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The Dual Drivers of Secondary Market Premiums: Endowment Effect and Speculative Demand in Game IP Merchandise

Yaxin Zhuang

Nanjing Foreign Language School, South New Town Campus, Nanjing, China
Stella.Zhuang28@nflsicc.com

Abstract. The rising "goods economy", resulting from the conversion of anime game intellectual property (IP) into wealth, emphasizes the significance of the character products. In this context, the secondary market value of anime game IP products becomes an important topic in the "goods economy". This phenomenon can be illustrated by the prize market of "Ichiban Kuji". This paper uses the Dan Heng Ichiban Kuji plush from Honkai: Star Rail as an example. The formation of these values is not merely determined by the supply and demand, but is mainly affected by psychological factors. From the viewpoint of behavioral economics, this paper studies the joint impact of the endowment effect and speculative demand on the secondary market value. The research shows that the endowment effect, caused by the player's attachment to the character, leads to unwillingness to sell and reduces the market liquidity. This shortage of supply facilitates speculative activities. The speculative demand based on the idea of scarcity results in price bubbles. Ultimately, all these cause damage to the IP brand and decrease the benefits of general consumers, such as financial losses and feelings of injustice. To deal with these complicated issues and restore the market balance, this paper proposes official purchase, price control in the secondary market, and consumer rational education. These proposals provide both theoretical and practical guidance for managing the secondary market of game merchandise.

Keywords: Endowment Effect, Speculative Demand, Game IP Merchandise, Secondary Market Premium, Market Failure

1. Introduction

1.1. Research background

The rapid monetization of intellectual property (IP) has transformed digital fandom into a tangible asset class. Recently, the market for animated game IP merchandise has experienced a significant climb. Recently, the market for animated game IP merchandise has experienced a significant climb. According to the "2024 China Game Industry Report" by the China Audio-Visual Entertainment Industry Association Game Work Committee, the market size of game IP derivative products in China has exceeded 325.783 billion yuan in 2024. And consumption of goods related to animated

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games has continued to rise [1]. The game "Honkai Star Rail" developed by miHoYo was launched in 2023 and quickly became a phenomenon. Its character merchandise has repeatedly experienced the phenomenon of "out of stock immediately upon release" on the official store and authorized channels. Taking the popular character Danheng as an example, related products such as dolls, badges, and plaques in the secondary market generally have premium prices. Some limited-edition items even have transaction records several times higher than the official price [2].

From the side of behavioral economics, the formation of the second-hand premium is not the result of market supply and demand; rather, it is the product of the combined influence of emotional factors and speculative behavior. On the one hand, the endowment effect causes owners of the items to overestimate their value because of loss aversion and emotional attachment to the items, leading to a desire to hold on to them and thereby reducing supply. On the other hand, speculative demand attracts scalpers to store large quantities, taking advantage of scarcity to push prices higher and turning the goods' related characteristics into speculative targets. Driven by these two factors, the secondary market price deviates from its utility value and official pricing benchmark. In 2024, complaints regarding "scalper speculation" on anime and game merchandise submitted to the Black Cat Complaint Platform rose by 46% year-on-year [3]. Therefore, researching this issue is of important commercial and social significance for regulating the secondary market, protecting consumer rights and interests, and maintaining the long-term value of IP brands.

1.2. Literature review

Thaler first presented the endowment effect systematically. He stated that people value an owned item more than its market price [4]. Kahneman et al. also confirmed experimentally that the endowment effect still exists greatly even if the object has no emotional significance [5]. de Oliveira's 'extended self' theory elucidates why consumers consider their possessions as a part of their identity. When an item is connected to a particular personality, memory, or community membership, the endowment effect becomes stronger [6]. This idea can be easily applied to the emotional attachment that game players have towards the character merchandise.

