

# *The Impacts of Online Reviews on Consumers' Purchase Intention of Video Game Items in China*

Qianhui Hou<sup>1,a,\*</sup>

<sup>1</sup>*School of Politics and Public Administration, South China Normal University, Guangzhou, Guangdong, China, 510000*

*a. Houqianhui@126.com*

*\*corresponding author*

**Abstract:** As an important vehicle for audiences to gain information about video game items, online reviews have been wildly leveraged by game developers to conduct influencer marketing to promote game items in China. However, the commercial nature of sponsorship could threaten the perceived trustworthiness of influencers and online reviews. To achieve this, a valid sample of 289 Chinese game players was collected through the questionnaire survey, and experimental research with a between-subject design was conducted to compare the purchase intention of video game items in different consumer groups that were exposed to three types of reviews. The study's key finding is that sponsored influencer reviews will lead to lower consumer purchase intentions, compared to both user-generated reviews and influencer reviews.

**Keywords:** Video game, Purchase intention, User reviews, Influencer marketing, Sponsorship disclosure

## 1. Introduction

The global video game market has been undergoing rapid growth, with an anticipated CAGR of 12.9% from 2022 to 2032. The market size was estimated to increase from US\$ 195.65 billion in 2021 to US\$ 743.21 billion in 2032 [1]. Among all the regional segments, China was also estimated to be the country generating the most revenue from the video game market in 2023 [2]. Moreover, the purchasing power of Chinese gamers is relatively higher than that of general global gamers [2]. Therefore, it merits investigating the video game marketplace in China.

Furthermore, Video games rely heavily on the digital marketplace for distribution and promotion. Specifically, after comparing the distribution patterns of physical and virtual goods in Chinese video games, Li et al. recognized that the transmission capability of virtual goods is affected by information flow and e-commerce rather than locations and traffic [3]. Meanwhile, video game items could be categorized as experience goods, which emphasizes that consumers have little knowledge of product quality before purchase [4]. In this sense, online reviews are regarded as a way to introduce, showcase, and promote video game items with engaging information so that consumers can learn more about the goods in advance.

Typically, reviews of video games can be divided into two types based on the information source, namely user-generated reviews and influencer reviews [5-7]. Compared to ordinary users, influencers are perceived to be more trustworthy and credible because they are experts and experienced in the

specific area, and have a high level of source credibility [8-9]. Therefore, influencer reviews are identified as outweighing ordinary user-generated reviews in the video game domain [5].

However, the commercial nature of influencer marketing could threaten the authenticity and trustworthiness of influencers [10-11]. Previous research has widely examined the possibility that sponsorship disclosure could negatively influence consumers' responses, such as purchase intention [12-13]. However, despite the growing scholarly efforts to explore the effects of the threatened credibility of influencers and sponsorship disclosure, few researchers have previously investigated this perspective in the video game domain.

Therefore, to fill up the research gap, this study sheds light on comparing the effects of 3 different kinds of reviews on consumers' purchase intentions for video game items. The research objective is to compare the purchase intentions of different consumer groups toward game items when exposed to specific types of reviews. The findings are expected to make academic contributions regarding influencer reviews in video games and to have practical implications for game developers to maximize influencer marketing strategies on consumers' purchase intentions.

## **2. Literature Review and Hypothesis Development**

### **2.1. The Impacts of Online Reviews**

#### **2.1.1. User-generated Reviews.**

User-generated reviews feature authenticity and readability. user-generated content is expected to be more authentic and self-expressive than mass-media creation, which relies heavily on the advertiser and is full of promotional artifacts [14]. Santos et al. also recognize that user reviews are less technical, more readable, and more emotional compared to expert critics of video games [7]. In this way, the review content can be relatable to major audiences.

