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WHAT FACTORS THAT COULD INFLUENCE REPURCHASE INTENTION OF VIDEO GAME?

Fauzan Azhima Achmad* and Ljoupka Namouvska

School of Business and Management, Institut Teknologi Bandung, Indonesia

E-mail address: fauzan_azhima@sbm-itb.ac.id

Abstract - **The aim of this study is to investigate the underlying factors that could lead to customer intention to repurchase video game. The study followed a model based on the improved theory of Technology Acceptance Model using perceived enjoyment and perceived ease of use variables, along with the theory of customer engagement, which consists of cognitive engagement, affective engagement, and behavioral engagement variables. In this study, the author used quantitative research survey method. The data was collected using non-probability convenient sampling towards customers that have experience of playing video game as the participants. The data was analyzed using SPSS 25 statistical analysis. As the result, all variables generate acceptable values for their reliability, validity, and classical assumption test. Furthermore, multi linear regression analysis found that perceived enjoyment, cognitive engagement, and affective engagement significantly influence repurchase intention of video game; while the relationship between perceived ease of use and behavioral engagement with repurchase intention are not significant.**

Keywords – **Video Games, Customer Purchase Intention, Consumer Behavior.**

I. INTRODUCTION

A. Background

The common interest of playing video game has been increasing over the last five decades since the release of the first commercially launched video game in the arcade [1], which has since branched across a variety of platforms. Nowadays, the increasing popularity of video game all over the world along with the COVID-19 pandemic's contribution towards video game consumption [2] has netted total global sales of $174.9 billion in 2020, which is a $77.4 billion increase from the previous year [3].

This sudden, yet explosive growth from the video game industry has led to many research potentials on the topic of video game entertainment and consumer behavior [4], specifically towards the customer intention behind the purchase of video game, which comes as a result of interacting with the game itself. A widely common concept that is a recurring theme in these researches touches on the concepts of motivation. Then, many researches that touches into the customer experience in the video game industry has been focusing more towards the gameplay experience and how it can be measured using various different models and frameworks. More so, other researchers have extended their studies beyond these concepts and built specific models that explain how consumer behavior of the video game industry can be explained [20].

Research in consumer perception towards technology is an ever-developing research topic in many industries that integrate any sort of technological invention to them. In understanding consumer behavior that is related to technology, the TAM (Technology Acceptance Model) by [26] is a commonly used model that many studies have laid the roots of their research upon [36]. Most of the studies involving TAM have extended the model by introducing other concepts that are related to individual behaviors. Some of the studies introduce perceptions that act similarly to the perceived ease of use and perceived usefulness [26], some others use these variables as an intermediary to link to a new concept [7], and some implement both [34].

B. Research Objective

There is always a need to understand and analyze consumer behavior and thought processes that leads them into being interested in video games in order to improve customer experience in that industry. Improving customer experience has always been a top priority for firms and customers alike in every industry [23], especially in the entertainment industry where the selling point of a firm is judged based on perceived customer experience. A study by [31] shows that customer engagement is an important aspect of customer experience in a video game.

Most of the research that is put into customer video game behavior explained behavioral aspects of consumer behavior in western countries [24][20][22], while only a few that explained customer experience as the underlying factors of consumer behavior toward video game in Asian countries, such as Indonesia. From these consumer behavior studies alone; it is also unclear to what extent customer experience correlates with video game repurchase intentions. Since many studies have applied TAM to explain extensive user experience of the technology concerned [24][36], the improved theory of TAM using perceived enjoyment and perceived ease of use may beneficial to gain a more complete picture of the correlation between experience factors with repurchase intention. Hence, the main objective of this research is to analyze the extent to which perceived enjoyment, perceived ease of use, and customer engagement could lead to repurchase intention of video games.

In order to conduct the literature search, the author used online journal databases such as Ebsco (Business Source Complete), Emerald Insight, and Google Scholar as well as on-site resources taken from the library of the Learning Center of Rennes School of Business. During the literature search, the author used the following key terms: video games,

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customer experience, customer engagement, and repurchase intention.

C. Video Game

The word "game" that video game is derived from is broadly defined as an activity where the decision maker is working towards a set goal in order to achieve it based on the system [39]. Games were meant to be played for various purposes such as research, teaching, training, sports, and nowadays most commonly known as entertainment [38]. The system that makes up a game using a predetermined set of rules that was designed for any of the purposes mentioned is called a game design. With the advancement of technology, game design is then integrated into an electronic system into what is commonly known today as a video [1]. A video game is essentially defined as a system or technology that allows for its users to generate input through a controller device in order to create output through a device that presents visual feedback to the users [37]. The system that is used to play a video game is called a platform, in which controls the interaction between the player and the game through the appropriate device that each platform supports. For example, a platform like the PS2 console is able to control the visual display for the output device, an HDMI monitor, and the button that allows the player to interact with the game for the input, a controller. This video game mechanism goes way back into the first commercial release of a video game in 1971, where a video game called "Computer Space" that allows users to play through an arcade machine platform [1]. Now, there have been over a thousand new video game releases per year across multiple different platforms for the past 20 years [40], which shows how much video game has grown within only 50 years ever since its commercial introduction.