In the aspect of speculative demand, Spread described the common procedure of speculative bubbles: the rise in prices results in more buyers and investors eventually ignore the true value, forming a "greater fool" cycle [7]. Dai et al. pointed out that retail investors are influenced by the disposition effect and anchoring effect and generally purchase at high prices during the later stage of a bubble, which intensifies the price fluctuation [8]. Present research has also extended the speculative behaviors to non-financial assets. Shin and Kim studied the consumption motives of limited edition goods and found that scarcity and identity both encourage people to buy high-priced things [9]. Kim et al. discovered that the attachment to game characters significantly increases the willingness of players to spend money on related merchandise. The stronger the emotional involvement, the higher the price they are willing to pay [10]. Wang et al. carried out an empirical investigation on online platforms for selling anime figures. They concluded that the scarcity stories and community excitement are the main reasons for the secondary prices being different from the original prices [11].

Previous works have considered the endowment effect and speculative demand separately, concentrating on either financial markets or ordinary collectibles. This division overlooks the relation between emotional attachment and financial speculation in game IP merchandise, especially significant for domestic Chinese IPs such as Honkai: Star Rail. Our study has three shortcomings: the lack of a complete theoretical foundation, the neglect of the dual role of merchandise as an emotional expression and a speculative asset, and the use of macro-data rather than micro-case

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studies. By studying the Danheng Ichiban Kuji plush, our investigation solves these issues by showing the variations in the secondary market price due to the joint action of the endowment effect and speculative demand, and therefore suggesting some management approaches.

1.3. Research framework

This document adopts a single case study method. Firstly, it reviews the literature regarding the endowment effect, speculative demand, and other relevant theories to define the main research ideas. Secondly, it introduces the allocation rules of the Danheng Ichiban Kuji plush, the buying and selling procedures, and the price changes in its secondary market. Then, it investigates the advantages and basic problems of this market condition: the reduction in the transaction quantity and market liquidity caused by the endowment effect; the occurrence of price bubbles due to speculative demand; and the negative impacts of disorderly secondary market transactions on the Intellectual Property (IP) brand value. Finally, it proposes some effective solutions such as an official purchasing scheme, price limits, real-name authentication for secondary transactions, and proper consumption education for consumers.

2. Case description

This research investigates the Honkai: Star Rail Ichiban Kuji series published by miHoYo and BANDAI SPIRITS in 2024, which includes the well-known character Dan Heng. The focus is on the "Last One Prize" POTEPOTTE plush, a rare product distributed in limited numbers by certain drawing methods (see Table 1). From the data of Xianyu (more than 100 cases), there are significant differences in prices: the average selling price has risen to 1034.6 yuan after the release, reaching above 1000 yuan, but decreasing to 420-600 yuan when the official supply appears in May 2024. The market behaviors demonstrate the typical endowment effect and speculation; the reluctance of the owners to sell is indicated by the comments on the Internet because of their emotional attachment to the item, whereas the transaction records reveal that the resellers engage in large-scale re-sales. These phenomena indicate the whole market process, from the shortage of liquidity caused by the concern of losing money to a speculative bubble resulting in some adjustment.

Table 1. Key specifications and market dynamics of the Dan Heng Ichiban Kuji case

Parameter	Description
Product	Ichiban Kuji "Last One Prize" POTEPOTTE Plush (Dan Heng • Imbibitor Lunae)
Release Context	2024 miHoYo–BANDAI SPIRITS collaboration; draw price: RMB 58.
Scarcity Mechanism	One unit per box; awarded to the final drawer exclusively.
Price Trajectory	Avg. re-sale: RMB 1,034.6; Range: RMB 398–1,256; Peak >RMB 1,000; Correction: RMB 420–600.
Market Anomalies	Endowment Effect: Hoarding suppresses re-sale supply. Speculative Demand: High-frequency scalping (>8 trades/30 days).
Cycle Observed	Official announcement, initial demand, secondary market introduction, stockpiling, price rise, and fall

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3. Dual-path analysis: functional value and structural distortions

3.1. Functional affordances: market validation and emotional extension

3.1.1. IP valorization and industrial signaling

Although the premium phenomenon causes certain regulatory problems, it has a great influence on the market. Especially, the large secondary value of the Dan Heng plush shows the appeal of the character and the Honkai: Star Rail intellectual property. The price rise adequately expresses the unsatisfied consumer demands and helps the copyright holders to adjust the stock and manage the characters at the proper time. The high re-sale prices can attract potential buyers to the game and its related products, thereby increasing the sales of other official articles. Furthermore, the quick development of the secondary market indicates the needs of the copyright holders, which is advantageous for them to produce merchandise and control the characters. From an industrial aspect, suitable premium levels demonstrate the effectiveness of the IP content and provide actual economic encouragement to the creators and their related enterprises.

