

The Influence of the Roblox Business Model on Robux Usage Behavior through Perceived Value in the Digital Economy among Generation Z

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Abstract

This study aims to analyze the influence of the Roblox business model on Robux usage behavior through perceived value in the digital economy among Generation Z. Roblox is a digital platform that integrates entertainment, user-generated content, digital marketplace features, virtual items, and monetization through Robux as a virtual currency. This study used a quantitative approach with an explanatory research design. Data were collected through an online questionnaire distributed to 137 Generation Z respondents who had played Roblox and had purchased or used Robux. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4. The results show that the Roblox business model has a positive and significant effect on perceived value ($\beta = 0.750$; $p < 0.05$), perceived value has a positive and significant effect on Robux usage behavior ($\beta = 0.545$; $p < 0.05$), and the Roblox business model directly affects Robux usage behavior ($\beta = 0.286$; $p < 0.05$). The mediation test shows that perceived value partially mediates the relationship between the Roblox business model and Robux usage behavior, with an indirect effect of 0.408 and $p < 0.05$. These findings indicate that Robux usage behavior among Generation Z is influenced not only by the platform business model but also by users' perceived value regarding the benefits, convenience, and digital experience provided by Robux. This study contributes to digital business literature by demonstrating that perceived value serves as an important explanatory mechanism linking the Roblox business model with virtual currency usage behavior among Generation Z.

Keywords:

Roblox business model; Robux; Perceived value; Digital economy; Generation Z.

1. INTRODUCTION

The development of information and communication technology has driven significant transformation across various sectors of life, including the economic sector. The digital economy refers to an economic system that utilizes digital technology as the basis for production, distribution, and consumption processes (Tapscott, 1996). (Bukht & Heeks, 2017) further explain that the digital economy includes all economic activities that depend on digital technology as the main medium for value creation. Along with this development, digital platforms have become one of the main drivers of economic transformation by integrating technology, users, and digital transaction activities. This condition has encouraged the emergence of various platforms that function not only as entertainment media but also as spaces for digital economic activities.

One platform that represents this phenomenon is Roblox. As a User-Generated Content (UGC)-based platform, Roblox allows users to act not only as players but also as creators who can develop games and digital assets. Economic activities on this platform are supported by Robux, a virtual currency used to purchase digital items, personalize avatars, access certain features, and support transactions within the platform ecosystem. The

Roblox business model integrates entertainment, creativity, digital marketplace features, and monetization into a single digital economic ecosystem. In addition, the Roblox annual report can be used as an official source to understand the development of the platform ecosystem, monetization model, and the role of Robux in Roblox's digital economic activities (Roblox Corporation, 2025).

The Roblox business model has characteristics that are closely related to the free-to-play or freemium concept, in which users can access the platform for free but obtain additional value through the purchase of digital items or specific features. In the context of digital games, freemium models and virtual item purchases have been shown to be related to perceived value, purchase intention, and continued use of digital services (Hamari, 2020; Hamari et al., 2017).

The success of Roblox shows that a digital business model is not only determined by the technology used but also by the platform's ability to create value for users. In the context of Generation Z as digital natives, the use of Robux has become part of digital consumption activities that reflect changes in transaction patterns in the digital economy era. Robux does not only function as a transaction tool but also carries symbolic and experiential value related to avatar personalization, digital identity expression, and enhanced gaming experiences. Therefore, Robux usage behavior needs to be analyzed not only from the perspective of the platform business model but also from the value perceived by users when using Robux.

The purchase of virtual goods in digital games is not only influenced by functional benefits but also by the social, emotional, and symbolic values perceived by users. This indicates that the use of Robux can be understood as part of virtual asset consumption that has value for users' digital identity (Hamari & Keronen, 2017; Mäntymäki & Salo, 2015).

Recent literature shows that digital economy research has increasingly moved toward understanding platforms as ecosystems in which users, creators, technology, and economic activities interact. Sang et al. (2024) demonstrate the relevance of user-generated content in shaping perceived value and user responses, while Martín-Peña et al. (2024) emphasize the role of platform ecosystems in supporting new forms of digital business. Li et al. (2024) similarly highlight the role of platforms in facilitating digital transformation. In gaming environments, virtual assets and currencies have also become increasingly relevant as mechanisms of economic exchange and value creation (UNCTAD, 2024; Zhang & Bi, 2024). These developments suggest that platform structures, user participation, perceived value, and virtual economic activity are becoming increasingly connected within contemporary digital economy research.

Despite these developments, existing studies tend to address platform business models, user-generated content, perceived value, and virtual currency consumption from different analytical perspectives. As a result, there is still limited empirical explanation of how characteristics of a platform business model are translated into actual virtual currency usage through the value perceived by users. This limitation is particularly relevant in the Roblox ecosystem, where entertainment, digital marketplaces, creator participation, and Robux-based transactions operate within the same platform. Research examining this mechanism among Generation Z, particularly in the Indonesian context, remains limited. Perceived value is therefore important to examine because users may decide to use Robux based not only on the availability of platform features but also on whether the benefits they receive are considered worthwhile relative to the costs incurred.