D. Technology Acceptance Model

The TAM (Technology Acceptance Model) is a model that explains the perception of customers towards technology [26], which is related to the behavioral intention of using the technology. The two core concepts that make up this model are perceived ease of use and perceived usefulness. Perceived ease of use is a measure of how much a person believes that using a particular technological system is effortless. Perceived usefulness is a measure of how much a person believes that using a particular technological system will help with their performance. This behavior will then affect the attitude and behavioral intention to use technology [26]. Although TAM is expected to predict the behavior of a technology user after just a brief interaction with the technology [26], many studies that have applied TAM have implicitly used TAM after extensive user experience of the technology concerned [24] [36]. For the purpose of this study, we will focus on the latter.

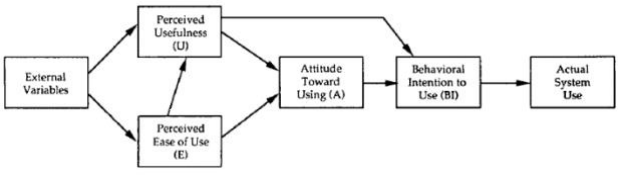

Figure 1: Technology Acceptance Model [26]

As a result of perceived usefulness and perceived ease of use, the TAM model has proven that these two core factors of TAM determine the customer's attitude towards using technology, which then affects customer's behavioral intention to use technology. The theory of reasoned action according to [25] explains that most of human behavior can be predicted since behavioral intentions of an individual are determinants of their actual behavior. The theory explains three determinants as attitude, subjective norm, and perceived behavioral control. Attitude refers to the feelings about performing the target behavior. Subjective norm is how a person bases their perception based on the perception of a person that is important to them, meaning having their perception reflect their significant other. Perceived behavior reflects on the internal and external constraints on behavior, which means the perceived difficulty of completion of the act will affect the person's intent and behavior towards that act. Out of all the three determinants, attitude is the most impactful factor that leads to the behavioral intention of using the technology itself [30]. This claim is supported by a gaming study by [21], which states that continuance intention is a result of the attitude of the players. Traits like persistence, novelty seeking, and reward dependence were related to increase in the individual's intent to recurrently participate in a task [22]. In marketing terms, this behavior correlates to an increase to the purchase intention of a product.

A concern has been brought up to the fact that both of the core concepts of TAM are aimed to specifically achieve the objective whether to utilise the technology or not, without consideration of the motivation that derives from the pleasure that comes from using technology. A further study by Davis et al. [30] claims that the two types of motivation that causes people to learn information technology comes from both intrinsic motivation, a motivation that derives from pleasure [35], and extrinsic motivation, a motivation that derives from goal [35]. Self-determination theory also claims that both intrinsic and extrinsic motivation are the drivers of humans to perform action [19]. This leads to the replacement of perceived usefulness to another variable that implies enjoyment and adoption to technology is positively related. This variable is called perceived enjoyment [30], and it is the more relevant variable to use in this study in comparison to perceived usefulness considering that it has been widely applied within the context of entertainment technology [24].

E. Customer Experience

Research on video game studies related to customer experience has been widely associated with a number of concepts that commonly occur in other studies that analyze consumer behavior in the video game industry. Customer experience as a concept has already been presented from early 1960s from a study that was done by Abbott [33], that claims "what people really desire are not products, but satisfying experiences". This concept has been embraced throughout marketing practices seen in firms nowadays heavily investing their value to always continuously improve experiences for their customers. However, as mentioned in the original TAM, one of the key factors that leads to

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intention of usage aside from the perceived ease of use and perceived usefulness is the attitude that is resulted from the experience of technology [26]. An empirical validation of consumer video game engagement study by [31] shows how consumers' experience affects their engagement in a video game, where the engagement is defined closely to the attitude of usage. The study states the three hedonic video game consumption experiences (imaginal, emotional, and sensory experience) [32] significantly influences the three types of customer engagement, which are cognitive, affective, and behavioral engagement.

F. Customer Engagement

According to previous research of TAM, customer experience is what leads to consumers' attitude that leads to behavioral intention of technological consumption [24]. The concept of the customer engagement talked about in the study relates directly to TAM's theory of consumer's attitude; hence, the author will focus specifically on the three types of customer engagement instead of customer experience.

F.1 Cognitive Engagement

Cognitive engagement is defined as the user's absorption to the game and the conscious attention of the user is being measured, which highlights the relevance of the activity, time, and surrounding environment. This type of engagement is related the concept of flow and immersion, which refers to the experience of total immersion for an individual due to the enjoyment of the activity that causes the lack of self-awareness towards their surrounding and only focusing on that one task they have absorbed themselves into [27]. This concept has been associated with activities with a broad range of context, especially in the context of video games, as multiple studies have mentioned how bringing players into the flow state is a good indication that the players experience deep feelings of happiness and enjoyment [29][34][31]. Chen [41] states that bringing players into this flow state should be the goal that video game firms are aiming for to ensure maximum enjoyment. However, despite the connection of flow to enjoyment that seems to be a straightforward concept, other studies have also claimed that flow is quite complex to apply in practice [42].