3.1.2. Affective bonding and identity construction

For game players, the Dan Heng plush is far more than a mere commodity. It functions as a tangible totem of parasocial relationships, embodying deep emotional projections and serving as an extension of the in-game identity into the physical realm. It embodies emotional projection toward the character and serves as an extension of the in-game experience. This deep emotional projection serves as the very foundation for identity construction. By purchasing, displaying, and exchanging the merchandise, players gain a strong sense of identity within social media communities and fan circles. The secondary market offers players an accessible channel to obtain scarce collectibles. Even at a premium price, many players regard such consumption as emotionally valuable spending for their fondness of the IP. This emotional bond strengthens user loyalty toward the brand, which is conducive to the long-term operational development of the game.

3.2. Structural distortions: market failure and brand repercussions

3.2.1. Endowment effect and liquidity depletion

After getting the Dan Heng plush by lottery draw, players attach great emotional value to it and consider its subjective value much higher than its market value. Due to the fear of loss, the owners subjectively evaluate the plush more valuable than the equilibrium market price, since the psychological pain of parting with an affectionate object is greater than the benefit of the monetary gain. Therefore, they are unwilling to sell the product, although its market price is much higher than the cost of the draw. This common unwillingness to sell leads to a shortage of circulating supply in the market. When a large number of players prefer to keep the plush for personal collection or display it on the Internet, the actual circulating supply in the secondary market is much lower than the market demand. Consequently, the lack of real transaction prices makes it difficult to form fair prices. Under these circumstances, the market prices are mainly influenced by the listing prices of some price speculators, which provides favorable conditions for the formation of price fluctuations.

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3.2.2. Speculative demand and bubble dynamics

By taking advantage of the popularity of Dan Heng and the rarity of the Last One Prize, the scalpers boost the market price through participating in many lotteries, holding the stocks, and creating false transaction records. They do not take into account the sentimental or practical value of the plush and only seek quick profits. If the price is anticipated to rise steadily, ordinary buyers may purchase at a high price out of fear of being left behind, which leads to a vicious speculative cycle. This situation is similar to the "greater fool theory", where investors buy overvalued assets merely because they hope to sell them at higher prices to other buyers, thus separating the prices from their real usefulness. However, any variation in market sentiment or an increase in official supply will result in a sharp drop in price, causing the late buyers to suffer great losses. Such speculative behaviors influence the actual price signals and damage the allocation function of the secondary market.

3.2.3. Institutional erosion and brand backlash

Too high premiums and speculative disorder will finally affect the whole IP brand image. If common players cannot buy desirable items at reasonable prices, they may be regarded as being cheated, which leads them to express their dissatisfaction to the official operator and the IP. This feeling of being cheated results in a strong sense of injustice, causing the consumer's hostility to change from the scalpers to the official operator, thus bringing about a moral hazard that endangers the long-term interest of the IP brand. The hostility originally aimed at the scalpers tends to shift to the official operator, forming a moral hazard that endangers the brand's long-term interest. The negative feelings spread on social media and gaming websites may decrease the players' persistent participation in the game and even cause a public opinion crisis. At the same time, the prevalent problems in the secondary market, including counterfeit goods, faulty products, and swapping of packages, will also reduce the consumers' trust. In the end, the damaged brand reputation reduces the stable commercial value and life cycle of the IP.