The present study addresses this gap by examining the Roblox business model, perceived value, and Robux usage behavior within one mediation framework. Its main contribution lies in explaining not only whether the Roblox business model is associated with Robux usage behavior, but also the process through which this relationship occurs. By positioning perceived value as a mediating construct, the study connects platform-level characteristics with users' evaluations of Robux and their subsequent usage behavior. The originality of the study therefore lies in combining these three elements within the specific context of Roblox and Generation Z.

Based on this background, this study aims to analyze the influence of the Roblox business model on Robux usage behavior through perceived value in the digital economy among Generation Z. The findings of this study are expected to contribute to the development of digital business studies, particularly in understanding the relationship between platform business models, users' perceived value, digital consumer behavior, and virtual currency usage within the digital economy ecosystem.

This article is organized into several sections. The first section presents the introduction, which explains the research background, research gap, and research objectives. The second section describes the research method, including the research design, population and sample, research variables, and data analysis technique. The third section presents the results and discussion based on SEM-PLS analysis. The final section provides the conclusion, implications, limitations, and suggestions for future research.

2. RESEARCH METHOD

This study used a quantitative approach with an explanatory research design to analyze the influence of the Roblox business model on Robux usage behavior through perceived value among Generation Z. A quantitative approach was selected because this study aimed to examine the relationships among variables objectively using numerical data obtained from respondents. Meanwhile, explanatory research was used to

explain the causal relationships among the independent variable, mediating variable, and dependent variable in the research model.

The research model consists of three constructs: the Roblox business model as the independent variable, perceived value as the mediating variable, and Robux usage behavior as the dependent variable. This study examined both direct and indirect effects among variables using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4. SEM-PLS was selected because it is able to analyze relationships among latent constructs simultaneously, including mediation models, and is suitable for prediction-oriented research.

2.1. Population and Sample

The population of this study consisted of Roblox users who belong to Generation Z. The sampling technique used in this study was purposive sampling, which is a sampling technique based on specific criteria relevant to the research objectives. The criteria for respondents in this study were as follows:

- a. Belonging to Generation Z.
- b. Having played Roblox.
- c. Having purchased or used Robux.

The sampling process was conducted using purposive sampling through an online questionnaire distributed within the Roblox Indonesia community on X (Twitter). The respondent recruitment post reached 674 views. From this number, 137 respondents completed the questionnaire and met the research inclusion criteria. Therefore, all 137 valid respondents were subsequently included as the final sample of this study.

The adequacy of this sample size was considered in relation to the structure of the proposed PLS-SEM model. The model contains three latent constructs and no endogenous construct receives more than two predictor paths. Given this model structure and the use of PLS-SEM for estimating direct and mediated relationships, the available responses were considered sufficient for estimating the proposed relationships (Hair et al., 2022).

2.2. Data Collection Technique

The data used in this study were primary data collected through an online questionnaire distributed using Google Form. The questionnaire was developed based on the indicators of each variable, adapted from relevant theories and previous studies, and adjusted to the context of the Roblox platform.

Each questionnaire item was measured using a five-point Likert scale. The scale was used to measure the level of respondents' agreement with each statement in the questionnaire.

Table 1. Likert Scale

Score	Description
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

2.3. Research Variables and Instruments

This study consists of three variables: Roblox business model (X) as the independent variable, perceived value (M) as the mediating variable, and Robux usage behavior (Y) as the dependent variable.

The Roblox business model refers to users' perceptions of Roblox's ability to create, deliver, and capture value through the freemium system, digital marketplace, User-Generated Content (UGC), and monetization using Robux as a virtual currency. This variable refers to the Business Model Canvas concept by (Osterwalder & Pigneur, 2010) and is supported by previous studies on digital platforms and business ecosystems.

Perceived value refers to users' perceptions of the benefits obtained compared to the costs or sacrifices incurred when using Robux. The higher the perceived value, the greater the possibility that users will use Robux in digital transaction activities on the Roblox platform.

Robux usage behavior refers to users' behavior in using Robux as a virtual currency to conduct digital transaction activities on Roblox, such as purchasing virtual items, personalizing avatars, enhancing gaming experiences, and repurchasing Robux.

The questionnaire items were formulated by drawing on established theoretical perspectives and previous studies, followed by adjustment to the Roblox and Robux context. Items representing the Roblox Business Model were informed by the business model perspective of Osterwalder and Pigneur (2010), particularly the processes of creating, delivering, and capturing value. Perceived Value was operationalized according to Zeithaml's (1988) view that value reflects users' assessment of benefits relative to sacrifices or costs. The indicators of Robux Usage Behavior were informed by literature concerning virtual goods consumption, continued use, and purchasing behavior in digital environments (Hamari & Keronen, 2017; Hamari, 2020;

Mäntymäki & Salo, 2015). The wording of the items was then contextualized to reflect user activities involving Roblox and Robux.

