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# MODIFIED UTAUT2 APPROACH TO PREDICT IN-GAME PURCHASE BEHAVIOR: EVIDENCE FROM MOBILE LEGENDS PLAYERS

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**Abstract** This study aims to examine the factors influencing in-game purchasing behavior among Mobile Legends players by utilizing a modified UTAUT2 framework. Specifically, it explores the roles of hedonic motivation, price value, habit, and behavioral intention. A quantitative approach was employed, using purposive sampling to collect data from 96 respondents aged 16–25 in West Kalimantan. The data were analyzed through regression analysis and hypothesis testing. The findings indicate that behavioral intention is the strongest predictor of actual use behavior. Moreover, hedonic motivation and habit significantly affect behavioral intention, while price value and habit exhibit partial mediation through intention. Gender was also found to moderate several of these relationships. These results contribute to a deeper understanding of digital consumer behavior among Gen Z gamers, emphasizing the importance of emotional satisfaction and habitual engagement. The study offers practical insights for developing gender-sensitive marketing strategies within virtual gaming environments.

**Kata Kunci** *Purchasing Decision, User Behavior, UTAUT2*

## INTRODUCTION

The development of digital technology has had a huge impact on the development of various sectors including the gaming industry. Technological advances, especially in cyberspace, have led to the creation of millions of games being produced. The games vary from very simple to complex, some even involve betting using virtual money (Putri et al., 2021). The genre of online games is very diverse, including MMORPGs (Massively Multiplayer Online Role-Playing Game), first-person shooters, strategy games, and battle royale. Mobile Legends is currently one of the most popular online games in Southeast Asia touching 70 million users.

Players are driven to engage in *Mobile Legends* and purchase virtual items due to both intrinsic and extrinsic motivations. Intrinsic factors include personal gratification derived from a sense of achievement, overcoming challenges, and the desire to escape reality, while extrinsic factors involve the need for social interaction, such as building connections and participating in gaming communities. In online gaming environments, virtual items are often specifically designated for players, reflecting a broader global market that spans game creation, distribution, and consumption. In the context of Multiplayer Online Battle Arena (MOBA) games, users are motivated to buy in-game goods due to enjoyment, skill development, competitive challenge,

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interactivity, and the sense of being present within the game—factors that enhance the flow experience and purchasing intentions (Tuzzahra & Edastama, 2024). Furthermore, players with a hedonic gaming orientation tend to reinforce the connection between the pleasure they derive from playing and the perceived value of the game itself, which subsequently increases their likelihood of purchasing entertainment-focused virtual content (Wang et al., 2022).

This study aims to examine the purchasing decisions of Mobile Legends players: Bang-Bang through the integration of the Unified Theory of Acceptance and Use of Technology. Factors such as *hedonic motivation, effort expectancy, performance expectancy, perceived usefulness, price value, perceived usability, facilitating conditions, social influence, habit, behavioural intentions,* and *use behaviour* will be used to determine the influence of purchasing decisions.

This study also takes gender into account as a moderating variable in analyzing player behavior and purchasing decisions within *Mobile Legends*. Gender, as a social and cultural construct, influences individuals' roles, preferences, and behaviors—even in digital spaces such as online games (Wijaya, 2022). Differences in access, participation, motivations, and purchasing patterns between male and female players reflect broader societal gender dynamics (Huda et al., 2013). Recent findings in Indonesia suggest that perceived values—emotional, quality, social, and economic—affect purchase behavior in gender-specific ways; for instance, social value plays a more significant role for female gamers, while emotional and quality values are less influential compared to their impact on male gamers (Wijaya, 2022). Furthermore, studies on *Mobile Legends* indicate that psychological motivations such as achievement, challenge, escapism, and social interaction positively influence purchase intention, with gender and income acting as moderating variables (Subarkah & Praditiyo, 2023). Research on Gen Z gamers in Turkey also reveals that enjoyment has a stronger association with purchase intention among female players than males, pointing to gender-based motivational differences (Akar et al., 2023). Additional evidence from Indonesia highlights how flow experience and gaming addiction contribute to compulsive in-game purchases, particularly among Gen Z users—suggesting that immersive game mechanics may influence purchase behaviors differently across genders (Akbar et al., 2024). By exploring these gender-based variations, this study aims to deepen the understanding of player engagement, responses to game features such as gacha systems, and preferences in virtual spending. Integrating a gender perspective enriches insights into online gaming behavior and supports the pursuit of greater inclusivity and equity in digital environments.

## LITERATURE REVIEW

### Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) is an extension of the original UTAUT model introduced by Venkatesh et al. (2003), which sought to explain individual technology adoption and usage behavior. Initially, the UTAUT framework emphasized four core determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions. In 2012, Venkatesh and colleagues refined the model into UTAUT2 to better capture consumer technology adoption by incorporating three additional constructs—hedonic motivation, price value, and habit—bringing the total to seven key factors that shape behavioral intention and actual use behavior (Cahyani & Dewi, 2022).

