



## **The influence of Limited-time Scarcity, Advertising, and E-wom on E-Impulse Buying towards virtual items in Genshin Impact**

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**Abstract,** *This study investigates the influence of Limited-time Scarcity, Advertising, and E-WOM (Electronic Word-of-Mouth) on E-Impulse buying behavior among players of Genshin Impact in the online community @paimonfess. Data from 400 respondents were collected through online questionnaires and analyzed using SmartPLS. The findings reveal that Limited-time Scarcity does not significantly and positively influence E-Impulse buying behavior. However, Advertising demonstrates a significant and positive impact on E-Impulse buying behavior, indicating that advertisements play a crucial role in encouraging impulse purchases among Genshin Impact players. Furthermore, E-WOM also shows a significant positive influence on E-Impulse buying behavior, highlighting the importance of word-of-mouth recommendations in shaping purchasing decisions within the online gaming community. These findings contribute to a deeper understanding of the factors driving E-Impulse buying behavior in the context of virtual item purchases in online gaming communities.*

**Keywords:** *Limited-time Scarcity, Advertising, E-wom, E-Impulse Buying*

**Abstrak,** Penelitian ini menyelidiki pengaruh Kelangkaan Waktu Terbatas, Iklan, dan E-WOM (Electronic Word-of-Mouth) terhadap perilaku pembelian E-Impulsif di antara para pemain Genshin Impact di komunitas online @paimonfess. Data dari 400 responden dikumpulkan melalui kuesioner online dan dianalisis menggunakan SmartPLS. Temuan menunjukkan bahwa Kelangkaan Waktu Terbatas tidak secara signifikan dan positif mempengaruhi perilaku pembelian E-Impulsif. Namun, Iklan menunjukkan dampak yang signifikan dan positif terhadap perilaku pembelian E-Impulsif, yang mengindikasikan bahwa iklan memainkan peran penting dalam mendorong pembelian impulsif di antara para pemain Genshin Impact. Selain itu, E-WOM juga menunjukkan pengaruh positif yang signifikan terhadap perilaku pembelian E-Impulse, menyoroti pentingnya rekomendasi dari mulut ke mulut dalam membentuk keputusan pembelian dalam komunitas game online. Temuan ini berkontribusi pada pemahaman yang lebih dalam tentang faktor-faktor yang mendorong perilaku pembelian E-Impulse dalam konteks pembelian item virtual di komunitas game online.

**Kata Kunci:** Kelangkaan Waktu Terbatas, Periklanan, E-wom, E-Impulse Buying

### **INTRODUCTION**

The internet has now become an essential part of everyday life. Many of us rely on it for communication, social interaction, conducting business transactions, and seeking entertainment (Hsun Ho & Yun Wu, 2012). This impact has spurred the growth of creative industries based on communication and information technology, one of which is the online gaming industry. Alongside technological advancements, online games have experienced rapid development (Gilbert et al., 2020).

As interest in playing online games continues to rise, the utilization of online gaming is increasingly being leveraged as a business opportunity by game developers. Developers are competing to create online games that can be enjoyed by gamers, one of which is known as Free-to-Play. F2P, short for Free to Play, is a type of online game that can be played for free without imposing download charges on prospective players. The business model was first introduced by Fred Wilson

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(2006) and operates by providing basic services to users while offering virtual items for purchase within the game through in-game purchases. One of the successful free-to-play based games marketed last year in 2020 and still popular in the following years is Genshin Impact.

Genshin Impact is an online game based on the free-to-play model with an action role-playing game (RPG) genre that can be downloaded and played for free. This game comes with cross-platform features that allow players to play from various hardware devices such as smartphones, PCs, and Playstations. Created and developed by a Chinese company called MiHoyo, which has recently officially changed its name to Hoyoverse, this company utilizes the Gacha system as a means to encourage players to purchase its virtual items with real money. As described by Toshihiko Yamakami (2012), in the Gacha system, players cannot directly purchase desired characters or weapons; instead, they must participate in lucky draw purchases or lottery tickets to have a chance to win the virtual items they desire. This is where the urgency to purchase virtual items comes into play.

