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Perceived Trust and Perceived Value's Influence on Consumers' Purchase Intention in *Otome* Games

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Abstract

Otome games, targeting female audiences through romantic narratives, have gained prominence in China, exemplified by titles like *Love and Deepspace* that generate substantial revenues. Despite their commercial success, research on consumer behavior in this niche market remains limited, particularly regarding factors influencing purchase intentions for digital and physical products. This study addresses this gap by examining how perceived value and perceived trust shape purchase intentions. Using a quantitative approach, the researchers collected data from *Otome* game players via questionnaires and analyzed it using SPSS. Results demonstrate that perceived value exerts a significant positive influence on purchase intentions for both product categories, whereas perceived trust shows no statistically meaningful impact. These findings indicate that *Otome* game consumers prioritize experiential value over trust-based considerations when making purchasing decisions. The study contributes to the understanding of female-centric gaming markets by highlighting perceived value's critical role in driving consumer behavior. Practically, it recommends that game developers concentrate on enhancing value-driven elements, such as narrative depth, character development, and exclusive content, to stimulate sales, rather than allocating resources to trust-building mechanisms.

Keywords: Perceived Trust, Perceived Value, Purchase Intention, *Otome* Games

1. Introduction

In 2024, the global *Otome* games market size was USD 5264.2 million and growing female gamer demographics are expected to boost sales to USD 10656.59 million by 2031 (Dharmadhikari, 2025). As one of the women-oriented games, the *Otome* games are continuously gaining traction compared to puzzle games and family or farm simulation games. *Otome* games are created for heterosexual women (Song & Fox, 2016) and have become increasingly popular in China in recent years, such as *Love and Deepspace*. This game genre is characterized by romantic scenes and love stories that transcend reality (Gong & Huang, 2023). They shape multiple male characters through stories, endowing them with a sense of reality that almost breaks the fourth wall, while providing female players with emotional value that cannot be obtained or is inconvenient to obtain in reality. In the *Otome* games, many players spend thousands or even tens of thousands of dollars to unlock the game's plot (Han & Wang, 2020).

Nonetheless, there are also games that were not welcomed among players, for instance, *A Romantic Ancient Puppet World*. Given this challenge, considerable research has been devoted to exploring the mechanism of players' consumption behavior in online games, for instance, perceived values (Hsiao & Chen, 2016; Hollebeek, 2014; Miao, 2023), pricing (Weisstein et al., 2016), romantic para-social interaction (Gong & Huang, 2023) and online or offline information (Cheema & Papatla, 2010). It has been identified that five dimensions of perceived value exert a significant positive impact on consumers' purchase intention, including emotional value, social value, quality value, perceived price and rewards (Wang & Wang, 2017). Hu & Yun (2009) demonstrated a positive effect that perceived trust has on consumers' purchase intention through intermediate factors.

However, less attention has been paid to the relationship between perceived trust, perceived value and consumers' purchase intention in *Otome* games. Most studies dissect perceived trust and perceived value into multiple dimensions to explore their impact on consumers' purchase intentions, rather than directly investigating the influence of perceived trust and perceived value on consumers' purchase intentions. Miao (2023) proved that some intermediate factors between perceived trust and consumers' purchase intention had a positive impact on consumers' purchase intention,

while others did not. In addition, a substantial part of extant studies has predominantly centered on in-game purchase intention and only a relatively small number of studies have explored the purchase intention of physical products. In-game purchase involves a diverse range of items, including game tokens, upgrade materials, character appearances, stamina values, and other decorative and functional game elements (Lin & Sun, 2007). The physical products pertain to items such as peripherals and co-branded products that players purchase offline in the context of gaming.

This study aims to further investigate consumers' purchase intentions by categorizing them into two dimensions: purchase intention of digital products and purchase intention of physical products. *Otome* games, as a particular niche within the gaming industry, constitute an intriguing research area. Our research attempts to quantify the specific impact levels of perceived trust and perceived value on consumers' purchase intentions within *Otome* games. Notably, given the distinctive emotional resonance and fulfillment inherent in *Otome* games, this study predominantly focuses on the emotional value within the perceived value. Through this effort, we anticipate filling a void in the existing literature, specifically in the area of consumer behavior related to *Otome* games.

To attain our research goals, we employed the method of multiple regression analysis for data processing. This approach could facilitate a more profound understanding of the relationships among variables and lead to more precise conclusions, thereby offering novel perspectives and valuable data for both academic research and commercial practice in this area.

2. Literature Review

Perceived value and perceived trust are pivotal in shaping consumer behavior and satisfaction within the realm of *Otome* games (Cao, 2024). Understanding their impact on purchase intentions is crucial for enhancing the player experience and fostering loyalty, thereby boosting player retention and consumption growth (Lu, 2022). However, despite the growing popularity of *Otome* games and significant research into consumer behavior in other gaming contexts, there are notable gaps in the literature regarding the specific roles of perceived value and perceived trust in this niche market.