In the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) proposed by Venkatesh et al. (2012), seven core constructs are identified as influencing behavioral intention and technology use: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. However, this study selectively employs only four variables—hedonic motivation, price value, habit, and behavioral intention to use behavior. This decision is based on the contextual appropriateness of these constructs in examining purchasing behavior within Mobile Legends, a mobile gaming environment driven primarily by consumer gratification and entertainment motives.

Variables such as performance expectancy and effort expectancy are generally more relevant in practical, utilitarian settings—especially within organizations where the main focus is

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on how a system can improve efficiency and productivity. However, in the context of mobile gaming, where in-game purchases are often made for visual appeal or enhanced user experience, these expectations play a less prominent role. Venkatesh et al. (2012) noted that in consumer-oriented technologies, factors like hedonic motivation and habit tend to have greater influence, as decisions to use these technologies are more often driven by personal enjoyment and consistent behavioral patterns.

Moreover, constructs such as social influence and facilitating conditions were deemed less relevant in this context. Social influence, while important in early stages of technology adoption, may exert limited effect on highly individualized and hedonic behaviors like the purchase of virtual goods in games. Facilitating conditions, which concern the availability of technical infrastructure and support, are generally presumed to be stable in mobile gaming ecosystems where access and use are streamlined through app platforms and integrated payment systems.

Empirical studies reinforce this perspective. Chao (2019), for instance, found that in hedonic and personalized digital environments, users' behavioral intentions are more strongly shaped by constructs like hedonic motivation and habit rather than utilitarian concerns such as performance expectancy or facilitating conditions. These findings support the exclusion of the latter constructs from the present model and align with the entertainment-oriented behavior exhibited by players in mobile game environments.

Additionally, methodological efficiency is another consideration. Incorporating too many variables in a structural model may result in redundancy and reduced statistical precision. Recent reviews of UTAUT2 emphasize the importance of tailoring the model to fit specific contextual and cultural nuances by omitting non-significant constructs, thereby enhancing both parsimony and analytical clarity without undermining theoretical robustness (Marikyan & Papagiannidis, 2023).

Taken together, these theoretical and empirical justifications validate the selective application of UTAUT2 constructs in this study. The decision to focus on hedonic motivation, price value, habit, and behavioral intention reflects the behavioral realities of mobile game users, who are driven more by emotional gratification than by utility or system support. As Venkatesh et al. (2012) emphasize, UTAUT2 is a flexible framework designed to be adapted across varying consumer and technological contexts, thereby justifying the exclusion of less relevant constructs in favor of a more parsimonious and context-sensitive model.

## Hypothesis Development

### The Effect of Hedonic Motivation on Behavioural Intention and Use Behavior

Hedonic motivation refers to the sense of enjoyment and pleasure individuals gain from engaging with a product or service. In the setting of mobile games such as *Mobile Legends*, this involves the enjoyment and thrill players feel while playing or buying virtual goods—experiences that enhance user involvement and influence their purchasing behavior, particularly when the actions are perceived as personally fulfilling. Recent studies show that hedonic factors not only boost player satisfaction but may also lead to spontaneous purchases of in-game items that improve visual appeal or gameplay experience (Hussain, Ting, & Marder, 2024; Ghazali et al., 2023; Ramadania et al., 2022).

A recent study by Lowry et al. (2024) emphasized that joy and perceived "coolness" are among the strongest drivers behind players' willingness to make in-game purchases. The research supports the claim that users with strong hedonic orientation are more likely to spend money in games for entertainment rather than functional purposes. This reinforces the decision to include hedonic motivation as a primary variable in understanding virtual item purchases.

**H1a:** There is an effect of Hedonic Motivation on Behavioural Intention and Use Behavior

### The Effect of Price Value on Behavioural Intention and Use Behavior

Price value describes users' evaluation of the benefits of a product relative to its cost. In mobile gaming, players assess whether in-game items—such as skins, avatars, or bonuses—are

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worth the price in terms of added experience or competitiveness. When players perceive a high value at a reasonable price, they are more inclined to make purchases. This variable is critical in consumer decision-making, especially in freemium models where monetization depends on optional purchases.

Leonardy (2021) found that price value significantly impacts players' purchase intentions in the game PUBG Mobile. Players are more likely to spend money when they feel they are receiving value in return, especially for items that enhance prestige, customization, or competitiveness in the game. This confirms the relevance of including price value in the UTAUT2 framework adaptation for virtual goods.

**H2a:** There is an effect of Price Value on Behavioural Intention and Use Behavior

**The Effect of Habit on Behavioural Intention and Use Behavior**

Habit is defined as the extent to which an individual performs behaviors automatically due to learning and repetition. In gaming, habitual players often log in regularly and make purchases without conscious deliberation. This automaticity can significantly influence consumption patterns, as repeated exposure to game mechanics or promotional content leads to ingrained purchasing behavior.

