# Factors That Influence Online Game Consumer Loyalty Through Consumer Satisfaction

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#### Abstract

This research aims to analyze the influence of product quality, product features, product style and design, brand image, and brand experience on consumer loyalty in the online game industry in the Depok, Bogor, Jakarta, Tangerang, Bekasi (Jabodetabek) area, with consumer satisfaction as an intervention variable. The results of data analysis show that online game product quality does not have a significant influence on consumer satisfaction, and the same thing applies to the direct influence of product quality on consumer loyalty. Online game product features also do not have a direct influence on gamer consumer satisfaction and loyalty. Product style and design do not directly influence consumer satisfaction and loyalty in online game. However, brand image has a direct influence on consumer satisfaction, while brand experience has a direct influence on satisfaction. Consumer satisfaction, in turn, has a positive impact on consumer loyalty. Some factors, such as product quality, product features, and product style and design, may have an indirect influence on loyalty through satisfaction. Therefore, this research provides valuable insights for game companies in developing, design, marketing, selling strategies, and increasing consumer loyalty, and consumer satisfaction in the online game industry in the Depok, Bogor Jakarta, Tangerang, Bekasi (Jabodetabek) area. Keyword: consumer loyalty; consumer satisfaction; game online; product attribute; brand image; brand experience

#### 1. Introduction

The Internet has become a crucial component of everyday existence, fulfilling a range of functions such as communication, social engagement, e-commerce, and leisure activities, including online gaming. The development of online games has gained immense popularity among people of all age groups, thanks to the widespread availability of the internet. Online games are a type of online game that can only be played on devices connected to the internet, and their growth on both computers and mobile phones has garnered significant attention.

In Indonesia, the popularity of online games has surged, particularly in recent years, propelled by increased affordability of internet access. The growth of the digital industry, including online gaming, has been further accelerated by the significant impact of the COVID-19 pandemic. As of January 2022, Indonesia holds the third position globally in terms of online game players, with approximately 94.5% of internet users aged 16–64 engaging in online games.

Online games like Mobile Legends: Bang Bang, Point Blank, Genshin Impact, Stumble Guys, Clash of Clans, Valorant, and Arena of Valor are among the most widely played in Indonesia. In these games, players can purchase various in-game items and content using real money, including character skins, weapons, costumes, power-ups, virtual currencies, and more. These in-game purchases add to the gaming experience and can be bought with real money.

In terms of revenue, some of the highest-earning online games in Indonesia are Mobile Legends: Bang Bang, Free Fire, and Roblox. Mobile Legends: Bang Bang enjoys a significant following among Indonesian players, while Free Fire's successful microtransaction business model contributes to its substantial revenue. These games benefit from their large player bases and are part of Indonesia's thriving online gaming market. In online games, product attributes encompass various elements that shape the gaming experience. These include playable characters, weapons, and visual aesthetics that differentiate one game from another, influence gameplay quality, and add value to the player's experience. In-game purchases often allow players to obtain these product attributes using real money, supporting the game's development and maintenance.

"Brand image" in online games pertains to the reputation and unique characteristics associated with a particular game. A positive brand image can build trust and appeal to players, motivating them to engage more with the game. "Brand experience" involves the overall experience players have while playing the game, including interactions, feelings, and impressions influenced by the game itself and community activities surrounding it. A positive brand experience fosters player satisfaction and deeper engagement, potentially leading to ingame purchases and long-term loyalty. As a result, game developers strive to maintain a positive brand image and provide satisfying brand experiences to players.

On the other hand, "brand experience" alludes to the encounter that players undergo while participating in a game. It encompasses all interactions, feelings, and impressions influenced by the game itself, as well as activities around the game, such as player communities, additional content, and support provided by the developers. A positive brand experience creates player satisfaction and deeper engagement, motivating them to continue playing, interact with the community, and potentially make in-game purchases.

Consumer satisfaction, as defined by Kotler (2005:70), is the feeling of pleasure or disappointment with a product, stemming from the comparison between the product's

impressions and performance (results) and their expectations. Consumer satisfaction with a product is based on how much they enjoy the product's performance or results. The management holds the view that customer contentment with a product or service is of paramount significance and influences the efficiency of the online game itself.

According to Keller & Keller (2016:153), loyalty involves a steadfast commitment to purchase and endorse a particular product or service in the future, regardless of emotional, situational, or marketing influences that might potentially alter one's behavior. Consumer satisfaction is achieved when producers meet the expectations in delivering goods and services. As satisfaction levels vary among consumers, companies should consider this aspect, given that loyalty is reflected in their recurring purchasing patterns. Based on these insights, the research will be titled "Factors Influencing Online Game Consumer Loyalty through Consumer Satisfaction."

#### 2. Literature Review

#### **2.1 Product Attributes**

(Kotler & Armstrong, 2017) Product attributes are the distinguishing characteristics of a product that are taken into account when making purchasing decisions. As per Kotler & Armstrong (2017), product attribute components can be categorized into three segments, which encompass product quality, product features, and product aesthetics and design. (Simamora, 2003) Product attributes encompass the factors that consumers take into account when buying a product, such as the price, quality, functionality comprehensiveness (features), design, postpurchase service, and more. (Stanton, 1991) These attributes cover aspects like pricing, brand, packaging, product warranty, color, the reputation of the seller, seller's service, product quality, and physical product characteristics.

#### **2.2 Product Quality**

No products are of lower quality compared to their competitors. The better the quality of a product, the stronger its brand reputation (Primary & Azizah, 2022). (Puspita & Nuvriasari, 2018) A quality product is defined as one that effectively fulfills its intended function, encompassing attributes like robustness, dependability, precision in outcomes, user-friendliness, ease of maintenance, and other valuable qualities in a specific context. (Tjiptono, 2012) Quality encompasses all aspects of a product offering that deliver advantages to customers. The evaluation of product quality, whether it involves goods or services, encompasses multiple dimensions. These dimensions include performance, longevity, adherence to specifications, characteristics, reliability, aesthetics, perceived quality, and serviceability (Tjiptono, 2012).

