



Role Involvement Shapes Brand Attitude and Consumption

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Abstract. The game industry is one of the important emerging industries. For game companies, whether they can create a game brand that is loved and supported by players is of great significance to the survival and sustainable development of the company. Therefore, it is of vital importance to deepen the understanding of gamers' brand attitudes and consumption intentions, with a particular focus on what factors can influence gamers' brand attitudes and consumption intentions. In the settings of RPG role-playing games, this study explores the impact of role involvement on gamers' brand attitude and consumption intention. With a cross-sectional survey design, questionnaire data from 402 game players were collected. The results revealed that game players' role involvement positively predicted their consumption attitude and purchase intention. Moreover, the cognitive role involvement shaped positive brand attitude via brand identity, that is, brand identity had a significant mediating effect. The findings of this study offer theoretical and practical contributions to understanding the relationship between role involvement, consumer attitude, and purchase intention.

Keywords: Role Involvement, Game, Brand Attitude, Brand Consumption

1 Introduction

The game industry is important in the current economic environment. As shown in the 2022 market report of the international research organization Newzoo, there were 3.2 billion players who brought \$196.8 billion in revenue to the global gaming market, with an increase rate of 2.1% compared to the past year. By 2025, the number of global game players is estimated to increase to 3.5 billion, when the game market is estimated to reach USD 225.7 billion. Over the past two years, the gaming market has demonstrated exceptional revenue and participation performance, successfully attracting numerous new players and re-engaging those who had previously disengaged from the industry.

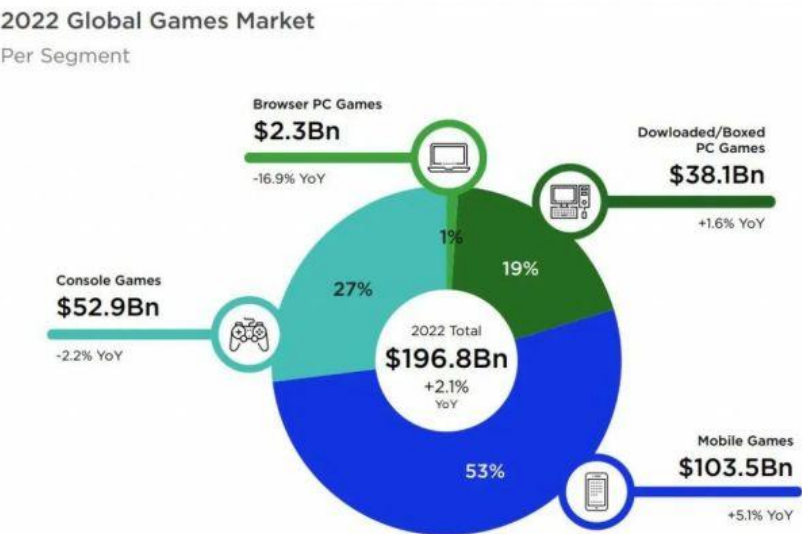


Fig. 1. 2022 Global Games Market (Newzoo, 2022)

The gaming industry in China, though a latecomer, has exhibited remarkable growth. Over the course of more than 20 years since the 1980s, through continuous learning and development, China's game agency sector has established a robust business model. Additionally, significant progress has been made in the realm of locally developed games.

. Since 2010, mobile games have emerge to dominate the global game market. Under this background, China's game industry anchored the mobile game track to continue to exert its strength, when a series of influential Chinese mobile games came

to the players, such as 'rhythm master' and 'King's glory', and 'crash' and 'king's glory'. In particular, the nation-wide popular mobile game, 'original god,' marked a new era with rapid development of the game industry. Since 2023, with the rise of ChatGPT, China's game manufacturers have also successively opened diversified attempts on the 'AI + game' track, enabling cost reduction and efficiency improvement. For example, Netease's 'Cold Hand Tour' has taken the lead in realizing NPC GPT direct loading, enriching game content, promoting innovation and activation, and opening a new model of AI game application in China. For example, the revenue of a Mihayou company in 2022 is 27.34 billion yuan, and the net profit is 16.1 billion yuan. Looking at the number of users as an example, the daily online number of online players LOL is more than 27 million people. According to Wikipedia, the average daily global users of LOL in 2022 are more than 27 million. The LOL global average monthly users are more than 67 million. The LOL global simultaneous online record has been 7.5 million. In all, game brands have shown great commercial value and potential, which forecasts a sustainable development of e-sports.