F.2 Affective Engagement

Affective engagement is defined as a measure for the dedication level and enthusiasm for a video game, which highlights the importance of self-congruence. This type of engagement implies the amount of motivation to video games that a person is willing to spend most of their time on, which is a behavioral trait common to avid users of video games [50]. According to the self-determination theory (SDT) [19] the reason for this behavioral trait could either be intrinsic (motivation to perform actions that is satisfying to perform) or extrinsic (drive to perform action for the sake of a reward unrelated to the action). The variables vary in between users, the more common indicators of self-determination for positive continuance intention according to the study by [62] are feelings of in control (intrinsic), effectiveness (extrinsic), and relatedness to others (intrinsic). Although these motivations play a role in the increase of player's level of dedication, challenges in video games that are considered too high of a difficulty could hamper a player's experience [62], which causes the intrinsic and extrinsic factors to be less fulfilled.

F.3 Behavioral Engagement

Behavioral engagement is defined as a measure for social connection and interaction with other people, which highlights the importance of the community aspects of a video game. This type of engagement is used in reference to the interaction between two or more users. The idea of behavioral engagement comes from the fact that social interaction has been one of the key parts of human development in building the modern society that is present [51]. This is the same case in video games, where the optimal experience of a video game player is a result of social interaction from within the gameplay experience [52]. This matches with the gratification theory, a theory that suggests that players are gratified by a number of attributes in gameplay, namely social interaction [53]. The theory is then developed into a model for continuance intentions in video game play, which suggests that players that are socializers have a higher satisfaction and are positive towards continuance intention of playing the respective video games [18]. However, this entirely depends on whether the video game in question is designed into to satisfy the social interaction aspect [18].

G. Hypothesis

Based on literature discussed in the previous sections, the author proposes a conceptual model (see Figure 1) and develops the hypothesis to understand the extent to which customers' intent towards repurchase is affected by factors such as perceived enjoyment, perceived ease of use, and customer engagement.

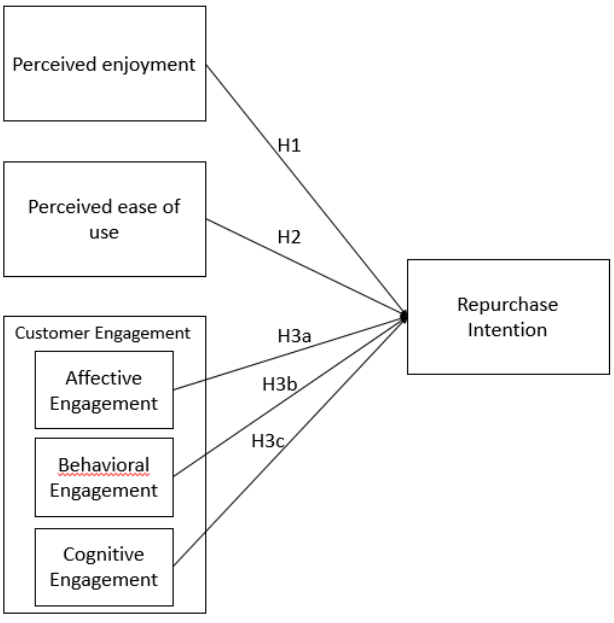

Figure 2: Conceptual Model

[26], has introduced another variable to the TAM model called the concept of perceived enjoyment. Perceived

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enjoyment has been argued to be the more relevant model for the purpose of a video game model to replace perceived usefulness, as it gives the perspective of the intrinsic motivation of the customer more in order to reflect their feeling of pleasure [46]. Accordingly, as the research of this study is related to the video game industry, we adopted the variable that supports intrinsic motivation as well as extrinsic motivation because these motivations influence the purchase intention of a customer [47]. Therefore, we replaced perceived usefulness from TAM with perceived enjoyment, so the two key factors of TAM end up with both intrinsic (perceived enjoyment) and extrinsic (perceived ease of use). From the following information, we hypothesize the following:

H1: Perceived enjoyment positively relates towards customers' repurchase intention of video game.
H2: Perceived ease of use positively relates towards customers' repurchase intention of video game.

According to the study by [31], the three types of engagement (cognitive, attitude, and behavioral engagement) could potentially lead to repurchase intention. For cognitive engagement, immersion-related behavior that leads to a state of flow leads to greater satisfaction, which is positively correlated with repurchase intention as multiple studies have proven [29][34][31]. For affective engagement, the concept of self-congruence that is related with dedication and enthusiasm itself has been correlated with behaviors of impulsive and compulsive buying, which is a result of a high customer's purchase intention [49]. For behavioral engagement, interactions between customers that signifies nonpurchase behaviors such as word of mouth can be seen as a trigger that leads customers to increase their repurchase intention [13]. With the available information, the hypothesis can be formed:

H3a: Cognitive engagement positively relates towards customers' repurchase intention of video games.
H3b: Affective engagement positively relates towards customers' repurchase intention of video games.
H3c: Behavioral engagement positively relates towards customers' repurchase intention of video games.

