen for its strong suitability

for small samples and its independence from strict normality assumptions (Hair et al., 2017).

Data were obtained from online questionnaires shared via different social media platforms and online groups of XYZ Platform users. The questionnaire consists of four main parts: respondent profile, perception of XYZ Platform's gamification features, customer engagement level, and customer loyalty level. The variables of gamification (X), customer engagement (Y1) and customer loyalty (Y2) were measured through the following indicators :

Table 1. Variable indicator

No.	Variable	Indicator	Items	Source
1.	Gamification (X)	Perceived Economic Benefit	X1.1 Poin atau koin yang saya dapatkan dari *game* di XYZ Platform sangat membantu menghemat pengeluaran belanja saya.	(Hsu & Chen, 2018)
			X1.2 Voucher diskon yang diperoleh dari Game memberikan keuntungan nilai uang yang nyata bagi saya.	
		Reward Visibility	X1.3 Saya memahami dengan jelas aturan main untuk mendapatkan poin di aplikasi XYZ Platform.	(Hofacker et al., 2016)
			X1.4 Saya dapat melihat dengan jelas berapa banyak koin yang telah saya kumpulkan.	
		Susceptibility to Reward	X1.5 Hadiah yang ditawarkan (Koin) adalah alasan utama saya berpartisipasi dalam fitur permainan XYZ Platform.	(Hsu & Chen, 2018)
2.	Customer Engagement (Y1)	Cognitive Engagement	Y1.1 Saya sering mengecek aplikasi XYZ Platform hanya untuk memastikan apakah ada misi permainan baru.	(Hollebeek et al., 2014)
		Affective Engagement	Y1.2 Saya merasa senang dan antusias ketika berhasil memenangkan hadiah dari *Spin Wheel.*	
		Behavioral Engagement	Y1.3 Saya meluangkan waktu setiap hari untuk membuka fitur *check-in* harian di XYZ Platform.	

			Y1.4 Saya menyelesaikan misi-misi yang diberikan (seperti belanja produk tertentu) demi mendapatkan tambahan poin.	
3.	Customer Loyalty (Y2)	Repeat Purchase	Y2.1 Saya akan terus berbelanja di XYZ Platform di masa mendatang untuk menggunakan poin yang saya miliki.	(Zeithaml et al., 1996)
			Y2.2 Saya memprioritaskan berbelanja di XYZ Platform di masa mendatang untuk menggunakan poin yang saya miliki.	
		Retention/ Switching Cost	Y2.3 Saya enggan beralih ke aplikasi e-commerce lain (seperti Shopee/Lazada) karena sayang jika poin di XYZ Platform tidak terpakai.	(Burnham et al., 2003)

The questionnaire employed a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The study's analysis comprised two stages, beginning with the evaluation of the measurement model or outer model followed by the assessment of the structural model or inner model (Hair et al., 2017). Evaluation of the outer model involves testing both its validity and reliability. Convergent validity was tested by looking at the outer loading value (≥ 0.70) and Average Variance Extracted/AVE (≥ 0.50) (Hair et al., 2017). Discriminant validity was evaluated using the Heterotrait-Monotrait Ratio (HTMT), where the threshold value is ≤ 0.85 or ≤ 0.90 depending on model strictness (Hair et al., 2017). Reliability was tested using Cronbach's Alpha (≥ 0.70) and Composite Reliability (≥ 0.70) (Hair et al., 2017). The internal evaluation of the model was carried out by looking at the R-square value to assess the variance explained, and Q-square for predictive relevance (Hair et al., 2017). Hypothesis testing was carried out by analyzing the path coefficient, t-statistics, and p-value values using a bootstrapping procedure with 5000 subsamples. The hypothesis is accepted if the t-statistics > 1.96 and the p-value < 0.05 (Hair et al., 2017).

IV. RESULTS AND DISCUSSION

Descriptive Analysis

Based on data obtained from 30 respondents, it is known that the average age of respondents is 21.13 years old with the youngest age being 16 years old and the oldest age being 31 years old. The majority of respondents were at the age of 21, which is also the median and mode value, with a standard deviation of 2.19. This

shows that the age distribution of respondents is relatively homogeneous and concentrated in their early 20s, reflecting the dominance of the Generation Z group.