2.1 Perceived Value, Perceived Trust, and Purchase Intention

Perceived value is a critical factor in shaping consumer behavior, particularly in the context of *Otome* games (Hollebeek, 2014). Perceived value refers to the subjective judgment and measurement of the value of a product or service by consumers (Zhou, 2023). In the context of *Otome* games, perceived value is often manifested through emotional connections and satisfaction derived from the game's romantic narratives (Ouyang, 2015). However, while numerous studies have explored the dimensions of perceived value in various consumer contexts (e.g., emotional, social, and quality value), there is a lack of comprehensive research on how these dimensions interact within the unique environment of *Otome* games.

Trust plays a pivotal role in influencing consumers' willingness to engage in repeated transactions, especially in the gaming industry (Morgan & Hunt, 1994). Trust is a subjective belief of consumers that the seller will fulfill their transaction obligations according to the consumers' understanding (Wei et al., 2022). Morgan and Hunt (1994) proposed that trust is a key factor in relationship marketing, influencing consumers' willingness to engage in repeated transactions. In *Otome* games, perceived trust can be influenced by the game company's reputation, crisis management, and consistency in delivering quality experiences (Hu & Yun, 2009). Despite its importance, the role of perceived trust in *Otome* games remains underexplored, particularly in comparison to other gaming genres where trust has been extensively studied (e.g., MMORPGs, mobile games).

Purchase intention is a key indicator of consumer behavior, especially in the context of digital and physical products (Zhou & Zhao, 2021). Purchase intention refers to the likelihood of consumers engaging in a specific purchasing behavior (Zhou & Zhao, 2021). In the context of *Otome* games, purchase intention can be divided into digital products (e.g., in-game items, virtual currency) and physical products (e.g., merchandise, collectibles) (Mazodier & Merunka, 2014). While research on purchase intention in gaming contexts is abundant, the specific dynamics of purchase intention in *Otome* games, especially regarding both digital and physical products, have not been thoroughly examined.

2.2 Perceived Value and Perceived Trust in Otome Games

Otome games are uniquely designed to cater to heterosexual women, offering emotional satisfaction through romantic narratives (Han & Wang, 2020). These games often feature first-person perspectives, allowing players to immerse themselves in the storyline and develop personal connections with the characters (Ouyang, 2015). The emotional value derived from these connections is a significant driver of purchase intentions (Park & Lee, 2011). However, existing studies on perceived value in *Otome* games predominantly focus on emotional value (e.g., emotional connection with virtual characters, Han & Wang, 2020), while neglecting the operational definitions and empirical validation of other dimensions (e.g., social value, quality value). For instance, Gong & Huang (2023) only measure emotional value

through parasocial interaction scales, failing to distinguish how social value (e.g., identity expression via in-game social features) or quality value (e.g., technical stability of game systems) independently influence purchase intentions. This gap creates ambiguity in understanding whether emotional value's dominance is context-specific to *Otome* games or an artifact of limited dimensional measurement.

Perceived trust in *Otome* games is influenced by the game company's ability to deliver consistent and high-quality experiences (Wei et al., 2022). Players are more likely to trust a game company that has a good reputation and effective crisis management strategies (Wei et al., 2022). This trust can enhance perceived value by reducing perceived risks and uncertainties (Pavlou, 2003). However, unlike other consumer contexts where perceived trust is a well-established predictor of purchase intention, its role in *Otome* games remains unclear. Most studies on *Otome* games have not directly examined the relationship between perceived trust and purchase intention, leaving a significant gap in the literature.

2.3 The Relationship Between Perceived Trust, Perceived Value, and Purchase Intention

Extensive research has shown that perceived value has a positive impact on purchase intention across various consumer contexts (Hollebeek, 2014; Ruangkanjanases & Sahaphong, 2015). In the context of *Otome* games, perceived value is particularly important because it directly influences players' willingness to make in-game purchases (Wang & Kim, 2005). However, the specific mechanisms by which perceived value affects purchase intentions in *Otome* games, especially for both digital and physical products, have not been adequately explored. Recent studies, such as Gong & Huang (2023), highlight the role of parasocial interactions in driving in-game purchases, yet their research does not fully address how perceived value influences purchase intentions across different products types in *Otome* games. Similarly, Miao (2023) explored the impact of perceived value on purchase intention in female-oriented games, but her study does not differentiate between digital and physical products, leaving a gap in understanding how perceived value operates in this niche market.

The relationship between perceived trust and purchase intention is less clear. While trust is generally considered a positive predictor of purchase intention in other fields (Morgan & Hunt, 1994), its impact in the context of *Otome* games has not been thoroughly investigated. Some studies suggest that trust can enhance perceived value by reducing perceived risks (Pavlou, 2003), but this relationship may vary depending on the specific context and consumer behavior patterns. Recent research by Faqih (2022) demonstrates the positive impact of trust on purchase intention in e-commerce, particularly in the context of online shopping during the COVID-19 pandemic. However, its applicability to *Otome* games, where emotional engagement and parasocial relationships are paramount, remains unexplored. Similarly, Kim et al. (2024) demonstrate the positive influence of trust on purchase intention in the pharmaceutical industry, yet their findings do not address the unique dynamics of *Otome* games, where trust may play a different role due to the emotional nature of the player-character relationship.

