MONETIZATION MODELS IN ONLINE GAMES: ANALYZING THE IMPACT OF MICROTRANSACTION PAYMENT STRATEGIES ON PLAYER PURCHASES



SUBMITTED TO

THE FACULTY OF ECONOMICS AND ISLAMIC BUSINESS
SUNAN KALIJAGA YOGYAKARTA STATE ISLAMIC UNIVERSITY
AS ONE OF THE REQUIREMENTS TO OBTAIN A DEGREE
BACHELOR OF ISLAMIC ECONOMICS

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STATE ISLAMIC UNIVERSITY OF SUNAN KALIJGA
YOGYAKARTA

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AS ONE OF THE REQUIREMENTS TO OBTAIN A DEGREE
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2025

RATIFICATION SHEET PAGE



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THESIS APPROVAL PAGE

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Dear Dean of the Faculty of Islamic Economics and Business

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Assalamualaikum wr. wb.

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With this, I hope that the thesis mentioned above can be submitted soon, For your attention, I thank you.

Yogyakarta, 11 february 2025

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MOTTO PAGE

"Aging and dying are the beauty of a mortal being called a human. Because they age and die, they become precious. "Strengh" is not a word that applies only to your ~Kyojuro Rengoku"

"When Person dies, all their deeds come to an end except for three: ongoing (jariyah) charity, beneficial knowledge, and a righteous child's prayer" ~ Prophet

Muhammad Saw"



DEDICATION PAGE

With deep gratitude to Allah SWT for His boundless blessings and guidance, I dedicate this Thesis to the greatest heroes and inspirations in my life, my father (*Mingki Gultom*) and mother (*Siti Ikiasatari*), whose unwavering love, support, and prayers have been my foundation, as well as to my beloved family, who have always been my pillar of strength. Lastly, I extend my appreciation to my cherished games, which have not only been a source of entertainment but also an inspiration and loyal companion throughout this journey.



ARABIC - LATIN TRANSLITERATION GUIDELINES

Transliteration is the process of transferring the form of writing from one language to another. In this thesis, the transliteration in question is the conversion of Arabic writing into Latin writing. The transliteration system used refers to the Joint Decree of the Minister of Religious Affairs of the Republic of Indonesia and the Minister of Education and Culture of the Republic of Indonesia with Number: 158 of 1987 and Number: 0543 b/U/1987. In general, the guidelines are explained as follows:

A. Single Consonant

Arabic letters	Name	Latin letters	Name
f	Alif	Not symbolized	Not symbolized
ب	Ba	В	Be
ت	Ta	Т	Te
ث	Šа	š	es (with dot on top)
ح	Jim	J	Je
۲	Ḥа	ķ	ha (with dot below)
Ċ	Kha	Kh	ka and ha
2	Dal	D	De
SIAIL	Żal	AIC ŻNIV	Zet (with dot above)
	Ra	R	er
Y 0	Zai	ΔΚΔ	R T Zet
س س	Sin	S	es
ش ش	Syin	Sy	ice and ye
ص	Şad	ş	es (with a dot below)
ض	Даd	ģ	de (with a dot below)
ط	Ţа	ţ	te (with a dot below)

ظ	Żа	Ż	zet (with a dot below)
ع	`ain	`	inverted comma (above)
غ	Gain	G	ge
ف	Fa	F	ef
ق	Qaf	Q	ki
ڬ	Kaf	K	ka
J	Lam	L	el
٩	Mim	M	em
ن	Nun	N	en
و	Wau	W	we
ۿ	Ha	Н	ha
¢	Hamza		apostrophe
ي	Yes	Y	ye

B. Double Consonants due to Syaddah are Written in Duplicate

متعدة	Written by	muta'addidah
عدّة	Written by	'iddah

C. Ta' Marbutah

1. Ta' marbutah lives

Ta' marbutah live or which gets fathah, kasrah, and dammah harakat, transliteration is "t".

حكمة 🔾	Written by	wisdom
جزية	Written by	jizyah

2. Ta'Marbutah dies

Ta' marbutah dies or which gets a sukun harakat, the transliteration is "h".

كرامة الأولياء	Written by	karāmah al-auliyā'

3. If the last word with ta' marbutah is followed by a word that uses the article al and the two words are read separately, then the ta' marbutah is transliterated with "h".