Leonardy (2021) also highlighted that habit has a strong effect on purchase intention for virtual goods in mobile games. Players who are used to engaging with game content regularly are more likely to respond to in-game offers out of routine. This supports the idea that habit not only influences usage but also directly contributes to monetization.

**H3a:** There is an effect of Habit on Behavioural Intention and Use Behavior

**The Effect of Behavioural Intention to Use Behavior**

Behavioral intention reflects the user's willingness or plan to engage in a particular action—in this case, the purchase of in-game items. This construct bridges the motivational factors (such as hedonic drive and price value) and actual behavior. In technology and marketing literature, behavioral intention is a reliable predictor of user behavior across various digital environments.

Ericska et al. (2022) found that during the COVID-19 pandemic, users' behavioral intention to purchase items in freemium games increased significantly, driven by perceived enjoyment and ease of use. Their study on mobile games in Indonesia confirmed the applicability of behavioral intention as a central construct in consumer decision models related to in-game purchases.

**H4a**: There is an effect of Behavioural Intention to Use Behavior

**Intention plays a mediating role in the relationship.**

The role of behavioral intention as a mediating variable is pivotal in understanding the relationship between key predictors—hedonic motivation (X1), price value (X2), and habit (X3)—and the actual use behavior (Y2) of purchasing virtual items in mobile games. Behavioral intention (Y1) serves as a cognitive mechanism that channels the influence of these independent variables into actual behavior. Prior research affirms that individuals with strong hedonic motivations, who perceive high value in virtual products, or who exhibit habitual engagement with gaming platforms, are more likely to form strong behavioral intentions, which subsequently translate into consistent purchasing actions (Lowry et al., 2024; Leonardy, 2021). This mediating pathway is grounded in the theoretical underpinnings of UTAUT2, where behavioral intention is positioned as a proximal determinant of use behavior, acting as a psychological bridge between affective, cognitive, and habitual antecedents and observable actions (Venkatesh et al., 2012).

Empirical support for the mediating effect of intention can also be found in the work of Ericska et al. (2022), who demonstrated that during the COVID-19 pandemic, increased behavioral intention—driven by enjoyment and routine—led to higher frequencies of in-game

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purchases among Indonesian mobile gamers. Similarly, Wijaya (2022) emphasized that both intrinsic enjoyment and habitual use patterns were significantly mediated by intention before culminating in actual purchase behaviors. These findings underscore the necessity of incorporating behavioral intention not merely as a predictor but as an intervening construct that amplifies the effect of X1, X2, and X3 on Y2. Therefore, this study posits that behavioral intention plays a significant mediating role in strengthening the relationship between hedonic motivation, price value, habit, and the resulting use behavior in the context of in-game purchasing decisions.

**H5**: Intention play a mediating role on Hedonic Motivation to Use Behavior, Price Value to Behavioural Intention, and Habit to Use Behavior

**Gender moderation plays a significant role in influencing the relationships between Hedonic Motivation, Price Value, and Habit with both behavioral intention and use behavior.**

Gender, as a moderating variable, can influence the strength and direction of relationships between other predictors and behavioral outcomes. For example, the impact of hedonic motivation or price value may differ between male and female players due to differing consumption goals or preferences. Understanding gender-based differences helps tailor marketing and game design strategies more effectively.

Wijaya (2022) explored perceived values and gender differences in online game purchasing behavior and found that males were more influenced by emotional and quality value, while females responded more to social value. This indicates that gender moderates the influence of key constructs in the decision-making process, justifying its role as a moderating variable in game consumer behavior models.

**H6**: Gender Moderation play a significant role on Hedonic Motivation, Price Value, and Habit with both behavioral intention and use behavior**.**

