FACTORS INFLUENCING INDONESIAN MOBILE GAMERS ON REPURCHASE INTENTION IN FREEMIUM MOBILE GAME WITH PERVAL

Atik Aprianingsih[*)], Bambang D.A. Nusantara[**)][1], Andhiny Puspa Maharatie[*)], G.N. Sandhy Widyasthana[***)]

[*)]School of Business and Management, Institut Teknologi Bandung
Jl. Ganesha No.10, Bandung, Indonesia
[**)]Faculty of Economic and Business, Pasundan University
Jl. Taman Sari No. 6-8 Bandung, Indonesia
[***)]MDI Ventures Singapore
168 Robinson Road, Singapore

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ABSTRACT

Background: The mobile gaming industry has experienced remarkable growth in recent years. However, the majority of Indonesian gamers' spending goes to foreign developers, with only 1.2% of the players' total spending of $1.1 million going to local developers.
Purpose: This study aims to analyze the factors that influence consumers' repurchase intentions when purchasing virtual items in the game Mobile Legends.
Design/methodology/approach: This study uses the Mobile Legend case study to inspire local game developers to better compete with globally popular games. A quantitative research method was employed to test the hypothesized relationships between the constructs using a sample size survey of 390 Indonesian Mobile Legends players.
Findings/Result: Findings from descriptive analysis of tested variables provided a balanced view between strengths in the gaming experience, such as high emotional and social value derived from role modeling features, and weaknesses around graphical quality and overall user satisfaction. On the other hand, when we tested the conceptual model using the PLS-SEM approach, we found that factors such as emotional value, price value, quality value, social value, satisfaction, addiction, and loyalty significantly influence repurchase intention has been confirmed.
Conclusion: Finally, recommendations including strategies to improve regional cultural representation and the use of price promotions and installment plans to optimize value perception are recommended for Indonesian games aiming to better compete with global game developers.
Originality/value (State of the art): This research addresses the existing gap in literature by proposing additional predictors, including addiction and loyalty, to provide comprehensive guidance for mobile game developers in stimulating increased repurchase intentions

Keywords: PERVAL framework, satisfaction, repurchase intention, online mobile game, mobile legends

[1] Corresponding author:
Email: bambangdwi_adityanusantara@sbm-itb.ac.id

INTRODUCTION

Games that are accessed over the internet through personal computers or gaming devices are referred to as online games (Papagiannidis, 2008). One type of game that has emerged from online gaming is the mobile game, defined as app-based titles played on portable electronics like smartphones or tablets. These games take advantage of mobile-specific features like touch screens, high-fidelity graphics, and constant web or internet connectivity (Sifa et al. 2018)

Mobile games differ from other formats due to characteristics such as photorealistic visuals, touchscreen input, asynchronous multiplayer, community functions, and virtual currency systems. Asynchronous play allows participation without coordinating schedules with others, and social elements foster discussion and showcase triumphs. With alternative funds, players can upgrade themselves or gift boosts to friends. Typically, mobile titles rely on real money for optional in-app purchases (Radoff, 2011).

Mobile gaming profits in Southeast Asia reached billions as detailed by Newzoo's 2019 statistics. Mobile represented most (over 69%) revenue overall. An influential mobile game was Mobile Legends, a MOBA from Moonton. Only in 2019, Mobile Legends earned in excess of $214 million globally, with players from Asia like Malaysia, Indonesia, and America with the largest player purchases. Indonesia witnessed the highest number of Mobile Legends downloads at over 281 million, with around three-quarters situated in Asia. Indonesians also expended over $1.1 billion across all gaming in 2018, indicating the country's huge mobile market.

Being free-to-play (F2P), Mobile Legends relies on ads and in-app purchases for monetization. The longer users play and engage with the game, the more likely they are to make purchases and benefit the game developers. Therefore, player retention is crucial. Understanding player preferences and motivations is key for in-app purchases. Companies need to determine what keeps players interested and returning, and what virtual items or features they will pay extra.

Mobile gaming has truly exploded as a dominant leisure activity. These games generally follow a free-to-play model, permitting free downloads and initial play without upfront expense. However, this model also allows for optional in-app purchases if users desire an enhanced experience. Prior research confirms that F2P models have achieved great success for developers, enabling broad reach while still generating income from optional purchases (Hadiji et al. 2014).

Despite the proven performance of free games, the rate of non-spenders becoming buyers remains relatively low, around 5%. The factors influencing when free players start making in-game expenditures are not fully understood, requiring more exploration of what impacts virtual spending in mobile titles. Studies categorize spending players as either “whales,” contributing significant amounts, or “minnows” contributing less (Hamari et al. 2017). Customer loyalty is very important nowadays. Retaining existing players is cheaper than finding new ones, and loyal customers offer extra benefits through positive word of mouth and increased lifetime value. In addition, they also show lower sensitivity to price changes. Therefore, it is necessary to continuously understand how to engage and maintain loyalty.