Moreover, the interplay between perceived trust and perceived value in driving purchase intentions in *Otome* games is underexplored. While Zhou & Huang (2023) examine the mediating role of value perception in live streaming marketing contexts, their findings do not directly address the gaming industry, particularly *Otome* games. This highlights a significant gap in the literature, as the emotional and social dimensions of *Otome* games may alter the traditional relationships between trust, value, and purchase intention observed in other consumer contexts.

In summary, while the existing literature provides a foundation for understanding the roles of perceived value and perceived trust in consumer behavior, there is a need for more recent and context-specific research in the *Otome* game market. This study aims to address these gaps by examining the direct and indirect effects of perceived trust and perceived value on purchase intentions for both digital and physical products in *Otome* games, providing a more nuanced understanding of consumer behavior in this unique niche.

2.4 Research Gaps and Questions

Despite the progress achieved in comprehending *Otome* game consumption, three pivotal research lacunae persist, impeding a more comprehensive understanding of this domain.

2.4.1 Inadequate Discrimination among Perceived Value Dimensions

Existing research in the realm of *Otome* games has predominantly fixated on emotional value, exemplified by exploring how players foster emotional connections with virtual characters (Han & Wang, 2020). However, scant attention has been directed towards the operational definitions and empirical validation of other dimensions of perceived value. For instance, Gong & Huang (2023) confined their measurement of perceived value to emotional value alone, relying solely on parasocial interaction scales in their study. Consequently, they failed to elucidate how social value—manifested, for example, through the expression of identity via in-game social features—and quality value—such as the technical stability and seamless functionality of game systems—independently impinge upon purchase intentions. This dearth of

dimensional discrimination engenders ambiguity, leaving it uncertain whether the preeminence of emotional value is an idiosyncrasy of *Otome* games or an artifact of restricted dimensional measurement. As a result, our understanding of the intricate interplay among various value dimensions in driving consumer decision-making within *Otome* games remains incomplete.

2.4.2 Inadequate Differentiation and Validation of Perceived Value Dimensions in Otome Games

While trust has been firmly established as a factor that mitigates perceived risk in the context of e-commerce (Faqih, 2022), its role within *Otome* games remains largely uncharted territory. A paradoxical situation arises in that the intense emotional immersion of players in virtual relationships within *Otome* games potentially obviates the need for rational trust judgments. Ouyang (2025) posited such a hypothesis, yet it has thus far eluded empirical verification. This lack of validation renders the role of perceived trust in *Otome* games nebulous. Without a clear understanding of how trust operates in this context, it is challenging to formulate effective marketing and game-design strategies that can capitalize on trust-related mechanisms to enhance player engagement and drive purchase intentions.

2.4.3 Ambiguous Role of Perceived Trust in Otome Game Purchase Intention

Current research in the field of *Otome* games has predominantly relied on cross-sectional surveys, a methodological approach that harbors inherent limitations. Notably, these surveys often fall short in differentiating between the purchase intentions for digital products—such as in-game cards—and physical products—such as character - themed merchandise. In reality, these two categories of purchases are propelled by distinct consumption motivations. Digital purchases are frequently associated with the pursuit of instant gratification, enabling players to swiftly access and enjoy in-game content. In contrast, physical purchases are more closely linked to collectibility, as players seek to amass tangible items that carry the brand and imagery of their favorite *Otome* game characters. Owing to the failure to account for these disparities, previous studies may have failed to fully capture the complexity of consumer behaviors within the *Otome* game market. This methodological constraint restricts the generalizability of research findings and impedes the development of targeted marketing and product-development strategies tailored to the specific needs and preferences of *Otome* game consumers.

This study endeavors to bridge the identified research gaps by precisely quantifying the distinct impact magnitudes of perceived trust and perceived value dimensions—including emotional, social, and quality value—on consumers' purchase intentions for both digital (e.g., in-game cards) and physical (e.g., character merchandise) products within *Otome* games. This research not only enriches the theoretical understanding of consumer behavior in this specialized market but also furnishes actionable insights for game developers and marketers. To comprehensively address these gaps, the study is guided by the following refined research questions:

How do the emotional, social, and quality value dimensions within perceived value differentially influence purchase intentions for digital and physical products in *Otome* games? Given that existing studies mainly focus on emotional value (Han & Wang, 2020), it is crucial to clarify the unique contributions of other value dimensions. For example, how does the social value derived from in-game social features, such as expressing identity, impact the purchase of digital in -game items compared to physical collectibles?

Does perceived trust play a moderating role between perceived value and purchase intentions in *Otome* games? If not, considering that in e-commerce, trust reduces perceived risk (Faqih, 2022), but in *Otome* games, players' emotional immersion might affect rational trust judgments (Ouyang, 2015), what alternative factors (such as brand loyalty or the degree of emotional engagement) could account for the relationship between perceived value and purchase intentions?

Considering the methodological limitations of previous cross-sectional surveys that often fail to distinguish between digital and physical product purchase intentions despite their different consumption motivations (Balakrishnan & Griffiths, 2018), what improvements can be made in research methods to more accurately assess the relative importance of perceived value and perceived trust in driving purchase intentions in *Otome* games? And how do these factors interact in different consumption scenarios?