#### **2.3 Product Features**

(Wicaksono, 2018) Product features are aspects of a product that consumers highly value and use to guide their decisions. Product features can create differences between a product and its competitors. Introducing new features that have a greater impact on consumers is one of the most effective ways for companies to outperform their competitors. (Kotler & Armstrong 2012) Features are a competitive means of differentiating a company's product from its competitors. Consumers can choose whether to have certain characteristics or not. As stated

by Ginting (2011), features serve as a strategy to leverage a competitive advantage, distinguishing a company's products from those of its competitors.

# 2.4 Product Style and Design

Design is a potential way to overcome competition with competitors because it can differentiate and position products and services for a company. A good staging process, as well as aesthetic colors and style, will produce a good design supported by the right composition and adapting to changing times. To achieve its goals, companies must implement marketing strategies that focus on improvement and innovation in their products and continue to do so continuously (Azizah, 2022). (Anggraini et al., 2021) Consumers will be loyal if they have many choices and get benefits from the products they use. (Yuliana & Pratama, 2019) Products with good style and design get a lot of attention, perform better and are more competitive in the market. (Stanton, 2006) Design is one aspect of forming the image of a product. A unique design, different from others, can be the only distinguishing feature of a product

#### 2.5 Brand Image

Image holds significant importance for consumers in determining or making decisions about a product or service. Gedalia (2015) defines brand image as the consumer's perception of the brand residing in their mind. A successful brand image enables consumers to identify their needs, distinguish the brand from competitors, and consequently, increases the likelihood of purchases (Alfriana Olivia, 2014). According to Duncan (2005), brand image is shaped by brand experience, encompassing perceptions of the brand, including brand characteristics, name, logo, packaging, and reputation. These elements collectively form a comprehensive impression of the brand in the minds of consumers. In essence, brand image represents the overall perception that customers hold about a brand and its attributes relative to other brands (Faircloth, 2005).

#### 2.6 Brand Experience

Customer experience arises from interactions involving customers, products, or companies (Ebrahim et al., 2016). In contrast, brand experience represents an internal, subjective, and behavioral reaction occurring at various interaction levels, be it direct or indirect, and is associated with brand stimuli (Brakus et al., 2009). It can be defined as "the subjective, internal responses of consumers (sensations, emotions, thoughts) and behavioral responses triggered by brand-related stimuli encompassing a brand's design, identity, packaging, communications, and surroundings" (Landa, 2006). Brand experiences encapsulate the encounters of individual audience members every time they interact with a brand.

# 2.7 Customer Satisfaction

Consumer satisfaction arises from a comparison between what the consumer received and their expectations. If a customer is content with the value provided by the product or service, there is a likelihood that they will remain a customer for an extended period (Giese and Cote, 2000). Satisfaction is a summary of affective responses with varying intensity at a specific time point and limited duration directed at the focal point of product acquisition and consumption (Reynolds and Arnold, 2000). Satisfied customers are more likely to recommend others to experience the source of their satisfaction (Sivadas and Baker Prewitt, 2000). Satisfaction has been identified as a crucial precursor to customer loyalty.

#### 2.8 Customer Loyalty

Consumer loyalty is the extent to which a customer or consumer is loyal to a particular brand, product or service, and they tend to choose to continue interacting, purchasing or using that product or service repeatedly. According to Hurriyati (2010), consumer loyalty is a deep commitment that customers maintain to subscribe, return, or repurchase products or services in a consistent manner in the next century. According to Ishak & Luthfi (2011), consumer loyalty is defined as the consistency of repeated purchases periodically and continuously over a certain period of time because consumers are interested in a product or brand. (Oliver, 1999) A firmly held commitment to repurchase or re-subscribe from a preferred product/service consistently in the future, thereby leading to repeat purchases of the same brand or series of brands, despite situational influences and marketing efforts potentially causing the behavior transition.

#### 2.9 Relationship between Product Quality and Consumer Satisfaction

The findings of a prior study by Azizah and Afifi (2023) revealed that the satisfaction experienced by players of the online game Valorant was attributed to the game developer's provision of high-quality gameplay. Another study by Purna Sari et al. (2018) indicated that consumer satisfaction with the ASUS brand is contingent on the company's ability to deliver high-quality products. This aligns with the established notion that the quality of products significantly impacts consumer satisfaction, as demonstrated in the research conducted on PT Hospi Commerce Main Palembang branch by Zakaria (2019).

# 2.10 Relationship between Product Feature and Consumer Satisfaction

(Hastari et al., 2023) BSI m-banking customer satisfaction is influenced by service features. According to the findings of research by Raihan Azizah and Afifi (2023), product features play a role in influencing the satisfaction of online Valorant game players. Additionally, as indicated in the study by Purna Sari et al. (2018), the perceived product features associated with the ASUS brand significantly impact consumer satisfaction.

# 2.11 Relationship between Product Style and Design and Consumer Satisfaction

(Falah et al., 2023) The design of Xiaomi smartphones has a positive and significant impact on consumer satisfaction during the purchase process. Azizah and Afifi's (2023) earlier research supports the notion that the style and design of valuable Valorant online game products contribute to player satisfaction. In line with the findings of Purna Sari et al. (2018), the design of Asus brand smartphones significantly influences consumer satisfaction.

# 2.12 Relationship between Brand Image and Consumer Satisfaction

(Ronaa and Farida, 2023) The positive impact of brand image on consumer satisfaction is evident in the case of Converse shoes at the Pakuwon Trade Center. Research by David Christian Gunawan and Antonius Jan Wellyantony P (2021) further illustrates that a favorable image significantly contributes to consumer satisfaction in the context of the e-sports game Mobile Legends: Bang Bang.