Table 2. Operationalization of Research Variables

Variable	Indicator	Code
Roblox Business Model (X)	Roblox provides a system that makes it easy for users to obtain the digital items or services they need.	X1
	The variety of digital items available on Roblox provides value for users.	X2
	The process of purchasing Robux is easy to carry out through the Roblox platform.	X3
	The Roblox marketplace makes it easier for users to conduct digital transactions.	X4
	The Roblox monetization system encourages users to use Robux to obtain benefits in the game.	X5
	Overall, the Roblox business model provides convenience and value for users.	X6
Perceived Value (M)	The use of Robux provides benefits that enhance the gaming experience.	M1
	Robux helps users obtain a better gaming experience compared to playing without using Robux.	M2
	Digital items purchased using Robux provide value that suits users' needs when playing Roblox.	M3
	The benefits perceived from using Robux are comparable to the costs incurred.	M4
	Overall, the use of Robux provides positive value for users.	M5
	The decision to use Robux is considered the right choice.	M6
Robux Usage Behavior (Y)	Users frequently use Robux to purchase digital items on Roblox.	Y1
	Users use Robux to personalize their avatars.	Y2
	Users purchase Robux to enhance their gaming experience.	Y3
	Users are willing to repurchase Robux when their Robux balance runs out.	Y4
	Users plan to continue using Robux in Roblox games in the future.	Y5
	Users prefer using Robux rather than playing Roblox without purchasing digital items.	Y6

2.4. Conceptual Framework and Hypotheses

The conceptual framework was developed based on the concepts of platform business model, perceived value, and digital consumer behavior. A platform-based business model such as Roblox can influence Robux usage behavior not only directly but also indirectly through users' perceived value. The higher the value perceived by users, the greater their tendency to use or purchase Robux.

In this study, the Roblox business model serves as the independent variable, perceived value serves as the mediating variable, and Robux usage behavior serves as the dependent variable. The relationships among these variables are presented in Figure 1.

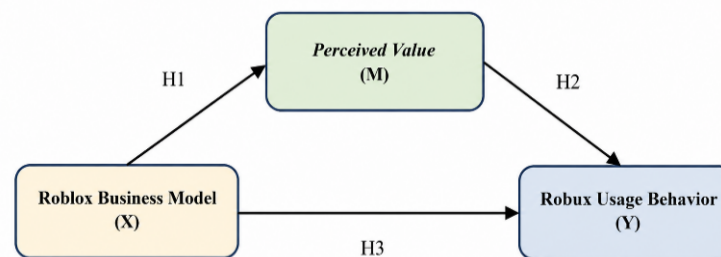


Figure 1. Conceptual Framework (Source: Author's elaboration, 2026)

The hypotheses proposed in this study are as follows:

- H1: The Roblox business model has a positive and significant effect on perceived value among Generation Z.
- H2: Perceived value has a positive and significant effect on Robux usage behavior among Generation Z.
- H3: The Roblox business model has a positive and significant effect on Robux usage behavior among Generation Z.
- H4: Perceived value mediates the effect of the Roblox business model on Robux usage behavior among Generation Z.

2.5. Data Analysis Technique

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The analysis involved two main stages: assessment of the measurement model and evaluation of the structural model. The measurement model was examined through indicator loadings, Average Variance Extracted (AVE), the Heterotrait-Monotrait Ratio (HTMT), Cronbach's Alpha, and Composite Reliability. Following Hair et al. (2022), indicator loadings above 0.70 and AVE values above 0.50 were used to indicate convergent validity, HTMT values below 0.90 were used to assess discriminant validity, and reliability coefficients above 0.70 were considered acceptable.

The structural model was evaluated using collinearity statistics, R-square, f-square, Q² predict, path coefficients, and bootstrapping. Variance Inflation Factor (VIF) values below 5 were used to indicate the absence of problematic multicollinearity. R-square was used to examine the explanatory power of the model, f-square to assess the contribution of each predictor, and Q² predict to evaluate predictive relevance, with values above zero indicating predictive capability. The significance of the hypothesized relationships was assessed through bootstrapping, using a t-statistic above 1.96 and a p-value below 0.05 as the decision criteria. The mediating role of perceived value was examined through the specific indirect effect generated in the bootstrapping procedure (Hair et al., 2022).

Research ethics were maintained throughout the data collection process. Respondents participated voluntarily and were informed about the purpose of the study before completing the questionnaire. The data collected were used only for academic purposes, and respondents' identities were kept confidential. No personal information was disclosed in the analysis or publication of the research findings.

3. RESULTS AND DISCUSSION

3.1. Results

This section presents the results of data processing obtained from questionnaires distributed to Roblox users from Generation Z. The collected data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4. The analysis was conducted in two stages, namely measurement model evaluation and structural model evaluation.

3.1.1. Respondent Characteristics

Respondent characteristics are presented to provide an overview of the profile of respondents involved in this study. The respondents were Roblox users who belonged to Generation Z and had purchased or used Robux. Based on the questionnaire distribution, this study obtained 137 respondents who met the research criteria.