By answering these research questions, this study not only significantly advances the theoretical understanding of consumer behavior in *Otome* games but also offers practical and targeted recommendations for game developers and marketers. These recommendations can assist them in optimizing their strategies to enhance player engagement and, ultimately, boost purchase intentions.

3. Methodology

3.1 Research Model and Hypotheses

This study involved 4 elements, including Perceived Value (PV), Perceived Trust (PT), and Purchase Intention of Digital Product (PIDP), Purchase Intention of Physical Product (PIPP). This paper aims to quantify the specific impact

levels of PT and PV on consumer purchase intentions in *Otome* games.

Based on the foregoing discussion, this paper proposes the following hypotheses:

H1: PV is positively correlated with consumers' PIDP in *Otome* games.

H2: PV is positively correlated with consumers' PIPP in *Otome* games.

H3: PT is positively correlated with consumers' PIDP in *Otome* games.

H4: PT is positively correlated with consumers' PIPP in *Otome* games.

According to the research hypotheses, the research model is constructed as shown in Figure 1.

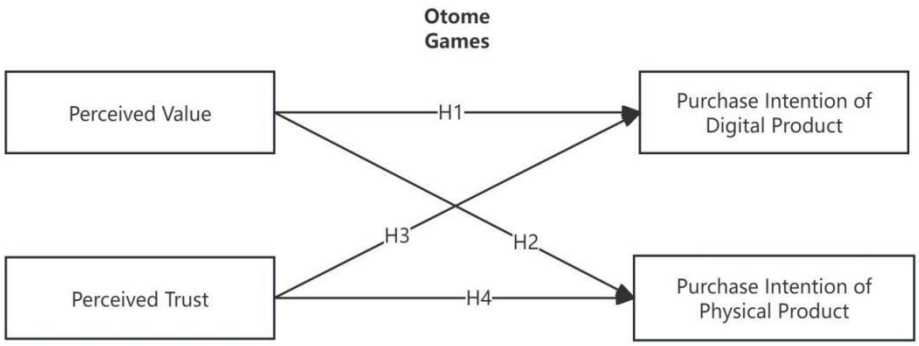

Figure 1. Theoretical Framework

The research model illustrated in Figure 1 integrates the key variables of PV, PT, PIDP, and PIPP to examine their interrelationships within the Otome games context. The model aims to examine how consumers' perceptions of value and trust influence their purchase intentions for both digital and physical products. Specifically, it postulates that PV positively affects PIDP and PIPP (H1 and H2), and that PT similarly exerts a positive influence on both PIDP and PIPP (H3 and H4). This framework provides a structured approach to understanding the mechanisms through which PV and PT shape purchase intentions in *Otome* games, offering insights into consumer behavior drivers within this niche market.

3.2 Research Procedure

The purpose of this study is to explore the impact of PT and PV on consumer purchase intentions in *Otome* games. To test the hypotheses concerning digital and physical products (H1 & H3 for PIDP; H2 & H4 for PIPP), multiple regression analysis was employed, with PT and PV as independent variables and PIDP and PIPP as dependent variables. By analyzing the regression coefficients, we can determine the nature of the relationship between PV, PT, and consumers' purchase intentions, thereby verifying whether the hypotheses hold true. Data were collected through a questionnaire to verify the study hypothesis. To assess the reliability and validity of the questionnaire, reliability and validity analyses were conducted.

3.3 Research Design

To test these four hypotheses, this study employs quantitative research methods. Questionnaires were used to collect data from players, and SPSS was employed to analyze the results to determine whether PT and PV are positively correlated with consumers' purchase intention.

The research employed the questionnaire method and used snowball sampling, acknowledging the potential biases and limitations inherent to this approach. Questionnaires were distributed to the accessible *Otome* game players at a university in southern China, who were then asked to refer additional *Otome* game players to continue the survey.

This paper focuses on the impact of emotional value within PV and PT on players' intention to consume. The questionnaire, adapted from Xiong's (2010) instrument for measuring consumers' perceived value in online games, was developed by the researchers and included single-choice questions, multiple-choice questions, and Likert scales. The design comprised two sections:

The first part is to collect the basic information of the respondents, encompassing fundamental inquiries such as gender and monthly disposable income. The second part aims to deeply understand the respondents' perceptions of PT, PV, and purchase intention. To achieve this, a Likert scale was employed, offering a 5-point continuum ranging from "Strongly

disagree" to "Strongly agree", with corresponding values assigned as follows: (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly agree. This scale facilitated the quantification of respondents' attitudes and perceptions, providing a robust foundation for answering the research question. The full questionnaire appears in the Appendix.

4. Results

4.1 Descriptive Statistical Analysis

This study presents a descriptive statistical analysis of the monthly disposable income and expenditure on games and gaming-related products among a sample of 103 respondents, aiming to understand the distribution of income and expenditure patterns in relation to gaming. The analysis provides insights into the demographic and spending behaviors of *Otome* game players, which are crucial for understanding their purchase intentions.