In addition, the respondents' history of XYZ Platform usage showed that 16 people (53.33%) last used XYZ Platform in the last 2-3 months, while 14 people (46.67%) had used it in less than 1 month. This distribution is relatively balanced, but a little more respondents have not used XYZ Platform in the last two to three months. However, this data shows that respondents are still classified as users who have been active in the near future, so the information provided is still relevant to be analyzed in the context of XYZ Platform's usage behavior.

Outer Model

Table 2. Convergent validity

Variable	Indicators	Outer Loadings Value	Convergent Validity (AVE)
Gamification (X1)	X1.1	0,765	0,502
	X1.2	0,727	
	X1.3	0,619	
	X1.4	0,627	
	X1.5	0,789	
Customer Engagement (Y1)	Y1.1	0,874	0,690
	Y1.2	0,729	
	Y1.3	0,872	
	Y1.4	0,839	
Customer Loyalty (Y2)	Y2.1	0,741	0,720
	Y2.2	0,894	
	Y2.3	0,900	

As shown in Table 2, convergent validity was evaluated using outer loading values and the Average Variance Extracted (AVE). An indicator is deemed valid if it records an outer loading of at least 0.70 and an AVE of at least 0.50 (Hair et al., 2017). In the Gamification variable (X1), most indicators have a loading value above 0.70, although there are two indicators (X1.3 and X1.4) that are slightly below the minimum limit. However, according to Hair et al. (2017), indicators with loadings between 0.40 and 0.70 can be retained if the overall construct's AVE meets the required threshold. Because the AVE value of 0.502 has met the $\geq$ 0.50 criteria, the

Gamification variable is still declared to be valid in a convergent manner. In the Customer Engagement variable (Y1), all indicators have a loading value ≥ 0.72 with an AVE of 0.690, thus meeting the validity criteria. Similarly, in the Customer Loyalty (Y2) variable, all indicators have a high loading (≥ 0.74) with an AVE value of 0.720. Overall, all variables meet convergent validity.

Table 3. Discriminant validity (Heterotrait-Monotrait Ratio)

	Customer Engagement (Y1)	Customer Loyalty (Y2)	Gamification (X1)
Customer Engagement (Y1)			
Customer Loyalty (Y2)	0,863		
Gamification (X1)	0,815	0,777	

Table 3 shows the results of discriminant validity evaluation based on the Heterotrait-Monotrait Ratio (HTMT). A model is considered to meet discriminant validity if the HTMT value is ≤ 0.85 under strict criteria or ≤ 0.90 under looser criteria (Hair et al., 2017). The results show that all HTMT values are in the range of 0.777–0.863. The HTMT value between Gamification and Customer Engagement is 0.815 and between Gamification and Customer Loyalty is 0.777, all of which are below the 0.85 threshold and thus meet the discriminant validity criteria. Meanwhile, the HTMT value between Customer Engagement and Customer Loyalty is 0.863, still below the tolerance limit of 0.90. Thus, all constructs in the model have good discriminant validity.

Table 4. Reliability

Variable	**Composite Reliability**	**Cronbach's Alpha**
Gamification (X1)	0,833	0,751
Customer Engagement (Y1)	0,899	0,849
Customer Loyalty (Y2)	0,884	0,805

Table 4 presents the reliability test results based on Composite Reliability (CR) and Cronbach's Alpha. A variable is declared reliable if CR ≥ 0.70 and Cronbach's Alpha ≥ 0.70 (Hair et al., 2017). The results show that the three research variables, namely Gamification (X1), Customer Engagement (Y1), and Customer Loyalty (Y2), have CR values in the range of 0.833–0.899 and Cronbach's Alpha values in the range of 0.751–0.849. All of these values have exceeded the minimum limit set, so all constructs can be declared reliable and internally consistent.

Inner Model

Table 5. R square

Variable Y	R Square
Customer Engagement (Y1)	0,426
Customer Loyalty (Y2)	0,395

Table 5 shows the R-Square values used to determine the contribution of independent variables to the dependent variable. The Customer Engagement variable (Y1) has an R-Square value of 0.426, which falls into the moderate category according to Hair et al. (2017), indicating that Gamification explains 42.6% of the variation in Customer Engagement. Furthermore, the Customer Loyalty variable (Y2) obtained an R-Square value of 0.395, which also falls into the moderate category according to Hair et al. (2017), indicating that 39.5% of the variation in Customer Loyalty can be explained by Gamification. These results confirm that the tested structural model has fairly good explanatory power.

