

# An Analysis of Economic Behavior Behind Modern Social Networks—Taking Online Game Users as an Example

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**Abstract.** This research paper examines the economic factors influencing modern social networks, focusing specifically on online game users. The study aims to explore the impact of users' sense of belonging in social networks on their usage intention. A research model is proposed, and data is collected through a questionnaire distributed to college students aged 18 to 30. The collected data is analyzed using SPSS, including descriptive statistics, correlation analysis, and regression analysis. The results indicate a significant positive correlation between users' sense of belonging to social networks and their willingness to use online games. The findings suggest that enhancing the social authenticity of online games and carefully selecting the first social platform for publicity are crucial strategies for online game operators' social network marketing. The research contributes to the understanding of the economic behavior behind social networks and provides insights for the sustainable development of the online game industry.

**Keywords:** Economic behavior, social networks, Online game users, Sense of belonging, Marketing strategies.

## 1. Introduction

Social networks have gained significant popularity in recent years due to their large user base, low cost, and accurate user targeting [1]. As a result, social network marketing has become an essential trend in the field of marketing [2]. Online games, heavily reliant on the internet, have also found a marketing platform in social networks. Understanding the economic behavior behind modern social networks, particularly among online game users, is crucial for formulating effective marketing strategies in the online game industry.

This research aims to investigate the impact of users' sense of belonging in social networks on their usage intention, focusing on online game players. The following research questions guide the study:

1. To what extent does the sense of belonging in social networks influence users' intention to use online games?
2. How do economic factors and user behavior intersect in the context of social networks and online games?

The study of economic behavior in social networks provides valuable insights into consumer behavior, marketing strategies, and the sustainability of the online game industry. By understanding the relationship between users' sense of belonging and their usage intention, online game operators can develop effective social network marketing strategies to promote the growth and success of their products. Moreover, this research contributes to the existing literature by filling gaps in knowledge regarding the economic factors influencing social networks, particularly in the context of online game users.

This research proposes a model that considers users' sense of belonging in social networks as an independent variable and their usage intention as a dependent variable. Previous studies have shown that the strength of social relations has an impact on users' willingness to accept and use new things. The model suggests that a stronger sense of belonging leads to a greater influence of others' actions on users' willingness to use social networks. The research aims to empirically analyze this relationship and provide insights for Chinese online game operators in formulating social network marketing strategies.

## **2. Literature Review**

### **2.1. The Emergence of Social Media Platforms as Marketing tools**

The rise of social media platforms has fundamentally reshaped the marketing landscape, creating novel opportunities for businesses to connect and engage with their target audience [3]. Numerous studies have underscored the benefits of social networks as marketing platforms, emphasizing their extensive reach, cost-effectiveness, and precise targeting capabilities [4]. In this digital era, social network marketing has become an indispensable tool for companies aiming to disseminate their products and services to a diverse audience [5].

Among the array of social media platforms, mobile instant messaging applications, such as QQ and WeChat, have surfaced as a dominant force in online activities [6, 7]. These platforms have spawned derivatives such as WeChat Moments and QQ Space, which have gained traction as avenues for network interactions. The popularity of these platforms gives businesses a strategic advantage due to their heavy user traffic and the capability to target specific user demographics [8].

### **2.2. The Intersection of Online Games and Social Platforms**

Online games, intrinsically dependent on the internet, have discovered substantial marketing prospects on social platforms. Decoding user behavior within online games is pivotal for devising effective marketing strategies in this burgeoning industry [9].

Studies exploring various facets of online game user behavior, including user satisfaction, trust, membership, and usage intention, have proliferated in recent years [10, 11]. Crucially, these studies have elucidated a connection between social relationships and users' willingness to adopt and utilize new offerings [12]. Factors such as social relationships, subjective norms, and social interaction have emerged as potent influencers in shaping online game user behavior [13, 14].

### **2.3. Identifying the Gaps in Existing Literature and Setting Research Objectives**

Despite the profound insights offered by previous research on social network marketing and online game user behavior, there exist substantial gaps in the literature. One such gap pertains to the economic behavior within modern social networks, specifically among online game users [15]. This research endeavors to fill this gap by investigating the influence of users' sense of belonging in social networks on their usage intention.

The primary objective of this research is to probe how users' sense of belonging impacts their behavior within social networks and, more specifically, their propensity to spend money on online games. By delving into this relationship, this study aims to augment the existing body of knowledge and furnish valuable insights for online game operators when crafting marketing strategies.

### **2.4. Theoretical and Practical Implications**

The findings of this research could provide a novel perspective on harnessing social networks as marketing tools, particularly in the context of online games. Furthermore, they could elucidate how user behavior within these networks can be effectively influenced to accomplish marketing objectives.