II. METHODOLOGY

This section of the paper will explain the approaches that were done to prove the hypothesis based on the main objective of this research.

A. Data Collection

For the purpose of data collection, the author has conducted a quantitative research method. Quantitative research method is a strategy of research that bases data collection and analysis through quantification [55]. This method includes collecting data based on the quantity of response, and then analyzes it through analytical methods (Aliaga and Gunderson, 2002).

The data is then collected through the usage of both primary and secondary data. Primary data is defined as data that are obtained through direct first-hand experience of the author, in which makes the newly obtained data precise, authentic, and impartial (Kabir, 2016). For the purpose of this study, the primary data collection was done in a form of survey that is highlighting repurchase intention of customers in video game context. On the other hand, the author also used secondary data, which is a type of data that was collected from other sources that has already been released. The usage of secondary data in this research is to strengthen the information that has already been collected from the primary data. For the purpose of this paper, the secondary data is obtained from books, journals, articles, and open-source data statistics that are relevant to the primary data.

B. Participants

This study chose anyone who has had experience with playing video games, which is a prevalent activity among everyone within the plausible age of playing video games, and that they cater to a universal audience. Hence, the sampling method used for this study is non-probability convenient sampling, which is a sampling method that allows for the author to select samples based on non-random criteria in which not all members of the population have an equal chance in participating [55]. In other words, the participants that are selected from the population are participants that are conveniently available to the author. This method is used due to a set of time requirement that is not enough to fulfill other methods, and cost-related due to the fact that this research is not funded in any way.

C. Measures and Procedures for Data Collection

The author created a set of questionnaires directly using google forms, and then distributed them to the participants through social media, such as WhatsApp, Line, Facebook, Email, and Discord. WhatsApp is a common universal direct messaging application that is used by people of all age despite, and WhatsApp is used in this study to target people who are not using any other social media platform (commonly people from Generation X and Baby Boomers) (Sandra et al., 2012). Line functions as a social media to target particularly the Indonesians with, as Line is a very popular among the young adults of Indonesia. Email is used to send the survey through services that allow this questionnaire to be publicized and posted to potential participants that are subscribed to this promotion service. Lastly, Discord is used mainly to target people who are interested in video games, because it is a commonly used social media platform for people to play video games together

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with. As the result, this study was able to collect 80 participants that filled the complete questionnaire.

As a filter question to ensure that this study is directed towards people who have experience with video games, the first question asked was: "Do you play video games?". Those who replied yes were given the full set of questionnaires to collect on the information needed for this study. The questionnaires that we have distributed to our participants consists of three parts. The first part is to find out about the participants' demographic profile (i.e., gender, age, monthly expense, education, and nationality), and the results can be seen in Table 1. The second part focused more towards the aspects of video gaming behavior in general (i.e., frequency, daily hours, and genre of preference, platform, and location of playing), and the results can be seen in Table 2. The third part covered the independent and dependent variables of the proposed conceptual model. The independent variables are technology acceptance model variables (i.e., perceived enjoyment and perceived ease of use), customer video game engagement (i.e., cognitive, affective, and behavioral engagement); and the dependent variable is repurchase intention. Each question is available in Appendix 1. In each question, the six-point Likert scale is used starting from 1 being "strongly disagree", 2 being "disagree", 3 being "slightly disagree", 4 being "slightly agree", 5 being "agree", and 6 being "strongly agree". Using the six-point scale allows participants to be more decisive with their answer and force them to take a side, which helps with the result of the research, as there is no such respondent that is perfectly neutral against a statement [63]. Particularly for Indonesian participants, the questionnaire is also translated to Indonesian language to remove the language barrier in question comprehension.

D. Data Analytical Approach

To process the data and apply multiple regression analysis, the author used IBM SPSS Statistics 25 software (IBM Corp., 2017).

TABLE 1
VARIABLES ENTERED AND REMOVED A.

Model	Variables Entered	Variables Removed	Method
1	Cognitive Engagement (X3c), Perceived Ease of Use (X2), Perceived Enjoyment (X1), Behavioral Engagement (X3b), Affective Engagement (X3a)[b]	.	Enter

a. Dependent Variable: Purchase Intention (Y)

b. All requested variables entered.

Table 3 displays the variables that are inputted in the SPSS and the method used for this regression analysis. For this study, the author used multi regression analysis. Multi regression analysis is a method or analytical hypothesis testing technique that is aimed to test whether or not is the two or more independent variable able to influence the dependent variable (Gülden and Neşe, 2013). Independent variable (denoted as X) is a variable that stands alone and isn't change by any other variable that the author is trying to measure, while dependent variable (denoted as Y) is a variable that depends on other variables and factors. In this study, the independent variables are: perceived enjoyment (X1), perceived usefulness (X2), affective engagement (X3a), behavioral engagement (X3b), and cognitive engagement (X3c). The dependent variable of this study is the repurchase intention (Y). Therefore, the purpose of this analysis is to know to what extent is the repurchase intention of video game consumers influenced by the aforementioned independent variables.

