The Mystery of the Blind Box Economy from the perspective of behavioral economics

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Abstract. Nowadays, the blind box economy is hot, and the blind box market has huge potential. Under the domination of irrational choice, consumers buy blind box products in large quantities and enjoy the fun of opening blind boxes. Based on behavioral economics, this paper analyzes and elaborates the causes of the blind box economy from five aspects, namely, crowd psychology, comparison psychology and conspicuous consumption, experience economy, psychological account, availability inspiration and flip-flop effect, to reveal the economic causes and point out the regulatory pain points of the "blind box boom". In addition, this paper puts forward relevant suggestions on the difficulties in regulating the blind box economy.

Keywords: Blind box; blind box economy; behavioral economics.

1. Introduction

Nowadays, there is a kind of goods called "blind box" on the market, which refers to the cardboard box containing different dolls without any style reminder, and consumers can only know the content after opening it. Merchants will put a hidden version of dolls in each series, the price is the same but the probability of drawing is only 1/144. According to statistics, in the past year, there are 300000 blind box players trading on Idle Fish, and the premium of blind box even reaches 30 to 40 times. Bubble Mart, the head enterprise of blind box industry in China, saw its revenue in the first half of 2018 increase by 155.98% year-on-year, and its net profit increase by 140 times year-on-year, and it has announced that it has been delisted from the New Third Board in April this year.

The law of diminishing marginal utility under the assumption of rational economic man combined with the law of demand shows that, as the quantity of a certain item purchased by consumers increases, the marginal utility brought by the item to consumers is diminishing, so as the quantity of the item increases consumers' demand for the item will decrease. However, in blind box marketing, consumers' demand for the blind box does not decrease with the increase in the number of items purchased, but rather increases dramatically, and the hidden version of the doll in the blind box may require hundreds or thousands of times the price of the basic model to be purchased. The blind box economy has grown and captivated men, women, and children alike, despite the fact that the hidden versions of the dolls in the blind box can cost hundreds or thousands of times the price of the base model, and the fact that what you pay for is not always what you want, and that the consumer is always at a disadvantage in this small game of chance anyway. What is the magic of the blind box? What do consumers consume in a blind box? Obviously, the theories based on the assumption of rational economic man are not enough to solve the above problems, but the author believes that some insights can be obtained from the perspective of behavioral economics [1,2].

2. The Origins and Development of the Blind Box Economy

Blind boxes originated in Japan in the early 20th century. During the Meiji period, on the occasion of store openings or the Japanese New Year, department stores wrapped products in cardboard boxes or colorful cloth and sold them at a price higher than the original price. These items were also called "lucky bags" and became a regular promotional tool for Japanese merchants. Japan's ACG culture (i.e. Animation, Comics, and Games) developed gradually, and in the 1970s, Twister developed independently from Fukubukuro as a derivative of Fukubukuro, with dolls being placed in Twister

"eggshells" and put into Twister machines on the street and in restaurants by the relevant operators, where consumers can purchase the opportunity to twist eggs by coin-operated machines, draw their favorite models, collect their favorite models, and even the "egg shell" itself has become a selling point of twisted eggs, which has aroused a large number of consumers' desire to collect.

In the 21st century, a blind box is a series of toys that are sold in a box with an unknown style but with an overall type of identification and an unknown content but with an indication of the scope of the toy. The box contains an "identification card" that identifies the style of the toy and accessories, so the blind box has an unknown and randomized nature. Once sold, the unique nature of the blind box determines that unless there is a problem with the quality of the blind box product, it cannot be returned or exchanged. Japan's DREAM, which launched the popular IP "Sonny Angel", and China's Bubble Mate, a multi-IP collection of hip games, are both iconic companies in the development of blind box culture. With the rapid development of the blind box economy, the blind box form has gradually penetrated into other industries from the field of fashion and play, such as the blind box of beauty, the blind box of fresh food, the blind box of snacks, etc., which set off the blind box craze.

The rapid growth of the blind box industry is not without its endless problems. On December 8, 2021, Bubble Mart Culture Creative Co., Ltd. was fined 200,000 yuan by the Beijing Chaoyang District Market Supervision Bureau for violating the Unfair Competition Law. On March 11, 2022, a number of consumers applied for a refund or exchange of SKULLPANDA's "Night's Guardian" due to its defects, but Bubble Mart's customer service refused on the grounds that it did not conform to the authentic product, and the consumers complained. Even so, Bubble Mart achieved revenue of RMB 4.49 billion in 2021, up 63.2 percent year-on-year, and net profit of RMB 854 million, up 63.2 percent year-on-year. Under the traditional economic perspective, consumers, as rational economic beings, will make rational consumption decisions, and when the price and quality of blind boxes are not proportional, they should give up purchasing such products, but the number of consumers of blind boxes is increasing, and they are sought after by the general public. Where is the charm of blind box products? How can the regulation of the blind box industry be effective? A behavioral economics response is urgently needed.

