Can Gamification Stimulate Customers to Repurchase in the E-Marketplace? The Mediation Effect of Customer Experience and Engagement

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Abstract

Intense competition among e-marketplaces drives companies to find creative ways to attract and keep customers. One of the approaches is by increasing customer engagement in the online community. Customer engagement to the e-marketplace can be enhanced by attaching gamification to the applications to create excitement and a fun experience for the customers when using the application. Despite its potential benefits, there are limited studies of the effect of gamification on repurchase intention. Furthermore, studies that look at the mediating effect of customer experience and engagement are relatively absent. This study examines the influence of gamification mediated by customer experience and engagement on customer repurchase intention. Samples were selected using a purposive technique by distributing online questionnaires that resulted in 473 valid responses. Data were analyzed using Partial Least Square-Structural Equation Modelling (PLS-SEM). The findings showed the positive effects of gamification on repurchase intention through customer experience and engagement.

I. Introduction

The current COVID-19 pandemic is increasing customers' tendency to shop online due to the fear of going out and getting infected by the coronavirus (Sudaryono et al., 2020). This increasingly shifting purchasing behaviour from brick-and-mortar to online occurs in many countries, including Indonesia, the largest e-commerce market in Southeast Asia (Das *et al.*, 2018; DBS, 2020). In 2019, the gross market value of Indonesia's e-commerce was $21 billion (Google et al., 2019) and it is expected to reach $40 billion in 2022 (Das et al., 2018). During the pandemic, e-commerce sales increased by 26%, with the increase of the number of new consumers by 51% (Ayu and Lahmi, 2020).

One of the online shopping platforms that are commonly used is e-marketplace that enables customers to compare products easily. Among companies in the e-commerce industry, e-tailers that facilitate transactions through e-marketplace have the highest growth rate with $5 billion gross market value in Indonesia in 2017, almost double the value in the preceding year (Das et al., 2018). Due to the market attractiveness, more and more e-marketplace providers are entering the market, including those from abroad that intensify the competition. As a result, each e-marketplace highlights its advantages and offers attractive promotions to attract new customers and retain the current ones. Each e-marketplace must evolve to sustain itself in the market, such as by creating new features that provide more benefits and functions, also giving a superior shopping experience to

increase customer engagement. One of the new features to increase customer engagement is gamification which will create excitement and a fun experience when customers use the application.

Despite its potential benefits, the outcomes of gamification have not been widely studied in a various of contexts. Kim et al. (2020) failed to prove the direct relationship between gamification and repurchase intention in the context of omnichannel retailing. Rahi and Ghani (2018) measured the moderating effect of gamification in the context of internet banking. They confirmed that gamification moderates the positive relationship between user intention to adopt technology and their intention to recommend the internet banking service. From those as mentioned above, the authors found that the empirical studies on the roles of gamification in influencing repurchase intention are still limited and inconsistent, which indicates the need to re-examine its effect on consumer behaviour. Furthermore, it signals that the relationship may be mediated by other variables.

Gamification plays a role in enabling customers to get new and fun experiences and be more involved with a brand or company. Even though gamification may increase customer engagement, previous research by Rahi and Ghani (2018) and Kim et al. (2020) did not consider the mediating effect of customer experience and engagement in the relationship between gamification and repurchase intention. Therefore, the authors intend to examine the mediation effect of customer experience and engagement on the relationship between gamification and repurchase intention in the context of e-marketplace in a developing country, where gamification is still not common. The authors use Indonesia's e-marketplace as the study context due to the potential of this country in the e-commerce businesses in Southeast Asia.

II. Review of Literature

2.1 Gamification

Gamification is a process that aims to improve service quality by invoking the concept of games into the services provided to customers so that customers could have a gaming experience (Hamari et al., 2014). Gamification is a non-game mechanism to create people's intention to do specific actions (Goodwin and Ramjaun, 2017). Gamification is also defined as a method to improve and develop the way companies engage with other interested parties (Robson et al., 2016).

Even though gamification integrates games into the platform, it has different purposes from games. Games usually only offer a quality feeling of pleasure to the users, but gamification is more than that as it is intended for a business purpose. Gamification is very beneficial for platforms such as e-commerce because it can record player activity, where the data will be processed by the system and used as insights for the business (Vdov, 2020).