The respondent characteristics in this study are presented based on age, Generation Z status, experience in playing Roblox, and experience in purchasing or using Robux. These four characteristics were selected because they are directly related to the sample criteria and are relevant to the research objectives.

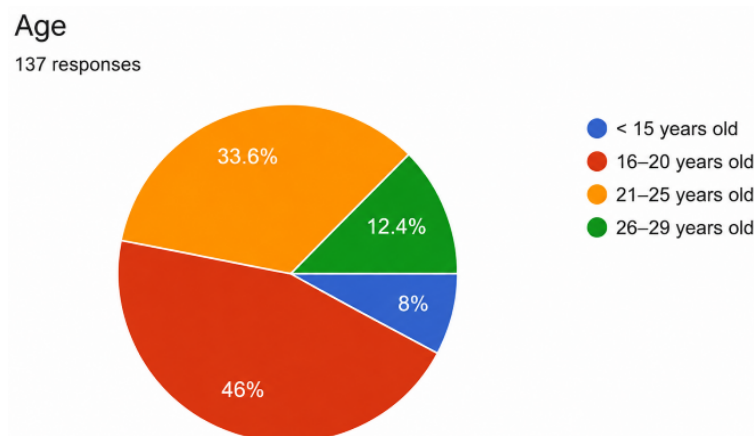


Figure 2. Distribution of Respondents by Age (Source: Processed by the Author, 2026)

Based on Figure 2, the respondents in this study were within the age range categorized as Generation Z. This indicates that the respondents who completed the questionnaire were in accordance with the target population of this study, namely Roblox users from Generation Z. Therefore, the data obtained can be used to analyze Robux usage behavior in the context of the digital economy among Generation Z.

Are you part of Generation Z (born between 1997 and 2012)?

137 responses

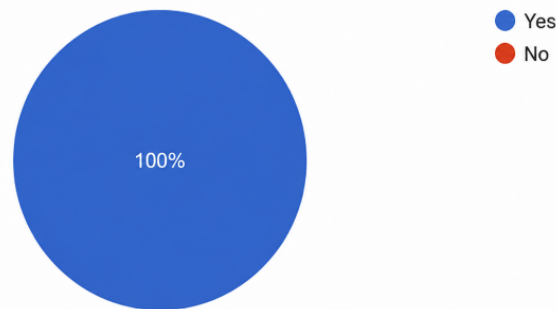


Figure 3. Distribution of Respondents by Generation Z Category
(Source: Processed by the Author, 2026)

Based on Figure 3, all respondents stated that they belonged to Generation Z, namely individuals born between 1997 and 2012. This result indicates that all respondents met one of the main criteria of this study. Thus, the data analyzed truly represent Generation Z users of the Roblox platform.

Have you ever played Roblox?

137 responses

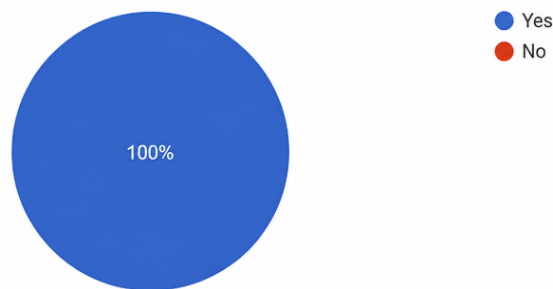


Figure 4. Distribution of Respondents by Experience in Playing Roblox
(Source: Processed by the Author, 2026)

Based on Figure 4, all respondents stated that they had played Roblox. This indicates that the respondents had direct experience using the Roblox platform and were therefore able to provide relevant responses to the questionnaire items. Experience in playing Roblox is important because this study focuses on users' perceptions of the Roblox business model and Robux usage behavior.

Have you ever purchased or used Robux?

137 responses

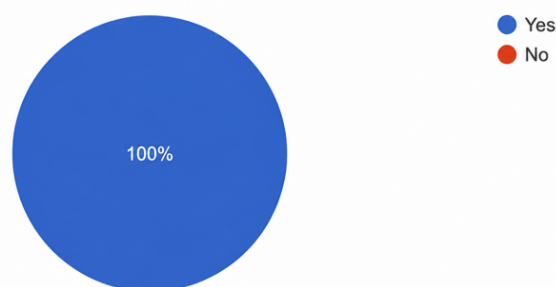


Figure 5. Distribution of Respondents by Experience in Purchasing or Using Robux
(Source: Processed by the Author, 2026)

Based on Figure 5, all respondents stated that they had purchased or used Robux. This result shows that the respondents had not only played Roblox but also had experience using Robux as a virtual currency on the platform. Therefore, the respondents were considered suitable to assess the variables of Roblox business model, perceived value, and Robux usage behavior.

3.1.2. Measurement Model Evaluation

The measurement model evaluation was conducted to examine the validity and reliability of the indicators in representing each research construct. The measurement model evaluation in this study included outer loading, Cronbach's Alpha, Composite Reliability, Average Variance Extracted (AVE), and Heterotrait-Monotrait Ratio (HTMT).

