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Virtual Communities and Customer Engagement as Determinants of Repurchase Intention among Mobile Legends Players in Indonesia

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ABSTRACT

This research investigates how virtual communities affect repurchase intentions toward virtual products among Mobile Legends players in Indonesia, with customer engagement serving as a mediating variable. The research is grounded in the phenomenon of declining performance of Mobile Legends amid the global growth of the mobile gaming industry, which indicates the importance of virtual communities in fostering player engagement. Data were collected through a survey of Mobile Legends community members in East Java, with a sample of 160 respondents. The study employed a quantitative approach using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS). The results show that virtual communities have a positive and significant effect on customer engagement and repurchase intention. Furthermore, customer engagement is proven to mediate the effect of virtual communities on repurchase intention. These findings confirm that effective management of virtual communities can enhance player engagement and encourage the sustainability of virtual product purchasing behavior in games.

Keywords: *Virtual Community, Customer Engagement, Repurchase Intention, Mobile Game, Indonesia.*

1. INTRODUCTION

Video games have now become one of the main forms of entertainment for the global community, offering a wide range of easily accessible options, either through purchase or for free on digital platforms such as Steam and the Google Play Store. Amid daily routines and busy lifestyles, games are used as an important means of entertainment, with global consumer spending projected to continue increasing in the coming years [1]. Overall, the mobile gaming market generated nearly USD 76.7 billion, representing a 0.1% increase compared to the previous year [2]. Although the global mobile gaming market continues to show growth, Mobile Legends experienced a decline in revenue in 2025 of approximately USD 158 million, even though the game remains one of the most popular in Indonesia [15].

The decline in Mobile Legends' performance in 2025 indicates that the management of virtual communities has not yet been optimal in building customer engagement, which in turn has implications for the decrease in players' repurchase intention toward in-game products and services. Most of the virtual products sold in Mobile Legends are character skins, which are considered by many players as important resources for building, enhancing, and maintaining their gaming experience and the sustainability of their virtual lives [18]. The intention to purchase virtual products is strongly influenced by social interactions, community norms, and recommendations that develop within players' virtual communities [26].

Virtual communities fundamentally serve as platforms that facilitate social interaction among their members, where appearance is not a primary concern and greater emphasis is placed on ideas and ways of communicating with one another [10]. Through these interactions, player engagement is formed through a two-way relationship between players and in-game products, making virtual communities play an important role in strengthening customer engagement [1]. Player engagement serves as an essential driver of game success because it drives purchasing

behavior, which emerges from increased interaction, emotional involvement, and a sense of belonging to both the game and its virtual community [4]. This occurs because players with a high level of engagement tend to spend more time interacting with the game and its virtual community, thereby increasing emotional involvement, a sense of belonging, and trust in the product, which ultimately strengthens repurchase intention toward in-game items and services.

This study is grounded in empirical observations, identified research gaps, the relevance of the examined variables, and the interrelationships among these variables. In addition, inconsistencies in the findings of previous studies create a research gap that is interesting to explore further. Several prior studies indicate that social or community factors do not have a significant effect on purchase decisions [3], [7], [22]. Considering the decline in Mobile Legends' performance in 2025 amid the global growth of the mobile gaming market, this research focuses on Mobile Legends communities across Indonesia. The objective of this study is to analyze the effect of virtual communities on online repurchase intention among Mobile Legends players in East Java.

2. LITERATURE REVIEW

2.1 Virtual Community

Virtual communities emerge as a result of members' participation in discussions aimed at providing information and influencing fellow members in making product purchase decisions [23]. Communities within a game refer to online social entities where players gather and participate in collective activities for instrumental purposes or experiential enjoyment in gameplay [11]. According to Jin et al. [16], interactions among friends lead to a strong sense of social connection, which can influence players to purchase items in order to contribute to the team. This condition indicates that social bonds within gaming communities not only strengthen teamwork but also encourage purchasing behavior as a form of support for group success.

Communities play a role in shaping consumer engagement at both attitudinal and behavioral levels [21]. The higher the level of positive interaction within a community, the stronger the members' engagement with both the community and the game [26]. Prior research has demonstrated that virtual communities exert a positive and statistically significant influence on online repurchase intentions [16] and customer engagement [4] [26]. Based on the above discussion, the following hypotheses are proposed:

H1. Virtual communities positively influences repurchase intention.