Lee and Jin (2019) describe four elements of gamification, namely fun, reward, competition, and storytelling. Our study only includes gamification elements in the form of fun, rewards, and competition that are the most related to the research concept of the e-marketplace. Gamification creates fun and exciting activities that make people more willing to do something when they feel entertained. Besides creating fun, e-commerce's gamification provides rewards when individuals complete a mission or reach a specific target in the form of redeemed coins or shopping vouchers. In addition, gamification provides weekly ranking to increase the enthusiasm and competitiveness of the users. This research does not include storytelling due to the simple games in the e-marketplace platforms where there is no story behind each game nor the player creating the story for

each game.

To run a business, companies need to establish positive relationships with customers. Many ways are that are used to build positive relationships, such as providing a positive experience when using e-marketplace services. Gamification is a method that can be used to improve experience, loyalty, brand awareness, and motivation in buying and selling transactions on the e-marketplace (Kardianawati et al., 2016). Research by Vdov (2020) shows that gamification can bring positive effects and values such as emotions and positive experiences in a digital environment. In addition to the good experience, customers may gain rewards for achieving the specific target in the games. Lee and Jin (2019) found that the fun, reward, competition, and storytelling from the games are positively related to consumer brand experience.

Gamification also motivates customers to keep using the e-marketplace services by offering a pleasant experience from the games and making them more involved with the services. Gamification is believed to effectively engage and motivate customers, as well as to spark further consumption behaviour (Xi and Hamari, 2020). Other research shows that gamification can increase the level of engagement of users of a German mobile e-commerce application (Meder et al., 2018). Eisingerich et al. (2019) state that gamification can increase engagement. This study also indicates that gamification is a means that can facilitate digital services, not just a tool for a particular campaign to be successful so that customers want to be engaged and buy a product.

Gamification features in the e-marketplace applications that are easy to play and give benefits to customers in the form of reward points and vouchers that can be used for shopping can motivate and encourage customers to continue purchasing products on the platform. However, Kim et al. (2020) failed to prove the direct relationship between gamification and repurchase intention in the context of omnichannel retailing. Although their study did not prove that proposition, different results were found in other studies in different contexts. Aparicio et al. (2021) state that gamification can help increase the usage level of an e-commerce application that can lead to future repurchase intentions. This study aims to look at whether gamification can have a direct effect on repurchase intention in the context of the e-marketplace. From the literature, we formulate the following hypotheses:

H1   Gamification has a positive effect on customer experience.
H2   Gamification has a positive effect on customer engagement.
H3   Gamification has a positive effect on repurchase intention.

2.2 Customer Experience

According to Becker and Jaakkola (2020), customer experience is all experiences that consumers have when buying or using a product or service. Customer experience is also described as an experience felt by customers when they try something involving an individual's psychology in doing activities with concentration, motivation, and enthusiasm that gives a pleasant experience (Irene and Japarianto, 2015). Customer experience is subjective and context-specific because the evaluation may differ across customers, cultures, and situations. Each person may have a different feeling because of their background that influences their judgment. For instance, gamification may give pleasant experiences to young customers but not the older ones. Its application may be more significant for people with much leisure time than those with limited free time.

Klaus and Maklan (2013) introduced customer experience dimensions that consist of product experience, outcome, moments of truth, and peace of mind. Product experience refers to the customers' perception of products and their ability to compare offers. This element is important in creating consumer behaviour and loyalty. Outcome focus is related

to the reduction of customer transaction cost. Moments-of-truth underlines the importance of service recovery and flexibility in dealing with customers when problems arise. Peace-of-mind refers to the customers' experience with service provider before, during, and after purchasing a service of all interactions.

Customer experience is related to internal and subjective responses of customers that can influence their engagement (Tyrväinen et al., 2020). A fun experience will encourage customers to be more involved, while an unpleasant experience will cause the customer to switch to another one or even do nothing. Hence, every company should create an exciting customer experience that will motivate customers to engage with and be loyal to the service provider so customers will be retained (Ross et al., 2020). A pleasant experience will make customers feel comfortable so that it creates an emotional bond with the company resulting in customers being more loyal to use the services offered and is believed to increase customer engagement (Syahputra and Murwatiningsih, 2019). Customer experience is one of the foundations of customer engagement with the arrangement of the engagement pyramid, starting from providing a good customer experience, creating emotional relationships with customers through the same goals and values, to establishing a shared identity (Grewal et al., 2017). Therefore, creating a good experience for the customer becomes the initial foundation for engagement with the company that is presented in the following hypothesis:

H4   Customer experience has a positive effect on customer engagement.