The offering of weapons and characters with limited time availability in Genshin Impact is also referred to as Limited Time Scarcity (LTS), where this promotion can create a strong sense of urgency for players to engage in gacha and obtain their dream characters and weapons hastily. It's not uncommon for individuals to be driven to impulsive purchases spontaneously and intuitively when presented with limited product offerings, attractive price promotions, limited-time purchase opportunities, and product displays that capture their interest (Wu et al., 2020).

The considerable interest of players in making purchases within the game Genshin Impact is closely linked to advertisements in the form of videos or photos frequently showcased on various platforms such as YouTube, X, and Instagram. Advertisements serve as a crucial tool for manufacturers to introduce their brand and products to consumers and attract purchasing interest. In line with the advertising format released by Genshin Impact, Hoyoverse as the developer company diligently releases video trailers introducing characters, showcasing visualizations, and providing information about the characters. This allows players to become acquainted with the characters that will be released in the next banner. Meanwhile, on social media platforms, the displayed advertisements typically consist of pop-up ads inviting users to download the Genshin Impact game.

Furthermore, Genshin Impact players are actively writing comments about the game itself in online communities or can be viewed as a form of Electronic Word of Mouth. This includes encouraging unplanned product purchase behaviors. The formation of opinions written on social media or online forums is linked to players' experiences in exploring the game, how players face the challenges presented by the game, their opinions on the world design of Genshin Impact, character design and appearance, the role of characters in the storyline, and the legends within the game.

## **LITERATURE REVIEW**

### **E-Impulse Buying**

Impulse buying is the purchase of a product that is unplanned, non-reflective, and immediate based on an emotional impulse (Wakefield et al., 2022). Research within the scope of Impulse Buying continues to evolve, with e-Impulse Buying now emerging as the latest urgency to be explored. Data suggests that in today's era, Gen Z makes purchases with less consideration compared to previous generations (Pechmann et al., 2005). Additionally, they actively participate in online gaming in Indonesia (Rakuten Insight, 2022), which provides instant gratification due to their immature self-control capabilities or lack thereof.

According to Foroughi et al. (2013), the indicators of impulse buying include:

- 1) Hedonic shopping value.
- 2) Physical environment.
- 3) Physical stimuli.
- 4) Product involvement.

#### **Limited-time Scarcity**

Limited Time Scarcity (LTS) refers to scarcity related to time due to supply. In this case, consumers can only avail of the offer or product for a limited time; after this period, the offer is no longer available (Gierl, Plantsch, and Schweidler 2008; Gupta and Gentry 2016). This positive attitude stimulates unplanned buying intentions and reduces the likelihood that consumers will seek better deals (Wu & Lee, 2016).

According to T. Y. Chen et al. (2020), the indicators of limited-time scarcity are:

- 1) Time restriction.
- 2) Time urgency.

#### **Advertising**

Advertising is a form or entirety of payment to promote goods or services through a clearly identified sponsor, such as through print media, broadcast media, network media, electronic media, and exhibition media (Kotler and Keller, 2012). Positive evaluations of advertisements can encourage consumers to purchase products, but negative evaluations can deter consumers from buying those products. Therefore, analyzing the influential role of advertising and its significant impact on consumer purchasing behavior becomes crucial (Kartini et al., 2019).

According to Agus (2012), advertising messages should be handled carefully to have an impact on the target audience. Successful advertising messages should ideally possess the following three indicators:

- 1) Meaningful.
- 2) Different.
- 3) Credible.