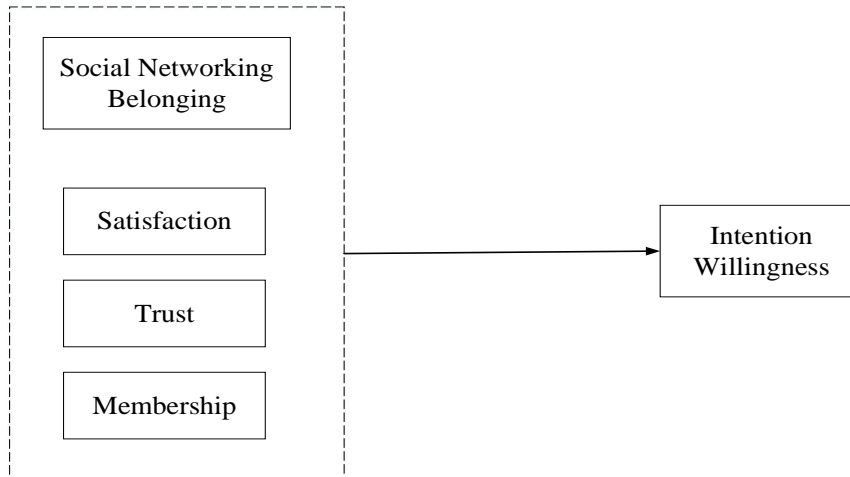
Expanding research in this domain contributes to a more holistic understanding of the economic behavior underpinning modern social networks. It provides a window into the motivations and preferences of online game users within social environments, thereby providing businesses the opportunity to calibrate their marketing strategies accordingly. Moreover, by scrutinizing the role of users' sense of belonging, the study will illuminate the psychological and social factors that steer user behavior and decision-making within social networks.

In summation, this literature review accentuates the benefits of social networks as marketing platforms and the importance of understanding user behavior within online games. It pinpoints gaps in the literature, specifically concerning the economic behavior within modern social networks among online game users. By addressing these gaps, this research aspires to contribute to a deeper

understanding of the economic behavior that permeates social networks and its implications for the online gaming industry.

### 3. Methodology

#### 3.1. Proposed Model



**Figure 1.** The proposed model.

This paper constructs a research model with social network belonging as the independent variable and the intention to use online games as the dependent variable (see in Fig. 1).

The sense of belonging in social networks is indicative of the strength of relationships among users, the networking sites, and their members. Numerous studies have affirmed that the strength of social relationships influences users' readiness to adopt or utilize. As mentioned before, the behaviors of socially connected individuals can impact the evaluation and adoption of novelties [16]. Hossain and Silva corroborated that the strength of social relationships correlates with people's propensity to use virtual communities. They found that a stronger social connection with users increases the likelihood of system acceptance. In their exploration of the willingness to use virtual communities, Venkatesh and Morris discovered that social relationships can shape user behaviors.

In conclusion, this study postulates a correlation between the sense of belonging and the intention to use social networks. The stronger a user's sense of belonging, the more significant the influence of others' actions on their willingness to use. Consequently, this paper proposes the following hypothesis:

H1: The sense of belonging of social network users exerts a significant positive impact on their intention to use.

#### 3.2. Questionnaire Design

This study explores the impact of social network belonging on users' intention to use it. Therefore, the survey participants must be both social network users and online game players. The 2016 Game Industry Report indicates that online game users are primarily between the ages of 10 and 35, skewing toward a younger demographic. However, the data authenticity may be compromised due to the younger users' limited comprehension and sense of responsibility. Consequently, this study targets college students aged 18 to 30 as the main survey participants, a cohort identified as the most active group on social networks.

The survey distribution in this study adopts a two-pronged approach: Online distribution via "Questionnaire Star" software, with collection achieved through friend networks, and on-site distribution at educational institutions. The respondents were predominantly college students.

In total, this study gathered 206 questionnaires. Out of these, 48 were deemed incomplete or invalid, leaving 157 usable responses. This translates to a usable questionnaire rate of 76.2%.

### 3.3. Data Analysis Methods

The collected data is analyzed using SPSS software. Descriptive statistics, including means and standard deviations, are calculated to provide an overview of the variables. Correlation analysis is conducted to examine the relationships between social network belonging and usage intention. Regression analysis is performed to determine the impact of social network belonging on usage intention, controlling for other variables. The statistical significance of the findings is assessed, and effect sizes are considered to evaluate the strength of the relationships.