2.3 Customer Engagement

Customer engagement can be interpreted as a customer's motivation to interact with a brand or firm and will create an attachment between the customer and the brand (Perez-Vega et al., 2021). Some e-commerce platforms already engage consumers to actively interact by creating a series of games to create fun and enthusiasm when shopping on that platform. It is a psychological state resulting from interactions and behavioural manifestations such as providing feedback, writing online reviews. and participating in events (Robson et al., 2016). If customers are well-engaged, they will react with specific actions such as participating in and following content that may not be carried out by customers who are not well-engaged.

According to Cheung et al. (2014), customer engagement is a physical, emotional, and cognitive component of consumers described in three main indicators: vigour, emotional, and cognitive. Vigour refers to the consumer's energy to invest time in using the platform. The emotional element is related to consumers' dedication that refers to customers' sense of fulfilment, meaning an enthusiasm that is characterized by showing interest in activities. The cognitive element refers to absorption that is the result of consumer involvement when using technology, thereby reducing cognitive load and further increasing convenience.

A customer who has engaged with and established a deep connection with some community will purchase products as a form of emotional expression. It also states that the more customers actively engage with an online community, the more likely they will purchase products or services through that community (Prentice et al., 2019). Alongside, Ho and Chung (2020) found that customer engagement, which is described in terms of value equity, brand equity, and relationship equity, determined the repurchase decision of mobile apps users in an emerging market. Therefore, customer engagement has a positive and significant effect on online repurchase intention (Hikmah and Riptiono, 2020). The relationship is presented as follows:

H5   Customer engagement has a positive effect on repurchase intention

2.5 Repurchase Intention

Repurchase intention refers to consumers' willingness to buy the same brand or products (Can and Erdil, 2018). According to Tokgoz and Saylan (2019), repurchase intention is the tendency or intention of consumers to buy a product in the form of goods or services based on the needs, desires, and demands of consumers. Behavioural intention determines an individual's actual individual behaviour in the future. Therefore, one's repurchase intention at a certain e-marketplace may predict customers' actual behaviour or purchase decisions (Dachyar and Banjarnahor, 2017).

Customers' repurchase intention is subjective as it may be stimulated by the products' price, quality, values, and customers' interests and previous shopping experiences (Kian et al., 2017). Nowadays, customers have become more rational. Even though they already have the intention to buy the products, they may not immediately purchase the products, it is defined as a decision process (Katawetawaraks and Wang, 2011). They do not only look for products, but they also evaluate the platform/place where the products are sold. Therefore, the e-marketplace features and services greatly affect repurchase intentions (Sreen et al., 2018). Consequently, e-marketplace should pay attention to the factors leading to customer's repurchase intentions. The e-marketplace should meet customers' expectations. Customers will form a repurchase intention if they can feel the benefits offered by a brand (Ilyas et al., 2020).