#### 2.13 Relationship between Brand Experience and Consumer Satisfaction

The findings from the study by David Christian Gunawan and Antonius Jan Wellyantony P (2021) indicate that when consumers have a positive experience, they are more likely to feel satisfied with the e-sports game Mobile Legends Bang Bang. Additionally, the research by Ayu et al (2023) establishes a positive impact of Brand Experience on customer satisfaction for CV Indo RSVP Group in Malang City.

#### 2.14 Relationship between Consumer Satisfaction and Consumer Loyalty

The outcomes of Azizah and Afifi's (2023) prior research affirm that players of the Valorant online game are likely to persist in playing due to the satisfaction derived from the game. Furthermore, Fenny Indrawati's (2018) study reveals a noteworthy impact of consumer satisfaction on loyalty at Cincau Station Surabaya. This correlation between customer satisfaction and loyalty aligns with Kotler & Keller's (2006) explanation, emphasizing that businesses aiming for high consumer satisfaction contribute to elevated consumer loyalty.

# 2.16 Relationship between Product Quality and Consumer Loyalty

Azizah and Afifi's (2023) study concludes that the quality of the Valorant online game product does not establish a direct connection with consumer loyalty. This outcome aligns with Agung Widodo's (2019) prior research, indicating that quality products lack a substantial impact on consumer loyalty. However, in contrast, Indrawati's (2018) study reveals a positive and significant influence of quality products on customer loyalty. According to this research, an enhancement in product quality correlates with an increase in consumer loyalty.

# 2.17 Relationship between Product Feature and Consumer Loyalty

Azizah and Afifi's (2023) prior research asserts that product features play a role in influencing the loyalty of online Valorant game players. In contrast, Agung Widodo's (2019) study indicates that product features lack a significant impact on consumer loyalty. Meanwhile, Aprilianto et al. (2015) find that the features of Blackberry cellphone products influence the loyalty of STIE Unity students.

#### 2.18 Relationship between Product Style and Design and Consumer Loyalty

Azizah and Afifi's (2023) prior research demonstrates that the style and design featured in the Valorant game significantly contribute to increased player loyalty. Customers evaluating KafeMieDjoedes Jombang perceive its ability to maintain loyalty through product design. Additionally, Sari and Atmojo's (2020) study highlights that the unique appearance of products at Djoedes Jombang cafe fosters customer loyalty. Agung Widodo's (2019) research affirms that product design holds a significant sway over consumer loyalty.

# 2.19 Relationship between Brand Image and Consumer Loyalty

(Ishan and Sutedjo, 2022) Affirms that Brand Image significantly and positively influences consumer loyalty for Amidis drinking water consumers. According to Gedalia

(2015), Brand Image is the consumer's perception residing in their mind or thoughts. In the same vein, Alfriana Olivia (2014) defines Brand Image as an integral part of consumers' mental perceptions encompassing product image and their thoughts, feelings, and desires. The research by Helen and Emrus (2014) supports a connection between brand experience and GMP customer loyalty.

#### 2.20 Relationship between Brand Experience and Consumer Loyalty

(Hasani et al, 2023) Establishes that Brand Experience significantly and positively impacts consumer loyalty to Scarlett Whitening products. According to Yardha (2015), Customer satisfaction serves as a mediator, bridging the influence of brand experience on customer loyalty. When consumers derive satisfaction from a product, seen as an experiential encounter, it facilitates the product's serviceability. The research by Helen and Emrus (2014) also affirms a correlation between brand image and GMP customer loyalty.

# 2.21 Consumer Satisfaction as an Intervening Variables

Consumer satisfaction, in the context of this research, functions as a mediating variable, acting as a conduit that links product quality, product features, product style and design, brand image, and brand experience to consumer loyalty in online games. The research findings by Hafifi et al. (2023) indicate that consumer satisfaction serves as an effective mediator, demonstrating a higher impact on consumer loyalty from product quality compared to product features, style, and design. Moreover, the study conducted by Gunawan et al. (2021) highlights that brand image and brand experience exhibit a weak yet positive and significant influence on consumer loyalty, with customer satisfaction playing a pivotal role as an intervening variable.

Table 3.1 Operationalization of Variables

Variables	Indicator	Number	Source
	1. Performance		
	2. Reliability		Garvin, Tjiptono
Product Quality (X1)	3. Conformity to specifications	1-5	(2012 : 121)
	4. Ability to Serve		(2012.121)
	5. Perception of Quality		
	1. Diversity of Features		
Product Features	2. Feature Quality		Tjiptono (2002), Nugroho (2021)
	3. Feature Advantages	6-10	
(X2)	4. Completeness of Features		
	5. Feature Importance		
	1. Models		
Droduct Style and	2. Attractive style		Ilmaya 2011, 50,
Product Style and Design (X3)	3. Variety	11-15	Kotler (2007:
	4. Up to Date		131-138)
	5. Distinctive Characteristics		

#### 3. Material and Method

Brand Image (X4)	<ol> <li>Company Image</li> <li>Product Image</li> <li>Player Image</li> <li>Advantages of brand association</li> <li>The power of brand association</li> </ol>	16-20	Aaker & Biel, 2009, Kotler dan Keller (2016:347)
Brand Experience (X5)	<ol> <li>Sensory</li> <li>Affection</li> <li>Behavior</li> <li>Intellectual</li> <li>Relate</li> </ol>	21-25	Brakus et.al (2009), (Hanifah et al., 2018)
Consumer Satisfaction (Y)	<ol> <li>Experience</li> <li>Consumer expectations</li> <li>Need</li> <li>Benefits</li> <li>Value Price Relationship</li> </ol>	26-30	Kotler (2016), Dharmayanti et al. (2013
Consumer Loyalty (Z)	<ol> <li>Reuse</li> <li>Like the brand</li> <li>Stick to the brand</li> <li>Believe that the brand is the best</li> <li>Recommend the brand to others</li> </ol>	31-35	Tjiptono (2002)

#### 3.1 Design Study

Aligned with the research's title, this study employs a descriptive analysis approach with a quantitative methodology. The quantitative descriptive research method aims to provide an objective portrayal of a situation through numerical data, encompassing data collection, interpretation, and findings presentation (Arikunto, 2006). By utilizing quantitative techniques, it becomes possible to assess the significance of group disparities or relationships between the variables under investigation (Sudaryana & Agusiady, 2022). The research population consists of all online game players in the Depok, Bogor, Jakarta, Tangerang, and Bekasi (Jabodetabek) region. The selection of this area as the research location is justified by Jabodetabek's status as a densely populated and rapidly growing region in Indonesia, serving as a hub for economic and technological activities.