III. RESULTS

A. Data Measurement

A.1 Descriptive Analysis

Based on the collected data, descriptive analysis was conducted to identify the demographic profile and behaviour of the participants as follow:

The participants represent 86.3% male and 13.8% female. The results indicate that more males are attracted to video games than females. This is also a common trend in many other researches related to player behavior in video games, such as a study of online game communities [46], immersion in video games [45], and playful consumption research [31]. All of these studies have male to female ratio at around 80 – 90% male to 10 – 20% female, and this study is no exception.

TABLE 2
GENDER OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	11	13.8	13.8	13.8
	Male	69	86.3	86.3	100.0
	Total	80	100.0	100.0	

Then, the majority of participants are within the age of 18 to 24 years old (43.8%), which indicates that video games are more catered towards young adults that belong to the generation Z category [57]. According to the study by Colby and Ortman, [57], people from the demography of generation Z are more likely to be interested in video games because they were born with digital entertainment. Although the second most data are from > 40 years old participants, it comes purely from the nature of this research sampling. They do not show the same frequency of gaming as 9 – 24 years old participants. This is related to Table 6: Frequency, which will be touched upon more in that section.

TABLE 3
AGE OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	>40 years old	20	25.0	25.0	25.0
	18 - 24 years old	35	43.8	43.8	68.8
	25 - 32 years old	7	8.8	8.8	77.5
	33 - 40 years old	10	12.5	12.5	90.0
	9 – 17 years old	8	10.0	10.0	100.0
	Total	80	100.0	100.0	

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The participants come from various nationalities, but the majority are Indonesians (87.5%). The rest 12.5% of the participants are of Asian nationalities. This shows that this study is more catered towards the Indonesian people and the neighboring countries.

TABLE 4
NATIONALITY OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Indonesian	70	87.5	87.5	87.5
	Malaysian	3	3.8	3.8	91.3
	Philippines	2	2.5	2.5	93.8
	Singaporean	4	5.0	5.0	98.8
	Sri Lanka	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

The monthly expenses of the participants are majorly above Rp.10,000,000.00 or $707.64 (40%), which indicates that majority of the participants can afford to purchase video games. However, the second majority of participants are also people who have a monthly expense of less than Rp.1,000,000.00 or $70.7 (28.7%), which indicates that the next majority of the participants may not have the same buying power as the 40%.

TABLE 5
MONTHLY INCOME OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<Rp. 1,000,000.00	23	28.7	28.7	28.7
	>Rp. 10,000,000.00	32	40.0	40.0	68.8
	Rp. 1,000,000.00 - Rp. 2,500,000.00	7	8.8	8.8	77.5
	Rp. 2,500,000.00 - Rp. 5,000,000.00	9	11.3	11.3	88.8
	Rp. 5,000,000.00 - Rp. 10,000,000.00	9	11.3	11.3	100.0
	Total	80	100.0	100.0	

Lastly, the majority of participants have an education of at least bachelor's degree (43%), which indicates that the participants have the capability of understanding on how video games work, the benefits and consequences that might lead to playing it, and other rationalization factors.

TABLE 6
EDUCATION OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mandatory School (High School and below)	21	26.3	26.3	26.3
	S1 (Bachelors)	43	53.8	53.8	80.0
	S2 (Masters)	14	17.5	17.5	97.5
	S3 (Doctorate)	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

The data shows that the majority of participants played video games every day (38.8%). The second majority of participants played video games every week (28.7%). Bringing up the topic from the age demographics section, 18 out of the 23 people who chose once a week are over 40 years old, which shows that age does play into factor on how much do people play video games.

TABLE 7
VIDEO GAME PLAYING FREQUENCY OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 - 3 days a week	17	21.3	21.3	21.3
	4 - 6 days a week	9	11.3	11.3	32.5
	Everyday	31	38.8	38.8	71.3
	Once a week	23	28.7	28.7	100.0
	Total	80	100.0	100.0	

The statistics of the respondent in video game playtime per session is closer to each other, with 31.3% of participants playing for 1 – 2 hours, 27.5% of participants playing for less than an hour, and 25% of participants playing for 2 – 4 hours. This shows that the participants are generally more inclined to play lesser hours of video games.

TABLE 8
VIDEO GAME PLAY TIME OF PARTICIPANTS BY HOURS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 2 hour(s)	25	31.3	31.3	31.3
	2 - 4 hours	20	25.0	25.0	56.3
	4 - 8 hours	11	13.8	13.8	70.0
	Less than an hour	22	27.5	27.5	97.5
	More than 8 hours	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

The genres of video game in this study is also very well spread out. The top three genres that are preferred by the participants in this study are shooters (FPS) (18.8%), other unlisted genres (11.3%), and a tie between role-playing (RPG) and sports at 10%. This shows that the demographic of respondent in this study have a variety in preferences. Other studies have shown a similar trend where although the top played genres may differ, but the spread-out preferences are similar to this study [31].