3.1.2.1. Convergent Validity

Convergent validity was assessed using the outer loading value of each indicator. An indicator is considered valid if its outer loading value is greater than 0.70. The results of the outer loading test are presented in Table 3.

Table 3. Outer Loading

Variable	Indicator	Outer Loading	Description
Business Model	X1	0,847	Valid
	X2	0,867	Valid
	X3	0,868	Valid
	X4	0,787	Valid
	X5	0,896	Valid
	X6	0,855	Valid
Perceived Value	M1	0,878	Valid
	M2	0,901	Valid
	M3	0,807	Valid
	M4	0,864	Valid
	M5	0,878	Valid
	M6	0,884	Valid
Robux Usage Behavior	Y1	0,830	Valid
	Y2	0,894	Valid
	Y3	0,910	Valid
	Y4	0,832	Valid
	Y5	0,897	Valid
	Y6	0,823	Valid

Source: Processed by the Author (2026).

Based on Table 3., all indicators have outer loading values greater than 0.70. This indicates that all indicators of the Roblox business model, perceived value, and Robux usage behavior variables meet the criteria for convergent validity. Therefore, all indicators are declared valid and suitable for use in the research model.

3.1.2.2. Construct Reliability and Validity

Construct reliability was assessed using Cronbach's Alpha, rho_A, Composite Reliability, and Average Variance Extracted (AVE). A construct is considered reliable when Cronbach's Alpha and Composite Reliability values are greater than 0.70. Meanwhile, an AVE value greater than 0.50 indicates that the construct meets convergent validity.

Table 4. Construct Reliability and Validity

Variable	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Roblox Business Model	0,926	0,932	0,942	0,729
Perceived Value	0,935	0,938	0,949	0,755
Robux Usage Behavior	0,932	0,935	0,947	0,749

Source: Processed by the Author (2026)

Based on Table 4, all variables have Cronbach's Alpha and Composite Reliability values greater than 0.70. The AVE values for all constructs are also above 0.50. Therefore, it can be concluded that all constructs in this study meet the criteria for reliability and convergent validity.

3.1.2.3. Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT). A construct is considered to meet discriminant validity if the HTMT value is below 0.90. The HTMT results are presented in Table 5.

Table 5. Heterotrait-Monotrait Ratio (HTMT)

Construct Relationship	HTMT	Description
Roblox Business Model – Perceived Value	0,795	Fulfilled
Roblox Business Model – Robux Usage Behavior	0,741	Fulfilled

Perceived Value – Robux Usage Behavior	0,810	Fulfilled
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Source: Processed by the Author (2026)

Based on Table 5, all HTMT values are below 0.90. This indicates that each construct in this study has a clear distinction from the other constructs. Therefore, the research model meets the criteria for discriminant validity.

3.1.2.4. Collinearity Statistics

Collinearity testing was conducted to determine whether there was a multicollinearity problem among variables in the research model. The test was carried out using the Variance Inflation Factor (VIF). A model is considered free from multicollinearity problems when the VIF value is below 5.

Table 6. Inner VIF

Variable Relationship	VIF	Description
Roblox Business Model → Perceived Value	1,000	No multicollinearity
Roblox Business Model → Robux Usage Behavior	2,282	No multicollinearity
Perceived Value → Robux Usage Behavior	2,282	No multicollinearity

Source: Processed by the Author (2026)

Based on Table 6, all VIF values are below 5. Therefore, it can be concluded that the research model does not experience multicollinearity problems.

3.1.2.5. Model Fit

Model fit testing was conducted to examine the overall suitability of the research model. One of the indicators used in SEM-PLS is the Standardized Root Mean Square Residual (SRMR). A model is considered to have good fit when the SRMR value is below 0.08.

Table 7. Model Fit

Indicator	Saturated Model	Estimated Model	Description
SRMR	0,053	0,053	Good
NFI	0,898	0,898	Nearly good

Source: Processed by the Author (2026)

Based on Table 7, the SRMR value for both the saturated model and estimated model is 0.053. This value is below the threshold of 0.08, indicating that the research model has a good level of model fit. In addition, the NFI value of 0.898 indicates that the model has a nearly good level of fit.

3.1.3. Structural Model Evaluation (Inner Model)

The structural model evaluation was conducted to examine the relationships among variables in the research model. The inner model evaluation included R-square, f-square, Q² predict, path coefficient, and specific indirect effect. The SEM-PLS structural model results are presented in Figure 6.