#### **E-Wom**

Word of mouth is the process of interpersonal communication between individuals as the source of the message and the message receiver, where information about a product, service, or brand is conveyed without commercial intent. Word of mouth not only influences customers' perceptions but also shapes their expectations of the product. E-WOM (Electronic Word of Mouth) has become a significant platform where consumers can express their opinions and is considered more effective than traditional word of mouth because it can be accessed by more people and has a broader reach through the internet (Jalilvand, 2012).

In measuring the influence of Electronic Word of Mouth, Goyette et al. (2010) proposed that there are three indicators that can be used as metrics, namely:

- 1) Intensity
- 2) Valence of opinions
- 3) Content

#### **Limited-time Scarcity and E-Impulse Buying**

According to Wu et al. (2021), limited quantity and time scarcity may influence impulsive online purchasing. Limited time and number of products offered during a flash sale affect the aroused feeling to make an unplanned purchase. (Lamis et al., 2022)

**H1: Limited-time Scarcity has a positive and significant effect on E-Impulse Buying Advertising and E-Impulse Buying**

According to the research Adhiyani & Indriyanti, (2020) we can determine that Advertising has a positive and significant effect on Impulse Buying.

**H2: Advertising has a positive and significant effect on E-Impulse Buying E-wom and E-Impulse Buying**

According to Husnain et al. (2016), Electronic word-of-mouth has significant impacts on impulse buying behavior, demonstrating a higher level of influence and resulting in positive effects. These results are also consistent with previous studies.

**H3: E-wom has a positive and significant effect on E-Impulse Buying**

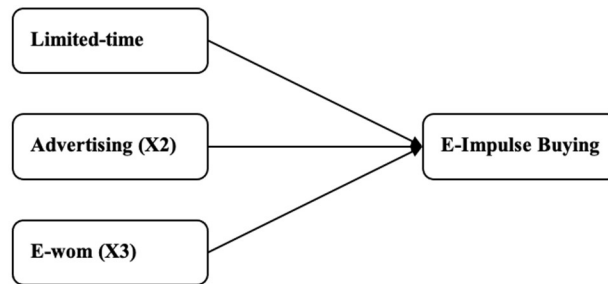


Figure 1. Conceptual Framework

## METHOD

This research utilizes quantitative methods, with primary data collected directly by the researcher. Google Forms were employed to distribute questionnaires to the online community of the research object, aiming to collect the research data. The population under study includes all players of Genshin Impact in the online community @paimonfess on social media X, with a total of 400 respondents. Sample selection was conducted using a non-probability sampling technique, specifically a purposive sampling method chosen by the researcher. The validity of the measurement model was assessed using two methods: convergent validity and discriminant validity, as part of categorizing the data analysis using Partial Least Squares (PLS). Following the validity test, a reliability test will be conducted, indicated by both Cronbach's alpha and the reliability values related to the composite. Furthermore, the structural model will be assessed by examining R-square to determine the impact and orientation of the connections among variables. The study considers four factors, namely E-Impulse Buying, Limited Time Scarcity, Advertising, and E-WOM.

## RESULT AND DISCUSSION

During the assessment of the external model, the reliability and validity of the measurement method were evaluated. A legitimacy test was conducted to ascertain the accuracy of the measuring instrument in gauging the desired outcomes. Validity testing determines the instrument's strength and its ability to effectively measure concepts, with validity not solely dependent on size (Hair et al., 2018). To pass the validity test, the average variance extracted (AVE) value should exceed 0.5, and the loading factor should surpass 0.7. The experimental findings can be observed in Table 1.