2.6 Research Model

The conceptual framework is presented in Figure 1.
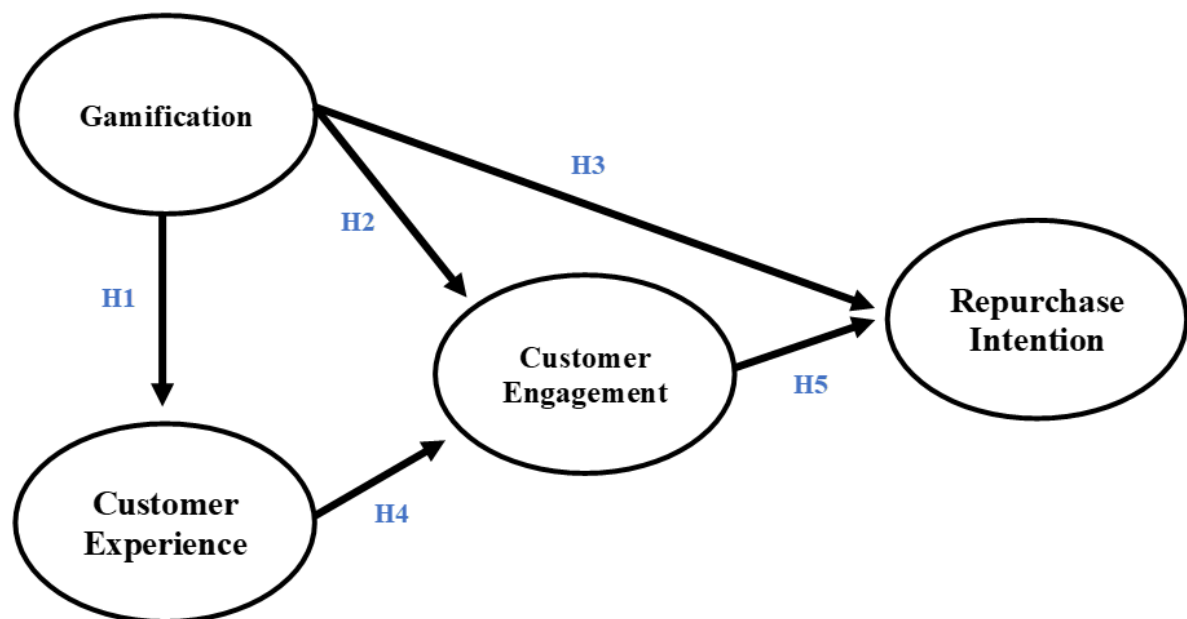
Figure 1. *Conceptual Framework*

III. Reseach Methods

The conceptual framework was examined using a quantitative approach where the data were collected from customers of the most prominent Indonesian e-marketplace that adopts gamification in its application. The samples were selected using purposive sampling by involving individuals who have used and have experienced games from the e-marketplace platform. The questionnaire consists of three parts: screening questions to

ensure the eligibility of respondents, questions about respondents' profiles, and questions related to the research variables. The questions of research variables were translated to the Indonesian language and a double-back translation was performed to ensure the meaning was similar to the original questions. The questionnaire was distributed online using Google Forms, and the link was spread through social media.

IV. Results and Discussion

Total 473 responses were used based on the fulfilment of the respondents' targeted criteria. There were a significant number more female respondents than males, and the majority were between 15 to 40 years old. They had already purchased products on the e-marketplace and had used games features on the e-marketplace more than eight times a month. Table 1 presents detailed information about the respondents.

Table 1. Profile of the respondents (*n = 473*)

Demographic characteristics	Frequency	Percentage
Gender		
Male	20	4.23
Female	453	95.77
Age		
15-24	385	81.4
25-40	87	18.4
41-56	1	0.2
Frequency of using games features on the e-marketplace (in month)		
3 to 5 times	90	19
6 to 8 times	164	34.7
More than 8 times	219	46.3

One item measuring customer engagement was excluded from the analysis due to low factor loadings. Meanwhile, the remaining measurement items met the construct validity and reliability requirements. As shown in Table 2, the convergent validity was fulfilled since the factor loading of the remaining items were between 0.598 and 0.895, and the AVE values were between 0.529 and 0.655. Construct reliability was met as presented by Cronbach's alpha values between 0.848 and 0.891 and composite reliability between 0.886 and 0.918.

Table 2. Results of the descriptive statistics, validity, and reliability test (*n = 473*)

Variable (Item)	Descriptive statistics		Convergent validity	Reliability		
	Mean	S.D.	Factor Loading	AVE	Composite reliability	Cronbach's alpha
Gamification (G)				0.529	0.886	0.848
G1	4.017	0.958	0.598			
G2	3.444	1.341	0.674			
G3	3.617	1.050	0.820			
G4	3.729	1.030	0.835			
G5	3.264	1.201	0.707			
G6	3.820	1.161	0.785			
G7	4.535	0.747	0.636			
Customer Experience (CEX)				0.548	0.894	0.862
CEX1	4.499	0.710	0.679			
CEX2	4.271	0.840	0.769			
CEX3	4.480	0.724	0.763			
CEX4	4.507	0.772	0.651			
CEX5	4.490	0.692	0.752			
CEX6	4.372	0.719	0.784			
CEX7	4.573	0.620	0.772			
Customer Engagement (CEG)				0.568	0.913	0.890
CEG1	4.438	0.764	0.651			
CEG2	4.323	0.780	0.757			
CEG3	3.311	1.324	0.773			
CEG4	3.560	1.236	0.758			

CEG5	3.471	1.237	0.822			
CEG6	3.839	1.030	0.839			
CEG7	4.112	0.977	0.749			
CEG9	3.994	0.914	0.658			
Repurchase Intention (RI)				0.655	0.918	0.891
RI1	4.241	0.861	0.852			
RI2	4.171	0.905	0.885			
RI3	3.685	1.143	0.803			
RI4	4.000	0.978	0.895			
RI5	3.856	1.121	0.607			
RI6	4.161	0.919	0.778			

The HTMT ratio were used to test the discriminant validity, and the results are presented in Tables 3. As shown in Table 3, all values of HTMT showed acceptable results less than 0.85.