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## 4. Results and Discussion

### 4.1. Results with Data

**Table 1.** The mean and standard deviation for each variable.

Variables	Measurement Factor	Mean	Standard deviation	Overall mean
Social Networking Belonging	Satisfaction	3.9299	0.69092	3.8676
	Trust	3.7866	0.77873	
	Membership	3.9193	0.71949	
Use Intention Willingness		3.8089	0.84328	

The Table 1 provides an overview of the mean and standard deviation for each variable. Respondents' satisfaction with social networks registers the highest mean value and the lowest standard deviation, indicating a high level of overall satisfaction and low variability in responses. Conversely, the subjective criterion exhibits the lowest mean value and the largest standard deviation, suggesting a wider spread of responses. However, the mean value of all factors exceeds 3, signifying that respondents place considerable importance on all surveyed factors.

**Table 2.** Variable correlation analysis.

Variables		Social Networking Belonging	Use Intention Willingness	
Social Networking Belonging	relevance	1	0.401**	0.476**
	significance		0	0
Use Intention Willingness	relevance	0.476**	0.594**	1
	significance	0	0	

As shown in Table 2, the significance (sig) value of the regression model, which relates the independent and dependent variables, is 0.000, falling below the threshold of 0.05. This, combined with a significant F-statistic, provides strong evidence that the impact of social network belongingness on the intention to use is substantial. In other words, there is a significant linear relationship between the variables in this regression equation. This indicates a notable linear regression correlation between the sense of belongingness to the social network and the intention to use it.

**Table 3.** ANOVA of social network belongingness on willingness to use.

modelling	square sum	df	mean square	F	Sig.
regression	25.104	1	25.104	45.335	0.000
Residuals	85.830	155	0.554		
Total	110.934	156			

As shown in Table 3, the significance (Sig) value of the regression coefficient c is 0.000, denoting a high level of significance. The regression coefficient, representing the effect of social network belongingness on the willingness to use, is 0.476, and the constant term is 1.452. Consequently, the standard equation that characterizes the linear regression relationship between social network belongingness and willingness to use is formula (1):

$$Y = 1.452 + 0.476 * X \tag{1}$$

**Table 4.** Regression coefficients of social network belongingness on willingness to use.

Modelling	Un-standard coefficients		Standard coefficients	t	Sig.
	B	Standard Error	Trial version		
Constant	1.452	0.355		4.090	0
Mean value of social belonging	0.609	0.091	0.476	6.733	0

After analyzing the data with SPSS 20.0 software, this paper draws the following conclusions: A significant positive correlation exists between the sense of belonging to a social network and the willingness to use it (see in Table 4). The regression coefficient for online game users' sense of belonging to social networks and their willingness to use online games is 0.476. This value is extremely significant at the 0.001 level, suggesting that online game users' sense of belonging to social networks has a significant positive influence on their willingness to use these networks. In other words, the stronger the users feel a sense of belonging to their frequently used social networking sites, the more likely they are to engage with or use an online game.

## 4.2. Discussion

### 4.2.1. Interpretation of Results

The results of this study provide empirical evidence supporting the positive impact of users' sense of belonging in social networks on their intention to use online games. The findings align with previous research that emphasizes the influence of social relationships on users' acceptance and usage behavior. Users who have a stronger sense of belonging are more likely to be influenced by others' actions and recommendations, leading to a higher willingness to use online games. These results contribute to a better understanding of the economic behavior behind modern social networks and its implications for the online game industry.

### 4.2.2. Connections to Proposed Model

The findings corroborate the proposed research model, which posits that users' sense of belonging in social networks significantly influences their usage intention. The model suggests that the strength of social relations affects users' willingness to accept and use new things. By empirically analyzing the relationship between social networking belonging and usage intention, this study provides empirical support for the proposed model. The results demonstrate the importance of considering users' sense of belonging and social connections in the development of social network marketing strategies for online game operators.

### 4.2.3. Implications of Findings

The findings of this study have practical implications for online game operators' social network marketing strategies. Strengthening the social authenticity of online games is identified as a crucial strategy. By encouraging players to use their social network accounts to log in to the game and promoting both cooperative and competitive social interactions, online game operators can enhance the social nature of games and increase players' social stickiness. This strategy aims to extend the lifespan of online games and improve player engagement. Additionally, carefully selecting the first social platform for publicity is recommended to ensure the positive role of subjective norms. By choosing appropriate social platforms and opinion leaders, online game operators can create a positive

evaluation atmosphere and establish a strong foundation for subjective norms to influence users' usage behavior positively.

#### **4.2.4. Limitations of Study**

This study has several limitations that should be acknowledged. Firstly, the sample population consists of college students aged 18 to 30, which may limit the generalizability of the findings to other demographic groups. Secondly, the research design relies on self-reported data, which could be subject to response biases and social desirability effects. Additionally, the study focuses on the Chinese online game industry, and the generalizability of the findings to other contexts and cultures should be considered. Furthermore, the research is based on cross-sectional data, which limits the ability to establish causal relationships. Future studies could employ longitudinal designs to examine the long-term effects of social network belonging on usage intention.