2 The Importance of Game Brands

Whether a competitive game brand can be established plays an important role in the survival and development of enterprises. Game brands not only represent the quality and characteristics of game products, but also represent the identity and belief of game players [1] [2]. In the game industry, well-known game brands tend to attract more players and consumers, thus bringing more business opportunities and benefits. With the rapid development of China's game industry, the influence of game brands is also gradually increasing. In terms of game brand building, China's game manufacturers have a lot of successful experience and cases. For example, well-known game brands such as Tencent Games' Honor of Kings and NetEase Games' Fantasy Westward Journey have a large user base and wide popularity. According to AppMagic data, the 2023 handheld game revenue list was compiled. Overall, Honor of Kings once again reigned supreme in the global iOS and Android handheld game revenue charts, and was \$300 million ahead of second-ranked PUBG Mobile. And AppMagic data are estimated using IAP data, excluding advertising revenue, and Apple and Google's share of revenue. These game brands not only bring huge profits to manufacturers, but also become irreplaceable classics in the

minds of players. In the future, with the further development of the game industry and the constant changes in consumer demand, game manufacturers need to continuously improve the game quality and service quality to meet the needs and expectations of consumers, to obtain better business benefits and development prospects in the fierce market competition. Consumers' inner feelings and identity are very important for enhancing the vitality of the game brand and promoting the sustainable development of the game industry [3] [4]. Some studies have found that consumers' consumption behavior is not only influenced by the development and design of the game itself, but also by the psychological state of the consumer (for example, the tendency to play) [5]. Therefore, it is necessary to think about why consumers tend to choose a certain game brand from the perspective of consumer psychology? That is, what are the key influencing factors of the consumption intention of the game brand?

3 The Factors that Shape Game Players' Attitudes and Behaviors

First of all, understanding the influencing factors of consumer behavior can also take into account the consumer's life experience, that is, the consumption of video games as a part of consumers' daily lives. Studies have pointed out that video games can be used as a resource for consumers' life scripts, that is, they provide players with virtual materials needed to effectively book and plan their daily lives (Morsworth and Denegry Noether, 2007). This view further elaborates the relevant arguments about video game consumption, which suggests that video games may be used as an object to escape the ordinary aspects of daily life. The role of the e-commerce environment will have a positive impact on brand trust, and then will positively affect behavioral intentions. (Appel & Mara, 2013 ; keeling, 2010 ; liew 2017)Consumers with brand trust tend to believe that the brand will fulfill its established functions (Chowdhury & Holbrooke, 2001; Delgado Balestre, 2002). Consumers with a high propensity to trust also tend to have innate beliefs, even with unfamiliar participants (Colquitt et al., 2007; Ferguson & Peterson, 2015; McKnight 2002).

In previous studies, consumers' attitudes and willingness to consume game brands have been affected by many factors. These factors include the player's own preferences, game characters, game engagement, loyalty, plot richness, and recognition (Aleem, Capretz, & Ahmed, 2018). Through in-depth understanding

of these factors, we can better understand 'Why do consumers tend to choose a certain game brand?' This problem provides a useful reference for the development of the game brand. For example, players' personal preferences are one of the factors that affect brand consumption. Some video game consumers tend to focus on "rational seeking happiness", while others are addicted to games and irrational consumption occurs. Therefore, managers can start from the three aspects of self-consumption, others' consumption, and broader systemic consumption (Monika Lisjak & AzizaC, 2022), and think about how to conduct advertising game marketing. Thereby increasing brand awareness (Couberg and De Pelsmark Gross, 2010), creating positive brand experiences and attitudes (Wahisht and Srijesh, 2017), and enhancing the brand's status in the minds of consumers (Chen and Lee, 2010). 2014). Previous studies have found that brand trust can affect the brand consumption intention of game players, but the relationship between role and brand has been ignored. Character-player similarity has been shown to evoke positive identification with characters to better enjoy the game (Trept & Linek, 2010). This suggests a need to focus on how the player plays and experiences his or her character in the game. Especially the influence of character engagement. Therefore, based on the scenario of RPG role-playing games, this study will focus on the impact of role involvement on the brand consumption intention of game players.