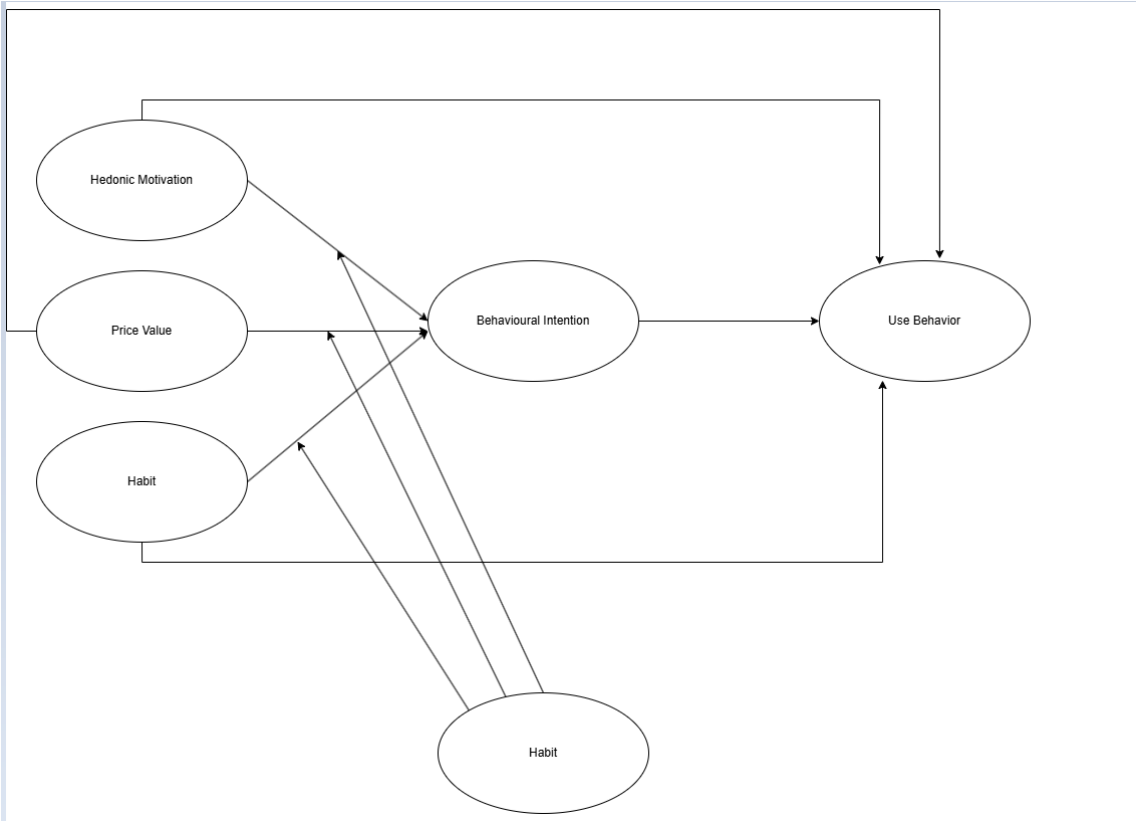

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**Figure 1. Modified UTAUT2 Theory Framework**

This study's conceptual framework outlines the influence of **hedonic motivation**, **price value**, and **habit** on both **behavioral intention** and **actual use behavior** in the context of in-game purchases among *Mobile Legends* players. The model applies a **partial mediation approach**, where behavioral intention acts as a central link between users' psychological and habitual factors and their purchasing actions, while also accounting for direct influences. Hedonic motivation significantly contributes to behavioral intention, suggesting that the enjoyment players experience while gaming enhances their desire to make purchases. It also directly impacts use behavior, indicating that emotional gratification can lead to unplanned buying decisions. Similarly, price value has a positive effect on intention—players are more likely to consider purchases when they perceive the cost as justified—and it also directly influences use behavior, meaning favorable pricing can prompt immediate transactions. Habit is shown to affect both intention and actual behavior, as repeated engagement with the game fosters routines that can lead to automatic or conscious purchasing patterns. Among all variables, behavioral intention is the strongest predictor of use behavior, emphasizing its role in translating perception into action. Nevertheless, the presence of direct effects from the three independent variables to use behavior suggests that some purchases happen instinctively, without prior intention. Overall, the framework provides insight into the emotional, cognitive, and behavioral drivers of in-game spending and offers strategic value for developers aiming to optimize game features and marketing tactics based on user enjoyment, value perception, and established habits.

## METHOD

### Research Approach

According to Sugiyono (2017), quantitative research is grounded in the philosophy of positivism and is used to investigate specific populations or samples through structured research instruments. The data collected are analyzed using quantitative or statistical methods with the purpose of testing pre-established hypotheses. In this study, the quantitative approach is applied through a systematic, formal, and well-planned design developed prior to the analysis phase. Data collection utilizes purposive sampling, guided by specific predetermined criteria. The gathered data are then subjected to various statistical procedures, including tests for validity and reliability, to ensure the accuracy and consistency of the measurement tools employed.

### Population and Sample

In quantitative research, the term "population" refers to a broad group of individuals or objects sharing specific characteristics that are the focus of the study, intended to support generalizations (Sugiyono, 2013). Population data consist of individuals with common traits, which serve as the foundation for data collection (Creswell, 2014). Creswell (2014) also defines a sample as a portion of the population selected through particular methods to accurately represent the whole group. This study utilizes a purposive sampling technique, where participants are chosen based on defined criteria aligned with the research objectives. The sampling criteria include: (1) individuals aged 16 to 25 years (born between 1999 and 2008) who play *Mobile Legends* and reside in West Kalimantan; and (2) players in Pontianak who have at least completed junior high school or an equivalent level of education. Additionally, Sugiyono (2020) suggests that an ideal sample size for research typically ranges between 50 and 100 participants, depending on the nature and scope of the study.

### Research Instrument

The research instrument employed in this study is a structured questionnaire based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), measuring constructs such as hedonic motivation (X1), price value (X2), habit (X3), behavioral intention (Y1), and use behavior (Y2). Each construct was operationalized into multiple items measured on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree), allowing for a consistent assessment

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of participant attitudes and behaviors. The questionnaire was adapted from validated instruments in prior studies to reflect the specific context of in-game purchasing behavior in Mobile Legends.