TABLE 9
VIDEO GAME FAVORITE GENRE OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Action	5	6.3	6.3	6.3
	Adventure	7	8.8	8.8	15.0
	Arcade	2	2.5	2.5	17.5
	Casual	5	6.3	6.3	23.8
	Children Entertainment	1	1.3	1.3	25.0
	Family Entertainment	2	2.5	2.5	27.5
	Fighting	1	1.3	1.3	28.7
	Other	9	11.3	11.3	40.0
	Racing	5	6.3	6.3	46.3
	Rhythm	3	3.8	3.8	50.0
	Role-playing (RPG)	8	10.0	10.0	60.0
	Shooter (FPS)	15	18.8	18.8	78.8
	Sports	8	10.0	10.0	88.8
	Strategy	9	11.3	11.3	100.0
	Total	80	100.0	100.0	

The majority of participants in this study have a preference in either PC or smartphone, both almost tied with 43.8% and 42.5% respectively. This is different from a study done by [31], where the majority of the participants in that study prefer PC by a large margin. This could be related to the fact that this study caters more to every single age group, while other studies target a more specific type of person. For example, since the [31] study was done in universities, this shows a correlation with a data here where 80% of the participants who are within the age of 18 to 24 chose PC as their platform.

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TABLE 1O
VIDEO GAME PLAYING PLATFORM OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gaming Console (PS4, Xbox, Nintendo Switch, etc.)	11	13.8	13.8	13.8
	PC (Personal Computer)	35	43.8	43.8	57.5
	Smartphone	34	42.5	42.5	100.0
	Total	80	100.0	100.0	

In this study, a large majority of the participants prefer to play at their house (93.8%). Only 6.3% of participants chose the option anywhere, leaving the options of cyber-café and friend's house at 0%. This shows that most of the participants prefer to play video games while they are at their own personal space. The 6.3% participants who chose anywhere are smartphone users who claimed to only play games while they are outside anywhere in between of attending their real-life matters.

TABLE 11
VIDEO GAME PLAYING LOCATION OF PARTICIPANTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Anywhere	5	6.3	6.3	6.3
	Home	75	93.8	93.8	100.0
	Total	80	100.0	100.0	

A.2 Reliability Test

In order to ensure that the data is valid, the Cronbach's alpha test is used [61]. "Cronbach's alpha is a measure used to assess the reliability, or internal consistency, of a set of scale or test items" as mentioned in Brown's (1997) research of estimating reliability. This occasion fits with the current study that bases the question of a set of scale from 1 to 6. An assumption that can be made with Cronbach's alpha, according to Brown (1997) study, is that the decimal can be seen as a percentage of reliability. For example, a Cronbach alpha of 0.9 can be translated as having 90% reliability and 10% unreliability. Cronbach alpha value of 0.6 is considered as reliable or having sufficient internal consistency of measurement (Sugiyoni, 2013).

As shown in Table 11, the reliability measurement test show that all variables are reliable with Cronbach's alpha value >0.6.

TABLE 12
RELIABILITY TEST

Variables	Cronbach's Alpha
Perceived Enjoyment (X1)	.608
Perceived Ease of Use (X2)	.816
Affective Engagement (X3a)	.904
Behavioral Engagement (X3b)	.915
Cognitive Engagement (X3c)	.919

A.3 Validity Test

The Validity Test That This Study Uses Will Be The Kaiser-Meyer-Olkin (Kmo) Measure Of Sampling Adequac. The Kmo Measure Of Sampling Adequacy Is A Statistic That States That Variance In A Study's Variables Is Caused By Underlying Factors. High Value Of Kmo (~1.0) Indicates That The Factor Analysis May Be Useful With Data, While Smaller Values Indicate That Factor Analysis Isn't Very Useful. Kmo Value Of 0.5 Indicate That Variable Is Valid.

As Shown In Table 12, The Validity Measurement Test Show That All Variables Are Valid With Kmo Value >0.5.

TABLE 13
VALIDITY TEST

Variables	KMO
Perceived Enjoyment (X1)	.844
Perceived Ease of Use (X2)	.756
Affective Engagement (X3a)	.849
Behavioral Engagement (X3b)	.846
Cognitive Engagement (X3c)	.876

A.4 Assumption Test

In A Study That Involves Multi Regression Analysis, There Are Four Important Assumptions That Needs To Be Addressed In Order To See Whether The Data Is Viable To Be Used For This Analysis In The First Place (Jason And Elaine, 2002). The First Assumption Is That Dependent Variable Should Be Measured In Either A Continuous Scale Or An Ordinal Scale. The Second Assumption Is That All The Independent Variables Should Be Measured On A Continuous Scale Or Any Other Categorical Scale (Ordinal Or Nominal). The Third Assumption Is That The Data Is Reliable. The Last Assumption Is That The Data Should Show Homoscedasticity Or Meaning That The Variances Are Best To Remain Similar Along The Line.

First Assumption

Regarding The First Assumption, The Dependent Variable Of This Research Already Utilizes An Ordinal Scale In The Questionnaire, By Assessing Respondent's Purchase Intention With A Likert Scale Of 1 To 6.