*THE INFLUENCE OF LIMITED-TIME SCARCITY, ADVERSITING AND E-WOM ON E-IMPULSE BUYING TOWARDS VIRTUAL ITEMS IN GENSHIN IMPACT*

Table 1. Initial Outer Loading

	Limited-time Scarcity (X1)	Advertising (X2)	E-Wom (X3)	E-Impulse Buying (Y)
LTS.1	0.794			
LTS.2	0.743			
LTS.3	0.844			
LTS.4	0.808			
I.1		0.728		
I.2		0.747		
I.3		0.766		
I.4		0.735		
I.5		0.759		
I.6		0.752		
I.7		0.772		
I.8		0.785		
WOM.1			0.608	
WOM.2			0.649	
WOM.3			0.633	
WOM.4			0.747	
WOM.5			0.617	
WOM.6			0.742	

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WOM.7			0.600	
WOM.8			0.753	
WOM.9			0.788	
WOM.10			0.702	
IB.1				0.750
IB.2				0.801
IB.3				0.828
IB.4				0.632

*Sources: Primary Data 2024*

The table above reveals indicators that do not meet the criteria or are considered invalid due to having outer loading values below 0.7. According to Hussein (2015), if the outer loading of an indicator is below 0.7, it can be considered for removal as it does not adequately represent the existing construct. Therefore, these indicators need to be eliminated. Below are the outer loading values after removing the indicators that do not meet the criteria:

Table 2. Outer Loading

	Limited-time Scarcity	Advertising	Electronic Word of Mouth	E-Impulse Buying
LTS.1	0.789			
LTS.2	0.759			
LTS.3	0.836			
LTS.4	0.809			
I.1		0.726		
I.2		0.744		
I.3		0.764		

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I.4		0.738		
I.5		0.760		
I.6		0.755		
I.7		0.770		
I.8		0.785		
WOM.3			0.786	
WOM.5			0.738	
WOM.7			0.807	
WOM.8			0.837	
WOM.9			0.723	
IB.1				0.794
IB.2				0.849
IB.3				0.856

*Sourse: Primary Data 2024*

As indicated in Table 2, all indicators for the variables now exceed 0.7, affirming the validity of their convergent nature.

Variable	Average Variance Extracted (AVE)
Limited-time Scarcity (X1)	0.571
Advertising (X2)	0.695
Electronic Word of Mouth (X3)	0.638
E-Impulse Buying (Y)	0.607

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Table 3 Outer AVE

Analyzing Table 3, the results indicate that the Average Variance Extracted (AVE) values for all factors are greater than 0.5, signifying the accuracy of convergent validity.

Table 4 Cross Loading Value

	Limited-time Scarcity	Advertising	Electronic Word of Mouth	E-Impulse Buying
LTS.1	<b>0.308</b>	0.169	0.789	0.401
LTS.2	<b>0.305</b>	0.195	0.759	0.370
LTS.3	<b>0.387</b>	0.272	0.836	0.300
LTS.4	<b>0.389</b>	0.235	0.809	0.193
I.1	<b>0.726</b>	0.244	0.379	0.334
I.2	<b>0.744</b>	0.246	0.363	0.367
I.3	<b>0.764</b>	0.298	0.313	0.325
I.4	<b>0.738</b>	0.301	0.313	0.219
I.5	<b>0.760</b>	0.299	0.325	0.340
I.6	<b>0.755</b>	0.339	0.311	0.392
I.7	<b>0.770</b>	0.271	0.289	0.412
I.8	0.785	<b>0.310</b>	0.386	0.436
WOM.3	0.336	<b>0.270</b>	0.312	0.786
WOM.5	0.373	<b>0.229</b>	0.234	0.738
WOM.7	0.312	<b>0.186</b>	0.304	0.807
WOM.8	0.341	<b>0.337</b>	0.319	0.837
WOM.9	0.454	<b>0.269</b>	0.309	0.723



*THE INFLUENCE OF LIMITED-TIME SCARCITY, ADVERSITING AND E-WOM ON E-IMPULSE BUYING TOWARDS VIRTUAL ITEMS IN GENSHIN IMPACT*

IB.1	0.284	0.794	<b>0.218</b>	0.402
IB.2	0.344	0.849	<b>0.244</b>	0.214
IB.3	0.340	0.856	<b>0.239</b>	0.227

According to Table 4, the variable demonstrates a higher correlation with its corresponding indicator than with other indicators. Therefore, all indicators examined in this study are confirmed to possess discriminant validity.