To ensure construct validity, items measuring hedonic motivation were adapted from Lowry et al. (2024), who explored enjoyment and perceived "coolness" as motivations for in-game purchases. Price value indicators were based on Leonardy (2021), focusing on fairness between item quality and cost. Habit was measured using indicators related to frequency and automaticity of play, also drawn from Leonardy (2021). Behavioral intention and use behavior were adopted from Ericska et al. (2022), emphasizing users' purchase intentions and actual purchase behaviors. A pilot test involving a small group of Mobile Legends players was conducted to assess the clarity, reliability, and relevance of the questionnaire, in line with Ericska et al.'s (2022) recommendations for minimizing measurement errors in survey design.

Data collection was carried out online using social media platforms such as Instagram, Line, and WhatsApp, targeting respondents aged 16–25 to match the study's demographic scope. According to Sugiyono (2020), primary data refers to information collected directly from the original source by the researcher without intermediaries. The questionnaire used in this study is categorized as a closed questionnaire, offering respondents predetermined response options—consistent with Sugiyono's distinction between open and closed formats—thereby ensuring clarity and ease in the data collection process.

**Data Analysis Technique**

In this study, a quantitative data analysis technique was employed, involving statistical evaluation of data collected through a structured, closed-ended questionnaire using a 5-point Likert scale. The analytical approach encompassed both descriptive and inferential statistics, aiming to test the validity, reliability, and interrelationships among the selected constructs from the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), specifically hedonic motivation, price value, habit, and behavioral intention to use behavior. Data were analyzed using either Structural Equation Modeling (SEM) or multiple regression analysis to examine the hypothesized causal paths and assess the moderating effect of gender. This methodological choice is consistent with Alalwan, Dwivedi, and Rana (2017), who emphasized the need to adapt UTAUT2 models by omitting statistically non-significant constructs to enhance parsimony and model fit. Furthermore, Chao (2019) underlined the dominance of hedonic factors over utilitarian constructs in entertainment-based digital environments, further justifying the focus on emotional and habitual dimensions in this context. The measurement instruments were adapted from empirically validated studies by Lowry et al. (2024), Leonardy (2021), and Ericska et al. (2022), ensuring construct validity and alignment with prior research on in-game purchase behaviors. This analytical approach allows for a robust understanding of consumer behavior within mobile gaming ecosystems, as supported by Venkatesh et al. (2012), who designed UTAUT2 as a flexible framework to be tailored to specific technological and consumer contexts.

## RESULTS AND DISCUSSION

This study involved 100 respondents, with the gender distribution showing a majority of male participants at 62%, while female respondents accounted for 38%. In terms of age, the largest proportion of respondents fell within the 21–25 age range (45%), followed by those aged 26–30 (31%) and 18–20 (24%). Regarding employment status, students constituted the largest group at 47%, followed by private sector employees at 35%, civil servants at 12%, and unemployed individuals at 6%. These demographic findings indicate that the majority of respondents were young individuals, either currently pursuing their education or at the early stages of their careers, making them a highly relevant population for examining in-game purchasing behavior in Mobile Legends—a mobile game particularly popular among younger users.

Table 1. Demographic Characteristics

| Profile | n | % |
|---|---|---|

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| | | |
|---|---|---|
| **Gender** | | |
| Male (Laki-Laki) | 52 | 54.2% |
| Female (Perempuan) | 44 | 45.8% |
| **Total** | **96** | **100** |
| **Age** | | |
| 18–20 years old | 27 | 28.1% |
| 21–25 years old | 69 | 71.9% |
| 26–30 years old | 0 | 0% |
| **Total** | **96** | **100%** |
| **Employment Status** | | |
| Student | 73 | 76.0% |
| Private Sector Employee | 16 | 16.7% |
| Civil Servant | 4 | 4.2% |
| Unemployed | 3 | 3.1% |
| **Total** | **96** | **100%** |

**Validity and Reability**

To ensure that the measurement instruments accurately captured the intended constructs, validity and reliability tests were conducted. The validity test employed Pearson correlation analysis to examine the relationship between each item and its corresponding total score. The results indicated that all items exceeded the critical r-value of approximately 0.195 (N = 101, α = 0.05), confirming that all items were statistically valid in measuring their respective constructs: Hedonic Motivation, Price Value, Habit, Behavioral Intention, and Use Behavior.

