



# Assesing the mediating effect of Self Control on the relationship between Perceived Ease of Use of E-money on Consumptive Behavior and Internet Gaming Disorder of generation Z (Empirical Evidences from Indonesia)

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**Abstract**. The purpose of this study was to determine how the mediating effect of self-control in the ease of using electronic money leads to consumptive behavior in internet gaming disorders. The world is currently experiencing rapid technological developments in all fields, including the gaming industry. This trend has resulted in more and more people focusing on the massive use of online games to distract them and focus, especially during the pandemic. The massive use of online games, or often referred to as internet gaming disorder (IGD), especially in Generation Z, has attracted many researchers around the world. Fast consumptive behavior and uncontrolled behavior are considered to bring harm to these online gamers. Furthermore, the integration of E-money in the game platform is expected to increase the flexibility of the consumptive behavior of these online gamers, thereby increasing the risk of IGD for these gamers. We used an online questionnaire that was tested on 155 respondents and thus analyzed the results by SEM-PLS. we found that ease of use e-money has a significant effect on consumptive behavior, self-control has an effect on ease of use of e-money, consumptive behavior has a significant effect on IGD. The empirical contribution of this study thus recommends the need to mediate control to these Generation Z gamers to suppress the tendency of rapid consumptive behavior and reduce the potential risk of developing Internet Gaming Disorder (emergency room).

Keywords: perceived ease of use; E-money; internet gaming disorder; self control; Generation Z

#### 1. Introduction.

Online games began to spread worldwide since the 2000s and the use of online games is growing rapidly among young adults (Rho, 2017) .WHO even declared #play apart together to play online games to reduce activities outside the home. The increase in virtual technology products such as online games and the ease of financial transactions targeting the Z-generation raises new problems such as consumptive behavior and internet gaming disorders. Years of research on the behavior of playing excessive online games can trigger psychological triggers and the mental health of the perpetrators (Griffiths, 2005). Excessive in playing online games can result in emotional difficulties and allow for impaired functioning of daily life (Yen, 2017). in addition, online game users spend more time, neglect important things and cause negative effects on performance, social relations and withdrawal symptoms (Demetrovics Z, 2012)

The American Psychiatric Association has described in an issue of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) that online gaming addiction behavior (Internet Gaming Disorder (IGD) is the use of online games that are run continuously and usually involve other players, causing distress significantly. They were categorized as having five of the nine symptoms that could be indicated over 12 months. At least five of the nine indications are signs that someone has an internet gaming disorder trait, including [1]. They have the nature of online gaming. [2]. irritability, restlessness, or sadness when not playing online games.[3]. playing time has increased [4]. Unable to control themselves when playing online games [5]. Loss of interest in previously owned hobbies [6]. Continue to play online games even though he (the user) knows that this is a psychosocial problem [7]. Ever cheated on family, therapists, or anyone else because of online games.[8] Playing online games to relieve anxiety [9] Have lost contact with other people and even career opportunities. There are about 155 million Americans who always play video games and there are about 42% of them play regularly in playing games (Rho, 2017) The purchase of skins, currency, textures, or more power can increase special abilities or new visual appearances (King & Delfabro, 2018). The development of online games is also followed by digital products whose benefits can be felt until now. The ease of transactions from fintech such as GoPay, Dana, Link Aja, Ovo, and others with promos and direct capabilities in connecting users, online games, and purchases on e-money can lead to high consumptive behavior if the self-control nature of the consumer does not accompany it. Online game and e-money users.

The high use of smartphones in adolescents is closely related to online games where the physical tool used is a smartphone. Much research has focused on social scientific findings about the risks and causal pathways of excessive smartphone use (Lee, 2016) The researcher also looked at one of the international journals, namely "problematic online gaming and the covid 19", this journal explains how the whole world community is changing by increasing digital consumption activities at home such as playing online games and related activities (King, 2020). The second study entitled "Online Games During the COVID-19 Pandemic in India: Work-Life Balance Strategies", this study explains that since the COVID-19 pandemic the gaming industry has experienced growth and the use of online games such as playing multiplayer. in India has increased dramatically (Amin, 2020). A previous study entitled "The Mediation of Economic Literacy on the Effect of Self Control on Impulsive Buying Behavior Moderated by Peers" explains the negative influence between self control and impulsive buying, which means that the higher a person's self control, the lower the impulsive buying trait they have. . (Riyanto et al, 2019). Furthermore, in a study entitled "Emotional Regulation in Young Adults with Internet Game Disorders", ER patients should be given appropriate interventions to reduce depression and provide emotional regulation therapy. In this study, try and find out how easy ways to use e-money can improve consumer behavior in playing online games so that it can cause internet gaming disturbances. This study tries to increase the ease with which money can be used to improve the game play pattern of Generation Z.