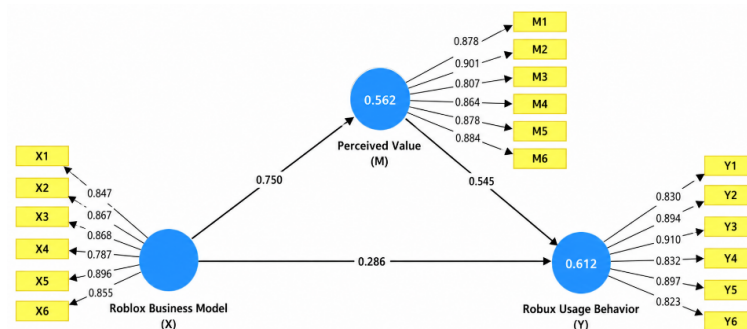


Figure 6. SEM-PLS Model Results (Source: Processed by the Author, 2026)

Based on Figure 6, the Roblox business model has a positive effect on perceived value with a path coefficient of 0.750. Perceived value also has a positive effect on Robux usage behavior with a path coefficient of 0.545. In addition, the Roblox business model directly affects Robux usage behavior with a path coefficient of 0.286. The R-square value for perceived value is 0.562, while the R-square value for Robux usage behavior is 0.612. These results indicate that the research model has positive structural relationships among the variables.

3.1.4. R-Square

The R-square value was used to determine the ability of the independent variables to explain the dependent or endogenous variables.

Table 8. R-Square

Endogenous Variable	R-Square	R-Square Adjusted
Perceived Value	0,562	0,559
Robux Usage Behavior	0,612	0,607

Source: Processed by the Author (2026)

Based on Table 8, the R-square value for perceived value is 0.562. This indicates that the Roblox business model is able to explain 56.2% of the variation in perceived value, while the remaining 43.8% is explained by other factors outside the research model.

The R-square value for Robux usage behavior is 0.612. This means that the Roblox business model and perceived value are able to explain 61.2% of the variation in Robux usage behavior, while the remaining 38.8% is explained by other factors not examined in this study.

3.1.5. Effect Size (f-Square)

The f-square value was used to determine the contribution of each exogenous variable to the endogenous variables in the research model.

Table 9. Effect Size (f-Square)

Variable Relationship	f-Square	Description
Roblox Business Model → Perceived Value	1,282	Large
Roblox Business Model → Robux Usage Behavior	0,093	Small
Perceived Value → Robux Usage Behavior	0,336	Medium

Source: Processed by the Author (2026)

Based on Table 9, the effect of the Roblox business model on perceived value has an f-square value of 1.282, which is categorized as large. The effect of the Roblox business model on Robux usage behavior has an f-square value of 0.093, which is categorized as small. Meanwhile, the effect of perceived value on Robux usage behavior has an f-square value of 0.336, which is categorized as medium.

3.1.6. Predictive Relevance

Predictive relevance was assessed using the Q^2 predict value. A model is considered to have predictive relevance when the Q^2 predict value is greater than 0.

Table 10. Q^2 Predict

Variable	Q^2 Predict	RMSE	MAE
Perceived Value	0,559	0,675	0,537
Robux Usage Behavior	0,475	0,736	0,585

Source: Processed by the Author (2026)

Based on Table 10, the Q^2 predict value for perceived value is 0.559, while the Q^2 predict value for Robux usage behavior is 0.475. Both values are greater than 0, indicating that the research model has good predictive relevance.

3.1.7. Coefficient and Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure by examining the original sample, t-statistics, and p-values. A hypothesis is accepted when the t-statistics value is greater than 1.96 and the p-value is less than 0.05.

Table 11. Path Coefficient

Hypothesis	Variable Relationship	Original Sample	T-Statistics	P-Values	Decision
H1	Roblox Business Model → Perceived Value	0,750	20,553	0,000	Accepted
H2	Perceived Value → Robux Usage Behavior	0,545	8,188	0,000	Accepted
H3	Roblox Business Model → Robux Usage Behavior	0,286	3,735	0,000	Accepted

Source: Processed by the Author (2026)

Based on Table 11, the Roblox business model has a positive and significant effect on perceived value, with an original sample value of 0.750, a t-statistics value of 20.553, and a p-value of 0.000. Therefore, H1 is accepted.

Perceived value has a positive and significant effect on Robux usage behavior, with an original sample value of 0.545, a t-statistics value of 8.188, and a p-value of 0.000. Therefore, H2 is accepted.

The Roblox business model also has a positive and significant effect on Robux usage behavior, with an original sample value of 0.286, a t-statistics value of 3.735, and a p-value of 0.000. Therefore, H3 is accepted.

3.1.8. Mediation Effect Testing

Mediation effect testing was conducted to determine whether perceived value mediates the influence of the Roblox business model on Robux usage behavior.

Table 12. Specific Indirect Effect

Hypothesis	Ediation Relationship	Original Sample	T-Statistics	P-Values	Decision
H4	Roblox Business Model → Perceived Value → Robux Usage Behavior	0,408	7,072	0,000	Accepted

Source: Processed by the Author (2026)

Based on Table 12, the specific indirect effect value is 0.408, with a t-statistics value of 7.072 and a p-value of 0.000. These results indicate that perceived value significantly mediates the influence of the Roblox business model on Robux usage behavior. Therefore, H4 is accepted.

Since the direct effect of the Roblox business model on Robux usage behavior remains significant, the mediation type is partial mediation. This means that the Roblox business model affects Robux usage behavior not only directly but also indirectly through perceived value.