زكاة الفطر	Written by	zakāh al-fiṭr

D. Short Vowels and Their Applications

óó'	Fatḥah	Written by	a
óó,	Kasrah	Written by	i
óó		Written by	и
11	Fatḥah	Written by	fa'ala
141	Kasrah	Written by	żukira
ų i lį		Written by	yażhabu

E. Long Vowels

1. Fatḥah + alif	Written by	ā
جاهلية	Written by	jāhiliyyah
2. $Fathah + y\bar{a}'$ die	Written by	ā
تسي	Written by	tansā
$3. Kasrah + y\bar{a}'$ die	Written by	RSITY ^ī
, hy	Written by	karīm
4. Dammah + wāwu die	Written by	ū
کر کروض کے	Written by	furūḍ

F. Double Vowels

$1. Fathah + y\bar{a}'$ die	Written by	ai
1(1)	Written by	bainakum

2. Fathah + wāwu die	Written by	аи
قول	Written by	qaul

G. Consecutive Short Vowels in One Word Separated by an Apostrophe

أأنتم	Written by	a'antum
أعدت	Written by	u'iddat
لنن شکرتم	Written by	la'in syakartum

H. Alif + Lam

1. If followed by a Qomariyah letter, it is written using the letter "a"

<mark>اق</mark> رآن	Written by	Quran
القياس	Written by	al-Qiyās

2. When followed by a Shamsiyyah letter, it is written according to the first letter of the Shamsiyyah.

السماء	Written b	ру	as-San	าā
الشمس	Written b	ру	ash-Sha	ıms

- I. Arrangement of Words in a Sentence
- 1. Written according to its pronunciation

ذوى الفرض	Written by	żawi al-furūḍ
أهل السننة	Written by	ahl -as-sunnah

PREFACE

By mentioning the name of Allah, the Most Merciful and the Most Merciful, we pour out all praise and gratitude to Allah for every blessing and gift so that the compiler can complete the thesis with the title "Monetization Models in Online Games: Analyzing the Impact of Microtransaction Payment Strategies on Player Purchases". Prayers accompanied by greetings may always be poured out to the role models of the Prophet Muhammad SAW, along with his family and friends.

Alhamdulillah, thanks to the pleasure of Allah and the help from various parties, the author was finally able to complete this thesis. The author acknowledges that this thesis still has shortcomings, both in language and structural organization. Therefore, constructive criticism and suggestions are highly appreciated to enhance the quality of this work in the future. The completion of this thesis is, above all, by the will of Allah SWT, who governs all things, and the author is deeply grateful that the challenges encountered throughout the writing process could be overcome with the support, guidance, and cooperation of many individuals. Thus, with utmost humility, the author extends sincere gratitude to:

- 1. Mr. Prof. Noorhaidi Hasan, S.Ag., M.A., M.Phil Rector of Sunan Kalijaga State Islamic University Yogyakarta. Mr. Dr. Afdawaiza, S.Ag., M.Ag.
- 2. Dean of the Faculty of Islamic Economics and Business, Sunan Kalijaga State Islamic University.
- 3. Mr. Dr. Mifthakul choiri, S.SOS.I., M.S.I., head of the Sharia economics study program, Faculty of Islamic Economics and Business, Sunan Kalijaga State Islamic University, as DPS and DPA
- 4. To my father, Mingki Gultom and my mother Siti Ikiasatari, as well as my brothers yudha ariestra and Juwita ayuningtyas and my niece crystal Giselda paramasti.
- 5. Friends of the Class of 2021 who have become good friends and best friends during college together.

- 6. All the people who have helped the author during his education in Yogyakarta who cannot be mentioned in one....
- 7. And technological stuff that help me do my thesis.

May all their goodness be accepted by Allah and repaid with kindness many times over. And one day they will be reunited both in this world and in the hereafter in a happy state. It is hoped that this article can be useful. Aamiiin.

Yogyakarta, 11 february 2025
The Author,

Aria Dwi Dharmala

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ABSTRACT

The online gaming industry has experienced rapid growth, becoming one of the most impactful sectors in the digital economy. This study analyzes the impact of microtransaction payment strategies on players' purchasing decisions using a quantitative approach. The variables examined include the price of virtual goods, consumer preferences, income, and the utility value of virtual goods. Data were collected through online surveys targeting online game players in Indonesia and analyzed using a multiple linear regression model.