Many studies have delved into the concept of value within digital consumption, especially mobile gaming. Intent to repurchase has been a key area of exploration, examining aspects like perceived value, satisfaction, and repurchase intentions themselves. Some research has specifically investigated the link between PERVAL (Perceived Value) and satisfaction, as well as its influence on repurchase intentions. Notably, studies by Kuo et al. (2009) revealed the impact of perceived value and satisfaction on intent to purchase.

Existing research has failed to provide a clear picture or applicable guidance for mobile game developers seeking to stimulate player repurchase intentions. This aligns with a study by Hsu et al. (2015), who explored factors influencing repurchase intention in mobile games and found other factors beyond satisfaction. To address this gap, researchers proposed additional predictors to holistically inform developers on stimulating increased repurchase intentions. The authors incorporated satisfaction, addiction, and loyalty as predictors in this study. Researchers will simultaneously test PERVAL, satisfaction, addiction, loyalty, and repurchase intentions as few studies have done so.

Past studies indicated satisfaction strongly predicts repurchase intentions (Petrick, 2002). According to Rust and Oliver (1994), satisfaction refers to positive emotions elicited from an experience. Ozarici and Sogut (2021) believe Internet addiction can relieve stress, though excessive addiction negatively impacts physical/mental health. In this study, mobile game addiction is defined as heavily relying on and repeatedly playing mobile games for extended periods without control. Zulganef (2006) reveals overall satisfaction positively correlates with user loyalty. Loyalty to a mobile game means a player's willingness to replay or recommend it. Lin and Wang (2006) discovered that perceived value affects customer loyalty to mobile services. Therefore, this study aims to contribute understanding of repurchase intention factors by incorporating addiction and user loyalty into existing literature.

This research aims to investigate the factors influencing customers' intentions to remain loyal and repeatedly purchase products and services from mobile game companies. Prior studies have shown the importance of customer retention. This study develops an integrative model examining how perceived value, satisfaction, addiction, loyalty, and recommendations relate to repurchase intentions. Specifically, incorporating addiction and loyalty as intentions to repurchase or recommend offers novel perspectives. The goal is to provide a holistic understanding of how these various predictors come together to influence repurchase decisions. The findings will contribute meaningful insights to the existing literature on what drives repeated purchasing in the mobile gaming industry.

METHODS

This study utilizes a purposive sampling technique with a non-probability sampling method where samples are chosen based on specific evaluation characteristics that align with the study's needs. In this study, the selected participants were Indonesian players who had previously made repurchases in Mobile Legends. The data for this study were collected using an online-based questionnaire via Google Forms. The sample size was obtained by following the formula from Sugiyono (2008) and was found to be a minimum of 385 participants.

The author adopted and adapted existing instruments from previous studies to measure factors such as PERVAL, satisfaction, addiction, and user loyalty that affect consumers' repurchase intention in Mobile Legends. The research utilized an interval scale using a 5-point Likert Scale and multiple-choice questions for demographic data. According to Bougie and Sekaran (2019), The Likert Scale is designed to measure a subject's level of agreement with a statement by using a five-point scale, ranging from (1) "strongly disagree," (2) "disagree," (3) "moderate," (4) "agree," (5) "strongly agree."

Data analysis was performed using the Structural Equation Model (SEM). Smart PLS 3 was used for instrument analysis. PLS-SEM is suitable for exploratory theoretical models because the existing literature on this topic is still limited. The research model analysis was conducted with two main steps, firstly examining the measurement model, and then investigating the structural model.

From Figure 1 in the form of a conceptual framework, it can be concluded that the independent variables are emotional, social, quality, and price values, with addiction and user loyalty as additional variables. Satisfaction acts as the mediating variable, and repurchase intention is the dependent variable.

PERVAL Framework

Perceived value plays an important role in determining how useful consumers find a product (Zeithaml, 1988). Yang and Peterson (2004) also discovered that it strongly influences purchase decisions. Previous research has identified various types of value. Those values are functional, social, emotional, cognitive, and conditional, that impact the buying process. Perceived value critically impacts behavior, especially for services, as Karjaluoto et al. (2012) found.

Different models and scales have explored the concept. Mathwick et al. (2001) developed an experience scale covering playfulness, aesthetics, service quality, and ROI. Sheth et al. (1991) proposed a multidimensional value incorporating social, emotional, epistemic, functional, and conditional factors. For this study, the PERVAL scale (Sweeney and Soutar, 2001) was used to assess perceived value. Lee et al. (2011) determined that a four-factor quality-price-emotional-social model best explained brand selection versus alternatives.