The research sample, a subset of the population, serves as the data source (Sugiyono, 2018). Samples are chosen using specific methods and considerations. This study employs a simple random sampling technique, involving the random selection of individuals from the population without regard to population strata (Sugiyono, 2018). This technique ensures that every individual in the population has an equal opportunity to be selected as a sample. Considering the explained sampling technique and the population characteristics, the criteria for respondents in this study are individuals who are online game players residing in the Depok, Bogor, Jakarta, Tangerang, Bekasi (Jabodetabek) region, aged between 18 and 45 years, and have made virtual item purchases in online games.

According to Hair et al. (2011), the minimum sample size for PLS-SEM must be equal to or greater than either ten times the largest number of formative indicators used to measure a

construct or ten times the largest number of structural paths regarding a particular construct in the structural model. Given that there are 7 variables in this research, each with 5 indicators, the largest number of formative indicators for a single construct is 5. Therefore, the minimum required sample size is  $7 \times 10 = 70$  individuals.

#### 3.2 Data Analysis

The research employs the Structural Equation Model (SEM) with a Partial Least Square (PLS-SEM) approach for data analysis. To evaluate the validity and reliability of the model, the outer and inner model of indicators and variables are examined using the SmartPLS 4 computer program (Cristin, 2015). According to Hair et al. (2017), two assessments are conducted for PLS-SEM:

The first assessment concerns the measurement model, also known as the outer model, which is used to determine the validity and reliability of the model. Tests performed on the outer model encompass:

a. Convergent Validity

b. Validity and Reliability

c. R Square

The second assessment pertains to the structural model or inner model, which aims to predict relationships between latent variables. Tests conducted on the inner model include:

a. Variance Inflation Model

b. Hypothesis testing

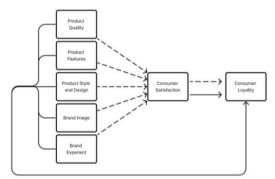


Figure 1. Research Model

Based on the literature review that has been carried out, the hypothesis of this research is:

- a. H1: Product Quality (X1) has a positive effect on Online Game Consumer Satisfaction (Y).
- b. H2: Product Quality (X1) has a positive effect on Online Game Consumer Loyalty (Z).
- c. H3: Product Features (X2) have a positive effect on Online Game Consumer Satisfaction (Y).
- d. H4: Product Features (X2) have a positive effect on Online Game Consumer Loyalty (Z).
- e. H5: Product Style and Design (X3) has a positive effect on Online Game Consumer Satisfaction (Y).
- f. H6: Product Style and Design (X3) have a positive effect on Online Game Consumer Loyalty (Z).

- g. H7: Brand Image (X4) has a positive effect on Online Game Consumer Satisfaction (Y).
- h. H8: Brand Image (X4) has a positive effect on Online Game Consumer Loyalty (Z).
- i. H9: Brand Experience (X5) has a positive effect on Online Game Consumer Satisfaction (Y).
- j. H10: Brand Experience (X5) has a positive effect on Online Game Consumer Loyalty (Z).
- k. H11: Consumer Satisfaction (Y) has a positive effect on Online Game Consumer Loyalty (Z).
- 1. H12: Product Quality (X1) has a positive effect on Online Game Consumer Loyalty (Z) through Consumer Satisfaction (Y).
- m. H13: Product Features (X2) have a positive effect on Online Game Consumer Loyalty (Z) through Consumer Satisfaction (Y).
- n. H14: Product Style and Design (X3) has a positive effect on Online Game Consumer Loyalty (Z) through Consumer Satisfaction (Y).
- o. H15: Brand Image (X4) has a positive effect on Online Game Consumer Loyalty (Z) through Consumer Satisfaction (Y).
- p. H16: Brand Experience (X5) has a positive effect on Consumer Loyalty (Z) of Online Games through Consumer Satisfaction (Y).

#### 4. Result

In this study, participants are classified into distinct groups according to factors such as gender, age, and occupation. The following are the results of the analysis of participant characteristics:

Characteristics		Frequency	Percentage
	Man	63	63%
Gender	Woman	37	37%
	Total	100	100%
	< 18 Years	0	0 %
	18 - 25 Years	93	93%
1 00	26 - 32 Years	2	2%
Age	33 - 39 Years	0	0%
	>40 Years	5	5%
	Total	100	100%
Job	Students	91	91%

 Table 4.1 Respondent Characteristic

Employee	6	6%
Teacher/Lecturer/Educator	1	1%
Businessman	0	0%
Others	2	2%
Total	100	100%

Source: Data collected firsthand and analyzed by the researchers in 2023.

Referring to Table 4.1 detailing the distribution of demographic characteristics, participants are classified into two gender groups: male and female. The provided table illustrates that the majority of respondents, constituting 63% of the total, are male, while female respondents make up the remaining 37%. To put it differently, the male demographic is predominant among those who extensively engage in online gaming activities in the Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek) region.

Analyzing the demographic characteristics data in Table 4.1, it is evident that the age distribution among respondents is predominantly within the 18-25 years range, comprising 93 respondents (93%). The age group >40 years constitutes 5 respondents (5%), followed by the 26-32 years age range with 2 respondents (2%), while the age groups <18 and 33-39 years have no representation, each amounting to 0 respondents (0%).