Table 3. HTMT Results (*n = 473*)

	Customer Engagement	Customer Experience	Gamification	Repurchase Intention
Customer Engagement				
Customer Experience	0.572			
Gamification	0.429	0.495		
Repurchase Intention	0.730	0.563	0.397	

As presented by the R-squares, gamification could explain variations of the customer experience by 18.5 percent. As presented in Table 4, H1 was supported in which gamification had a significant positive influence on customer experience ($\beta = 0.430$, *p*-value = 0.000). Related to H2 and H4, 30.5 percent of customer engagement variability was explained by gamification and customer experience. H2 that tested the effect of gamification on customer engagement ($\beta = 0.195$, *p*-value = 0.000) was supported. H4 was also supported as this study found that customer experience had a significant positive effect on customer engagement ($\beta = 0.439$, *p*-value = 0.000). From the path coefficients, customer

experience had a greater effect on customer engagement than gamification. Finally, 44.1 percent of the repurchase intention variation was explained by customer engagement. H5 was supported as the finding showed a significant positive effect of customer engagement on repurchase intention ($\beta = 0.613$, p-value = 0.000). H3 was also supported as this study found that gamification had a significant positive effect on repurchase intention ($\beta = 0.112$, p-value = 0.001).

Table 4. Result of the hypotheses testing ($n = 473$)

Path		Path Coefficient	S.E.	t-value	p-value	Decision
H1	Gamification → Customer Experience	0.430	0.039	11.017	0.000	Supported
H2	Gamification → Customer Engagement	0.195	0.047	4.148	0.000	Supported
H3	Gamification → Repurchase Intention	0.112	0.038	2.981	0.001	Supported
H4	Customer Experience → Customer Engagement	0.439	0.042	10.593	0.000	Supported
H5	Customer Engagement → Repurchase Intention	0.613	0.033	18.392	0.000	Supported

Customer experience significantly mediates the relationship between gamification and customer engagement ($\beta = 0.189$, p-value = 0.000) as shown in Table 5. Customer engagement was also significant in mediating the relationship between gamification and repurchase intention ($\beta = 0.119$, p-value = 0.000), as well as the relationship between customer experience and repurchase intention ($\beta = 0.269$, p-value = 0.000). Lastly, customer experience and customer engagement were significant in mediating the relationship between gamification and repurchase intention ($\beta = 0.116$, p-value = 0.000).

Table 5. The results of the mediation effect test ($n = 473$)

Path		Path Coefficient	S.E.	t-value	p-value	Remark
1	Gamification → Customer Experience → Customer Engagement	0.189	0.024	8.020	0.000	Significant
2	Gamification → Customer Engagement → Repurchase Intention	0.119	0.029	4.053	0.000	Significant
3	Customer Experience	0.269	0.032	8.496	0.000	Significant