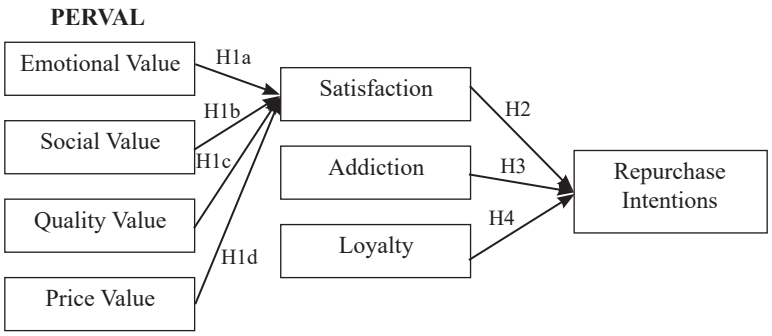

Figure 1. Research framework

Sweeney and Soutar (2001) validated that PERVAL can properly represent the consumer perspective. Various studies have applied it in various digital contexts such as financial applications, e-commerce, music streaming, motivational evaluation, purchasing, politics, and technology acceptance (Karjaluoto et al. 2019; Shang and Wu, 2017; Hsiao and Yang; 2015). In other words, perceived value provides valuable insights into how consumers think and act. Understanding this can improve competitive strategy and business success.

Repurchase Intentions

Repurchase intention in this study refers to the likelihood of future optional purchases based on perceived value. In mobile games, factors impacting intentions include quality, trustworthiness, reputation, satisfaction, and perceived worth. Previous research concludes elements like image, satisfaction, and perceived value best forecast intent among mobile gamers regarding optional purchases (Ardhiyansyah et al. 2021; Wibowo & Simanjuntak, 2020). High repurchase intentions suggest satisfied players, meaning with strong loyalty, developers gain sustainable income (Ardhiyansyah et al. 2021). As retaining customers costs less than attracting new ones, repurchase intentions are crucial to long-term achievement (Li, 2016).

Emotional Value

Emotional value refers to how meaningful the feelings are that come from a product or service. In mobile games, this encapsulates enjoyment, excitement, and stress during play (Thongmak, 2020). Factors shaping emotional value most significantly include ease of use, the right amount of challenge, creative novelty, visual aesthetics, and difficulty level (Gultom et al. 2021). Positive experiences and well-crafted content also contribute prominently (Pappas et al. 2019). Research shows emotional value impacts player retention and satisfaction (Zheng, 2019). It also relates to loyalty and optional in-app purchases, highlighting financial benefits. Emotional value informs perspectives and decisions, influencing user behavior in the marketplace. In essence, as per the perceived value framework, emotional value plays an important role in mobile gaming by encompassing feelings guided by convenience and emotion.

Previous literature provides empirical support for the hypothesis that emotional value relates positively to satisfaction with the mobile game Mobile Legends. Loa and Berlianto (2022) found emotional value influenced satisfaction and intention to continue using mobile games generally in a favorable way. Other studies tested models demonstrating the effect of different value dimensions, including emotional value, on consumer satisfaction and repurchase intentions. Specifically, within mobile games, Thongmak (2020) highlighted the positive association between perceived playfulness, a facet of emotional value, and higher player satisfaction. The role of emotional value in positively impacting satisfaction and continued usage has been established in prior work involving mobile games and other areas. Based on this, we propose the following hypothesis: H1a: Perceived emotional value is positively related to satisfaction with Mobile Legends.

Social Value

Social value involves how much people value the social elements of a product or service, especially interactions and status (Chen & Wang, 2022). In mobile games, factors influencing social value include the sense of presence within the community, strengthening self-awareness and standing (Chen & Wang, 2022). Additionally, it was discovered virtual item ownership

via gameplay shapes optional purchases (Li & Joo, 2023). Past studies showed information quality, personalization, engagement, and presence impact perceived social worth. With few game developers dominating, understanding social value remains pivotal to sustained competitiveness and market expansion (Wang, 2023). As defined in the perceived value framework, social factors greatly mold user perspectives, attitudes, and spending via elements like presence, status, and virtual item ownership.

Research has demonstrated virtual goods purchases correlate with social value perceptions in gaming communities (Hamari et al. 2020). Analogous to tangible goods, virtual items carry social and cultural significance impacting self-perceptions (Hamari & Keronen, 2017). Game developers often implement features that foster social value like rare, costly virtual goods which elevate players' statuses and enable self-expression digitally (Belk, 2013; Zakaria et al. 2022). The gaming community connects shared-interest players. Studies positively associate virtual goods purchases with derived social value (Hamari et al. 2020). Design elements reportedly cultivate social value perceptions (Wu et al. 2013). Possessing prized virtual items enhances players' statuses and identities within multiplayer online communities (Belk, 2013; Zakaria et al. 2022). In turn, research links the possession of socially valuable virtual goods and interactive gameplay experiences to satisfaction in MMORPG contexts (Xiong & Yu, 2020). Therefore, we propose hypothesis: H1b: Perceived social value positively relates to satisfaction in Mobile Legends.