3.2. Discussions

The results of this study show that the Roblox business model has a positive and significant effect on perceived value. This finding indicates that the better users perceive the Roblox business model, the higher the value they perceive from using Robux. The Roblox business model, which integrates a freemium system, digital marketplace, User-Generated Content (UGC), and monetization through Robux, is able to shape users' perception that Robux provides benefits in enhancing their gaming experience. This finding is in line with (Sang et al. 2024), who found that UGC on digital platforms can increase users' perceived value and influence user behavior. In addition, this result supports (Martín-Peña et al. 2024), who explained that platform-based business models can develop valuable digital ecosystems through interactions among users, creators, and service providers.

The finding also indicates that the Roblox business model is able to create value within the digital ecosystem. Roblox does not only provide an online gaming platform but also develops a virtual economic space where users can conduct transactions, purchase digital items, personalize avatars, and interact with creators. In this context, Robux serves as an important instrument that connects entertainment activities with digital economic activities. This is consistent with the Platform Business Model concept proposed (Osterwalder & Pigneur, 2010), which emphasizes that value in a business model is created through the processes of value creation, value delivery, and value capture. This finding is also in line with (Li et al. 2024), who stated that digital platforms play an important role in driving digital transformation through the integration of technology, users, and economic activities. Furthermore, this finding can be related to the concept of platformization, in which digital platforms not only function as distribution media but also regulate the production, consumption, and monetization of digital content within an ecosystem (Nieborg & Poell, 2018).

The results also show that perceived value has a positive and significant effect on Robux usage behavior. This finding indicates that users tend to use or purchase Robux when they perceive that Robux provides benefits that are comparable to the costs incurred. These benefits may include enhanced gaming experiences, the purchase of virtual items, avatar personalization, and access to certain features in the game. This result supports the concept of perceived value proposed by (Zeithaml, 1988), which explains that perceived value is formed through users' comparison between the benefits received and the sacrifices made. In the context of consumer behavior, this finding is also consistent with (Kotler & Keller, 2016), who explained that consumer decisions are influenced by the value and benefits perceived from a product or service. This finding is also in line with (Hsiao & Chen, 2016), who explained that perceived value plays an important role in encouraging in-app purchase intention in digital games.

In the context of Generation Z, Robux usage can also be understood as part of digital consumption behavior. Generation Z is generally familiar with digital transactions, virtual assets, and digital identity within online platforms. The use of Robux to purchase items or personalize avatars indicates that digital assets do not only have functional value but also symbolic value. Avatars in Roblox can serve as a means of self-expression, so purchasing digital items through Robux is not only related to gaming needs but also to users' desire to build identity and social experiences in virtual spaces. This finding is consistent with (Lehdonvirta & Castronova,

2014), who explained that virtual economies enable consumption, production, and value exchange through digital assets. In addition, (Steinnes, 2024), emphasized that monetization systems through virtual items and digital storefronts play an important role in shaping economic activities on digital gaming platforms. This finding is also supported by (Hamari & Keronen, 2017) and (Mäntymäki & Salo, 2015), who found that the purchase of virtual goods in digital games is influenced not only by functional benefits but also by social, emotional, and symbolic values perceived by users.

In addition to the indirect effect through perceived value, the results show that the Roblox business model directly affects Robux usage behavior. This means that the business system implemented by Roblox, such as the ease of purchasing Robux, the availability of a digital marketplace, the variety of virtual items, and the monetization mechanism, can encourage users to conduct transactions using Robux. This finding indicates that monetization strategies on digital platforms can directly influence users' consumption behavior. This condition is consistent with the concept of platform business models, which places interactions among users, creators, and transaction systems as the main source of value creation (Osterwalder & Pigneur, 2010; Martín-Peña et al., 2024). However, the direct effect of the Roblox business model on Robux usage behavior is smaller than the effect of the Roblox business model on perceived value. This indicates that although the platform business model can directly encourage Robux usage, its influence becomes stronger when users first perceive value or benefits from using Robux.

The mediation findings provide further insight into how the Roblox business model is related to Robux usage behavior. Perceived value significantly transmits part of the influence of the Roblox business model to Robux usage behavior, while the direct relationship remains significant, indicating partial mediation. This suggests that platform features and monetization mechanisms may encourage Robux usage directly, while another part of their influence operates through users' evaluations of the benefits, convenience, and experience obtained from using Robux. This interpretation is consistent with Zeithaml's (1988) view that consumption decisions are influenced by users' evaluation of the benefits received relative to the sacrifices made. It also supports Sang et al. (2024), who highlight the role of perceived value in shaping user responses within digital platforms. Thus, perceived value helps explain one of the mechanisms through which the Roblox business model is translated into Robux usage behavior.

Taken together, the findings provide more than separate evidence for the relationships among the three constructs. They reveal a sequence in which characteristics of the Roblox business model are associated with stronger perceived value and, subsequently, greater Robux usage behavior. At the same time, the remaining direct relationship indicates that perceived value is an important, but not exclusive, explanation of Robux usage. This finding connects the platform-level perspective of digital business with the user-level perspective of virtual consumption by showing how platform characteristics and users' value evaluations operate within the same explanatory model.