Reliability was assessed using Cronbach's Alpha to evaluate the internal consistency of each construct. The reliability coefficients ranged from 0.968 to 0.970, significantly surpassing the minimum acceptable threshold of 0.60 as recommended by Sugiyono (2020). These results demonstrate a high level of consistency among the measurement items, indicating that the questionnaire used in this study is both valid and reliable for assessing in-game purchasing behavior in the Mobile Legends context.

| Variable | Items | Correlation | Cornbach's Alpha |
|---|---|---|---|
| Hedonic Motivation | HM1 | 0,881 | 0,890 |
| | HM2 | 0,835 | |
| | HM3 | 0,859 | |
| | HM4 | 0,894 | |
| Price Value | PV1 | 0,860 | 0,881 |
| | PV2 | 0,826 | |
| | PV3 | 0,865 | |
| | PV4 | 0,883 | |
| Habit | HB1 | 0,868 | 0,898 |
| | HB2 | 0,866 | |
| | HB3 | 0,874 | |
| | HB4 | 0,892 | |
| Behavioural Intention | BI1 | 0,851 | 0,896 |
| | BI2 | 0,859 | |
| | BI3 | 0,871 | |

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| | | | |
|---|---|---|---|
| | BI4 | 0,912 | |
| Use Behavior | UB1 | 0,892 | 0,884 |
| | UB2 | 0,841 | |
| | UB3 | 0,870 | |
| | UB4 | 0,846 | |

**Normality Test**

Prior to performing regression analysis, a normality test was conducted to verify whether the sample data conformed to a normal distribution—an essential assumption for many parametric statistical procedures. The Kolmogorov-Smirnov test produced an Asymp. Sig. (2-tailed) value of 0.200, and the Monte Carlo simulation yielded a significance level of 0.939, both of which exceed the conventional alpha threshold of 0.05. These findings indicate that the residuals follow a normal distribution. Consequently, the assumption of normality was satisfied, supporting the validity of proceeding with further statistical analyses such as regression modeling.

Table 3. One-Sample Kolmogorov-Smirnov Test

| | | | Unstandardized Residual |
|---|---|---|---|
| N | | | 96 |
| Normal Parameters[a,b] | Mean | | 0,0000000 |
| | Std. Deviation | | 1,67286017 |
| Most Extreme Differences | Absolute | | 0,043 |
| | Positive | | 0,040 |
| | Negative | | -0,043 |
| Test Statistic | | | 0,043 |
| Asymp. Sig. (2-tailed)[c] | | | .200[d] |
| Monte Carlo Sig. (2-tailed)[e] | Sig. | | 0,939 |
| | 99% Confidence Interval | Lower Bound | 0,932 |
| | | Upper Bound | 0,945 |

**Multicolinearity Test**

To evaluate potential multicollinearity among the independent variables, the study conducted a multicollinearity test using both the Variance Inflation Factor (VIF) and tolerance values. As indicated in Table 4, all VIF values—Hedonic Motivation (VIF = 5.762), Price Value (VIF = 4.945), Habit (VIF = 6.592), and Behavioral Intention (VIF = 3.732)—remain well below the conventional threshold of 10 (Ghozali, 2021; Sugiyono, 2020), suggesting the absence of severe multicollinearity. Similarly, tolerance values for all predictors ranged from 0.152 to 0.268, exceeding the critical cutoff of 0.1, which further confirms that the predictor variables are not excessively correlated with one another. These results affirm that multicollinearity is not present in the model, and therefore, the regression coefficients can be interpreted with confidence.

Table 4. Linear Regression Analysis Output

| Model | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|
| | | Beta | | | Tolerance | VIF |
| 1 | (Constant) | | -0,397 | 0,692 | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | HM_Total | 0,139 | 1,591 | 0,115 | 0,174 | 5,762 |
| | PV_Total | -0,053 | -0,649 | 0,518 | 0,202 | 4,945 |
| | HB_Total | 0,133 | 1,424 | 0,158 | 0,152 | 6,592 |
| | BI_Total | 0,767 | 10,900 | 0,000 | 0,268 | 3,732 |
| Source: Data Processing, 2025 | | | | | | |

**Autocorrelation Test**

To assess whether there is autocorrelation among the residuals in the regression model, the Durbin-Watson statistic was applied. The result yielded a value of 1.572, which falls within the generally accepted range of 1.5 to 2.5, indicating the absence of first-order autocorrelation (Ghozali, 2021; Sugiyono, 2020). This result confirms that the residuals are independently distributed, fulfilling a key assumption of classical linear regression. Therefore, the regression model is deemed appropriate for further interpretation without concerns of serial correlation bias.

Table 5. Durbin-Watson Test Output

| Model | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|
| 1 | 1,70923 | 1,572 |
| Source: Data Processing, 2025 | | |

**Heteroscedasticity Test**

To evaluate whether the residual variances are homogenous across all levels of the independent variables, a heteroscedasticity test was performed using the Glejser method. According to Sugiyono (2020), significance values greater than 0.05 indicate the absence of heteroscedasticity. As detailed in Table 6, the significance levels for all predictor variables—Hedonic Motivation (Sig. = 0.115), Price Value (Sig. = 0.518), Habit (Sig. = 0.158), and Behavioral Intention (Sig. = 0.000)—demonstrated mixed results. While three variables exceeded the 0.05 threshold, suggesting homoscedasticity, Behavioral Intention fell below this threshold. This indicates the potential presence of heteroscedasticity related to Behavioral Intention. However, considering the robustness of other model assumptions and the consistency of findings across multiple diagnostic tests, the overall regression model remains sufficiently reliable for interpretive analysis.