The findings reveal that the price of virtual goods significantly influences players' purchasing decisions. Consumer preferences for virtual goods enhance player engagement and spending, while income affects their ability to conduct transactions. The utility value of virtual goods plays a crucial role in fostering player loyalty toward the game. This study contributes theoretically to digital economy literature and offers practical insights for game developers to optimize sustainable monetization strategies that adhere to principles of fairness.

Keywords: microtransactions, price, consumer preferences, income, utility value, online gaming industry.



ABSTRAK

Industri game online telah mengalami perkembangan pesat, menjadikannya salah satu sektor ekonomi digital yang berpengaruh. Penelitian ini menganalisis pengaruh strategi pembayaran mikrotransaksi terhadap keputusan pembelian pemain, dengan menggunakan pendekatan kuantitatif. Variabel yang diteliti meliputi harga barang virtual, preferensi konsumen, pendapatan, dan nilai utilitas barang virtual. Data dikumpulkan melalui survei daring kepada pemain game online di Indonesia dan dianalisis menggunakan model regresi linear berganda.

Hasil penelitian menunjukkan bahwa harga barang virtual berpengaruh signifikan terhadap keputusan pembelian pemain. Preferensi konsumen terhadap barang virtual meningkatkan keterlibatan dan pengeluaran pemain, sementara pendapatan memengaruhi kemampuan untuk melakukan transaksi. Nilai utilitas barang virtual berperan dalam mempertahankan loyalitas pemain terhadap game. Penelitian ini memberikan kontribusi teoretis pada literatur ekonomi digital dan menawarkan panduan praktis bagi pengembang game dalam mengoptimalkan strategi monetisasi yang berkelanjutan serta sesuai dengan prinsip keadilan.

Kata kunci: mikrotra<mark>nsaksi, harga, preferensi konsumen,</mark> pendapatan, nilai utilitas, industri game online.



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CHAPTER I

INTRODUCTION

A. Backround of Study

In an ever-evolving digital world, the online gaming industry has become one of the fastest-growing sectors and has a significant economic impact. Monetization through microtransactions, such as the purchase of virtual goods, is a key strategy for game developers to generate sustainable revenue. Consumption theory plays an important role in understanding a player's purchasing decisions, especially regarding the price factor, consumer preferences, income, and utility value of the virtual goods offered.

According to Sadono Sukirno in Introduction to Microeconomics Theory (2010), states that the definition of microeconomics is a branch of economics that studies the behavior and determination of consumers and companies. Microeconomics itself functions to analyze how all decisions and behaviors affect the supply and demand of goods and services which will determine prices, determine the supply and demand of goods and services further. According to Mary A. Marchant and William M. Snell (2004), microeconomics is the study of individuals, households, and firms making decisions in economic processes. This opinion is in line with N. Gregory Mankiw in his book Principles of Microeconomics (2008), microeconomics is a science that discusses the role of individual economic actors, where households and companies make decisions and interact in certain markets. In the context of microeconomics, the principles that govern the decision-making process for individuals and companies are

particularly relevant to understanding the structures and strategies used by modern industries, including the video game industry.

As technology evolves, it is changing the market landscape and decision-making framework for consumers and manufacturers. According to Mankiw (2008), markets are usually a good way to regulate economic activity, and this principle applies to the gaming industry, where rapid technological innovation has created new market dynamics and consumer behavior. These changes, driven by microeconomic principles and technological advancements, have allowed video game companies to explore innovative monetization strategies, creating opportunities to improve interactions with consumers.

The term "monetization" can also be used informally to refer to the exchange of ownership for cash or cash equivalent, including selling a security right, charging a fee for something that was once free, or trying to make money on goods or services that were previously unprofitable or considered potentially profitable. Data monetization, on the other hand, refers to the spectrum of ways in which information assets can be converted into economic value. For a company to succeed, revenue generation is essential. Most video game development companies have an obvious way to generate revenue simply by selling their products. However, some use other methods to do so such as using microtransactions, playtime, subscriptions, fundraisers, events, and other activities (Sarkar 2016).