4. Governance strategies and suggestions

4.1. Mitigating the endowment effect via official repurchase and exchange mechanisms

To solve the problem of insufficient liquidity because of the reluctance of players to sell, it is suggested that copyright holders and Ichiban Kuji sellers set up an official buying and selling platform. On one hand, the official side should buy up the popular prizes frequently at an equitable price and then resell them through official channels at the original price or with a small increase. This can improve the supply effectiveness in the market. On the other hand, an exchange activity can be arranged. Players can exchange some of their duplicated prizes or those kept for a certain time for points or new drawing opportunities. This meets their emotional needs and helps in the circulation of goods. Furthermore, the official side may establish a certified store on second-hand markets to handle the official stock or refurbished items. This provides a reference price for the market. In conclusion, these measures aim to introduce liquidity into the secondary market, offer a stable price standard, and thereby reduce the supply decrease resulting from the endowment effect.

4.2. Curbing speculative demand through price caps and verified transactions

To avoid the hoarding and speculation by scalpers, it is suggested that the second-hand trading websites establish price limits and carry out real-name authentication. For instance, particular IP

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products can have a flexible upper price limit. If the listed price is too high, the product will not be made available for sale. Moreover, full utilization of real-name check and facial recognition is required. This makes the sellers' identities traceable and controls the frequent transactions of the same account in a short time. In addition, the platforms should also develop a method to detect speculative behaviors. The accounts that frequently buy and sell the same IP products, exhibit unusual transaction amounts, or have very low refund rates should be labeled and restricted. The authorities may include the anime products in the blind box economic supervision system and ask the platforms to reveal the transaction records. By increasing the cost and risk of speculative hoarding, these steps aim to restore market transparency and protect legitimate consumers from price distortion.

4.3. Fostering rational consumption via education and risk warnings

To eliminate the unreasonable demand for high prices made by the general people, it is suggested that different parties should carry out rational consumption education. Firstly, the copyright holders can frequently inform the secondary market about the possible dangers through their official web pages. They should declare that the limited products are not investment objects. Secondly, the used goods exchange sites should put up an unavoidable warning notice on the transaction procedure and set up a waiting time before placing the order. Thirdly, the player associations should be encouraged to accept the principle of 'pay for affection rather than for speculation'. They should refuse the resellers and prevent price comparisons, and promote a positive collecting atmosphere. This multi-stage approach is significant in modifying the market perspective from speculative investment to actual appreciation, therefore ensuring the continuous progress of the game IP merchandise system.

5. Conclusion

5.1. Key findings

This research, by means of a detailed case study, clarifies the two-way mechanism that affects the secondary market prices of game IP merchandise. Particularly, it takes the Dan Heng Ichiban Kuji plush from Honkai: Star Rail as an example. It investigates how the endowment effect and speculative demand jointly influence the secondary market prices. The results indicate that the endowment effect makes the real players unwilling to part with their possessions and reduces the market liquidity. Speculative demand results in price fluctuations. Finally, the secondary market disorder brings back the impact on the IP brand. The beneficial effects are mainly the realization of IP value and the extension of the player's emotional experiences. However, the main issues are the market failure and the decrease in consumer welfare.

5.2. Research significance

The results of this research have two aspects, providing both theoretical progress and useful suggestions. From a theoretical point of view, this article incorporates the endowment effect and speculative demand from behavioral economics into the examination of the game IP merchandise secondary market. It shows the influence relationship between emotional attachment and financial speculation. This enhances the research on digital cultural consumption. In reality, it offers some guidance for IP copyright owners to formulate release and repurchase plans, for second-hand trading websites to manage transactions properly, and for authorities to control the risks of speculation. It

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also supplies young consumers with a knowledge tool to collect information reasonably. In the end, this study promotes a harmonious environment where emotional bond and rational transaction coexist, contributing to the long-term growth of the game IP merchandise market.

5.3. Limitations and future study

This research mainly depends on secondary data and public documents. It does not contain enough large-scale questionnaire surveys or experimental data to measure the intensity of the endowment effect and the characteristics of speculative behavior. In the future, the research can employ scenario experiments to control the triggering situations of the endowment effect. It can also conduct in-depth interviews to acquire the actual decision-making psychology of speculators and collectors. Moreover, future studies may compare the premium mechanisms of various types of intellectual properties or different markets to further develop the theory of cultural economics. In summary, these prospective research perspectives are expected to provide a more comprehensive and empirically supported insight into the cultural economics of game IP commodities.

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