Second Assumption

Regarding the second assumption, the independent variable of this research also utilizes ordinal scale in the questionnaire, by assessing respondent's perceived enjoyment, perceived ease of use, and customer engagement with a Likert scale of 1 to 6.

Third Assumption

Regarding the third assumption, the reliability test has already been conducted using Cronbach's Alpha measurement, which proves that the measurement test is reliable.

Fourth Assumption

In the fourth assumption, the data should show homoscedasticity, meaning that the variances are best to remain similar along the line. This will be tested by using scatterplot from dependent variable towards all the independent variables. As the result, Figure … shows that ….

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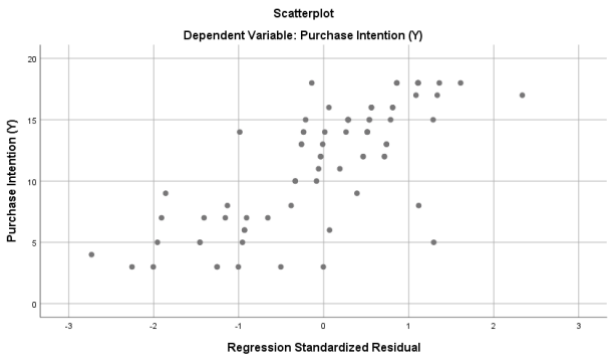

Figure 3

A.5 Multiple Regression Analysis

Multiple regression analysis is a statistical technique that develops the relationship between two or more independent variables and an interval-scaled dependent variable [55]. This analysis aims to see the linear relationship between both variables (Kenton, 2020). In order to determine the level of significance of both variables, the F test and the T test will also be conducted along with the R-square test to assess the strength of association [55].

F Test

The F test determines the simultaneous effect used to assess whether the independent variables simultaneously or jointly affect the dependent variable (Ghozali, 2005). If the value of F is shown to be lower than the error rate of alpha 0.05, the estimated regression model is significant. If the value of F is higher than the error rate of alpha 0.05, then the estimated regression model is not significant (Iqbal, 2015).

TABLE 14
ANOVA TEST

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1118.959	5	223.792	23.774	.000[b]
	Residual	696.591	74	9.413		
	Total	1815.550	79			

a. Dependent Variable: Purchase Intention (Y)

b. Predictors: (Constant), Cognitive Engagement (X3c), Perceived Ease of Use (X2), Perceived Enjoyment (X1), Behavioral Engagement (X3b), Affective Engagement (X3a)

Table 13 shows that the sig. value is 0.000, which is smaller than 0.05. Hence, there is a significant relationship between both of the variables.

T-Test

Unlike the other abovementioned tables, the coefficient table gives information about the influence of the independent variables partially towards the dependent variable. From the table above, a new regression equation result is presented:

y = -5996 + 0.374x1 - (0.084)x2 + 0.121x3a + 0.15x3b + 0.035x3c

where: x1 = perceived enjoyment, x2 = perceived ease of use, x3a = affective engagement, x3b = behavioral engagement, and x3c = cognitive engagement.

TABLE 15
COEFFICIENT TEST[A]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-5.996	2.943		-2.037	.045
	Perceived Enjoyment (X1)	.374	.142	.268	2.637	.010
	Perceived Ease of Use (X2)	-.084	.061	-.110	-1.386	.170
	Affective Engagement (X3a)	.121	.059	.278	2.071	.042
	Behavioral Engagement (X3b)	.150	.066	.306	2.293	.025
	Cognitive Engagement (X3c)	.035	.052	.072	.674	.502

a. Dependent Variable: Purchase Intention (Y)

Then, from Table 14 we can conclude the following:

- The perceived enjoyment variable has a significant impact on the repurchase intention of video games with a p value of 0.010 (<0.05) and with the T value 2.637 (>1.96). Therefore, hypothesis H1 is supported.
- The perceived ease of use variable does not have a significant impact on the repurchase intention of video games with a p value of 0.170 (>0.05) and with the T value -1.386 (<1.96). Therefore, hypothesis H2 is rejected.
- The affective engagement variable has a significant impact on the repurchase intention of video games with a p value of 0.042 (<0.05) and with the T value 2.071 (>1.96). Therefore, hypothesis H3a is supported.
- The behavioral engagement variable has a significant impact on the repurchase intention of video games with a p value of 0.025 (<0.05) and with the T value 2.293 (>1.96). Therefore, hypothesis H3b is supported.
- The cognitive engagement variable does not have a significant impact on the repurchase intention of video games with a p value of 0.502 (>0.05) and with the T value 0.674 (<1.96). Therefore, hypothesis H3c is rejected.

A.6 R Square Analysis

The most commonly reported value in the model summary table is the R square value, because R square represents in percentage of the independent variables' contribution to achieve the dependent variable. Table 4 displays information about how the independent variables contributes altogether towards the dependent variable. In this case, the R square is 0.616, which interprets as the independent variables contributes by 61.6% towards the dependent variable when taken as a group.