#### **4.2.5. Suggestions for Future Research**

Building on the findings of this study, future research could explore other factors that influence users' willingness to use online games within the context of social networks. For example, investigating the role of social influence and social norms in shaping users' behavior could provide valuable insights. Additionally, studying the impact of different social network platforms on users' usage intention could uncover platform-specific dynamics. Comparative studies across different cultural contexts can also contribute to a more comprehensive understanding of the economic behavior behind social networks and online game usage. Furthermore, qualitative research methods, such as interviews or focus groups, can provide deeper insights into users' perceptions and experiences related to social network belonging and online game usage.

## **5. Conclusion**

In conclusion, this research contributes to the understanding of the economic behavior behind modern social networks, with a specific focus on online game users. The findings highlight the significant positive impact of users' sense of belonging in social networks on their intention to use online games. The research model, which considers social network belonging as an independent variable and usage intention as a dependent variable, is supported by empirical evidence. The results emphasize the importance of social connections and social relationships in influencing users' acceptance and usage behavior.

The practical implications of the study suggest that online game operators should prioritize strategies that enhance the social authenticity of games and carefully select the first social platform for publicity to ensure positive subjective norms. Strengthening the social nature of online games and leveraging social networks as marketing platforms can contribute to the sustainable development of the online game industry.

It is important to recognize the limitations of this study, such as the sample characteristics and the reliance on self-reported data. Future research should address these limitations and further explore the complexities of social network dynamics and user behavior. By expanding the knowledge base in this area, researchers can provide valuable insights for practitioners and policymakers in the field of social network marketing and the online game industry.

## **References**

- [1] Bonchi F., Castillo C., Gionis A., et al. social network analysis and mining for business applications. *ACM Transactions on Intelligent Systems and Technology (TIST)*, 2011, 2 (3): 1 - 37.
- [2] Ibrahim S. S., Ganeshbabu P. A study on the impact of social media marketing trends on digital marketing. *Shanlax International Journal of Management*, 2018, 6 (1): 120 - 125.
- [3] Kaplan A. M., Haenlein M. Users of the world, unite! The challenges and opportunities of social media. *Business horizons*, 2010, 53 (1): 59 - 68.

- [4] Mangold W. G., Faulds D. J. social media: The new hybrid element of the promotion mix. *Business horizons*, 2009, 52 (4): 357 - 365.
- [5] Xie X-M., Zeng S. X., Tam C. M. Overcoming barriers to innovation in SMEs in China: A perspective-based cooperation network. *Innovation*, 2010, 12 (3): 298 - 310.
- [6] McDonald T. Strangership and social media: Moral imaginaries of gendered strangers in rural China. *American Anthropologist*, 2019, 121 (1): 76 - 88.
- [7] Goggin G. *Apps: From mobile phones to digital lives*. John Wiley & Sons, 2021.
- [8] Van Dijck J., Poell T., De Waal M. *The platform society: Public values in a connective world*. Oxford University Press, 2018.
- [9] Qian T. Y., Wang J. J., Zhang J. J., et al. Fulfilling the basic psychological needs of esports fans: A self-determination theory approach. *Communication & sport*, 2022, 10 (2): 216 - 240.
- [10] Elbeltagi I., Agag G. E-retailing ethics and its impact on customer satisfaction and repurchase intention: a cultural and commitment-trust theory perspective. *Internet Research*, 2016, 26 (1): 288 - 310.
- [11] Ngai E. W. T., Moon K. K., Lam S. S., et al. social media models, technologies, and applications: an academic review and case study. *Industrial Management & Data Systems*, 2015, 115 (5): 769 - 802.
- [12] Cheung C. M. K., Chiu P-Y., Lee M. K. O. Online social networks: Why do students use facebook?. *Computers in human behavior*, 2011, 27 (4): 1337 - 1343.
- [13] Bhatti T. Exploring factors influencing the adoption of mobile commerce. *Journal of internet banking and commerce*, 2007, 12 (3): 1 - 13.
- [14] Dixon G. N., Deline M. B., McComas K., et al. Saving energy at the workplace: The salience of behavioral antecedents and sense of community. *Energy Research & Social Science*, 2015, 6: 121 - 127.
- [15] Ashley C., Tuten T. Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & marketing*, 2015, 32 (1): 15 - 27.
- [16] Liu X., Lu J., Wang H. When health information meets social media: Exploring virality on Sina Weibo. *Health communication*, 2017, 32 (10): 1252 - 1260.