H2. Virtual communities positively influences customer engagement.

2.2 Customer Engagement

Convey Customer engagement is a psychological state that arises from consumers' interactive experiences with a brand [1]. According to Huang et al. [14], player engagement is a psychological process that encourages loyalty to a particular brand and subsequently drives purchase decisions through strong and enduring psychological connections. The higher a player's level of engagement with a game, the greater the likelihood that they will purchase virtual products [26]. Several studies have found that player engagement can drive repurchase intention [5], [19], [26]. Accordingly, this study formulates the following hypotheses:

H3. Customer engagement positively influences repurchase intention

H4. Customer engagement mediates the effect of virtual communities on repurchase intention

3. METHODS

This study adopts a quantitative approach and an explanatory research design to analyze the causal relationships among the variables in the proposed research model, namely the effects of virtual communities, customer engagement, and repurchase intention. In addition, this study examines how customer engagement mediates the influence of virtual communities on repurchase intention. The population of this study consists of Mobile Legends community members aged over 17 years who have made top-ups more than once. This study uses non-probability sampling with a purposive sampling method to obtain respondents who are relevant and suitable for the research objectives. Several constructs in this study are adopted from Hsiao and Chiou [11], Huang et al. [14], and Zang et al. [25]. The determination of sample size follows the approach proposed by Hair et al. [8], namely multiplying the number of indicators by 10, resulting in a minimum sample size of 160 respondents. This study applies Structural Equation Modeling (SEM) analysis using a variance-based SEM approach, specifically Partial Least Squares (PLS), which is processed using SmartPLS version 3.0.

4. RESULTS AND DISCUSSION

Based on descriptive statistical analysis, the respondents were predominantly male (76.2%). In terms of age, most respondents were between 17 and 21 years old (74.4%) and had made top-ups more than three times (73.1%). Furthermore, based on the type of social media used, the majority of respondents used TikTok (35.6%). Lastly, in terms of total expenditure, most respondents spent between IDR 100,000 and IDR 300,000 (45%).

Table 1. Respondent Profile

Demographic	N (%)	Demographic	N (%)
Gender		**Social Media**	
Male	122 (76.2%)	Tiktok	57 (35.6%)
Female	38 (23.8%)	Facebook	42 (26.2%)
Age		Youtube	30 (18.8%)
17 th s/d 21 years	119 (74.4%)	Instagram	31 (19.4%)
22 th s/d 26 years	39 (24.3%)	**Total Spending**	
27 th s/d 31 years	2 (1.3%)	< Rp. 100.000	34 (21.2%)
Total Top up		Rp. 100.000 – Rp. 500.000	72 (45%)
2 Times	27 (16.9%)	Rp. 500.000 – rp. 1.000.000	21 (13.2%)
2 – 3 Times	16 (10%)	> Rp. 1.000.000	33 (20.6%)
> 3 Times	117 (73.1%)		

Source: Processed Primary Data (2026)

The reliability and validity of the research model were evaluated using Cronbach's alpha, composite reliability (CR), and convergent validity measures. Several items in this study were eliminated because they did not meet the required validity and reliability standards. Based on the outer loading test results, all remaining indicators in this study were found to be valid. All factor loadings exceeded the threshold value of 0.7, as shown in Table 2; therefore, all indicators can be considered valid and appropriate for further analysis, as they consistently represent the constructs being measured.

Table 2. Construct Validity Test

Item	Outer Loading	Item	Outer Loading

VC1	0.840	CE3	0.771
VC2	0.794	CE4	0.744
VC3	0.815	CE5	0.776
VC4	0.837	CE6	0.743
VC5	0.865	RI1	0.805
VC6	0.758	RI2	0.796
CE1	0.769	RI3	0.794
CE2	0.727	RI4	0.782

Source: Processed Primary Data (2026)

The results of Cronbach's alpha, composite reliability, and AVE testing are presented in Table 3. The initial results show that Cronbach's alpha values range from 0.798 to 0.901, indicating that all items in this study demonstrate very good internal consistency. Furthermore, composite reliability (CR) values range from 0.867 to 0.924, indicating that the constructs in this study have very high reliability. Lastly, the convergent validity test shows AVE values ranging from 0.570 to 0.670, indicating that the indicators in this study represent their latent variables well.