Table 6. Path coefficient, p value & t-statistic

Variable	Path Coefficient	P Value	T-Statistic
X1->Y1	0,679	0,00	7,569
X1->Y2	0,629	0,00	6,419

Table 6 presents the results of hypothesis testing through path coefficient analysis. The results show that the effect of Gamification on Customer Engagement has a path coefficient value of 0.679 with a t-statistic of 7.569 and a p-value of 0.00. Because the t-statistic value is > 1.96 and the p-value < 0.05, the first hypothesis is declared significant. Meanwhile, the effect of Gamification on Customer Loyalty has a path coefficient value of 0.629 with a t-statistic of 6.419 and a p-value of 0.00. Thus, the second hypothesis is also declared significant. These results indicate that Gamification has a positive and significant effect on both Customer Engagement and Customer Loyalty.

Discussion

This study successfully empirically demonstrated that gamification has a positive and significant impact on customer engagement among XYZ Platform users, confirming the acceptance of the first hypothesis (H1). The implementation of game elements (clear rules and perceived economic benefits) effectively stimulates active

user participation. This finding aligns with (Gullshenas & Shirazi, 2026), demonstrating that gamification leverages basic human motivations, such as competition and achievement, to transform ordinary interactions into emotionally satisfying experiences, thereby encouraging voluntary investment of time in the app. Furthermore, it supports (Heksarini & Safira Putri, 2022) by showing that social features and point systems successfully keep users engaged.

In addition to driving engagement, the data analysis supports the second hypothesis (H2), revealing that gamification has a positive and significant impact on customer loyalty. Unlike traditional loyalty programs, gamification provides unique motivational benefits that actively encourage continuous app usage during shopping (Heksarini & Safira Putri, 2022). This loyalty is primarily formed through retention mechanisms and switching costs. The accumulation of points and elevated status creates a psychological barrier aligned with Loss Aversion theory, users become reluctant to switch to competitors due to the fear of losing their built-up virtual assets.

Overall, this study validates the conceptual framework that gamification plays a vital role in shaping consumer behavior on e-commerce platforms. Support for the findings of (Gullshenas & Shirazi, 2026) is evident, as gamification has been shown to help create emotional attachment or "Brand Love," which strengthens long-term customer retention through a combination of economic incentives and psychological satisfaction. The magnitude of the effect, indicated by the moderate R-Square values, confirms that gamification is crucial to XYZ Platform's retention strategy. Ultimately, integrating game elements that offer tangible benefits has proven highly effective in transforming passive buyers into customers with strong cognitive, affective, and behavioral engagement, as well as sustained loyalty.

V. CONCLUSION AND RECOMMENDATION

Based on the analysis and discussion, this study concludes that XYZ Platform's gamification strategy contributes substantially to increasing customer engagement and loyalty. The implementation of game elements offering tangible economic incentives, such as points and discount vouchers, has proven effective in triggering active user participation, through cognitive, affective, and behavioral engagement. In addition to encouraging daily interaction, gamification also successfully strengthens customer loyalty by creating a psychological switching barrier, where users are reluctant to switch to a competitor's platform for fear of losing their accumulated virtual assets or account level progress. This confirms that gamification is not simply an add-on feature, but rather a strategic mechanism capable of developing durable and ongoing relationships between customers and e-commerce platforms.

However, This research acknowledges several limitations. The first is that the sample size was relatively small and dominated by respondents from younger age groups or Generation Z. Therefore, the results may not be fully generalizable to represent consumer behavior from older demographics who may have different responses to gaming technology. Second, this study focused only on one e-commerce platform (XYZ Platform), which limits comparisons of gamification effectiveness across platforms. 5. Third, based on the coefficient of determination, there is still a significant proportion of variance in the loyalty variable that is not explained by the gamification variables in this research model.

Based on these limitations, it is suggested that future research widen the sample size by involving a more diverse age demographic to obtain a more comprehensive picture. Future researchers are also strongly encouraged to conduct comparative studies across marketplace platforms, for example, comparing the effectiveness of gamification between XYZ Platform and its main competitors. Furthermore, to refine the customer loyalty prediction model, future research should consider adding other relevant independent or mediating variables, such as Service Quality, Brand Trust, Perceived Ease of Use, or Social Influence. The use of mixed-methods research by incorporating in-depth interviews can also be considered to explore the psychological reasons behind user perceptions of gamification features in more detail. This chapter consists of explanations of the findings of the research questions. And, if any, the explanations of other findings, as well as real and feasible recommendations

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