Quality Value

Quality value refers to the positive assessment of utility based on perceived quality against cost/effort (Luo et al. 2014). In mobile games, factors affecting quality value include experiential quality, service quality, and entertainment contributing to game value (Wu, 2017). Additionally, content quality, positive emotions, and ease of on-the-go play shape quality value (Pappas et al. 2019). Playfulness, access, connection, and rewards determine value, greatly impacting loyalty (Muqarrabin et al. 2021). Perceived game quality directly affects value and satisfaction (Wu, 2017). Emotions and content also shape value, impacting experiences and satisfaction (Pappas et al. 2019). Quality value determinants strongly influence loyalty, feeding in-app spending and success (Muqarrabin et al. 2021). In conclusion, understanding and managing influencing factors under the perceived value framework is critical to user metrics and sustainable growth in mobile gaming.

Game developers constantly strive to enhance their products' performance and quality, resulting in innovation and invention. Purchase intention is primarily influenced by consumers' perception of performance and quality values (Kloeckner et al. 2021). Previous studies have demonstrated that quality can have a moderate impact on behavioral intentions through perceived value and satisfaction (Ghazali et al. (2019), or it can have a direct impact. Perception of service quality has been shown to impact satisfaction, influencing post-purchase behavior (Handrich et al. 2022). Thus, we put forward a hypothesis: H1c: Perceived quality value positively related to satisfaction with Mobile Legends

Price Value

Price value refers to consumers' assessment of utility received versus value delivered (Pappas et al. 2019). Factors that influence price value are ease of use, challenge, novelty, and aesthetics that drive enjoyment, with ease being the most impactful (Gultom et al. 2021). It becomes very important for mobile game developers to create value from the games developed in order to foster commitment and satisfaction from players. Modeling and predicting player behavior provides very important insights for design, development, and marketing strategies by considering price value (Hadiji et al. 2014). Game developers should consider customer price perceptions through reasonable and attractive pricing without sacrificing quality (Zietsman et al. 2019).

Customer perceptions of price value in mobile games can vary significantly, stemming from individual assessments of the value derived from different financial commitments. Within this context, the price of offerings represents an economic tradeoff, favorable price evaluations result when customers feel an experience is cost-worthy. Prior research has demonstrated pricing influences on consumer attitudes and behaviors. For example, Chen et al. (2017) correlated reasonable pricing with more positive attitudes and purchase intentions across mobile games generally. Studies have also linked perceived price value to continued engagement and in-app purchasing in mobile games

specifically. Syahrivar et al. (2021) and Arifin et al. (2023) both found higher perceived value of virtual items associated with increased persistent gameplay and purchases over time, empirically indicating that perceived price value positively impacts satisfaction. Given this literature establishing relationships between price perceptions, attitudes, and satisfaction across gaming contexts, we propose the hypothesis: H1d: Perceived price value has a positive correlation with satisfaction in Mobile Legends.

Satisfaction

Customer satisfaction can be defined as an enjoyable emotional response resulting from fulfilled services, benefits, or rewards received (Aditama & Haryono, 2022). In the context of mobile games, satisfaction is an emotional response to gameplay shaped by factors such as perceived value and quality of a game (Slack & Singh, 2020; Adeyemo, 2018). High satisfaction increases loyalty, trust, and advocacy from existing customers, which are key drivers of game developers' success and profits (Wa et al. 2013). Satisfaction is crucial as it can affect profitability. This relates to retention as satisfied users will stay and recommend others, thus driving business growth. Properly understanding player satisfaction is fundamental in mobile gaming, as it is crucial to the business.

For companies focused on intangible assets, especially service providers, prioritizing customer satisfaction is important. Satisfaction increases the chances of strengthened repurchase intentions in various contexts (Alam et al. 2020; Ardisa et al. 2022; Liang et al. 2021). These studies consistently demonstrate satisfaction greatly impacts repurchase intentions across industries. It can be concluded satisfied customers tend to repurchase more regularly (Alam et al. 2020; Ardisa et al. 2022; Liang et al. 2021). Therefore, strong links appear connecting satisfaction, purchase likelihood, and repeat buying probability. Given this empirical evidence, we propose the following hypothesis: H2: Satisfaction is positively related to in-app repurchase intention toward Mobile Legends.