Table 3. Reliability Test

	Cronbach's Alpha	*Composite Reliability*	AVE
Virtual Community	0.901	0.924	0.670
Customer Engagement	0.850	0.888	0.570
Repurchase Intention	0.798	0.867	0.619

Source: Processed Primary Data (2026)

According to the HTMT criterion presented in Table 4, all construct values meet the discriminant validity requirement by remaining below the 0.90 threshold [9]. Therefore, overall, the constructs in this study can be considered to meet the criteria for discriminant validity, taking into account the theoretical foundations that distinguish each construct.

Table 4. Discriminant Validity Test (HTMT Ratio)

	Customer Engagement	*Repurchase Intention*	Virtual Community
Customer Engagement			
Repurchase Intention	0.470		
Virtual Community	0.369	0.717	

Source: Processed Primary Data (2026)

The structural model was assessed by examining the degree of misfit in the dependent variables. Variance Inflation Factor (VIF), R^2, and path coefficients were employed as the primary indicators for evaluating the structural model [8]. The results indicate that all VIF values range between 1.0 and 5.0 [8], with the highest value recorded at 2.848, suggesting the absence of multicollinearity in the model. Additionally, the R^2 values for customer engagement and repurchase intention are 0.113 and 0.442, respectively, demonstrating that the proposed model explains an acceptable proportion of variance. The Q^2 test result shows a value of 0.5051, these results indicate that the research model demonstrates a predictive relevance of 50.51%, while the remaining variance is attributable to factors outside the model. Accordingly, the proposed model can be classified as strong. The Goodness of Fit (GoF) assessment was conducted to evaluate the overall model fit based on the variables included in the analysis. The GoF value of 0.414 suggests that the structural model exhibits a strong level of fit and substantial predictive capability.

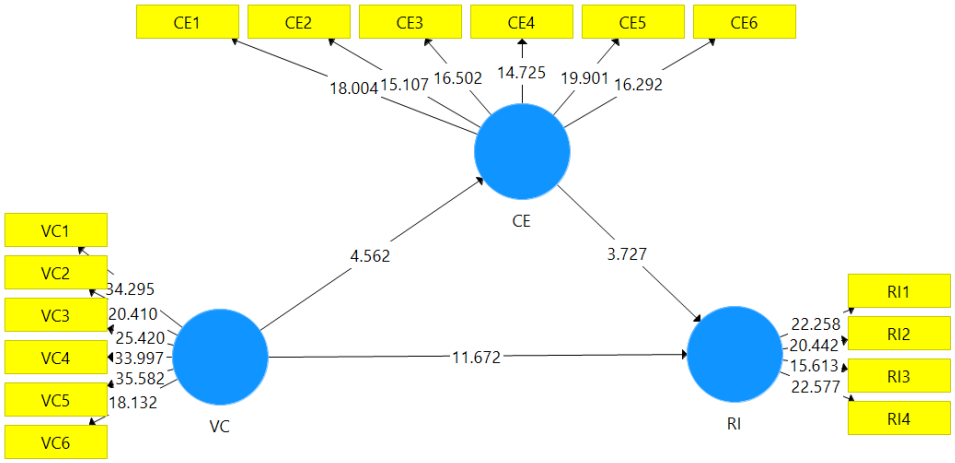

Figure 1. Research Result Model

First, the hypotheses concerning the influence of virtual communities on repurchase intention and customer engagement were tested. The results indicate that virtual communities exert a positive and statistically significant effect on repurchase intention (β = 0.569, p = 0.000) as well as on customer engagement (β = 0.336, p = 0.000), thereby supporting H1 and H2. In addition, customer engagement is found to have a positive and significant effect on repurchase intention (β = 0.202, p = 0.000), providing empirical support for H3.