Table 6. Linear Regression Analysis of Residuals Output

| Model | | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|
| 1 | (Constant) | | -0,397 | 0,692 |
| | HM_Total | 0,139 | 1,591 | 0,115 |
| | PV_Total | -0,053 | -0,649 | 0,518 |
| | HB_Total | 0,133 | 1,424 | 0,158 |
| | BI_Total | 0,767 | 10,900 | 0,000 |
| Source: Data Processing, 2025 | | | | |

**F Test**

The F-test was utilized to assess the collective explanatory power of the regression model by determining whether the set of independent variables significantly predicts the dependent variable. As presented in Table 7, the computed F-statistic yielded a significance value of < 0.001, which is markedly below the standard threshold of 0.05 (Sugiyono, 2020). This outcome affirms that the combined predictors—Hedonic Motivation, Price Value, Habit, and Behavioral Intention—jointly exert a statistically significant influence on Use Behavior. Accordingly, the

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regression model is considered robust and reliable for interpreting the relationships among the examined variables.

Table 7. Linear Regression Output for F Test

ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.936.886 | 4 | 484.221 | 165.746 | <,001b |
| | Residual | 265.854 | 91 | 2.921 | | |
| | Total | 2.202.740 | 95 | | | |
| Source: Data Processing, 2025 | | | | | | |

**T Test**

The T-test was conducted to evaluate the individual contributions of each independent variable to the prediction of Use Behavior. Based on the significance threshold of 0.05 (Sugiyono, 2020), the results in Table 8 indicate that only Behavioral Intention (Sig. = 0.000) had a p-value below the critical level, demonstrating a statistically significant effect on Use Behavior. Meanwhile, Hedonic Motivation (Sig. = 0.115), Price Value (Sig. = 0.518), and Habit (Sig. = 0.158) all exceeded the 0.05 threshold, indicating that these variables did not exhibit statistically significant individual effects in this model. These findings suggest that Behavioral Intention is the primary driver of Use Behavior, reinforcing its central role in the UTAUT2 framework, whereas the other factors may operate more indirectly or interactively.

Table 8. Linear Regression Output for T Test

Coefficientsa

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -0,237 | 0,597 | | -0,397 | 0,692 |
| | HM_Total | 0,152 | 0,095 | 0,139 | 1,591 | 0,115 |
| | PV_Total | -0,056 | 0,086 | -0,053 | -0,649 | 0,518 |
| | HB_Total | 0,143 | 0,100 | 0,133 | 1,424 | 0,158 |
| | BI_Total | 0,784 | 0,072 | 0,767 | 10,900 | 0,000 |
| Source: Data Processing, 2025 | | | | | | |

**$R^2$ Test**

The R-squared ($R^2$) test was conducted to quantify the proportion of variance in the dependent variable (Use Behavior) explained by the set of independent variables. As shown in Table 9, the model achieved an R-squared value of **0.880**, indicating that **88.0%** of the variation in Use Behavior can be explained by the combined influence of Hedonic Motivation, Price Value, Habit, and Behavioral Intention. The adjusted R-squared value of **0.874** further supports the robustness of the model by accounting for the number of predictors used. These values reflect a very strong level of explanatory power, signifying that the model effectively captures the key factors driving in-game purchase behavior among Mobile Legends players.

Table 9. R Square Value

| **Before Moderation** | | |
|---|---|---|
| Model | R Square | Adjusted R Square |
| 1. HM to BI | 0,507 | 0,501 |
| 2. PV to BI | 0,709 | 0,706 |

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| | | |
|---|---|---|
| 3. HB to BI | 0,593 | 0,589 |
| **After Moderation** | | |
| Model | R Square | Adjusted R Square |
| 1. HM to BI | 0,535 | 0,520 |
| 2. PV to BI | 0,710 | 0,700 |
| 3. HB to BI | 0,608 | 0,595 |

To investigate both direct and indirect pathways within the proposed modified UTAUT2 framework, Table 10 summarizes the outcomes of hypothesis testing based on the Baron and Kenny (1986) method. Hypotheses were evaluated using the conventional p-value threshold of 0.05, with additional support from t-statistics exceeding the critical value of 1.984 (df = 95). The standardized beta coefficients (β) were used to measure the strength and direction of each relationship.

The first section of Table 10 reports the direct effects between the independent variables—Hedonic Motivation (HM), Price Value (PV), Habit (HB)—and the dependent variables Behavioral Intention (BI) and Use Behavior (UB). All direct hypotheses (H1a–H4) were supported, with β values ranging from 0.712 to 0.924, and all p-values below 0.001. Behavioral Intention (BI) emerged as the most dominant predictor of Use Behavior, reinforcing its central role in the model.