Addiction

Addiction generally refers to maladaptive behavior that involves repeated engagement with rewarding stimuli despite negative outcomes (Starcevic et al. 2018). Specifically, addiction involves a pathological dependence on gaming demonstrated by symptoms such as conflict and loss of control (Yang & Gong, 2021). Factors driving addiction include using the virtual world to psychologically compensate and escape from loneliness, depression, and stress in real life (Gan et al. 2022). The implications of addiction go beyond ethical and financial concerns, highlighting the need for responsibility from developers and player engagement to avoid any harm (Wang et al. 2019). Moreover, addicted players may exhibit intense investment, which paradoxically fosters higher customer loyalty and spending, benefiting the game industry (Balakrishnan & Griffiths, 2018; Yang & Gong, 2021). It is essential to consider the potential for responsible design and monetization strategies to mitigate the negative impact of addiction while leveraging the positive aspects for the benefit of both players and the industry.

Addiction critically drives repeated purchases especially for online games. Research shows habit is the most important factor impacting purchase intention (Akbar et al. 2018). Internet gaming addiction directly affects player loyalty (Hamari et al. 2020). Players seeking pleasure are more likely to develop a psychological addiction to mobile games, which correlates to increased in-app purchases (Balakrishnan & Griffiths, 2018). Consistent freemium use establishes a foundation for premium content purchases (Chiu & Huang, 2015). Empirical evidence indicates addiction increases willingness to make in-app purchases for mobile games (Balakrishnan and Griffiths, 2018). Given this background, we propose the following hypothesis: H3: Addiction positively related to in-app repurchase intention.

Loyalty

User loyalty refers to a commitment to a brand built over repeated experiences (Nalchigar et al. 2016). In mobile games specifically, it's the dedication shown through consistent gameplay and optional spending over time (Li & Joo, 2023). Owning virtual items (Li & Joo, 2023) can lead to satisfaction with features or services (Soltani-Nejad et al. 2020), and pure enjoyment (Gultom et al. 2021). Brand trust and reputation also shape loyalty (Cui et al. 2019). Loyal players invest more money in games, boosting developer profits (Balakrishnan & Griffiths, 2018). Understanding loyalty drivers will augment revenue and growth for developers.

Consumers exhibiting allegiance to a product or service streamline their decision-making process for reoccurring acquisitions and produce augmented income through additional funding. The study conducted by Kurniawan and Suhaimi (2021) uncovered a positive association between allegiance and repetitive acquisitions. Molinillo et al. (2020) uphold this, asserting that contented and devout consumers are more likely to participate in reoccurring acquisitions. The analysis by Ginting et al. (2021) affirms the impact of service superiority on re-acquisition purposes. Applying these discoveries to the situation of Mobile Legends, player satisfaction brings about sustainable repurchasing of virtual items as noted by Ashfaq et al. (2019). Therefore, we propose a hypothesis: H4: User loyalty positively influences in-app repurchase intentions.

RESULTS

Descriptive Analysis

The study sample comprised a total of 390 respondents who are Indonesian Mobile Legend players who have previously made purchases as shown in Table 1. Most respondents were male (82.3%). The age category of the majority of respondents was 25-30 years old (48.5%). Regarding income, most respondents had an income below IDR3,000,000 (37.3%). Additionally, most respondents spent less than IDR500,000 (46.7%). Most respondents made in-app purchases on Mobile Legends 1-2 times. The mean value of VE is 3.010, indicating a high emotional value associated with playing Mobile Legends, providing an enjoyable experience. The mean value of VS is 3.505, demonstrating that having role models improves social value, as skilled players are positively perceived by others. The mean value of VQ is 3.225, suggesting that the graphics quality may not meet user expectations. These findings align with the results of the satisfaction analysis. The mean value of VP is 3.430, indicating that the pricing of diamonds in Mobile Legends is considered reasonable, making it a cost-effective product. The mean value of SA is 3.820, indicating that Mobile Legends falls short of meeting user expectations. The mean value of AD is 3.448, implying an awareness of the potential for addictive activity associated with playing the game. The mean value of UL is 3.807, suggesting that users exhibit low product-switching behavior as they prefer Mobile Legends over other games. Finally, the mean value of RI is 3.820, indicating a willingness among users to purchase virtual goods and continue spending money on Mobile Legends in the future.

Table 1. Respondent profile

Description		N=390	
		Frequency	Percentage
Gender	Male	264	82.30%
	Female	57	17.70%
Age	< 25 Years Old	137	42.60%
	25 - 30 Years Old	156	48.50%
	> 30 Years Old	29	9.00%
Income	< IDR 3 Million	124	38.50%
	IDR 3 - 5 Million	95	29.50%
	IDR 5 - 10 Million	67	20.80%
	> IDR 10 Million	36	11.30%
Expenses in Mobile Legends every month	< IDR 500,000	150	46.70%
	< IDR 500,000 - IDR 1,500.000	156	48.70%
	> IDR 1,500.000	15	4.60%
Frequency of Purchasing Virtual Goods In Mobile Legends	1-2 times	203	13.80%
	3-5 times	86	59.50%
	> 5 times	32	26.70%
Frequency of Playing Every Hour	1–3 hours	44	13.80%
	4–6 hours	191	59.50%
	> 6 Hours	86	26.70%

Reliability and Validity Analysis

Reliability and validity are important metrics for assessing the quality of research instruments. Reliability refers to the consistency and stability of measurement. The present study used Cronbach's alpha to assess the internal consistency reliability of multi-item scales, with values above 0.7 indicating acceptability. Establishing reliability and validity decreases measurement error and increases confidence in findings. The study's findings suggest scales met common benchmarks as shown in Table 2.