	→ Customer Engagement → Repurchase Intention					
4	Gamification → Customer Experience → Customer Engagement → Repurchase Intention	0.116	0.017	7.018	0.000	Significant
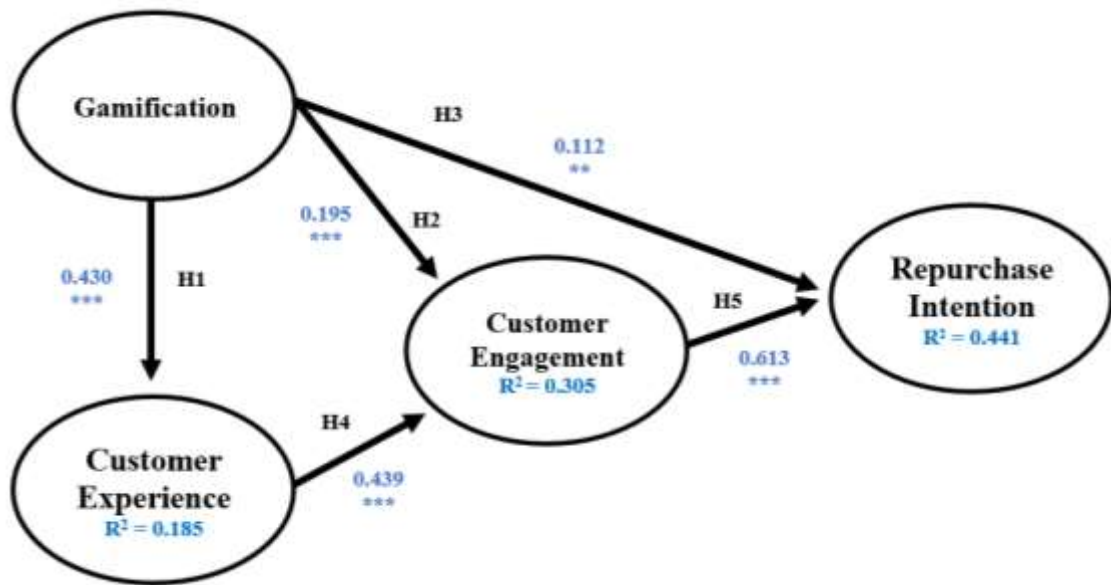
Figure 2. Path Diagram

E-marketplace repurchase intention structural model results. Path *significant at $p < 0.05$; **significant at $p < 0.010$; *** significant at $p < 0.001$.

Discussion

Even though gamification is beneficial and has positive impacts on online platforms (Hamari et al., 2014), there are only a few empirical studies are examining the role of gamification on online platforms. Among these studies, the findings of Rahi and Ghani (2018) and Kim et al. (2020) remain unclear. Therefore, this study examines the effect of gamification on repurchase intention by including customer experience and engagement as mediating variables.

First, this study finds a significant positive effect of gamification on customer experience. It is in line with the study by Kardianawati et al. (2016) in the same context and Vdov (2020) in digital environments that can be utilized in marketing, education, and management fields. Gamification creates fun and exciting activities that make people more willing to do something when they feel entertained. Besides creating fun, e-marketplace's gamification provides some rewards when individuals complete a mission or reach a specific target in the form of redeemed coins or shopping vouchers. With those benefits, an e-marketplace can create a new experience for its users. The majority of the respondents are from Generation Z with an age range of 15-24 years old, which is more tech-savvy and easily understand how to play the games compared to the earlier generations because they

are born in and grew up in different social and economic conditions (Dwidienawati and Gandasari, 2018). Generation Z is the first generation to have access to wide-scale digital communication technology in cell phones, Wi-Fi, and interactive computer games. Another study by Çobanoğlu et al. (2018) finds that Generation Z prefers to play indoor games such as computer games and other similar. As such, respondents consider that the gamification offered by the e-marketplace provides a new and exciting experience. The game elements comfort them during shopping activities in the e-marketplace application and make them choose that application over others.

Second, this study finds a significant positive effect of gamification on customer engagement. It supports a previous study by Xi and Hamari (2020) in the context of brand communities, Eisingerich et al. (2019) in the context of digital service, and Meder et al. (2018) in the same context. It is easy to engage with Generation Z customers by implementing fun strategies, such as providing gamification in e-marketplace apps. They consider that the games in the e-marketplace applications provide a new and exciting experience. For the respondents, the elements of the game lead them to be more involved in the e-marketplace application, such as paying more attention, being enthusiastic, and having fun with it, and forgetting about anything else.

Third, unlike Kim et al. (2020) who found an insignificant direct effect of gamification on repurchase intention, this study finds the effect is significant and positive. This difference might be related to the study context. Gamification can increase consumer enjoyment of online shopping. Hence, the customer's decision to shop online is triggered by his motivation to participate in the game (Xu et al., 2020). Respondents consider that the gamification offered by the e-marketplace provides an exciting and new experience that makes them happy. The element of gamification motivates them to keep playing the games to get rewards. Not only to provide a new experience for its users, but gamification also has its own purpose by providing rewards that can be used for subsequent purchases. As a result, giving this reward can encourage customers to repurchase an item in the future as a form of redeeming the reward they get. The significance of the direct effect indicates that customer experience and customer engagement play a partial mediation effect.