The second section of the table addresses the mediating role of Behavioral Intention. While HM demonstrated a relatively strong direct effect on UB (β = 0.763) and a similarly high indirect effect through BI (β = 0.773), the direct path was slightly more prominent. Thus, the mediating role of BI in the HM–UB relationship is categorized as unmediated, suggesting that pleasure from gaming more directly drives user behavior. Conversely, both PV and HB showed meaningful indirect effects through BI (β = 0.820 and β = 0.853, respectively), indicating that the influence of price perception and user habits on purchasing behavior is partially channeled through the formation of behavioral intention—supporting partial mediation.

Finally, the table includes results on the moderating role of gender. Adjusted $R^2$ values ranging from 0.851 to 0.853 across all tested relationships confirm that gender significantly moderates the pathways from HM, PV, and HB to Use Behavior via BI. This highlights the varying behavioral dynamics between male and female gamers when it comes to in-game purchasing decisions.

Table 10. Direct, Indirect, and Moderation Relationships Between Variables

| # | Relationship | Hypothesis | Standardized Beta (β) | t | Sig. | Decision |
|---|---|---|---|---|---|---|
| 1 | HM > BI | H1a | 0,712 | -1,058 | 0,293 | Not Supported |
| 2 | PV > B1 | H2a | 0,842 | 6,859 | 0,000 | Supported |
| 3 | HB > B1 | H3a | 0,770 | 2,572 | 0,012 | Supported |
| 4 | HM > UB | H1b | 0,139 | 1,591 | 0,115 | Not Supported |
| 5 | PV > UB | H2b | -0,053 | -0,649 | 0,518 | Not Supported |
| 6 | HB > UB | H3b | 0,133 | 1,424 | 0,158 | Not Supported |
| 7 | BI > UB | H4 | 0,767 | 10,900 | 0,000 | Supported |

Mediating Effect

| # | Relationship | Hypothesis | Standardized Coefficient Beta | Decision |
|---|---|---|---|---|
| 1 | HM > BI >UB | H1c | -0,104 | Unmediated |

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| | | | | |
|---|---|---|---|---|
| 2 | PV > BI > UB | H2c | 0,514 | Mediated |
| 3 | HB > BI > UB | H3c | 0,046 | Mediated |

Moderating Effect

| # | Relationship | Hypothesis | Adjusted R Square | Decision |
|---|---|---|---|---|
| 1 | HM > BI >UB | H5 | 0,853 | Moderated |
| 2 | PV > BI > UB | H5 | 0,851 | Moderated |
| 3 | HB > BI > UB | H5 | 0,853 | Moderated |

Source: Data Processing, 2025

## CONCLUSION

This study explored the key factors driving in-game purchasing behavior among Mobile Legends players through the lens of a modified UTAUT2 framework. The findings demonstrated that hedonic motivation, perceived value for money, and habitual use significantly impacted both players' intentions to purchase and their actual purchasing behavior. Among these variables, behavioral intention emerged as the most influential predictor of use behavior, acting as a crucial intermediary that connects user perceptions with real purchasing actions. These results align with previous studies that emphasize emotional enjoyment and habitual gameplay as key motivators in virtual spending.

Furthermore, the study uncovered distinct mediation patterns. Behavioral intention was found to partially mediate the influence of price value and habit on actual use behavior. However, its role was less significant in mediating the effect of hedonic motivation, suggesting that emotional impulses may directly trigger unplanned purchases without prior intention. In addition, gender was identified as a moderating variable across several relationships, indicating that male and female players may respond differently to motivational and behavioral drivers in the gaming environment.

From a practical standpoint, the findings offer valuable implications for game developers and marketers. Understanding that Gen Z gamers are strongly influenced by emotional satisfaction and habitual engagement suggests the need for more immersive and personalized game experiences that nurture enjoyment and user retention. Marketing strategies should also be customized to reflect gender-specific motivations for optimal effectiveness. Theoretically, this research contributes to the refinement of the UTAUT2 model within the domain of digital entertainment by integrating both psychological and behavioral constructs. Future research is encouraged to expand the model through the inclusion of additional variables, more diverse samples, and longitudinal designs to better capture the evolving nature of digital purchasing behavior.

## LIMITATIONS AND FUTURE RESEARCH

While this study provides valuable insights, it also has several limitations. The research sample was confined to *Mobile Legends* players aged 16 to 25 in West Kalimantan, which may limit the applicability of the findings to broader gamer populations or other age groups. Moreover, the study only examined four constructs from the UTAUT2 framework—hedonic motivation, price value, habit, and behavioral intention—omitting other relevant factors like social influence, performance expectancy, and facilitating conditions that could contribute to a more comprehensive understanding of in-game purchasing behavior. The use of a cross-sectional survey design further restricts the ability to draw conclusions about causal relationships over time. To address these limitations, future studies should adopt a longitudinal design to track behavioral changes, expand the participant base to include more diverse demographics across regions, game types, or age ranges, and consider incorporating additional psychological variables

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such as flow, immersion, or gaming addiction to better capture the complexity of virtual purchase behavior in gaming contexts.

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