Data Analysis

Table 3 shows that hypothesis testing provides a very strong confirmation for all proposed hypotheses. Hypothesis 1a was tested to establish the relationship between emotion value and satisfaction in Mobile Legends. It yielded a t-value of 16.941 bigger than 1.96, and a p-value of 0.000 lower than 0.05, favouring the correlation. Social value was tested at Hypothesis 1 b and the t-value recorded at 5.013 is above 1.960, and the p-value is 0.000 below 0.05 to support this hypothesis. A t-value that exceeded the value degree of 1.96 at 4.105 and a p-value less than 0.05, which was 0.000, supported Hypothesis 1c involving quality value and satisfaction. The t-value of 7.614 for Hypothesis 1d on price value and satisfaction surpassed the 1.96 threshold and an insignificant p-value of 0.000 less than 0.05 validated its results. Additionally, the t-value for Hypothesis 2 studying satisfaction and repurchase intention was 14.199 which was higher than 1.96 and it had a p-value of 0.000 which was below 0.05. The 3rd hypothesis regarding addiction and repurchase intentions revealed a t-value that was higher than 1.96 by 3.697 and a p-value that was lower than 0.05 at 0.000. Lastly, Hypothesis 4 which pertained to loyalty and repurchase intention presented a t-value higher than 1.96 of 2.312 and a p value below 0.05 which was 0.000. According to the statistical tests without indicating a negative correlation, all hypotheses were positive as proposed.

The findings from Table 3 clearly demonstrate a positive correlation between emotional value and satisfaction with the online game Mobile Legends, thereby confirming Hypothesis 1 (H1a). This lends support to previous research examining the link between affective appraisal and user fulfillment (Pappas et al. 2019; Arifin et al. 2023). To better comprehend the association between perceived emotional worth and satisfaction with digital games, specifically Mobile Legends, it is prudent to consider the mediating role of enjoyment (Revels et al. 2010). Enjoyment emerges as a pivotal determinant of user satisfaction and affective experience within the online gaming domain (Espinosa et al. 2020). The pleasurable sensations derived from gameplay encourage continued engagement, thus impacting purchase intentions and overall satisfaction with the product (Xu, 2023). Furthermore, the influence of performance outcomes on enjoyment has been hypothesized to shape feelings of self-efficacy related to gaming skills, thereby enhancing enjoyment (Trepte & Reinecke, 2011). This implies the emotional value arising from successful performance may augment general enjoyment of the gaming experience and, by extension, user fulfillment. By acknowledging the importance of affective worth and its consequences, developers can make informed design choices to optimize the user experience and deepen engagement over time.

Table 2. Reliability and AVE Scores

Measurement Items	Item	Mean	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Emotional Value (VE)	4	3.010	0.883	0.921	0.745
Social Value (VS)	4	3.505	0.875	0.916	0.733
Price Value (VP)	4	3.430	0870	0.913	0.725
Quality Value (VQ)	4	3.225	0.872	0.913	0.724
Satisfaction (SA)	5	3.820	0.883	0.887	0.611
Addiction (AD)	4	3.448	0.825	0.884	0.656
User Loyalty (UL)	4	3.807	0.858	0.905	0.705
Repurchase Intention (RI)	4	3.820	0.813	0.884	0.660

Table 3. Hypothesis Testing Result

Hypothesis	Path	Coefficient	T-Statistics	P-Values	Information
H1a	Emotional Value (VE) → Satisfaction (SA)	0.462	16.941	0.000	Accepted
H1b	Social Value (VS) → Satisfaction (SA)	1.04	5.013	0.000	Accepted
H1c	Quality Value (VQ) → Satisfaction (SA)	0.824	4.105	0.000	Accepted
H1d	Price Value (VP) → Satisfaction (SA)	0.307	7.614	0.000	Accepted
H2	Satisfaction (SA)→ Repurchase Intention (RI)	0.516	14.19	0.000	Accepted
H3	Addiction (AD) → Repurchase Intention (RI)	0.183	3.697	0.000	Accepted
H4	User Loyalty (UL) → Repurchase Intention (RI)	0.115	2.312	0.021	Accepted