Table 5. Direct Effect testing

	Hypotheses	β	p-value	Result
H1	Virtual Community → Repurchase intention	0.569	0.000	Supported
H2	Virtual Community → Customer Engagement	0.336	0.000	Supported
H3	Customer Engagement → Repurchase intention	0.202	0.000	Supported

Source: Processed Primary Data (2026)

This study further investigates the mediating role of customer engagement in the relationship between virtual communities and repurchase intention. The results presented in Table 6 indicate that customer engagement significantly mediates the effect of virtual communities on repurchase intention (β = 0.068, p = 0.006), thereby supporting H4.

Table 6. Indirect Effect testing

	Hypotheses	β	p-value	Result
H4	*Virtual Community* →Customer Engagement → Repurchase Intention	0.068	0.006	Supported

Source: Processed Primary Data (2026)

This study evaluates factors that influence repurchase intention of virtual products, particularly virtual communities. In addition, this study incorporates player engagement with the game as a mediating variable between virtual communities and repurchase intention. Although several prior studies have investigated the role of virtual communities in influencing repurchase intention [24] [25], only a limited number have included customer engagement as part of the research model. Therefore, the inclusion of this variable provides a more comprehensive understanding of player behavior, as customer engagement reflects emotional, cognitive, and behavioral involvement that directly influences repurchase decisions in games. This is particularly important given the high level of competition in the mobile gaming industry, which requires developers not only to attract new players but also to retain existing players through sustained engagement in order to maintain revenue from in-game purchases.

The findings of this study reveal that virtual communities significantly influence the repurchase intention of virtual products in Mobile Legends. This result is consistent with previous studies [11] [16] [24] [25], which suggest that virtual communities play an important role in encouraging repurchase behavior. Online communities serve as reference groups for their members, who tend to develop shared norms or moral responsibilities that influence members' behavior [11]. Through virtual communities, players obtain recommendations, strategies, and social encouragement that strengthen their perceived value of virtual products, thereby increasing their tendency to repurchase. Thus, virtual communities function not only as a medium for player communication but also as social mechanisms that foster loyalty and sustain purchasing behavior in games.

The subsequent finding shows that virtual communities have a significant effect on customer engagement, which is consistent with the study by Cheung et al. [5] and Huang et al. [13]. Kaptein et al. [17] argue that increased activity within a community can strengthen consumer engagement with a service, as reflected in higher purchase intensity. The community environment influences members' engagement behavior by stimulating emotional and cognitive changes, which ultimately encourage behavioral involvement within the community [24]. Therefore, virtual communities act as interactive spaces that not only facilitate information exchange but also build sustained emotional and psychological engagement between players and the game.

The results further confirm that customer engagement significantly affects consumers' repurchase intention, in line with prior studies by Lee et al. [19] and Molinillo et al. [20]. Players with a high level of engagement with a game tend to be more willing to spend larger amounts of money to enhance the quality of their gaming experience. Online repurchase intention refers to consumers' willingness to make repeated purchases through digital platforms or social media [19]. This occurs because high engagement fosters emotional attachment and a sense of ownership toward the game [18], leading players to perceive the purchase of virtual products as a means to maintain satisfaction, improve performance, and support the continuity of the gaming experience they enjoy.

Finally, the mediation effect test results indicate that customer engagement mediates the relationship between virtual communities and community members' repurchase intention. This finding suggests that community activities encourage ongoing interactions, experience sharing, and the reinforcement of social norms among members, causing players to feel more emotionally and socially involved, develop a sense of belonging, and be motivated to maintain their relationship with the game through increased purchase intensity. In addition, community members' willingness to help one another, both inside and outside the game through the provision of advice and feedback, further strengthens member engagement [12]. Information exchange among members also enhances trust in the community, reflected in the quality and reliability of the shared information, where such trust becomes an important factor in driving virtual product purchase intention [6].

CONCLUSION

The findings indicate that virtual communities are instrumental in encouraging the repurchase of virtual products among Mobile Legends players in Indonesia. Virtual communities are proven to have a positive effect on customer engagement, which subsequently increases players' propensity to make repeat purchases. Moreover, customer engagement acts as a mediating variable that strengthens the relationship between virtual communities and repurchase intention, indicating that players' emotional, cognitive, and behavioral involvement serves as the primary mechanism driving purchasing behavior. These findings emphasize that effective management of virtual communities can be a crucial strategy for game developers to enhance player engagement and ensure the sustainability of revenue from virtual products.

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