In the video game domain, previous research has confirmed that online user reviews could positively influence the success of game items. Specifically, Brunt et al. identify that user-generated reviews with a high-quality indicative tag exert a positive impact on the new demand for games [15]. Cox & Kaimann found that consumer reviews are positively correlated to sales of games [5]. This argument is also supported by Zhu & Zhang's findings that indicate an increase in online reviews is especially beneficial for games with low sales and games targeting consumers with greater Internet experience [16]. Meanwhile, Adigüzel sheds light on the positive effects of different forms of reviews, including both video reviews and textual reviews on video game sales [6]. The researcher also highlights that consumers' engagement in video reviews, such as the number of video views, likes, and dislikes, also has a positive influence on sales [6]. In sum, all these findings provide a basis for examining online user reviews and consumers' behavioural intentions.

#### **2.1.2. Influencer Reviews.**

Influencers highlight their capability of affecting consumers' purchase decisions, and the extent of influence is determined by the level of vested interest and expertise [17]. In this way, a high degree of expertise and a low level of vested interest could lead to a high extent of influence [17]. Moreover, as Web 2.0 technology facilitates social networking, influence is no longer exclusive to the elite, and it can also grow from the bottom up [17].

Usually, in the video game community, users gradually gain social capital (i.e., community position) through their contributions to or participation in the game community, such as exchanging valuable information including game reviews, leading community activities, or regulating guilds [18]. With social capital increasing in the community, users can grow as influencers. Influencers are the

third-party without much vested interest in providing expertise on video game reviews [17]. They could reduce information asymmetry, which is caused by the experiential nature of video games [4].

Influencers' influence can also be explained from the perspective of source credibility. Expertise, trustworthiness, and physical attractiveness as the major determinants of perceived source credibility [19]. Therefore, compared to ordinary users, consumers' perception of source credibility toward influencers could be higher because of their sufficient knowledge and experience in the game and game community. Moreover, by testing the effects of different factors, including valance, volume, and consistency of reviews, researchers also identified influencer reviews as the determinant of game sales [5-6]. Other research also demonstrates that influencer reviews could predict the video game's reputation in the long term [7].

### **2.1.3. Sponsored Influencer Reviews.**

Though influencer reviews are perceived to be trustworthy and credible, sponsorship in influencer reviews could threaten the authenticity of influencers and brands [10]. Behavior driven by intrinsic motivation and external stimuli such as rewards or threats could facilitate the perception of inauthenticity [20]. Following this theory, research has confirmed the negative effects of sponsorship disclosure on consumers' behavioural intentions, including the intention to engage in word-of-mouth and the intention to purchase [12-13]. Similarly, the commercial orientation of the post will negatively impact influencers' trust, post credibility, interestingness in the content, and willingness to search for more information about the product [11]. However, sponsorship compensation justification was found to create more positive consumer attitudes toward influencers and increase source credibility compared to a sponsorship disclosure without justification [21].

The perspective of sponsorship disclosure negatively influencing consumers' responses is also expected to be applied in the video game domain. As games are categorized as experience goods, consumers rely on digital word-of-mouth to gain information about the quality of the game, and therefore, could be experienced in exploring video game reviews.

According to Vrontis et al.'s systematic review of influencer marketing, research themed as sponsorship disclosure and consumer outcomes is weighted as 18% of the total reviewed scholarly work [22]. Though marketing researchers stress academic efforts in sponsorship disclosure, there is currently a lack of applying this perspective to the video game context.

## **2.2. Hypothesis Development**

Based on the literature review, this study infers that different types of reviews could exert different influences on consumers' responses. Specifically, the research hypotheses are as follows:

H1: Compared to user-generated reviews, consumers exposed to influencer reviews have a higher purchase intention of video game items.

H2: Compared to influencer reviews, consumers exposed to sponsored influencer reviews have a lower purchase intention of video game items.

H3: Compared to user-generated reviews, consumers exposed to sponsored influencer reviews have a lower purchase intention of video game items.

## **3. Research Methods**

### **3.1. Study Design**

To achieve the research objective and examine hypotheses, the research adopted a between-subject experimental design to collect data from an online questionnaire survey. There were three condition groups: the user-generated review (UGR) group, the influencer review (IR) group, and the sponsored

influencer review (SIR) group. To specify the research subject and make a difference from the other two types of reviews, SIR was formulated as influencer review content that revealed sponsorship.