The video game industry has undergone a significant transformation over the years, from the early days of arcade games to today's era of online gaming. With the advent of the internet, online games are becoming increasingly popular, accessible

through various devices such as smartphones, computers, and consoles. According to a report by Statista, the global online gaming market is projected to reach \$190 billion by 2025, with an estimated 2.7 billion gamers worldwide (Statista, 2022). Technological developments allow individuals to spend their money in the real world on objects that are available virtually, such as accessories or special equipment in the virtual world (Lehdonvirta, Wilska, & Johnson, 2009). This phenomenon is known as virtual consumption, but some refer to it as Micro-transaction.

According to Hamari et al. (2017), microtransactions are an effective way to offer content at a more affordable price, allowing players to pay according to their specific needs. This strategy is in line with the broad market by lowering the barrier to early purchase, effectively replacing the traditional "single price" model. Hamari's findings show that players who microtransaction show higher engagement rates and increased overall spending in the game. However, critics state that microtransactions can exploit psychological triggers, such as the "loss aversion" described by Kahneman and Tversky (1979) in Prospect Theory. This theory explains how players can exaggerate potential losses (e.g., the loss of goods available for a limited time) compared to commensurate gains, which can lead to impulse purchases. While Hamari et al. focus on the sustainability of the microtransaction economy, the opposite perspective highlights ethical issues, such as predatory pricing and social inequality created in the gaming ecosystem.

In recent years, the gaming industry has shifted towards new economic models, including microtransactions (MTX) and loot boxes. MTX is a business model where players can purchase virtual goods through micropayments, which is often adopted by

free-to-play games as an alternative revenue stream. According to a study by SuperData Research, the global MTX market was valued at \$22.7 billion in 2020, with an expected growth rate of 12.6% from 2020 to 2025 (SuperData Research, 2020). The debate surrounding MTX and loot boxes has sparked concern among gamers, with many arguing that this monetization model could create an unfair advantage in competitive multiplayer gaming. According to a survey by the Entertainment Software Association, 70% of frequent gamers believe that MTX can be unfair or predatory (ESA, 2020).

Microtransactions in online games have the potential for developers to generate profits that they should not consistently get from their users. With this potential, users are ultimately made to continue spending money to buy in-game items with a considerable amount of money, thus creating a sensation in microtransactions. The sensation here is a pattern that occurs when gamers or users make any microtransactions in the digital gaming market. (Rahiem & Fitrananda, 2021).

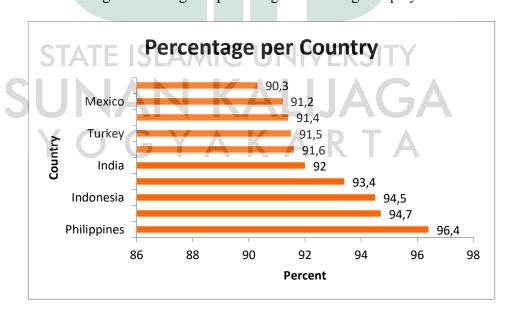


Figure 1. 1 Highest percentage of online game players

Source: databooks

Based on the We Are Social report, Indonesia is the country with the third largest number of video game players in the world. The report noted that there are 94.5% of internet users aged 16-64 in Indonesia who play video games as of January 2022. We Are Social notes that the authority or 83.6% of internet users aged 16-64 in the world play video games using any device. Meanwhile, as many as 68.1% of internet users use smartphones to play video games.

Alfred Marshall's theory of demand highlights the relationship between the price of goods and the quantity demanded by consumers through the concept of marginal utility, in which the added value of the consumption of goods decreases as quantity increases. Meanwhile, the consumption theory of Koller and Kotler emphasizes emotional, social, and psychological factors in consumption decision-making, including the symbolic and emotional value of an item. In the context of microtransactions and online game monetization models, these two theories complement each other. The price of virtual goods such as skins or exclusive items is influenced by marginal utility (Marshall), while players' preferences for purchasing are often driven by emotional and social needs (Koller and Kotler). Strategies such as exclusive supply and dynamic pricing integrate the optimal price concept of demand theory with the emotional factors of consumption theory, creating an effective and sustainable monetization model.

Pricing strategies in microtransactions play a crucial role in influencing player behavior and generating revenue. Zhang and Vaden (2019) argue that dynamic pricing strategies significantly increase revenue by leveraging players' impulsive buying behavior. By adjusting prices based on purchasing habits and market dynamics,

developers can encourage more frequent transactions, especially when items are offered as part of a "special offer," even if the actual discount is minimal. However, Hamari and Lehdonvirta (2010) warn of the ethical implications of such a pricing model. Although lower prices in microtransactions attract more players, they often lead to cumulative spending that raises concerns about consumer exploitation. This perspective points to the need for a balance between maximizing economic sustainability and maintaining ethical justice, providing a nuanced framework for evaluating prices in microtransactions-based games.