4.1.1 Monthly Disposable Income

The analysis of monthly disposable income reveals that the majority of respondents fall into lower income brackets. Specifically, 48.6% of the respondents reported earning less than 2000 yuan per month, while another 48.6% reported incomes between 2000 and 5000 yuan. Notably, there were no respondents in the 5000-10000 yuan income range, and only 2.8% of the sample reported earning above 10000 yuan. This income distribution suggests that *Otome* game players are predominantly from lower-income groups, which may influence their spending behavior in terms of both digital and physical game-related products. The absence of respondents in the middle-income range (5000-10000 yuan) is particularly interesting, as it may indicate a gap in the market for middle-income players or a lack of engagement from this demographic.

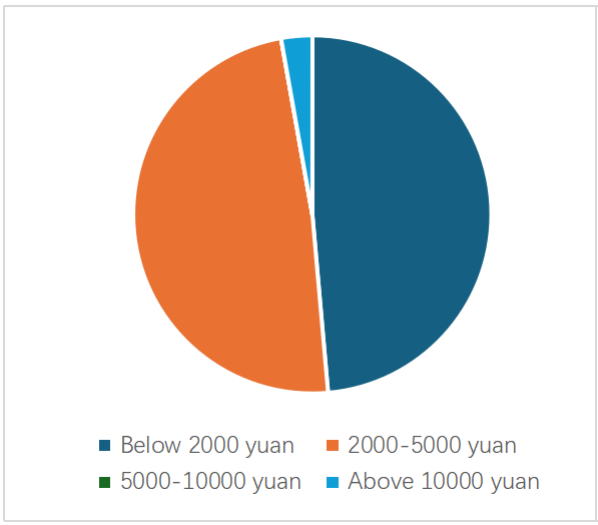

Figure 2. Distribution of Monthly Disposable Income

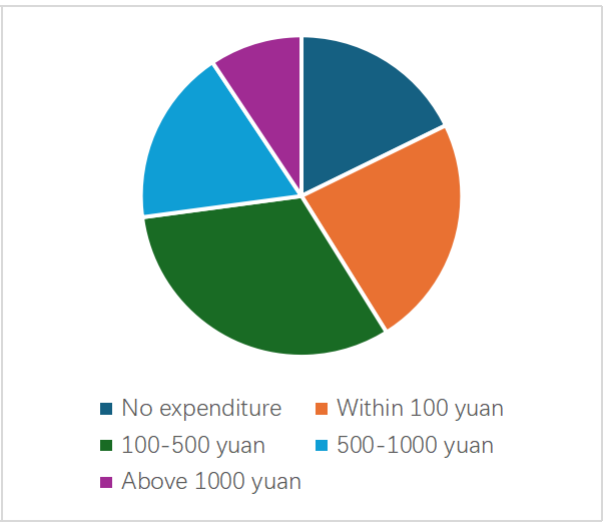

Figure 3. Average Monthly Expenditure on Game-related Products

4.1.2 Gaming Expenditure

The analysis of average monthly expenditure on game-related products shows that the largest group of respondents (31.8%) spends between 100 and 500 yuan per month. Additionally, 23.4% of respondents spend within 100 yuan, while 17.8% spend between 500 and 1000 yuan. A smaller segment of respondents (9.3%) reported spending more than 1000 yuan monthly on game-related products, while 17.8% of respondents indicated no expenditure at all. This expenditure pattern suggests that while a significant portion of players are willing to spend moderately on game-related products, there is also a notable segment that either spends very little or nothing at all. The presence of a small but significant group of high spenders (above 1000 yuan) indicates that there is a subset of players who are highly engaged and willing to invest substantially in their gaming experience.

4.1.3 Summary

The descriptive statistical analysis reveals key trends in the monthly disposable income and gaming expenditure among 103 respondents. The majority of respondents (97.2%) earn below 5000 yuan, with 48.6% earning less than 2000 yuan

and another 48.6% earning between 2000 and 5000 yuan. Only 2.8% have incomes above 10000 yuan, and no respondents fall within the 5000-10000 yuan range.

Regarding gaming expenditure, the largest group (31.8%) spends between 100 and 500 yuan monthly, while 17.8% spend nothing, and another 17.8% spend between 500 and 1000 yuan. A smaller segment (9.3%) spends over 1000 yuan.

These findings suggest a potential correlation between lower income levels and moderate gaming expenditure. The data indicate that gaming remains a popular discretionary expense even among lower-income groups. Future research could explore the types of games preferred by different income segments and the factors influencing their spending decisions. This analysis provides a foundation for understanding consumer behavior in the gaming market, particularly among lower-income demographics.

4.1.4 Implications for Game Developers and Marketers

The findings from the descriptive statistical analysis have important implications for game developers and marketers. The predominance of lower-income players suggests that pricing strategies should be carefully considered to ensure affordability and accessibility. For instance, offering a range of in-game purchase options at different price points could cater to both moderate and high spenders. Additionally, the presence of a significant group of non-spenders (17.8%) highlights the need for strategies to convert these players into paying customers, such as offering free trials or limited-time discounts.

Furthermore, the high engagement of the small but significant group of high spenders (above 1000 yuan) suggests that premium content and exclusive offers could be effective in maximizing revenue from this segment. Game developers could consider creating high-value digital and physical products that appeal to these players, such as limited-edition collectibles or exclusive in-game items.