First, instructions about the survey process were given, and informed consent was ensured. Second, within each group, participants were asked to read the textual scenario that contains a game item review posted by either a user, an influencer, or a sponsored influencer. Then they could complete the questionnaire.

Though UGR and IR were intended to be designed as non-commercialized and purely voluntarily posted, participants might still suspect the commercial intention of the review. Therefore, to avoid potential variables that affect the dependent variable, a manipulation check question was included to check whether the condition in each group was successfully manipulated. Among the three condition groups, participants should answer whether the user was sponsored by the game developer. And those who did not pass the manipulation check were ruled out of the samples. Specifically, samples in the UGR group and in the IR group that selected “yes”, and samples in the SIR group that selected “no” to answer the manipulation check question were excluded.

### 3.2. Participants

A total of 537 Chinese participants who were familiar with video games and used game forums once were recruited partially from an online panel via a Chinese questionnaire company. The sample data was valid, and there was no missing value.

### 3.3. Experiment Manipulation

In each group, the experiment stimulus was designed as a scenario that provides a textual review of a game item (a newly launched game character card) posted by a specific type of post creator in a game community. To increase the internal validity of the research and minimize the potential confounding effects caused by respondents' past experience with real games and game items, all game-related information was fictitious, including the game item, the video game, and the game community. Specifically, an action role-playing game was chosen as the game type in the experiment scenarios because this type took the largest market share in Chinese mobile games in 2022 and thus gamers were more familiar with this type [23].

Among the three groups, the study only manipulated the condition of the post creator (user, influencer, or sponsored influencer) while remaining other information unchanged. The UGR scenario highlighted the user at level 1 and with three followers, while the IR scenario and SIR scenario highlighted the VIP user at level 99 and with 5 million followers. Meanwhile, in the SIR group, the textual review also disclosed the sponsorship from the game developer in a brief description. Before reading the review sample of the game item, participants were exposed to an introduction to the game community and the video game.

### 3.4. Survey Design and Measurement

The questionnaire survey is comprised of two parts of questions. The first part includes the dependent variable, intention to purchase the game item, recorded on a 7-point Likert scale, ranging from 1 = strongly disagree to 7 = strongly agree. The variable was measured by Park & Lee's 3-item scale, i.e., “I intend to buy the game item in the future”, “I predict that I will buy the game item in the future”, “I hope to buy the game item soon” [24]. The Cronbach's  $\alpha$  value of this variable was 0.89. The second part includes demographic questions (such as age, gender, and status) and game-playing-related questions (such as years that have been spent on game playing, and annual expenditure on game items).

## 4. Result

### 4.1. Statistic

Regarding sample demographics, 64% of respondents were male, and the majority were young people aged between 20 and 25 (45%). This indicates a representative sample of the population, as the majority of Chinese gamers are males [2], and aged below 24 [25]. Meanwhile, 54% of participants reported themselves as having a job, compared to 26% of participants reporting themselves as students. Most of the participants were mature game players who played video games for 4 to 6 years (42%) and spent an average of 301 yuan to 600 yuan (29%) or more than 900 yuan (23%) on game items per year.

### 4.2. Hypothesis testing

In this study, a one-way ANOVA was used to examine the effects of different types of reviews on consumers' purchase intentions for video game items. The result of the homogeneity test of variance shows that for intention to purchase, the significance P value is 0.758, which does not show significance at the level and cannot reject the null hypothesis. Therefore, the data meets the homogeneity of variance requirement. The results are displayed in Table 1.