The findings presented earlier confirm Hypothesis 1b, matching outcomes from prior investigations (Dewi & Natalia, 2021; Kiraly et al. 2015) that discerned social value impacting user satisfaction. Multiplayer online battle arena games like Mobile Legends appeal through fulfilling diverse psychological motivations including recognition-seeking and achievement-drive (Kiraly et al. 2015). This implies the social worth derived within such platforms positively shapes satisfaction as they provide arenas to solicit esteem and accomplish success amid gaming networks characterized by the accrual of virtual possessions. Understanding how pursuits of renown, triumph, and social worth interrelate in online gaming contexts like Mobile Legends can guide the development of strategies nurturing positive interpersonal interactions and communal spirit, ultimately enhancing players' experiences. Elucidating relationships linking recognition-seeking, achievement, and social significance merits attention to direct cultivation of supportive, engaged communities. Such analysis may advise platform architects seeking to optimize titles through optimizing associated psychological and social benefits for sustaining interest. Prioritizing investigations of this nature stands to offer valuable insight applicable across the industry.

Hypothesis 1c is accepted based on Table 3. The findings are in line with findings by previous studies (Suhartanto et al. 2020; Lau et al. 2022). Several studies have highlighted the significance of factors such as flow, enjoyment, and visual attraction in influencing player satisfaction (Liu, 2017; Alrwashdeh et al. 2020; Hu et al. 2019). Liu (2017) emphasized the importance of flow in the continuous play of online games. Flow, defined as an immersive state of pleasure, has been identified as a crucial factor in shaping the gaming experience. Additionally, Hsiao & Yang (2015) found that the visual attractiveness of mobile games significantly impacts satisfaction with the game. This suggests that the visual appeal of games like Mobile Legends plays a vital role in shaping user satisfaction. Furthermore, study Alrwashdeh et al. (2020) found perceived service quality and value on user satisfaction, indicating a positive relationship. This finding is relevant as it suggests that the perceived quality of an online game, such as the gameplay experience, graphics, and overall value, contributes to user satisfaction. Knowing these factors can help develop the direction of game developers in improvising. key features that contribute to user satisfaction.

Hypothesis 1d is accepted based on Table 3. The findings are in line with findings by previous studies (Wu et al. 2016; Shao et al. 2019) Value of money and in-app purchases are crucial in freemium games like Mobile Legend (Rietveld, 2017). In Mobile Legend, well-designed in-app purchases offer exclusive skins, heroes, and perks for real currency. Prior research highlights the importance of a balanced investment-to-benefit ratio for satisfaction. Reasonably priced in-app items provide flexibility for customization based on budgets. Matching price with value perceptions positively influences post-purchase satisfaction (Syahrivar et al. 2021). However, inflated prices undermine price value and create an unfavorable cost-benefit analysis. Developers leverage social influence and collection tendencies to maximize price value, but over-exploitation may lead to negative sentiments (Neely, 2019). Understanding this relationship helps game publishers maintain a win-win balance between business and user outcomes by pricing virtual items appropriately (Neely, 2019). It also provides insight into regulating monetization practices so as not to harm player welfare.

The data in Table 3 confirms Hypothesis 2, aligning with previous empirical work examining the link between satisfaction and repurchase intentions (Paiz

et al. 2021; Ardhiyansyah et al. 2021). Within the context of in-app purchases for online games, the relationship is pivotal to comprehending player behavior and sustaining revenue streams. Satisfied users are more inclined to remain engaged in long-term and repeat transactions, making incremental purchases (Durlak et al. 2011). Satisfaction regarding gameplay contributes to assessments of perceived value essential for driving repeat buys of virtual goods (Li et al. 2014). Noteworthy is that monetization should aim to satisfy psychological needs while motivating ongoing transactions without compromising core play objectives (Blasi et al. 2019). Moreover, emotional bonds to a title enhance gratification and voluntary spending on in-app content, upholding continued participation and additional earning opportunities (Abbasi et al. 2016). Understanding this dynamic furnishes strategic player retention guidance and regulation perspectives to preclude value deflation through excessive financial extraction (Hosany et al. 2016). Proper considerations herein promise win-win outcomes balancing company profits and consumer wellbeing.

The findings in Table 3 confirm Hypothesis 3, aligning with previous research (Sang, 2017; Balakrishnan & Griffiths, 2018). In multiplayer online games, microtransactions serve as a core monetization strategy supporting ongoing development (Balakrishnan & Griffiths, 2018). This prominently includes purchasable cosmetics and boost items in the mobile multiplayer online battle arena (MOBA) titles (Balakrishnan & Griffiths, 2018). However, uncontrolled spending on such content risks negative consequences for vulnerable players. Games employ behavioral design to cultivate repetitive engagement and reward schedules, potentially increasing dependency for susceptible users over extended use (Wu et al. 2016). Addicted individuals may experience automatic purchase impulses during play due to causality links between spending and perceived progress/achievement (Wu et al. 2016). Deficits in self-regulation and prioritizing engagement above repercussions typify addiction, sometimes driving excessive expenses to sustain engagement levels or differentiate in-game (Wu et al. 2016). Moreover, peer influences within titles can promote normative spending pressures. With addiction factors proven significant herein, balance is paramount, companies should generate income while prioritizing welfare to ensure healthy, sustainable communities and gameplay long-term.