When a player plays a role-playing game (RPG), character involvement refers to the level of player involvement in the game character [1]. This kind of input includes understanding the background of the role and investing in the feelings of the role, including cognitive input and emotional input. Understanding the background of the role is positively related to the time invested by the player. The more you like a role, the more time you will spend to understand and invest more feelings. According to relevant research and literature analysis, the higher the degree of role involvement, the stronger the player's attitude and willingness to consume the game brand, which is more likely to generate revenue [1].

Based on the above, this paper proposes that the role involvement of game players has a positive effect on their brand consumption, and brand identity plays an intermediary role in it. Accordingly, this paper proposes the following research hypotheses:

Hypothesis 1 (H1): Role involvement is positively related to brand consumption.

H1a: Cognitive brand involvement is positively related to brand attitude.

H1b: Affective brand involvement is positively related to brand attitude.

H1c: Cognitive brand involvement is positively related to brand purchase intention.

H1d: Affective brand involvement is positively related to brand purchase intention.

Hypothesis 2 (H2): Role involvement is positively related to brand consumption via brand identity.

H2a: Cognitive brand involvement is positively related to brand attitude via brand identity.

H2b: Affective brand involvement is positively related to brand attitude via brand identity.

H2c: Cognitive brand involvement is positively related to brand purchase intention via brand identity.

H2d: Affective brand involvement is positively related to brand purchase intention via brand identity.

4 Method

Data were collected by a widely-used data collection platform in China (i.e., <https://www.wjx.cn/>) [11][12]. The sample size was predetermined to be at least 400 participants, and we finally recruited 402 participants (Mage = 24.09, SDage = 4.58, 29% female, 62% undergraduate or higher educational degree) from 125 cities in China. Participants who showed missing, erroneous, or overly consistent responses, or failed the check-tests or suspicion probes were automatically excluded by the platform system before we obtained the dataset. All the participants signed an informed consent form and were compensated with 2 Chinese yuan for completing the survey. An inquiry done at the end of the survey showed that no participant surmised the actual research purpose.

5 Measurements

Role involvement. Following previous research (Badrinarayanan et al., 2014), cognitive role involvement (McDonald's $\omega = 0.903$) and affective role involvement (McDonald's $\omega = 0.913$) were measured using a 7-point semantic scale.

Brand identity. We measured nature exposure experiences using the four-item scale developed by Kamitsis et al. [6]. A sample item is "In your everyday home, travel and work environments and activities, please rate your level of exposure to

‘natural environments’ (5-point Likert scale; 1 “low” to 5 “high”). The Cronbach’s α was .83 in this study.

The exposure to natural environments was quantified using the four-item scale established by Kamitsis et al. [6]. An exemplary item reads, “Kindly assess your level of exposure to ‘natural environments’ in your daily life, including your home, travel, work environments, and associated activities” (rated on a 5-point Likert scale, ranging from 1 for “low” to 5 for “high”). The internal consistency of the scale in this study was high, with a Cronbach’s α value of .83.

Brand identity. Brand identity was measured by the scale of self-brand congruity (Saxena et al., 2023). This scale is of four items to measure game players’ identity with the game brand (e.g., “The avatar/virtual identity/profile in a game is consistent with how I see myself.” 7-point Likert scale; 1 “totally disagree” to 7 “totally agree”). The McDonald’s ω was .89 in this study.

Brand attitude. Game attitude was measured using a six-item scale [7]. A 7-point semantic differential scale was used to rate six items composed of bipolar adjectives (appealing/unappealing, pleasant/unpleasant, dynamic/dull, attractive/unattractive, enjoyable/not enjoyable and refreshing/depressing). The McDonald’s ω was .92 in this study.

Brand purchase intention. Brand purchase intention was measured using a single-item scale from previous research[1]. This item was “How likely are you to purchase the brand in the near future?”) and was rated on a 7-point Likert scale (1 = extremely unlikely, 7 = extremely likely).

Control variables

Demographical information (i.e., age, gender, educational level, and income) were measured as control variables.

6 Results

The correlation matrix of all the measured variables are shown in Table 1. As revealed by the results of confirmative factor analysis with four latent factors (i.e., nature exposure, nature connectedness, sustainable consumption behavior, and environmental knowledge), measures for our multi-item variables are considered to have good convergent validity (factor loadings > .75, Chi square = 442.96, df = 146, CFI = .95, TLI = .95, RMSEA = .07, SRMR = .04).