Table 5 Cronbach Alpha and Composite Reliability

Variable	Cronbach Alpha	Composite Reliability
Limited-time Scarcity (X1)	0.893	0.896
Advertising (X2)	0.780	0.780
Electronic Word of Mouth (X3)	0.814	0.834
E-Impulse Buying (Y)	0.839	0.855

*Source: Primary Data, 2024*

Table 5 illustrates that both Cronbach's alpha and composite reliability are above 0.7. This suggests that the variable is highly reliable and capable of accurately measuring the construct.

Table 6. R-Square

Variable	R-Square
E-Impulse Buying	0.184

*Source: Primary Data, 2024*

In Table 6, the R-squared value for e-Impulse Buying is 0.184, suggesting that Limited time Scarcity, Advertising, and E-wom collectively explain 18% of the variability in e-Impulse Buying. Conversely, the remaining 82% of the variance is attributed to other unexamined variables.

Table 7. Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Iklan -> E-Impulse Buying	0.256	0.260	0.059	4.336	0.000
Limited-time Scarcity -> E-	0.096	0.100	0.055	1.753	0.080

Impulse Buying					
E-Wom -> E-Impulse Buying	0.187	0.189	0.070	2.668	0.008

*Source: Primary Data, 2024*

Based on table 7, the hypothesis testing evaluation was conducted using bootstrapping with a sample size of 400 in SmartPLS 4 software. The influence of limited-time Scarcity can be observed from the Path Coefficient results, with a path coefficient of 0.096, a P-value of 0.080, and a t-statistic of 1.753. In this study, the insignificance is indicated because P is not less than 0.05, specifically 0.080.

Furthermore, the relationship of Advertising on E-Impulse Buying can be examined through hypothesis testing evaluation conducted using bootstrapping with a sample size of 400 in SmartPLS 4 software. From the Path Coefficient results, a path coefficient of 0.256, a P-value of 0.000, and a t-statistic of 4.336 are observed. This study indicates significance as P is less than 0.05, precisely 0.000, and the t-statistic value is greater than 1.96, specifically  $4.336 > 1.96$ .

Next, the relationship between Ewom and E-Impulse Buying can be examined through hypothesis testing evaluation conducted using bootstrapping with a sample size of 400 in SmartPLS 4 software. From the Path Coefficient results, a path coefficient of 0.187, a P-value of 0.008, and a t-statistic of 2.668 are observed. This study indicates significance as P is less than 0.05, specifically  $0.008 < 0.05$ , and the t-statistic value is greater than 1.96, specifically  $2.668 > 1.96$ .