In conclusion, the descriptive statistical analysis provides valuable insights into the income and spending patterns of *Otome* game players. These findings can inform the development of targeted marketing strategies and pricing models that cater to the diverse financial capabilities and preferences of the player base. By understanding the demographic and spending behaviors of their audience, game developers and marketers can optimize their strategies to enhance player engagement and drive revenue growth.

4.2 Reliability Analysis

Cronbach's Alpha coefficient is used to evaluate the internal consistency of a questionnaire or scale, that is, reliability. The range of the Alpha coefficient is from 0 to 1, with higher values indicating better internal consistency of the scale. Compared with split-half reliability and test-retest reliability, Cronbach's Alpha is more suitable for testing the homogeneity of multi-item scales. It is especially suitable for the Likert scales used in this study. The reliability of all independent variable items was tested, and the results showed that the Cronbach's Alpha coefficient was 0.889, indicating that the scale had good reliability, that is, the various items of the questionnaire had a high degree of consistency and can reliably measure the relevant factors of consumers' purchase intention, which lays a reliable foundation for subsequent regression analysis.

Table 1. Cronbach's Reliability Analysis

Test item	Cronbach's alpha	Number of terms	Cronbach's alpha
PV	0.879	4	0.889
PT	0.893	5	
PIDP	0.947	3	
PIPP	0.962	3	

The study examined four dimensions of measurement items (encompassing both independent and dependent variables), with reliability analysis performed separately for each dimension (i.e., PV, PT, PIDP, and PIPP). Overall, the Cronbach's Alpha values of all dimensions are relatively high (all above 0.8), indicating that these items also have good internal consistency within their respective dimensions.

4.3 Validity Analysis

Validity refers to the degree to which a measurement method can effectively and accurately measure the target variables.

The closer the measurement results are to the true values of the target variables, the higher the validity; conversely, the lower the validity. Factor analysis was conducted using SPSS software, with detection indicators including the KMO test and Bartlett's Test of Sphericity. The range of KMO values is from 0 to 1, and the closer the value is to 1, the more suitable it is for factor analysis. The KMO value of this questionnaire is 0.817, which is close to 1. This indicates a strong correlation among the variables, confirming that the data is suitable for factor analysis. The significance level of Bartlett's Test of Sphericity is 0.000 ($p < 0.001$), which further confirms that the data exhibits sufficient correlation for factor analysis.

Table 2. Test Results for the Variables KMO and Bartlett

KMO Value		0.817
Bartlett Sphericity Check	Approximate Chi-square	1326.921
	df	105
	p-value	0.000

Factor analysis was conducted, and the results are shown in the following table.

Table 3. Total Variance Explained

Extraction Sums of Squared Loadings				Extraction Sums of Squared Rotated Loadings		
Element	Total	Variance Percentage	Accumulation%	Total	Variance Percentage	Accumulation%
1	6.025	40.165	40.165	3.531	23.538	23.538
2	3.25	21.664	61.828	3.036	20.241	43.779
3	1.618	10.788	72.616	2.857	19.049	62.828
4	1.323	8.822	81.438	2.791	18.61	81.438

Generally, a cumulative variance explained ratio exceeding 60% indicates that the questionnaire has acceptable structural validity. The results of factor analysis showed that the cumulative variance explanation rate of the four factors was 81.438%, which exceeded the acceptable standard of 60%, indicating that the questionnaire had good structural validity, and thus it is acceptable.

Table 4. The Component Matrix after Rotation

Element	1	2	3	4
I think the game company performs well in crisis public relations and problem handling	0.865			
I believe the game company is trustworthy	0.836			
I think the game company will continue to provide a stable gaming experience and subsequent content updates	0.817			
I think the game has a good reputation	0.788			
I would recommend the game company on social media or online communities	0.784			
When I use *Otome* game products or services, I feel happy or satisfied		0.871		
When I use *Otome* game products or services, I feel good		0.841		
I like *Otome* games		0.795		

I have established an emotional connection with *Otome* game products or services	0.746		
I have the habit of purchasing physical products (such as figures, pendants, badges, etc.)		0.925	
After the game releases new physical products (such as figures, pendants, badges, etc.), I am willing to purchase them		0.916	
I am willing to actively collect information on game-related physical products (such as figures, pendants, badges, etc.) and make purchases		0.916	
After the game releases virtual products (such as cards, costumes, etc.), I am willing to purchase them			0.920
I am willing to actively collect information on game-related virtual products (such as cards, costumes, etc.) and make purchases			0.899
I have the habit of purchasing virtual products (such as cards, costumes, etc.)			0.859

Note: Rotation method: Orthogonal rotation with Kaiser normalization.

As shown in Table 4, all items have factor loadings greater than 0.5, which further confirms that the scale exhibits good structural validity. These results show that the questionnaire can effectively measure consumers' purchase intention and related factors, and provide a solid foundation for subsequent data analysis.

4.4 Regression Analysis

4.4.1 Multiple Regression Analysis of Purchase Intention of Digital Product

The multiple regression analysis is conducted to test the first and third hypotheses with PV and PT as independent variables and PIDP as the dependent variable.