Table 1: Test of Homogeneity of Variances

	user-generated reviews (n=109)	influencer reviews (n=89)	sponsored influencer reviews (n=91)	F	P
intention to purchase	1.261	1.214	1.358	0.278	0.758

The mean values of user-generated reviews and sponsored influencer reviews on intention to purchase are as follows: 4.098\*/4.217\*/3.685\*; The P value of the ANOVA result is 0.014\*\* $\leq$ 0.05, so the statistical result is significant, indicating that different reviews have significant differences in intention to purchase. After that, the LSD method was used to compare the user-generated reviews and sponsored influencer reviews, with  $P < 0.05$ , indicating a statistical difference in intention to purchase between the two groups. Consumers exposed to user-generated reviews have a higher purchase intention of video game items than sponsored influencer reviews, which supported H3. It is found that in the comparison between influencer reviews and sponsored influencer reviews,  $P < 0.05$ , there is a statistical difference in intention to purchase between the two groups. Consumers exposed to influencer reviews have a higher purchase intention for video game items than sponsored influencer reviews, which supported H2. The results are displayed in Table 2.

It is also found that the comparison between user-generated reviews and influencer reviews,  $P = 0.51$ , there was no statistical difference between the two groups. Thus,  $H1$  was rejected.

Table 2: A one-way ANOVA test of the marketing effect of different types of reviews

	user-generated reviews (n=109)	influencer reviews (n=89)	sponsored influencer reviews (n=91)	F	P
intention to purchase	4.10 $\pm$ 1.26a	4.22 $\pm$ 1.21b	3.67 $\pm$ 1.36	4.364	0.014**

Note: a different from the sponsored influencer reviews group at  $P = 0.022$ ; b different from the sponsored influencer reviews group at  $P = 0.01$

## 5. Discussion

The results of the present study showed that while sponsorship disclosure will significantly reduce consumers' purchase desire, consumers exposed to user-generated reviews and influencer reviews will have a higher purchase desire than those exposed to sponsored influencer reviews.

## 6. Conclusion

This study aims to compare the effects of user-generated reviews, influencer reviews, and sponsored influencer reviews on consumers' intention to purchase video game items. The results suggest that game developers and marketers should consider using user-generated or influencer reviews instead of sponsored influencer reviews to increase consumer purchase intentions for video game items. When using influencer marketing strategies, game developers and marketers should carefully design online review marketing campaigns to communicate the product information to the public as truthfully as possible, so that consumers can trust the product information in the advertisement, thereby increasing their purchase intention of video game items. While avoiding disclosing sponsorship information to the public, covert marketing can be used instead of overt marketing to maximize the effectiveness of marketing activities.

In addition, this study also has some limitations. First, this study only focuses on the impact of reviews on consumers' purchase intention, and does not examine consumers' actual purchase behavior. Second, this study only studies the influence of a single evaluation on consumers' purchase intention, and does not consider the influence of multiple evaluation combinations. More research is needed to verify consumers' purchase intentions when multiple review types are stacked.

## References

- [1] FMI (2022) *Video Game Market Outlook (2022-2032)*, *Future Market Insights*. Available at: <https://www.futuremarketinsights.com/reports/video-game-market> (Accessed: 23 June 2023).
- [2] Statista (2023) *Video games - china: Statista market forecast*, *Statista*. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/china> (Accessed: 23 June 2023).
- [3] Li, Q. et al. (2019) 'Evolution and transformation of the Central Place Theory in E-business: China's C2C Online Game Marketing', *Sustainability*, 11(8), p. 2274. doi:10.3390/su11082274.
- [4] Nelson, P. (1970) 'Information and consumer behavior', *Journal of Political Economy*, 78(2), pp. 311–329. doi:10.1086/259630.
- [5] Cox, J. and Kaimann, D. (2015) 'How do reviews from professional critics interact with other signals of product quality? evidence from the video game industry', *Journal of Consumer Behaviour*, 14(6), pp. 366–377. doi:10.1002/cb.1553.
- [6] Adıgüzel, F. (2021) 'The effect of YouTube reviews on video game sales', *Journal of Business Research - Turk*, 13(3), pp. 2096–2109. doi:10.20491/isarder.2021.1249.
- [7] Santos, T. et al. (2019) 'What's in a Review: Discrepancies Between Expert and Amateur Reviews of Video Games on Metacritic', *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), pp. 1–22. doi:10.1145/3359242.
- [8] Boonchutima, S. and Sankosik, A. (2022) 'Online video game Influencer's credibility and purchase intention', *Drustvena istrazivanja*, 31(4), pp. 683–701.
- [9] Hill, S.R., Troshani, I. and Chandrasekar, D. (2017) 'Signalling effects of vlogger popularity on online consumers', *Journal of Computer Information Systems*, 60(1), pp. 76–84. doi:10.1080/08874417.2017.1400929.
- [10] Audrezet, A., de Kerviler, G. and Guidry Moulard, J. (2020) "Authenticity under threat: When Social Media influencers need to go beyond self-presentation," *Journal of Business Research*, 117, pp. 557–569. Available at: <https://doi.org/10.1016/j.jbusres.2018.07.008>.
- [11] Martínez-López, F.J. et al. (2020) 'Behind influencer marketing: Key marketing decisions and their effects on followers' responses', *Journal of Marketing Management*, 36(7–8), pp. 579–607. doi:10.1080/0267257x.2020.1738525.
- [12] Liljander, V., Gummerus, J. and Söderlund, M. (2015) 'Young consumers' responses to suspected covert and overt blog marketing', *Internet Research*, 25(4), pp. 610–632. doi:10.1108/intr-02-2014-0041.