Fourth, this study finds a significant positive effect of customer experience on customer engagement. It is similar to previous studies by Grewal et al. (2017) in the context of retailers and Irene and Japarianto (2015) in the context of beauty and personal care stores. This study reports that customer experience plays a significant mediating role between gamification and customer engagement. After customers buy or use a product or service, they evaluate the products based on their experience. Providing a pleasant experience is crucial to create loyal customers and build engagement. Most respondents in this study were women. Women usually shop by asking about others' experiences when shopping (Kumaravel, 2017). In addition, they use feelings and are more likely to stay connected with family, friends, and brands that match themselves. Therefore, a good customer experience should be created to attract other potential customers interested in the products/services offered by the e-marketplace based on the experiences of others that can be obtained from the reviews and ratings of each product. The positive customer experience encourages them to be more involved in the e-marketplace application by posting their experience, reviewing the products, and being emotionally attached to the e-marketplace. It implies that the more customers are happy with the experience they have after playing the game, it is easier to engage them.

Last, this study finds a significant positive effect of customer engagement on repurchase intention. It is in line with Hikmah and Riptiono (2020) in the same context and Ho and Chung (2020) in the context of mobile apps. This study provides sufficient

evidence that customer engagement mediates the relationship between gamification, customer experience, and repurchase intention. According to Kaihatu (2020), customer engagement as a result of interaction encourages customers to be more involved and transforms non-transactional behaviours into purchase behaviours (Prentice et al., 2019). The respondents consider that their engagement with the e-marketplace leads them to feel passionate, give more attention to the e-marketplace, and inspires them to shop. As a result, this engagement leads them to repurchase from the e-marketplace soon.

V. Conclusion

5.1 Theoretical Implications

This study contributes to the understanding of the role of gamification in affecting repurchase intention as there are not many studies looking at the direct and indirect effects of gamification on repurchase intention. This study examines the mediation effects of customer experience and engagement in the relationship between gamification and repurchase intention. The inclusion of mediating variables is due to the inconsistent finding of Kim et al. (2020) that fails to prove the direct relationship between gamification and repurchase intention in the context of omnichannel retailing. This study reveals that gamification on e-marketplace applications is a valuable medium to create a good customer experience and engagement. The originality of this study is the examination of the direct and indirect effect of gamification on repurchase intention as not many studies do this, particularly in the context of e-marketplace in an emerging country. Therefore, this study fills the gap of the gamification roles in customer decision and the mediating effects of customer experience and engagement in the context of the e-marketplace. This study signifies the partial mediating role of customer experience and engagement in the relationship between gamification and repurchase intention.

5.2 Practical Implications

E-commerce businesses that include e-marketplace have significant potential growth in the Asian market. Due to their technological acceptance and competence, it seems that generation Y and Z remain the leading markets for this industry. Due to the heightened competition, players in this business must have a clear orientation for strengthening their market positioning and market growth platforms (Deloitte Indonesia, 2019). There are several ways to increase customer visit frequency, and one of them is through creating a good customer experience. As reported in this study, the provision of gamification features in the platform can attract more customers, particularly young customers, to use the application, which leads to repeat purchases. The game feature may give an exciting experience to customers and increase their engagement with the e-marketplace.

Gamification may increase the effectiveness of marketing campaigns of e-marketplace that result in positive outcomes. The presence of gamification can attract customers by offering a fun activity while shopping, and eventually increase their tendency to engage with the e-marketplace. Currently, only a few e-marketplaces have recognized the potential benefits of gamification to enhance customer experience. Since games in the e-marketplace application provide an exciting experience to customers, the providers must continue improving the games to maintain the number of users of the application and encourage them to revisit the application again and again.

Merely incorporating game elements into the e-marketplace platforms does not guarantee its effectiveness in creating consumer engagement and interest in continuing to use the e-marketplace. E-marketplace providers must know the critical aspects of games, so

that they can invest their resources effectively. They should consider developing exciting and challenging games because gamification can increase customer engagement and keep them playing (Eisingerich, 2019). Furthermore, they may create games that allow users to compete with other users as some individuals feel proud if they can win over others. The e-marketplace providers can develop new arcade games, such as mini-games that can be completed quickly. They may also give more rewards to customers after finishing the game as some customers play games in the application to get rewards that can be used to purchase the products in the e-marketplace.

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