Overall, the results of this study indicate that the success of the Roblox business model is not only determined by its monetization strategy through Robux but also by the platform's ability to create value perceived by users. Roblox is able to develop a digital ecosystem that combines entertainment, creativity, virtual transactions, and user participation within a single platform. This makes Robux not only a virtual currency in the game but also part of digital economic activities that reflect changes in Generation Z's consumption patterns in the digital era. This finding is in line with (Zhang & Bi, 2024), who explained that the virtual economy in online games develops through virtual asset transaction mechanisms. In addition, (UNCTAD, 2024) emphasized that the modern digital economy is increasingly influenced by the development of digital assets, digital platforms, and technology-based activities.

This study provides an understanding that in the digital economy, virtual currency usage behavior cannot be explained only through technological aspects or platform features. Users' perceptions of the value they obtain are an important factor in encouraging digital consumption behavior. Therefore, perceived value serves as an important mechanism that explains how a digital platform business model can influence virtual currency usage behavior among Generation Z. Thus, this study strengthens the field of digital business by positioning platform business models, users' perceived value, and digital consumption behavior as interconnected elements within the digital economy ecosystem.

4. CONCLUSION

This study aimed to analyze the influence of the Roblox business model on Robux usage behavior through perceived value in the digital economy among Generation Z. Based on the SEM-PLS analysis using SmartPLS 4, all hypotheses proposed in this study were supported. The Roblox business model was found to have a positive and significant effect on perceived value. This indicates that the better users perceive the Roblox business model, the higher the value they perceive from using Robux.

The findings also show that perceived value has a positive and significant effect on Robux usage behavior. This means that users are more likely to use or purchase Robux when they perceive that Robux provides benefits, value, and gaming experiences that are comparable to the costs incurred. In addition, the Roblox business model was also found to have a direct positive and significant effect on Robux usage behavior.

Therefore, the freemium system, digital marketplace, variety of virtual items, User-Generated Content (UGC), and Roblox monetization mechanism can encourage the use of Robux in digital economic activities.

An important finding of this study is that perceived value partially mediates the effect of the Roblox business model on Robux usage behavior. Partial mediation occurs because the direct effect of the Roblox business model on Robux usage behavior remains significant after perceived value is included as a mediating variable. This indicates that the Roblox business model influences Robux usage behavior not only directly but also indirectly through the formation of users' perceived value. In other words, the higher the value perceived by users from using Robux, the greater their tendency to use or purchase Robux.

From a theoretical perspective, the study links digital business models with individual-level virtual consumption by demonstrating the role of perceived value between the two. The findings indicate that Robux usage among Generation Z cannot be understood solely from platform features or monetization mechanisms. Users' assessment of the benefits associated with Robux also forms part of the process. The partial mediation result therefore extends the analysis from a simple direct relationship to a mechanism in which platform characteristics and perceived user value jointly contribute to virtual currency usage.

For digital platform managers, the findings suggest that monetization should be supported by experiences that users perceive as valuable. Transaction convenience, relevant virtual items, personalization options, and improvements to the gaming experience may help users recognize the benefits associated with virtual currency use. Accordingly, efforts to increase monetization opportunities should be accompanied by continued attention to user experience and clear information about what users receive in exchange for virtual purchases.

Ethical considerations are also relevant when designing virtual currency systems. Monetization mechanisms should provide clear information about prices, transaction procedures, and the benefits attached to digital items. This is particularly important for platforms that attract younger users. Previous research has shown that poorly designed monetization practices may be viewed as aggressive, misleading, or capable of encouraging repeated spending (Petrovskaya & Zendle, 2022; Zendle et al., 2020). For this reason, value creation should be pursued together with transparency, responsible monetization, and appropriate consumer protection.

Several limitations should be considered when interpreting the findings. First, the study relies on self-reported responses, so the results reflect participants' own perceptions and experiences with Roblox and Robux. Second, the cross-sectional design captures user responses at only one point in time and therefore does not describe changes in behavior over longer periods. Third, the sample is limited to Generation Z Roblox users, which restricts conclusions about other age groups. Fourth, the analysis focuses on one platform and does not establish whether similar patterns occur in other virtual economies. Fifth, purposive sampling was used to recruit respondents who met predefined criteria, which limits the representativeness of the sample. Finally, although 137 respondents were considered sufficient for the PLS-SEM model applied in this study, broader and more heterogeneous samples could improve the generalizability of the findings.

Future studies could track users over time to determine whether perceived value and virtual currency usage remain stable or change as users gain more experience with a platform. Research involving larger and more diverse samples would also allow comparisons across different user characteristics. Cross-platform studies could examine whether the relationships observed in Roblox also appear in other virtual economy environments. Mixed-methods approaches may further clarify the motivations and experiences that underlie virtual currency use. Additional variables, including enjoyment, social influence, digital identity, trust, or financial literacy, may also be considered as possible mediating or moderating factors in future models.

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