Variable	M	SD	1	2	3	4	5	6	7	8
1. Age	24.09	4.58	—							
2. Gender	1.29	0.45	.02	—						
3. Education	4.56	0.76	-.09	.01	—					
4. Income	3.49	1.43	.40**	.02	.10*	—				
5. Cognitive role involvement	5.52	1.24	.11*	.11*	.04	.19***	—			
6. Affective role involvement	5.78	1.06	.06	.11*	.11*	.17**	.80***	—		
7. Brand identity	5.36	1.23	.10*	.09	.01	.16*	.75***	.63***	—	
8. Brand attitude	5.81	1.03	.05	.13*	.13*	.17**	.74***	.87***	.65***	—
9. Brand purchase intention	5.28	1.65	.11*	.04	.15*	.22**	.39***	.41***	.33***	.47***

Table 1. Descriptive Statistics and Correlation Matrix.

Note. a male = 1, female = 2. * $p < .05$. ** $p < .01$. *** $p < .001$.

As revealed by Table 2, there were significant predictive effects of cognitive role involvement on brand attitude ($b = .10$, $p < .01$) and brand purchase intention ($b = .24$, $p < .05$), supporting H1a and H1b. The same effects were identified in affective role

involvement on brand attitude ($b = .73, p < .001$) and brand purchase intention ($b = .357, p < .01$), supporting H1c and H1d. We next conducted path analysis to investigate the indirect effect of role involvement on brand consumption via brand identity. The path model was estimated through a bootstrapping approach to calculate 95% bias-corrected confidence intervals (CIs) with 5000 random samples[8], using the “lavaan” package in R 4.1.1[9][10]. As revealed, the indirect effect of cognitive role involvement on brand attitude via brand identity y was significant (effect = .092, 95% CI = [.014, .203]), supporting H2a. However, H2b, H2c, and H2d were not supported, as the indirect effects of cognitive role involvement on brand purchase intention via brand identity (effect = .015, 95% CI = [-.005, .076]), as well as the indirect effects of affective role involvement on brand attitude (effect = .063, 95% CI = [-.063, .210]) and brand purchase intention (effect = .010, 95% CI = [-.010, .082]) via brand identity, were not significant.

Table 2. Regression Models.

	(1) Brand attitude	(2) Brand attitude	(3) Brand purchase intention	(4) Brand purchase intention
(Intercept)	4.421***	0.699**	2.720***	0.127
Age	-0.003	-0.005	0.015	0.013
Gender	0.281*	0.063	0.110	-0.050
Education	0.150*	0.052	0.281**	0.226*
Income	0.120**	0.016	0.221***	0.142*
Cognitive role involvement		0.100**		0.240*
Affective role involvement		0.743***		0.357**

R^2	0.058	0.760	0.067	0.210
Adj. R^2	0.049	0.756	0.058	0.198

Note. $N = 402$. Unstandardized regression coefficients are displayed, with standard errors in parentheses.

* $p < .05$. ** $p < .01$. *** $p < .001$.

7 Discussion

Based on the scenario of RPG role-playing games, this study will explore the impact of role involvement on brand attitudes and consumption intentions of game players. Through questionnaire research, it is found that role involvement is positively correlated with consumers' attitudes and purchase intention (Hypothesis 1 is supported). At the same time, it is found that consumers' cognitive role involvement can enhance their positive brand attitude by triggering their brand identity, and the intermediary effect of brand identity is significant (Hypothesis 2 is partially supported). In summary, this study provides preliminary evidence for understanding the relationship and internal mechanism between role involvement and consumers' attitudes and purchase intentions.

This study has certain theoretical and practical significance. First, this study provides a new perspective for understanding game brand consumption. This study explores the potential effects of game players' role involvement on brand attitudes and consumption intentions. Second, this study also explores the internal intermediary mechanism of this role from the perspective of brand identity, and obtains some empirical support. The results reveal that there may be differences in the influence mechanism of cognitive role involvement and emotional role involvement. This has inspired the follow-up to further explore its intermediary role and boundary conditions from the perspective of brand identity. From a practical point of view, the research results inspire for managers to improve the efficiency of brand marketing and build a benign consumer-brand connection.

This study also has some limitations. For example, this study only used the research design of a cross-sectional questionnaire survey, which may have limitations in causal inference. Future research may consider conducting follow-up studies or experimental studies. In addition, this study only uses the research sample of

Chinese gamers, and whether there are cultural differences with players in other cultural backgrounds remains to be further explored.

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