The purpose of this study was to determine how self-control can mediate the ease of use of electronic money on consumptive behavior and internet gaming disorder. This study examines a sample of Indonesian Z generation gamers who are definite respondents. The theoretical implication in this research can help readers understand the theory of the ease of use of consumptive behavior of electronic money, internet game interference, and an understanding of self-control which in the Z-generation can reduce consumptive behavior that occurs due to problems in online games. This research can provide information and solutions to the problem of internet gaming disorder that hit Generation Z. The importance of self-control of generation z in using e-money as an increase in internet gaming disorder in playing games should be watched out.

# 2. Method

The research method used is a distributive quantitative approach using SEM-PLS on a questionnaire with 155 respondents who took part in the survey with geogle form. The ease of use e-money variable as independent variable uses 17 question indicators, consumptive behavior variable as the dependent

variable with three questions, internet gaming disorder as the dependent variable with 9 question indicators, and self-control as a mediating variable with six questions. The scale used is an interval scale, namely the Likert scale. In the beginning, the researcher used 30 samples as a pilot test to test the validity and reliability of the questionnaire data. All items are declared valid because the calculated r is above the r table value and the construct is declared a variable because all Cronbach alpha values are above 0.7. The sampling technique used is non-probability sampling. The sampling technique used is non-probability sampling, where this technique does not allow all members of the population to have the opportunity to become a sample or it is not known that all of them have the same opportunity or not, so that later the results of the study cannot be generalized to the population conclusively. In this study, we used a comparison between the t-statistic value and the t-table value to determine the results of the SEM-PLS analysis.

#### 3. Results and Discussion

## 4. Characteristics of Respondents

One hundred fifty-five respondents were taken as samples in this study to find the results, namely 66.5 percent of men while 33.5 percent of women as respondents in this study. Ages 18-22 years dominate with 76 percent of all respondents, while ages 14-18 percent are 12.9 percent, 22-26 percent are 9%, and the rest are 11-14 years. The questionnaire was dominated by students as much as 83.2 percent, with 129 of 155 respondents. Islam dominates 94.2 percent of the total respondents who answered. Most of the respondents' last education was from high school, with a percentage of 69.7 percent. The monthly expenditure level of the majority of respondents is 71.6 percent, with income below 1 million rupiahs.

Meanwhile, the monthly expenditure level as the cost of playing games is below one million with 96.8 percent. The majority of respondents played games for less than 3 hours, as much as 64.5 percent. Meanwhile, 26.5 percent of those played games for 3-5 hours. The most played game titles are mobile legend bang bang as many as 103 people who play.

## 5. Validity and Reliability

Before collecting the final data, we first started by testing the validity and reliability of the data using SPSS using 30 samples as a pilot test. Thus, 35 valid indicator items and four variables were found to be reliable for research.

# 6. SEM-PLS Analysis

*6.1.1. Testing Outer Model.* The outer model can be used to see the validity and reliability of a model. Some of the sub-points that will be described include factor loading, Average Variance Extracted (AVE), and Discriminant Validity, as well as composite reliability.