Table 5. Results of multiple regression analysis

	Regression Coefficient	*t*	*p*	Covariance Diagnostics	
				VIF	Tolerance Level
A Constant (math.)	0.653	1.070	0.287	-	-
PV	0.608	4.036	0.000	1.208	0.828
PT	0.042	0.319	0.750	1.208	0.828
Sample Size	103				
R^2	0.174				
Adjustment R^2	0.158				
F Value	F=10.545, p=0.000				

Note. Dependent variable: PIDP

D-W value: 1.977

As presented in Table 5, the model formula is: PIDP = 0.653 + 0.608PV + 0.042PT. The *R* - square value of this model is 0.174, signifying that PV and PT can account for 17.4% of the variation in PIDP.

The model's statistical robustness was rigorously validated. The *F* - test of the model indicates that the model passes the *F* - test ($F = 10.545$, $p = 0.000 < 0.05$), which implies that at least one of PV and PT has an effect on PIDP. Diagnostic tests further affirmed the model's reliability: VIF values for both PV and PT were 1.208, well below the multicollinearity threshold of 5, ensuring predictor independence. Additionally, the Durbin-Watson statistic (1.977) approximates the ideal value of 2, suggesting no autocorrelation among residuals and validating the assumption of

independent errors.

PV emerges as a statistically significant driver of PIDP. The regression coefficient of PV is 0.608 ($t = 4.036$, $p = 0.000 < 0.01$), with its contribution exceeding 50% of the model's explanatory capacity, demonstrating that PV has a significant positive influence on PIDP. The magnitude of PV's effect corroborates empirical findings in digital marketing literature, reinforcing its centrality in decision-making processes for intangible goods.

In contrast, PT demonstrates no statistically significant association with PIDP. The regression coefficient of PT is 0.042 ($t = 0.319$, $p = 0.750 > 0.05$). The negligible coefficient and high p-value suggest that trust mechanisms, as operationalized in this study, fail to meaningfully predict digital product adoption intentions. This finding contradicts conventional expectations derived from physical product and service contexts, where trust often positively affects consumers' purchase intention.

Hypothesis testing outcomes reflect this dichotomy. H1 positing a positive relationship between PV and PIDP, is strongly supported, consistent with prior research on value-driven consumer behavior. Conversely, H3, which proposes a positive PT-PIDP relationship, is rejected due to the absence of statistical significance. This contrast underscores the context-dependent nature of trust mechanisms, suggesting that their influence may be contingent on product tangibility or cultural factors not captured in the current model.

4.4.2 Multiple Regression Analysis of Purchase Intention of Physical Product

The multiple regression analysis is conducted to test the second and fourth hypotheses with PV and PT as independent variables and PIPP as the dependent variable.

Table 6. Results of multiple regression analysis

	Regression Coefficient	t	p	Covariance Diagnostics	
				VIF	Tolerance Level
A Constant (math.)	1.608	2.602	0.011	-	-
PV	0.625	4.100	0.000	1.208	0.828
PT	-0.096	-0.713	0.478	1.208	0.828
Sample Size	103				
R^2	0.152				
Adjustment R^2	0.136				
F Value	F=8.997, p=0.000				

Note. Dependent variable: PIPP

D-W value: 1.811

According to Table 6, the regression equation is formulated as: PIPP = 1.608 + 0.625PV - 0.096PT. The R - squared value of 0.152 for this model implies that PV and PT can collectively explicate 15.2% of the variance in PIPP, indicating moderate explanatory power.

Model validity and diagnostic tests confirm the robustness of these findings. The F - test of the model, with $F = 8.997$ and $p = 0.000$ ($p < 0.05$), indicates that the model is statistically significant. This implies that at least one of the independent variables, PV or PT, exerts an effect on the dependent variable PIPP. Regarding the multicollinearity in the model, VIF for both variables is 1.208, which is less than 5. This demonstrates the absence of a multicollinearity problem. The Durbin-Watson value of 1.811, being close to 2, suggests that there is no substantial autocorrelation within the model and no significant correlation among the sample data.

Variable-specific analysis uncovers divergent patterns between the predictors. The regression coefficient of PV is 0.625, with $t = 4.100$ and $p = 0.000$ ($p < 0.01$), accounting for approximately 82% of the model's explanatory power when considering standardized coefficients. The magnitude of PV's effect reinforces its universal relevance across both digital

and physical product domains.

Conversely, PT demonstrates a non-significant negative association with PIPP. The regression coefficient of PT is -0.096, with t = - 0.713 and p = 0.478 (p > 0.05). This counterintuitive finding diverges from conventional trust literature in physical commerce, where trust typically mediates risk perceptions. The inverse directionality may reflect unique *Otome* game market dynamics, such as the dominance of licensed official merchandise channels that inherently reduce consumer skepticism, or emotional purchase drivers overriding rational trust evaluations.

Based on the analytical results, H2, which posits a positive PV-PIPP relationship, receives strong support, consistent with prior research emphasizing value perceptions in collectible markets. H4, which proposed a positive PT-PIPP linkage, is statistically rejected. This contradiction with broader e-commerce findings highlights the contextual boundaries of trust mechanisms, suggesting they may operate differently in specialized markets characterized by high brand loyalty and emotional engagement.