Consumer preferences play a significant role in microtransactions, as highlighted by Mugge et al. (2009), who argue that personalization and emotional attachment to virtual goods drive purchasing behavior. Items like character skins allow players to express their identity, which encourages loyalty and repeat purchases. However, Prospect Theory from Kahneman and Tversky (1979) emphasizes that irrational perceptions of risk and reward often manipulate consumer preferences. Strategies such as time-limited offers and exclusive items take advantage of psychological pressure, encouraging impulse purchases that may not provide significant utility (Taylor et al., 2021). This perspective shows the complexity between rational and emotional factors in shaping consumer preferences for microtransactions.

Microtransactions have proven to be a highly profitable revenue model, as noted by Hamari and Lehdonvirta (2010), who highlight that strategically designed systems can maintain player engagement and extend the game's revenue cycle. By offering rare or time-limited items, developers take advantage of players' impulsive tendencies, which increases engagement and spending. However, Behuria (2022) warns of

potential losses, arguing that excessive monetization strategies can create a "pay-to-win" dynamic, which undermines fairness of play and long-term player satisfaction. This perspective reflects the need for a balance between economic gains and maintaining a pleasant gaming experience.

The utility value of virtual goods in microtransactions plays a crucial role in shaping player loyalty and engagement. Duh and Lin (2019) argue that having virtual items enhances the gaming experience, providing emotional and symbolic value that supports long-term player retention. However, criticism highlights the potential for irrational consumption patterns, as suggested by Bernoulli and Samuelson's utility theories. In microtransactions, emotional attachment to virtual goods is often leveraged to encourage impulse purchases, which raises concerns about the fairness of perceived value compared to the price paid. This perspective shows the complexity of utility value in the context of digital consumption.

This approach uses research methods with cross-section data and surveys. Cross-section data, according to Hasan and Alam (2018), is a description of conditions at a specific point in time that allows researchers to analyze the relationship between variables, such as price and consumer preferences, on purchase decisions. The survey, as stated by Sugiyono (2018), provides an in-depth picture of player behavior and preferences through data collection through online questionnaires. This combination of approaches allows researchers to answer research questions quantitatively and descriptively.

According to Don Tapscott, the economy in the digital world is changing the way people buy and sell. According to him, there are several factors that affect the form of

economic activities in the community. The research aims to connect the theory of consumption and demand with the practice of monetization in online games, creating a better understanding of how strategies such as microtransactions affect players' purchasing decisions. With this approach, research is expected to make a significant contribution to academic literature and industry practices related to monetization strategies in the digital era.

B. Research Question

The focus of this study is to identify and analyze:

- 1. How does the price affect players' purchasing decisions in online games?
- 2. How do consumer preferences for virtual goods affect players' engagement and spending levels?
- 3. How does Revenue affect their decisions to engage in microtransactions?
- 4. How does the utility value of virtual goods affect players' loyalty to the game?

C. Research Objectives

The objectives of this study are:

- 1. Analyze the effect of prices on players' purchasing decisions in online games.
- 2. Identify the relationship between consumer preferences and players' levels of engagement and spending.
- 3. Evaluate the effect of players' Revenue on their decisions to make microtransactions.
- 4. Assess how the utility value of virtual goods impacts players' loyalty to the game.

D. Significance of the Study

Referring to the formulation of the problem in this study, the objectives to be achieved through this research are as follows

1. Understanding Player Behavior

This research provides valuable insights into how players respond to different microtransaction models, including factors such as price, preferences, income, and the utility of virtual goods. It helps game developers understand player consumption patterns to create more effective monetization strategies.

2. Optimizing Monetization Strategies

By evaluating the impact of microtransaction strategies on player behavior, this research offers recommendations for developers to optimize their revenue without compromising the player experience.

3. Contribution to the Digital Economy

This study reveals how microtransactions in games contribute to the sustainability of the digital economy, particularly in the gaming industry, which is increasingly becoming one of the main pillars of the creative economy.