Factor loading is one of the earliest mode validity tests. The conditions must be > 0.6 so that an indicator is declared valid. After analyzing using SMART PLS, all indicators of the four constructs were declared valid because all values of an indicator were > 0.6. Average Variance Extracted (AVE). AVE is a value that is usually used in the convergent validity test obtained from convergent validity. The AVE requirement in this study is that it must be > 0.5 and when viewed from the results of the experiments carried out, the values of all variables are > 0.5. Ease of use e-money has a value of 0.604, consumptive behavior is 0.707, internet gaming disorder is 0.520, and self-control is 0.703. The discriminant validity stage aimed to test the discriminant at the indicator level with the provision of a correlation between the indicator and its latent variable compared to a correlation between the presence of other latent indicators outside the block. After the analysis, it was found that there were 27 valid indicators and eight invalid indicators from cross-loading because the value was below 0.7. Composite Reliability. The final step in evaluating the outer model is to ensure that there are no

measurement problems in this study by testing the unidimensionality of the model. The unidimensionality test was carried out with composite reliability and Cronbach's alpha. The value of 0.7 is the cut-off value. The composite reliability value for ease of use e-money is 0.962, consumptive behavior is 0.878, internet gaming disorder has a value of 0.907, and self-control is 0.934. Therefore, there is no problem of unidimensionality in the study of Assessing the mediating effect of Self Control on the relationship between the Perceived Ease of Use of E-Money on Consumptive Behaviour and Internet Gaming Disorder of generation Z.

6.1.2. *Testing inner model*. Coefficient of Determination  $R^2$  (R-Square). In using PLS, it can be seen that the value of Q2, Q2 itself can be interpreted the same as determinization (R-Square) in a regression analysis.

Variable	R Square	R Square Adjusted
Internet Gaming Disorder	0,266	0,262
Self Control	0,336	0,331
Consumptive behaviour	0,085	0,079

Table 1. R Square Model

From the table above, Q2 can be calculated as follows: Q2 =  $1-(1-R1^2)(1-R2^2)(1-R3^2) = 1 - (1-0.266)(1-0.336)(1-0.085) = 0.5540 = 55$  percent. We can state that the model can explain 55 percent of the data consisting of 26 percent of Internet Gaming disorders that are influenced by consumptive behavior where the rest is influenced by other factors, 33 percent of self-control affects the ease of using e-money where the rest is influenced by other factors, 8 percent consumptive behavior comes from the ease of use of electronic money where the rest is influenced by other factors in the pattern of consumptive behavior.

# 7. Hypothesis testing

Coefficient t-Statistic. To test the hypothesis whether the hypothesis is accepted or rejected, a statistical test is carried out using the t-count value (to) compared to the t-table value (t $\alpha$ ). The value of the t-table itself is obtained from the degree of freedom (DF) = the amount of data (n)-k. k is the number of research variables. Therefore the number of t-tables is found with the calculation of 155-4=151. Then the t-table = 1.975, with a significance level of 5 percent. The following table T Statistics from the SmartPLS software. Based on the hypothesis test table above, the relationship between the variables in the hypothesis can be drawn. The statistical t value of the effect of Ease of Use E-money on self-control is 9.104 > t table of 1.975, indicating a significant influence between Ease of Use E-money on self-control. The t value of the ease of use e-money statistic on consumptive behavior is 3.651 > t table 1.975, so ease of use significantly affects consumptive behavior. The statistical t value of consumptive behavior towards internet gaming disorder is 8,155 > t table 1,975, so that consumptive behavior has a significant effect on internet gaming disorder. research from Tampere University Finland which also found that gamers spend more money (Essi Jamsa, 2020). From the results obtained, the three hypotheses are accepted.

# 8. Conclusion

This study proves the development of online games targeting generation z, where the ease of using emoney can increase consumptive behavior and internet gaming disorder. By performing calculations on the SmartPLS 3.0 software, it can be concluded that the t-statistic value of the effect of Ease Of Use E-money on self-control is 9.104 > t table 1.975. The result shows a significant influence between Ease of Use E-money on Self-Control. The t value of the ease of use e-money statistic on consumptive behavior is 3.651 > t table 1.975, and we can state that ease of use significantly affects consumptive behavior. The statistical t value of consumptive behavior towards internet gaming disorder is 8,155 > t table 1,975, so that consumptive behavior has a significant effect on internet gaming disorder. The limitation of this research focused on the disbalance proportion of the respondents' characteristics. The majority of respondents who filled out the questionnaire were 18-22, or 76 percent of the total respondents. So the future direction of this research is must increase the number of respondents or balance the various ages of respondents

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