5. Discussion

5.1 Major Findings

The research hypotheses proposed that PV and PT would positively correlate with PIDP and PIPP, respectively. However, the analysis revealed that while PV has a significant positive impact on both PIDP and PIPP, PT showed no significant impact on either PIDP or PIPP. Consequently, H1 and H2 are supported, whereas H3 and H4 are not.

PV's significant impact on both PIDP and PIPP aligns with prevailing research trends. For instance, emotion value plays a crucial role in the consumption behavior of *Otome* games (Li,2021), as consumers are more likely to purchase when they perceive positive emotional value or connection. However, the conclusion that PV exerts a significant effect on both PIPP and PIDP differs from the findings of other studies. For instance, Lv (2024) concluded that the influence of emotional value on purchase intention and purchase behavior was not significant. This discrepancy may stem from differences in game genres studied, suggesting game developers should investigate context-specific dynamics.

Additionally, the findings on PT contradict conclusions from other fields, warranting special attention. For instance, He (2024) concluded that perceived trust has a significant positive impact on consumers' purchase intention. The unique nature of Otome games may explain this divergence: despite frequent consumer complaints and distrust toward game companies, players maintain consumption due to deep emotional connections with game characters. To obtain this emotional value (i.e., the positive emotional connection with game characters), consumers remain willing to pay for in-game characters, even if they do not trust the game company.

5.2 Implications

This research employed a questionnaire survey method and found that PV has a positive impact on consumers' purchase intention, while PT does not significantly influence consumers' purchase intention, whether of digital products or physical products. This result holds significant implications for both academic research and business practice.

Theoretically, the study advances the relationship between PV and purchase intention. The finding that PV exerts a positive influence on purchase intention is in accordance with the general trend in the existing research. Concerning the relationship between PT and purchase intention, this study fills a gap in the domain of *Otome* games. In other fields, it is prevalently held that PT has a positive impact on purchase intention, for instance, Faqih (2022) concluded that trust has a significantly positive effect on individuals' intention to adopt internet shopping. In the pharmaceutical industry, patient trust positively influenced patient purchase intention (Kim et al., 2024). However, in the *Otome* game, this study demonstrates that PT does not have such an impact, which does not fit with the extant research in other areas.

In commercial practice, it is instructive for game companies to focus more on the elevation of players' PV rather than overemphasize the enhancement of PT. In the current process of the game market shifting from "increment" to "stock", game developers first need to emphasize the competitive logic of "product-oriented" (Miao, 2023). Players, in general, value more the diverse values that games themselves can offer. Consequently, game companies are required to allocate a greater proportion of their budgets to game development or maintenance, so as to continuously provide players with superior gaming experiences and improve players' overall PV from multiple perspectives. For projects for enhancing PT, such as corporate image promotion, game companies need not invest excessive resources.

6. Conclusion

This study examined how PV and PT influence purchase intentions in *Otome* games through a questionnaire survey. Results confirmed PV's positive impact on purchase intentions for both digital and physical products, consistent with prior research. Conversely, PT showed no significant effect, contrasting findings from other domains and underscoring the unique dynamics of gaming markets where intrinsic value outweighs trust-based motivations.

The findings advance theoretical understanding of PV's role in specialized entertainment contexts while challenging

assumptions about PT's universal applicability. Practically, they guide game companies to prioritize PV enhancement, such as gameplay innovation, content diversity, and user experience, over excessive investments in PT-driven initiatives like corporate branding.

While the study provides critical insights, certain methodological constraints merit acknowledgment. The experimental scope's focus on *Otome* game enthusiasts may constrain broader applicability, and self-reported measures, while valuable, may not fully capture the complexity of purchase decision-making processes. Future research could enhance robustness through mixed-method designs, cross-genre sampling, and explorations of mediating variables. Longitudinal research tracking PV or PT dynamics across product lifecycles could further refine marketing strategies for digital entertainment platforms.

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Authors contributions

Huang was responsible for study design and literature research. Xing was responsible for questionnaire collection. Li was responsible for data analysis. All three authors jointly drafted the manuscript and revised it. All authors read and approved the final manuscript. No special agreements concerning authorship other than those stated above were made.

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Appendix

How much money have you spent on games/game-related products on average each month over the past 6 months?

A. None

B. Less than 100 yuan

C. 100-500 yuan

D. 500-1000 yuan

E. Over 1000 yuan

How long have you been playing games? (As of now)

A. Within 3 months

B. 1 year

C. 2 years

D. Since the game started

E. Other

I like the *Otome* games

Strongly Disagree (1) - Strongly Agree (5)

When I use *Otome* games products or services, I feel happy or satisfied

Strongly Disagree (1) - Strongly Agree (5)

I believe the game company is trustworthy

Strongly Disagree (1) - Strongly Agree (5)

I think the game company will continue to provide a stable gaming experience and subsequent content updates

Strongly Disagree (1) - Strongly Agree (5)

After the game releases virtual products (such as cards, costumes, etc.), I am willing to purchase them

Strongly Disagree (1) - Strongly Agree (5)

After the game releases new physical products (such as figures, pendants, badges, etc.), I am willing to purchase them

Strongly Disagree (1) - Strongly Agree (5)