Moreover, the distribution of respondents' work types, classified into five categories including students, employees, teachers/lecturers, and entrepreneurs, reveals that students constitute the majority with 91 respondents (91%). Employees follow with 6 respondents (6%), teachers/lecturers with 1 respondent (1%), and the remaining 2 respondents (2%). Entrepreneurs represent the smallest category with no respondents (0%).

Game Online	Frequency
Genshin Impact	19
Tower of Fantasy	3
Valorant	20
Point Blank	25
Mobile Legend: Bang Bang	79
Dota 2	3
Free Fire	16
Call of Duty Mobile	22
PlayerUnknown's Battlegrounds (PUBG)	45
Others	19
Total	251

Source: Data collected firsthand and analyzed by the researchers in 2023.

Based on Table 4.2, it is found that the online game most played by Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek) people is Mobile Legend: Bang Bang with a total of 79, the online game PlayerUnknown's Battlegrounds (PUBG) is played by the 2nd most people in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek), next is Point Blank which is played the 2nd most. 3 with 25, then there is Call of Duty Mobile with 22, next there is Valorant with 20, Genshin Impact and other online games with 19. And in the last position there are Dota 2 and Tower of Fantasy with 3. The findings indicate that Mobile Legends: Bang Bang is the most favored and widely played online game among the residents of Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek). The data reveals that out of the 100 respondents surveyed, a total of 251 online game.

# Result of PLS-SEM Analysis

# Measurement Model

# 1. Convergent Validity

Convergent validity assesses a measurement model by examining items that derive their value from the relationship between item scores and construct scores. Convergent validity is determined through Loading Factors, Cronbach's alpha, composite reliability, and AVE (Average Variance Extracted) factors, resulting in the following results:

Variables	Item	Loading Factor	Keterangan
	X1.1	0.703	Valid
	X1.2	0.731	Valid
Product Quality (X1)	X1.3	0.769	Valid
	X1.4	0.739	Valid
	X1.5	0.801	Valid
	X2.1	0.790	Valid
	X2.2	0.866	Valid
Product Features (X2)	X2.3	0.834	Valid
	X2.4	0.747	Valid
	X2.5	0.835	Valid
	X3.1	0.803	Valid
Product Style and Design	X3.2	0.789	Valid
Product Style and Design (X3)	X3.3	0.829	Valid
(A3)	X3.4	0.874	Valid
	X3.5	0.862	Valid
	X4.1	0.867	Valid
	X4.2	0.847	Valid
Brand Image (X4)	X4.3	0.844	Valid
	X4.4	0.876	Valid
	X4.5	0.844	Valid
	X5.1	0.821	Valid
	X5.2	0.798	Valid
Brand Experience (X5)	X5.3	0.724	Valid
	X5.4	0.829	Valid
	X5.5	0.748	Valid
	Y1.1	0.788	Valid
Consumer Satisfaction	Y1.2	0.849	Valid
	Y1.3	0.828	Valid
(Y)	Y1.4	0.812	Valid
	Y1.5	0.855	Valid
	Z1.1	0.727	Valid
	Z1.2	0.885	Valid
Consumer Loyalty (Z)	Z1.3	0.811	Valid
	Z1.4	0.729	Valid
	Z1.5	0.839	Valid

 Table 4.3 Results of Outer Loading Validity

Source: Data collected firsthand and analyzed by the researchers in 2023.

From the data in the table, this research consists of 35 questions asked for all indicators. Therefore, the model will be tested again using cronbach's alpha, composite reliability, and AVE (Average Variance Extracted) as listed below:

#### 2. Validity and Reliability

	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)	Description
Product Quality	0.806	0.813	0.865	0.562	Valid
Product Features	0.874	0.881	0.908	0.665	Valid
Product Style and Design	0.889	0.896	0.918	0.692	Valid
Brand Image	0.909	0.909	0.932	0.732	Valid
Brand Experience	0.844	0.850	0.889	0.617	Valid
Consumer Satisfaction	0.884	0.886	0.915	0.683	Valid
Consumer Loyalty	0.858	0.864	0.899	0.641	Valid

 Table 4.4 Validity and Reliability

Source: Data collected firsthand and analyzed by the researchers in 2023.

Based on the test results in Table 4.7, it shows that each question item constructed has a Cronbach's alpha value, composite reliability (rho\_a), composite reliability (rho\_c), composite reliability (rho\_c) > 0.7, and an average variance extracted (AVE) value > 0.5, meaning Research instruments are said to be good or reliable.

#### 3. R Square

**Table 4.5 Fornell-Larcker Criterion** 

	R Square	R Square Adjusted	Criteria
Consumer Satisfaction	0.823	0.814	Substantial
Consumer Loyalty	0.857	0.848	Substantial

Source: Data collected firsthand and analyzed by the researchers in 2023.

Based on the test results, it can be explained that the coefficient of determination value expressed by the Adjusted R Square number is 0.814, which means that 81.4% of consumer satisfaction is influenced by variables such as quality, features, style and product design, brand image, brand experience so that the remainder (100%-81.4%) with 18.6% results influenced by other external variables studied. For the Adjusted R Square test results of 0.848, which means 84.8% of consumer loyalty is influenced by variables such as quality, features, style and product design, brand image, brand experience so that the remainder (100% -84.8%) with results 15.2% is influenced by other external variables studied.

#### **Structural Model Evaluation (Inner Model)**

1. VIF

Table 4.6 Va	ariance Iı	nflation 1	Factor
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variano	ce Inflatio
	VIF
X1.1	1.656
X1.2	1.779
X1.3	1.564
X1.4	1.548
X1.5	1.767
X2.1	2.026
X2.2	2.774
	2.145
	1.955
X2.5	1.994
X3.1	2.118
	2.065 2.115
	2.115
	2.685
	2.776
	2.963
	2.480
	2.715
	3.070
	2.482
	2.105
	1.872
	1.694
	2.239
	1.510
	1.857
	2.411
	2.205
	2.098
	2.496
	1.725
	2.772
	2.049
	1.586
Z1.5	2.387
	X1.1 X1.2 X1.3 X1.4 X1.5 X2.1

**Source:** Data collected firsthand and analyzed by the researchers in 2023.

According to the test results presented in Table 4.8, each question item constructed exhibits a value of <5.0, indicating that the research instrument is considered to be free from multicollinearity issues between constructs.