TABLE 4:
MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785[a]	.616	.590	3.068

a. Predictors: (Constant), Cognitive Engagement (X3c), Perceived Ease of Use (X2), Perceived Enjoyment (X1), Behavioral Engagement (X3b), Affective Engagement (X3a)

IV. DISCUSSION

This study demonstrates the validity of TAM and customer engagement model to test the effects of video game purchase intention. Based on each variable that defines the construct of this model, the author will discuss how the hypothesis is linked to past studies and the implications of the data in this section. Hypothesis testing has proven that the variables that significantly influences the player's video game purchase intention are perceived enjoyment, affective engagement, and

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behavioral engagement, while the variables that turn out not to influence the player's video game purchase intention are perceived ease of use and behavioral engagement.

In accordance of TAM [26], the interrelation between perceived enjoyment towards behavioral intention is proven to be in accordance with the literature that states intrinsic motivation leads to repurchase intention [47]. The intrinsic motivation in this case is perceived enjoyment, and this causes repurchase intention (which is in accordance with TAM's behavioral intention) to go up. This is especially true in context of video game, as the studies related to perceived enjoyment and intrinsic motivation have all used entertainment technology as a research subject [26][47]. Hence, it is proven that customer enjoyment is strongly correlated to the intention of repurchase of video games. For cognitive engagement, it is related to immersion and flow. There have been many studies in the video game industry discussing the implications of how immersion and flow theory affects customer intentions positively [29][34.] The proven hypothesis solidifies the fact that immersion and flow state can be related to repurchase intentions of customers. The studies have also shown that self-congruency behaviors are positively correlated with behaviors of high repurchase intention, such as impulsive and compulsive buying [49]. Self-congruency itself in video game context contains behaviors that indicate affective engagement, such as dedication and enthusiasm [31]. Therefore, it is proven that higher affective customer engagement leads to higher intention of repurchase of video games.

However, it turns out that the other variable of TAM, the perceived ease of use [26], does not correlate with customer repurchase intention. It was assumed that perceived ease of use was a part of the intrinsic and extrinsic motivation that leads to repurchase intention [47]. However, as proven by the TAM model, customer perceived ease of use is not directly correlated with consumer behavioral intention, instead it could only influence the attitude of the consumer without changing its intention. Behavioral engagement also does not correlate with customer repurchase intention, solely from the fact that engaging in social interaction does not improve the intention of the consumer to the video game, instead it improves attitude towards playing the video game itself [31].

V. CONCLUSION

5.1 Conclusion

This study was aimed due to a need of understanding and analyzing consumer repurchase intention towards video games. This leads to the proposition of a conceptual model that predicts how perceived enjoyment, perceived ease of use, and different aspects of customer engagement compromising of cognitive, affective, and behavioral engagement influence customer repurchase intention. The result turned out that perceived enjoyment, cognitive engagement, and affective engagement are the variables that are able to directly influence customers intention of video game repurchase. In order to validate the conceptual model, this study uses Cronbach's alpha test. The results through the Cronbach's alpha test demonstrates that the conceptual model was proven as valid to measure the independent (perceived usefulness, perceived ease of use, cognitive engagement, affective engagement, behavioral engagement) and dependent variable (repurchase intention of video game) of this research.

This study has led to several key findings:
The result turned out that perceived enjoyment, cognitive engagement, and affective engagement are the variables that are able to directly influence customers intention of video game repurchase, while variables that do not directly influence customers intention of video game repurchase are perceived ease of use and behavioral engagement. This tells us that the variables that are influential to repurchase intention are variables that involve direct customers engagement with video games, while indirect customers engagement with video games tend to not be correlated with repurchase intention. In order for managers to increase their customer's interest in repurchasing their video games, they should focus more on making the type of video games that are able to increase the customers' intrinsic motivations to play so that customers are more likely to be immersed in the video game and are motivated to continue on playing the video game. For example, recent best-selling video game Genshin Impact has put their focus into customer engagement in their game, which proves that a great story and engaging gameplay mechanics can keep the player immersed into the virtual world that they offer to their players.

5.2 Limitations and Recommendations

This study could contribute into the consumer behavior video game literature in several ways. This study bases on the research based on the past studies that has been pioneers of the research in technology, using the TAM as a baseline. Along with TAM, this study also bases on the research on a less popular concept that is rottenly interchangeable with customer experience, which is the concept of customer engagement. This study creates a clear line between the differences of customer experience and customer engagement, and how both can be used in different context. Along with that, this study incorporates older concepts like TAM with newer concepts like customer engagement to create a new model that can be expanded further upon in future studies.

However, some limitations are also present in this study. Due to the time and cost constraints, this study generalizes its samples towards a more general population that are not specifically catered towards gaming. This creates potential for future research to create a more targeted sample using the same concept, as the results may differ completely. Since this study has proven that enjoyable video games that are immersive that increase customers' motivation to play are more likely to increase customers repurchase intention, it does not exactly cover which detailed specific type of video games sell well. Therefore, there is a lot of future research potential on the specific types and characteristics of video games that would garner interest from their audience. This study also focuses more towards customer engagement with video games instead of talking about the customer experience as a whole. This creates future research potential on how can

the customer experience in the process of video game purchase be fully optimized to increase repurchase intention of customers.

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