- [13] De Jans, S., Cauberghe, V. and Hudders, L. (2018) 'How an advertising disclosure alerts young adolescents to sponsored vlogs: The moderating role of a peer-based advertising literacy intervention through an informational vlog', *Journal of Advertising*, 47(4), pp. 309–325. doi:10.1080/00913367.2018.1539363.
- [14] Marwick, A.E. (2013) 'Designed in California: Entrepreneurship and the myths of web 2.0', *Status Update*, pp. 245–272. doi:10.12987/9780300199154-007.
- [15] Brunt, C.S., King, A.S. and King, J.T. (2019) 'The influence of user-generated content on video game demand', *Journal of Cultural Economics*, 44(1), pp. 35–56.
- [16] Zhu, F. and Zhang, X. (Michael) (2010) 'Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics', *Journal of Marketing*, 74(2), pp. 133–148. doi:10.1509/jmkg.74.2.133.
- [17] Brown, D. and Hayes, N. (2008) *Influencer Marketing: Who really influences your customers? Amsterdam etc.: Butterworth-Heinemann*.
- [18] Hsiao, C.-C. and Chiou, J.-S. (2012) 'The impact of online community position on online game continuance intention: Do game knowledge and community size matter?', *Information & Management*, 49(6), pp. 292–300. doi:10.1016/j.im.2012.09.002.
- [19] Ohanian, R. (1990) 'Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness', *Journal of Advertising*, 19(3), pp. 39–52. doi:10.1080/00913367.1990.10673191.
- [20] Deci, E.L. and Ryan, R.M. (1985) 'The general causality orientations scale: Self-determination in personality', *Journal of Research in Personality*, 19(2), pp. 109–134. doi:10.1016/0092-6566(85)90023-6.
- [21] Stubb, C., Nyström, A.-G. and Colliander, J. (2019) 'Influencer marketing', *Journal of Communication Management*, 23(2), pp. 109–122. doi:10.1108/jcom-11-2018-0119.
- [22] Vrontis, D. et al. (2021) 'Social Media Influencer Marketing: A systematic review, Integrative Framework and future research agenda', *International Journal of Consumer Studies*, 45(4), pp. 617–644. doi:10.1111/ijcs.12647.
- [23] GPC and CNG (2022) *2022 China Game Industry Report*. rep. GPC.
- [24] Park, B.-W. and Lee, K.C. (2011) 'Exploring the value of purchasing online game items', *Computers in Human Behavior*, 27(6), pp. 2178–2185. doi:10.1016/j.chb.2011.06.013.
- [25] QuestMobile (2022) *2022 Mobile Game Industry Insight Report*. rep. Beijing, China: QuestMobile.