#### **Hypothesis Testing**

The hypotheses in this study are formulated through model computation using the PLS technique with bootstrapping. The outcomes of bootstrapping computations yield T-statistic values for each relationship or path. Hypothesis testing is conducted at a significance level of 0.05, and a hypothesis is deemed accepted if the T-statistic value surpasses 1.96. The results of hypothesis testing in this study are as follows:

Hypothesis	Path	T statistics ( O/STDEV )	P values	Description
H1	X1 -> Y	2.863	0.004	ACCEPTED
H2	X1 -> Z	1.266	0.206	REJECTED
H3	X2 -> Y	0.082	0.934	REJECTED
H4	X2 -> Z	0.349	0.727	REJECTED
H5	X3 -> Y	0.505	0.614	REJECTED
H6	X3 -> Z	2.843	0.005	ACCEPTED
H7	X4 -> Y	2.214	0.027	ACCEPTED
H8	X4 -> Z	2.400	0.017	ACCEPTED
H9	X5 -> Y	2.308	0.021	ACCEPTED
H10	X5 -> Z	2.039	0.042	ACCEPTED
H11	Y -> Z	5.626	0.000	ACCEPTED
H12	X1 -> Y -> Z	2.42	0.016	ACCEPTED
H13	X2 -> Y -> Z	0.086	0.932	REJECTED
H14	X3 -> Y -> Z	0.492	0.623	REJECTED
H15	X4 -> Y -> Z	1.984	0.048	ACCEPTED
H16	X5 -> Y -> Z	2.186	0.029	ACCEPTED

4.8 Hypothesis Testing Based on t Statistics

Source: Data collected firsthand and analyzed by the researchers in 2023.

Based on the information presented in the table above, the results of this research found 10 accepted hypotheses, and 6 rejected hypotheses. This is because the P values obtained must be smaller than 0.05 and the T statistics must be more than 1.96. This research found a direct influence between product quality (X1) on consumer satisfaction (Y), product style and design (X3) on consumer loyalty (Z), brand image (X4) on consumer satisfaction (Y), brand image (X4) towards consumer loyalty (Z), brand experience (X5) towards consumer satisfaction (Y), brand experience (X5) towards consumer loyalty (Z), and consumer satisfaction (Y) towards consumer loyalty (Y). This research also found that there is no direct influence between product quality (X1) on consumer loyalty (Z), product features (X2) on consumer satisfaction (Y), product features on consumer loyalty (Z), product style and design (X3). on consumer satisfaction (Y). This research also found an indirect influence between product quality (X1) on consumer loyalty (Z) through consumer satisfaction (Y), brand image (X4) on consumer loyalty (Z) through consumer satisfaction (Y), brand experience (X5) on consumer loyalty (Z) through consumer satisfaction (Y). This research also found that there is no indirect influence between product features (X2) on consumer loyalty (Z) through consumer satisfaction (Y), product style and design (X3) on consumer loyalty (Z) through consumer satisfaction (Y).

# 5. Discussion Influence Product Quality (X1) against Consumer Satisfaction (Y)

The quality of online game products has a direct influence on the satisfaction of online game consumers in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.004 < 0.05 and a t-statistic value of 2.863 > 1.96. This proves that the quality of online game products has a direct influence on the satisfaction of online game consumers in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H1 is accepted. The findings of a previous study conducted by Raihan Afifi and Nurul Azizah in 2023, titled "The Influence of Product Attributes on Consumer Loyalty Through Consumer Satisfaction as an Intervening Variable: A Case Study of Valorant Online Game Players in Surabaya City", indicated that the satisfaction experienced by Valorant online game players is attributed to the satisfying quality of the game provided by its developers.

# Influence Product Quality (X1) against Consumer Loyalty (Z)

The quality of online game products does not have a direct effect on consumer loyalty in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.206 > 0.05 and a t-statistic value of 1.266 < 1.96. This proves that the quality of online game products has no direct effect on the loyalty of online game consumers in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H2 is rejected. Similar findings were also obtained in a previous study conducted by Agung Widodo and Dr. Wahdiyat Moko, SE., MM in 2019, titled "The Influence of Product Attributes on Consumer Loyalty in Mobile Games: Mobile Legends: Bang Bang (A Study on Students of Brawijaya University, Malang)", which indicated that quality products do not have a significant influence on consumer loyalty.

# Influence Product Features (X2) against Consumer Satisfaction (Y)

Online game product features do not have a direct effect on consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.934 > 0.05 and a t-statistic value of 0.084 < 1.96. This proves that online game product features do not have a direct effect on online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H3 is rejected. The findings of this study do not align with previous research conducted by Raihan Afifi and Nurul Azizah in 2023, titled "The Influence of Product Attributes on Consumer Loyalty Through Customer Satisfaction as an Intervening Variable: A Case Study on Valorant Online Game Players in Surabaya City." Their study indicated that product features can influence the satisfaction of Valorant online game players.

# Influence Product Features (X2) against Consumer Loyalty (Z)

Online game product features do not have a direct effect on consumer loyalty in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.727 > 0.05 and a t-statistic value of 0.349 < 1.96. This proves that online game product features do not have a direct effect on online game consumer loyalty in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H4 is rejected. Previous research yielded similar results conducted by Agung Widodo and Dr. Wahdiyat Moko, SE., MM in 2019, with the study titled "The Influence of Product Attributes on Consumer Loyalty in Mobile Games: Mobile Legends: Bang Bang (A Study on Students of Brawijaya University, Malang)," which indicated that product features do not have a significant influence on consumer loyalty.