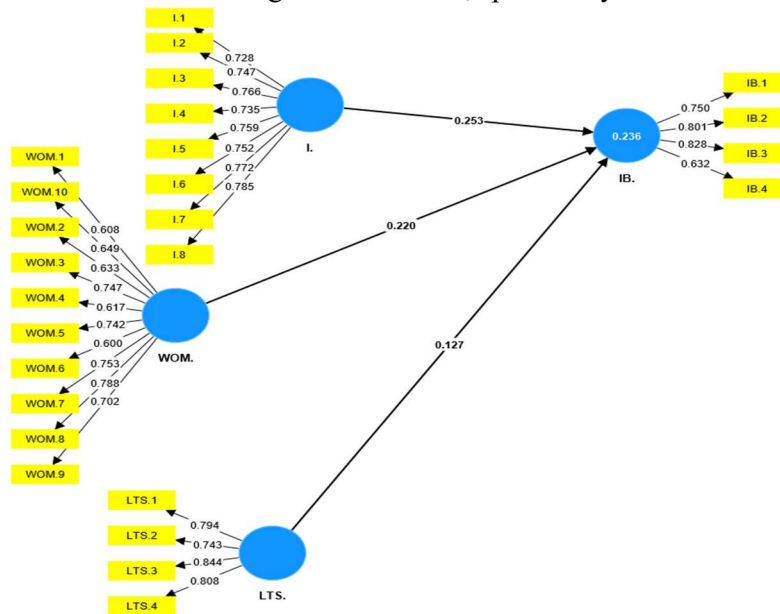


Figure 2 Final PLS Model Output

### Effect of Limited-time Scarcity on E-Impulse Buying

The findings of this study suggest that Limited-time Scarcity does not have a positive and significant impact on E-impulse buying. This indicates that the limited timeframe does not prompt Genshin Impact players to engage in impulse buying behavior. This contradicts previous research

findings which stated that Limited-time Scarcity does indeed influence E-Impulse buying (Yi Wu, et al., 2020).

This study suggests that Limited-time Scarcity is not an effective method for encouraging players to engage in E-Impulse Buying, as Genshin Impact frequently relaunches banners featuring the same characters and weapons at later times, commonly referred to as "re-run." This conclusion stems from direct interviews conducted by the researchers with two informants, Arief Septian Aldo and Affan, who have backgrounds as Genshin Impact players and are respondents in this study. The interviews yielded the following conclusion:

"The time constraints imposed on each banner in Genshin do not prompt me to make unplanned virtual item purchases because there are usually other opportunities to obtain characters or weapons in the game through reruns." (Interview, February 19, 2024)

#### **Effect of Advertising on E-Impulse Buying**

The findings of this study indicates that the output path coefficient value demonstrates a significant and positive relationship between Advertisement on E-Impulse Buying, with a statistical value exceeding 1.96. Consequently, hypothesis two can be accepted. This finding aligns with previous research, such as that of Harpepen (2022), which concluded that there is indeed an influence of advertisements on E-Impulse Buying. In the context of the game Genshin Impact, advertisements are presented by showcasing visually appealing content that typically includes introductions to characters and weapons, highlighting their strengths and advantages. At times, attractive offers such as promotions and limited-time opportunities are also featured in Genshin Impact advertisements. These elements capture the interest and attention of players, leading to a tendency to make unplanned purchases after viewing the advertisements, a phenomenon known as E-Impulse Buying.

#### **Effect of E-WOM on E-Impulse Buying**

The results of the SmartPLS analysis indicate that the output path coefficient value demonstrates a statistically significant relationship between E-WOM (Electronic Word-of-Mouth) and E-Impulse Buying, with a value exceeding 1.96. Consequently, hypothesis two can be accepted. This finding aligns with previous research, such as that of Ahmad et al. (2023), which concluded that there is indeed an influence of E-WOM on E-Impulse Buying. In the context of the game Genshin Impact, when a player obtains a character or weapon in the game, they are often vocal about sharing their experience in electronic form on online forums, including those on social media platform X. These written experiences are read by other community members, thereby encouraging them to make unplanned purchases after reading the posts. These forms of personal communication are highly effective as a means to increase E-Impulse Buying for businesses, as they represent organic and cost-efficient campaigns.

### **CONCLUSION**

Based on the results of the hypothesis testing study on the influence of Limited-time Scarcity, Advertising, and E-WOM on E-Impulse Buying towards virtual items in Genshin Impact, the researcher draws the following findings:

- 1) Limited-time Scarcity does not significantly influence E-Impulse buying behavior in this study because it is implemented in a manner that is not effective.

- 2) Advertising can significantly influence E-Impulse Buying behavior because advertisements often present tempting products, leading customers to have a tendency to engage in E-Impulse Buying after seeing features of the game displayed in the advertisements.
- 3) E-WOM (Electronic Word-of-Mouth) has a significant influence on E-Impulse Buying because customers tend to share satisfying and positive experiences with products/services, which can attract other potential customers to experience similar experiences.

These findings suggest that while Limited-time Scarcity may not be effective in influencing E-Impulse buying in the context studied, Advertising and E-WOM are influential factors in driving such behavior.

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