The results of statistical calculations are presented in table 3 indicating that hypothesis 4 is accepted. These findings were supported by previous studies (Sang, 2017; Biviji et al. 2020). Mobile Legends cultivates player loyalty through various strategies. Continuous gameplay improvements, new content, and immersive experiences engage players and foster identification with the virtual world (Loa & Berlianto, 2022; Rani et al. 2020. Rewards programs reinforce game value, incentivize spending, and enhance player loyalty (Molinillo et al. 2020). Understanding loyalty factors helps optimize retention strategies by designing incentives that respect player autonomy and volunteerism (Balakrishnan & Griffiths, 2018). Recognizing loyal players through member facilities strengthens player loyalty. Understanding these factors helps developers optimize retention strategies and maintain a loyal player base for long-term success.

In conclusion, this study provides strong empirical support for the proposed research model examining factors influencing repurchase intention among Mobile Legends players. Across four hypotheses, significant positive relationships were demonstrated between emotional value, social value, visual value, and pricing with satisfaction. Satisfaction in turn was found to positively influence repurchase intention. The additional considerations of addiction and loyalty further strengthened the predictive power of the model. The results can provide an advanced understanding of repurchase drivers in the mobile game genre.

Managerial Implications

This study showed emotional and social aspects strongly impacting player experiences in MMORPG and MOBA games respectively. Game designers should prioritize emotional value to drive engagement while facilitating social interaction can increase social value. Price incentives also significantly influence consumer behavior in Indonesia, making value pricing critical. There is a positive relationship between quality value and satisfaction in Mobile Legends. Marketers should evaluate how efforts impact price value to maximize ROI. Improving perceived quality fosters loyalty and reduces switching in competitive markets.

Mobile Legends succeeds through Southeast Asian partnerships and incorporating local folklore into characters. Local developers can adopt this strategy.

Pricing tactics like discounts, installments, and bundling promos employed by Mobile Legends can also be adopted, starting with bundling to align value perception. Prioritizing emotional, social, and quality factors while strategically pricing value will help local publishers compete.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study aimed to understand the key determinants that drive in-app purchases among Mobile Legends players. Several hypotheses were proposed based on prior research in this domain. The findings provided empirical support for these hypotheses while also offering novel insights. Specifically, the results validated the proposition that perceived emotional value positively impacts satisfaction (Pappas et al. 2019; Arifin et al. 2023). Enjoyable gameplay and positive feelings were found to enhance user satisfaction significantly. Additionally, the study corroborated social value's favorable relationship with satisfaction, aligned with prior work (Dewi & Natalia, 2021; Kiraly et al. 2015). Quality value, including immersive experience and visual appeal, also demonstrated a substantial influence on satisfaction as suggested previously (Suhartanto et al. 2020; Lau et al. 2022). Notably, perceived price value was revealed to positively shape satisfaction, consistent with past literature (Wu et al. 2016; Shao et al. 2019). Reasonably priced virtual items balanced against value-derived reportedly strengthened satisfaction. Moreover, satisfaction emerged as a strong precursor to repurchase intention, echoing findings from earlier research (Wu et al. 2016; Shao et al. 2019). Satisfied users appeared more engaged and inclined towards future spending. Moreover, user loyalty positively correlated with repurchase intention, validated by Sang (2017) and Biviji et al. (2020). Continuous upgrades, customization, rewards, and fair matchmaking seem integral to retaining loyal, high-spending customers over time. Lastly, some addicted players may experience compulsive urges to spend driven by perceived progress attainment through expenditures. Overall, this study provided empirical validation for key influencers of repurchase decisions among Mobile Legends users. Game developers stand to gain strategic insights around optimizing perceived values, satisfaction, engagement, and user loyalty to enhance monetization. Further research can build on these findings to evolve best practices for cultivating profitable, long-term player relationships.

Recommendations

The study has a few limitations that suggest potential avenues for future research. Firstly, the study only analyzed multiplayer online battle arena (MOBA) games. Future studies should contrast MOBA with other online game player behaviors. Secondly, the study only focused on one game, Mobile Legends: Bang Bang, which is the best-selling game in Indonesia. Further research should explore different genres of mobile games and other settings. Thirdly, the study considered all age categories of MOBA players. Future studies should focus specifically on savvy online game players, particularly those in the Gen Y age group. Finally, the sample of this study was predominantly male users. For future studies, it is recommended to balance gender representation to find better results.

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