#### Influence Product Style and Design (X3) against Consumer Satisfaction (Y)

The style and design of online game products does not have a direct effect on consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.614 > 0.05 and a t-statistic value of 0.505 < 1.96. This proves that the style and design of online game products does not have a direct effect on online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H5 is rejected. Different results were obtained in a prior study conducted by Purna Sari, H. Chalil, and Engki P. Nainggolan in 2018, titled "The Influence of Product Attributes on Customer Satisfaction Using ASUS Smartphone in Palu City," which indicated that product design significantly influences customer satisfaction.

#### Influence Product Style and Design (X3) against Consumer Loyalty (Z)

The style and design of online game products has a direct influence on consumer loyalty in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.005 < 0.05 and a t-statistic value of 2.843 > 1.96. This proves that the style and design of online game products has a direct influence on the loyalty of online game consumers in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H6 is accepted. This study yields similar results to previous research conducted by Raihan Afifi and Nurul Azizah in 2023, titled "The Influence of Product Attributes on Consumer Loyalty Through Consumer Satisfaction as Intervening Variables (Case Study on Valorant Online Game Players in Surabaya City)." The research demonstrates that the style and design presented by the developers in the game Valorant are highly effective, as players become increasingly loyal to the game.

# Influence Brand Image (X4) against Consumer Satisfaction (Y)

The brand image of online games has a direct influence on consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.027 < 0.05 and a t-statistic value of 2.214 > 1.96. This proves that the brand image of online games has a direct influence on consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H7 is accepted. Similar findings were obtained in a prior study conducted by David Cristian Gunawan and Antonius Jan Wellyantony P in 2021, titled "The Influence of Brand Image and Brand Experience on Customer Satisfaction and Customer Loyalty in the Mobile Legends Bang Bang Esport Game in Surabaya." In that study, it can be inferred that when consumers have a positive brand image, they are also more likely to feel satisfied with the Mobile Legends Bang Bang e-sports game.

# Influence Brand Image (X4) against Consumer Loyalty (Z)

The brand image of online games has a direct influence on consumer loyalty in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.017 < 0.05 and a t-statistic value of 2,400 > 1.96. This proves that the brand image of online games has a direct influence on the loyalty of online game consumers in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H8 is accepted. Similar results were found in a previous study conducted

by Helen and Emrus in 2014, titled "The Relationship Between Customer Satisfaction and Brand Experience with Brand Image on Customer Loyalty: A Case Study of Mall Management." In that study, it was stated that there is a connection between brand image and customer loyalty in the context of mall management.

#### Influence Brand Experience (X5) against Consumer Satisfaction (Y)

Online game brand experience has a direct influence on consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.021 < 0.05 and a t-statistic value of 2.308 > 1.96. This proves that online game brand experience has a direct influence on online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H9 is accepted. Similar findings were obtained in a previous study conducted by David Cristian Gunawan and Antonius Jan Wellyantony P in 2021, titled "The Influence of Brand Image and Brand Experience on Customer Satisfaction and Customer Loyalty in the Mobile Legends Bang Bang Esport Game in Surabaya." In that study, it can be concluded that when consumers have a positive experience, they tend to be more satisfied with the Mobile Legends Bang Bang e-sports game.

# Influence Brand Experience (X5) against Consumer Loyalty (Z)

The brand experience of online games has a direct influence on the loyalty of online game consumers in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.042 > 0.05 and a t-statistic value of 2.039 < 1.96. This proves that the brand experience of online games has a direct influence on the loyalty of online game consumers in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H10 is accepted. Similar results were achieved in a previous study conducted by Helen and Emrus in 2014, titled "The Relationship between Customer Satisfaction and Brand Experience with Brand Image on Customer Loyalty: A Case Study of Mall Management." The study indicated that there is a correlation between brand experience and customer loyalty in the context of mall management.

# Influence Consumer Satisfaction (Y) against Consumer Loyalty (Z)

Online game consumer satisfaction has a direct influence on consumer loyalty in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.000 < 0.05 and a t-statistic value of 5.626 > 1.96. This proves that online game consumer satisfaction has a direct influence on online game consumer loyalty in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H11 is accepted. The findings of this research align with a prior study conducted by Fenny Indrawati in 2018, titled "Influence of Quality Products on Customer Loyalty with Satisfaction as an Intermediate Variable at Cincau Station Surabaya," which concluded that customer satisfaction significantly affects customer loyalty.

# Influence Product Quality (X1) against Consumer Loyalty (Y) through Consumer Satisfaction (Z)

Indirectly, the quality of online game products has no effect on online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.016 < 0.05 and a t-statistic value of 2,420 > 1.96. This proves that indirectly the quality of online game products has an influence on loyalty. online

game consumers through online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H12 is accepted. Similar results were obtained in a prior study conducted by Cindy Phasalita Widayatma and Sri Puji Lestari in 2019, titled "The Influence of Product Quality on Customer Loyalty with Customer Satisfaction as an Intervening Variable (Case Study in Rifa Culinary Kendal)," which indicated that customer satisfaction can act as a mediating variable between product quality and customer loyalty.

# Influence Product Features (X2) against Consumer Loyalty (Y) through Consumer Satisfaction (Z)

Indirectly, online game product features have no effect on online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.932 > 0.05 and a t-statistic value of 0.086 < 1.96. This proves that indirectly online game product features have no influence on online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H13 is rejected. This study provides different results compared to a previous study conducted by Raihan Afifi and Nurul Azizah in 2023, titled "The Influence of Product Attribute on Consumer Loyalty Through Consumer Satisfaction as Intervening Variables (Case Study on Online Game Players of Valorant in Surabaya City)." With various in-game skin products offered by Valorant developers, it creates a sense of satisfaction among players, leading to their loyalty and repeated purchase of weapon skins.

# Influence Product Style and Design (X3) against Consumer Loyalty (Y) through Consumer Satisfaction (Z)

Indirectly, the style and design of online game products has no effect on online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.623 > 0.05 and a t-statistic value of 0.492 < 1.96. This proves that indirectly the style and design of online game products has no influence on online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H14 is rejected. These findings also contradict the research conducted by Aditya Yessika Alana, Wahyu Hidayat, and Handoyo Djoko, which asserted that design influences consumer loyalty and satisfaction as intervening variables for Nokia mobile phones.