4. Policy and Ethical Guidance

The findings of this research can serve as input for policymakers to create fair regulations regarding microtransaction practices, including oversight of monetization models that may be deemed exploitative.

5. Academic Contribution

This research expands theoretical and practical studies on the relationship between microeconomics and microtransactions, providing a significant contribution to the development of literature in digital economics and consumer behavior.

E. Research Systematics

This research is divided into five chapters, with the following descriptions:

Chapter I: Introduction, This chapter provides an explanation of the background of the research implementation. It also includes the problem statement, research objectives, and the benefits of the study.

Chapter II: Theoretical Framework and Literature Review, This chapter outlines the theories underlying the research, a review of relevant literature, the development of hypotheses as preliminary answers to the problem statement, and the conceptual framework constructed in this study.

Chapter III: Research Methodology, This chapter explains the selection of the type and method of research used, details the research variables along with their operational definitions, the population and sample, data and data sources, and the explanation of the model equations in the study.

Chapter IV: Results and Discussion, This chapter discusses the results after estimating the research model, including hypothesis testing. This allows the researcher to obtain answers to the problem statement.

Chapter V: Conclusion, The final chapter presents the conclusions drawn from the research. It also provides recommendations for improvements that can serve as a consideration for future studies.



CHAPTER V

CONCLUSIONS AND SUGGESTIONS

A. Conclusion

Based on the results of the research that has been conducted, several conclusions can be drawn regarding the influence of price, consumer preferences, income, and utility value on players' purchase decisions in online games using a microtransaction model. Here are the main conclusions:

- 1. Price has a positive and significant effect on microtransactions. Effective pricing strategies, such as discounts and special offers, increase players' likelihood of making purchases, while excessively high prices reduce their purchasing power. This finding aligns with Alfred Marshall's demand theory and price elasticity, reinforcing that lower prices increase demand.
- 2. Consumer preference has a negative and significant effect on microtransactions. Players with strong preferences for specific virtual goods tend to be less likely to engage in microtransactions, whereas those with more flexible preferences are more open to purchases. This supports Kotler and Keller's preference theory, which emphasizes internal motivations (self-expression) and external motivations (social influence) in consumer decision-making.
- 3. Revenue has a positive and significant effect on microtransactions. Players with higher incomes tend to make more frequent in-game purchases, whereas those with lower incomes are more selective. This finding is consistent with Keynesian income theory, which states that consumption behavior is influenced by income level.

4. Utility value has a positive and significant effect on microtransactions. Virtual goods that provide functional, symbolic, or emotional benefits enhance player engagement and retention, increasing their willingness to spend. This aligns with Bernoulli and Samuelson's utility theory, which explains that consumers choose items that maximize their satisfaction.

Overall, an effective monetization strategy is one that is able to balance the needs of players with the sustainability of the game's economy, without sacrificing ethical principles or creating injustice in the gaming ecosystem.

B. Advice

Based on the conclusions of the study, here are some suggestions for game developers, policymakers, and researchers:

- 1. For Game Developers, implementing dynamic pricing strategies that can adjust the purchasing power of various player segments, providing personalized and relevant virtual goods to increase player engagement, avoiding monetization practices that are considered exploitative, such as loot boxes with high uncertainty elements.
- For policymakers, Create clear regulations regarding microtransaction models to
 ensure consumer protection, especially on mechanisms that resemble gambling,
 Educate players about the financial impact of microtransactions to prevent
 excessive consumption behavior.
- For the next research, conduct a comparative study between game genres to explore differences in player behavior towards the microtransaction model, Use a longitudinal approach to understand changing player preferences and the long-

term impact of microtransactions, Consider psychological and social aspects in evaluating player purchase decisions, such as the influence of the game community on consumption behavior.



4. For Player game online, Online game players are encouraged to make informed decisions regarding in-game purchases by considering the value and necessity of the items they acquire. Players should prioritize spending on features that enhance their gaming experience and avoid impulsive purchases driven by short-term trends. Actively participating in community discussions or providing feedback to developers can help shape better in-game systems and foster ethical practices within the gaming industry. Additionally, players are advised to balance their gaming activities with other aspects of life to ensure a healthy and enjoyable gaming experience

By considering these suggestions, it is hoped that the results of the research can make a positive contribution to the development of the game industry, fair policy-making, and increasing consumer literacy in the digital ecosystem.



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