# Influence Brand Image (X4) against Consumer Loyalty (Y) through Consumer Satisfaction (Z)

Indirectly, the brand image of online games has an influence on online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.048 < 0.05 and a t-statistic value of 1.984 > 1.96. This proves that indirectly the brand image of online games has an influence on consumer loyalty. online games through online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H15 is accepted. Similar findings were also obtained in a previous study conducted by David Cristian Gunawan and Antonius Jan Wellyantony P in 2021, titled "The Influence of Brand Image and Brand Experience on Customer Satisfaction and Customer Loyalty in the Esports Game Mobile Legends Bang Bang in Surabaya." In that study, the Brand Image variable in the e-sports game Mobile Legends Bang Bang yielded a weak, positive, and significant influence on Customer Loyalty through Customer Satisfaction.

# Influence Brand Experience (X5) against Consumer Loyalty (Y) through Consumer Satisfaction (Z)

Indirectly, online game brand experience influences online game consumer loyalty through online game consumer satisfaction in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) with a P value of 0.029 < 0.05 and a t-statistic value of 2,186 > 1.96. This proves that online game brand experience indirectly has an influence on consumer loyalty. online games through online game consumer satisfaction in Jakarta, Bogor Depok, Tangerang, Bekasi (Jabodetabek). Thus H16 is accepted. Similar results were found in a prior study conducted by David Cristian Gunawan and Antonius Jan Wellyantony P in 2021, titled "The Influence of Brand Image and Brand Experience on Customer Satisfaction and Customer Loyalty in the Esports Game Mobile Legends Bang Bang in Surabaya." In that research, the Brand Experience variable in the esports game Mobile Legends Bang Bang had a weak, positive, and significant impact on Customer Loyalty through Customer Satisfaction.

# 6. Conclusion, Implication, and Recommendation

# Conclusion

The research analysis on factors influencing consumer loyalty in online games in the Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) area reveals several key findings. Firstly, the quality of online game products has a direct positive impact on consumer satisfaction (H1), indicating higher satisfaction among consumers pleased with product quality. However, the quality of online game products does not directly influence consumer loyalty (H2).

Moreover, online game product features lack a direct impact on both consumer satisfaction (H3) and consumer loyalty (H4), suggesting these features may not be the primary factors in influencing consumer satisfaction and loyalty. Additionally, the style and design of online game products do not directly influence consumer satisfaction (H5) but have a direct positive impact on consumer loyalty (H6), indicating a role in retaining consumers, though not directly affecting their satisfaction.

The research highlights the brand image of online games having a direct positive influence on consumer satisfaction (H7) and consumer loyalty (H8), underscoring its significance in shaping consumer perception and loyalty. Furthermore, online game brand experience directly influences both consumer satisfaction (H9) and consumer loyalty (H10), showcasing that a positive brand experience can elevate satisfaction and foster loyalty in online games. The research also establishes that online game consumer satisfaction directly influences consumer loyalty (H11), emphasizing the crucial role of maintaining satisfaction for higher consumer retention.

In indirect analysis, the study finds that the quality of online game products significantly influences consumer loyalty through consumer satisfaction (H12), indicating that enhancing product quality can indirectly boost consumer loyalty. Conversely, online game product features do not significantly influence consumer loyalty through consumer satisfaction (H13), suggesting this factor's importance lies in its impact on loyalty through satisfaction.

Further analysis reveals that, indirectly, the style and design of online game products does not significantly influence consumer loyalty through consumer satisfaction (H14), indicating no indirect impact on loyalty through satisfaction. Additionally, the brand image of online games significantly influences consumer loyalty through consumer satisfaction (H15) in an indirect manner, emphasizing the potential increase in loyalty through a strong brand image. Similarly, online game brand experience significantly influences consumer loyalty through consumer loyalty through consumer satisfaction (H16), indicating an indirect pathway where positive brand experiences can enhance loyalty through satisfaction. Thus, these research findings provide valuable insights into the factors influencing consumer loyalty through satisfaction in online games in the Depok, Bogor, Jakarta, Tangerang, Bekasi (Jabodetabek) area.

#### Implication

This research provides valuable insight in understanding the relationship between factors that influence consumer loyalty in online games through consumer satisfaction in the Jabodetabek area. The analysis outcomes reveal a noteworthy direct influence of game product quality on consumer satisfaction levels, underscoring the significance of creating high-quality products to enhance player satisfaction. However, it is important to remember that product quality does not automatically lead to consumer loyalty. This suggests that other aspects, such as brand image and brand experience, also play a crucial role in retaining players and encouraging them to remain loyal. Furthermore, these findings confirm that consumer satisfaction plays a central role in building consumer loyalty in online games. The results of this research can be a basis for the online gaming industry to improve marketing strategies, increase online game consumer satisfaction, and maintain a loyal consumer base. Therefore, online game managers need to continuously strive to ensure that players are satisfied with their experience, along with efforts to improve product quality and positive brand image to build long-term relationships with their players.

#### Recommendation

For future research, various recommendations can be proposed, such as broadening the research scope to encompass additional factors that could potentially impact consumer loyalty within the online gaming industry.For example, aspects such as price, promotions, and the level of security of online transactions could be relevant factors to consider in future research. Second, geographical comparative analysis is also important, considering that this research is focused on the Depok, Bogor, Jakarta, Tangerang, Bekasi (Jabodetabek) area. Future researchers can expand their analysis to compare research results in various locations in Indonesia or even in various countries. This will help in understanding differences in consumer preferences and behavior that may occur across regions. Finally, in addition to using quantitative methods, future researchers can also consider qualitative approaches, such as indepth interviews or observations, to gain deeper insight into the factors that influence consumer loyalty in online games.

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