3. A Behavioral Economics Perspective on the Blind Box Economy

Classical economics believes that people are "rational economic man", however, individuals in the reality of economic behavior, can not have complete market information for its rational choice, inevitably subject to intuition, situation, habits, customs and other factors, make some irrational economic behaviors that go against the traditional economic hypotheses. Behavioral economics is a discipline to study economic phenomena under incomplete rational behavior. Introducing psychology into economics increases the ability of economics to explain various economic phenomena in real life, thus providing a psychological cornerstone for economic analysis, making economic analysis closer to the reality of life, and making the formulation of policies more reasonable. Analyzing the magic of the blind box economy from the perspective of behavioral finance will yield some more convincing explanations [3,4].

3.1. The Blind Box Economy under Irrational Consumption

3.1.1 Irrational consumption under herd mentality

Herd mentality is the idea that when people are faced with a decision, their choices are susceptible to being influenced by the way other decision-makers behave and think, which weakens the significance of the decision for the individual. In the Asch conformity experiments, only 25% of the participants stuck to their answers even when the answers to the questions were obvious, 75% answered at least one question incorrectly, and 37% answered all the questions incorrectly, as guided by the actor experimenter's wrong answers. In the blind box economy, merchants cooperate with stars and netizens with high attention and high traffic, spreading the video of dismantling the blind box all over the world, setting off the craze of playing the blind box on the whole network, and putting the

blind box vending machine in the business district with high traffic, so that consumers can really feel the fire of the blind box both on the network and in reality, and the use of the herd of consumption will make the consumers to make the choice of the goods in the passive situation, give up the original consumption tendency, guide the consumer's consumption trend. The target customer group of the blind box is young consumers, this part of the crowd has a strong curiosity, and they are brave to try new things. Under the intuition effect of behavioral economics, they will take the common consumption goods in the society as their optimal choice before confirming the quality and price of the goods, and they are not accurate enough in the way of establishing a good image and formulating the cognition of the standard of consumption, and they are very easy to be disturbed by the dissemination of information, and they will produce the herd mentality with a greater probability. It is very easy to be disturbed by information dissemination and has a higher probability of generating the herd mentality, which also stimulates the growth of irrational consumption in disguise [5,6].

3.1.2 Irrational consumption under comparison mentality and conspicuous consumption

Woodworth explains in consumer behavior that the intrinsic reasons for consumer purchasing behavior include the motives of truth-seeking, novelty-seeking, beauty-seeking, fame-seeking, cheapness-seeking, convenience-seeking, crowd-pleasing, and fetish-seeking, which means that the motives of consumers for purchasing a good don't come from the value of the good itself, but rather tend to be more dependent on the additional benefits that the good can bring to the consumer, and the sum of the value of the good itself and the added value it adds to the consumer constitutes the criterion for consumers to measure whether to buy the good or not. Comparison psychology plays an important role in the process of evaluating the added value of a good, which involves self-realization and self-reward. In the blind box economy, the hidden models drawn by other people or their favorite styles will stimulate the consumers' comparison psychology, generating the idea of wanting to own the same style, and when their friends and relatives show that they own more styles than they do, they will try to continue to buy the blind box to satisfy their own sense of achievement. This is because the development of the blind box economy under the herd mentality is beyond the niche economic scope that it should be in, into the social circle of the majority of consumers, the formation of the added value of goods, the possession of the blind box will help consumers to show their personal wealth, economic strength, lifestyle, identity and social status, to maintain and create a social network that guarantees the survival and development, and helps consumers to communicate with other people in their social circle, and to exchange information and communication in the social circle, which is the most important factor in the development of the blind box. It helps consumers to exchange information with other people in the social circle and gain more empathy, love and respect in the society. By buying more blind boxes, they can accomplish more self-realization and self-reward, and get more spiritual identity and social status recognition, thus triggering irrational consumption due to the psychology of comparison and ostentatious consumption [7].

3.2. The Blind Box Economy in the Experience Economy

With the development of the experience economy era, consumers in the low-level needs are satisfied, the higher level of demand has become critical, in the new consumption structure of the consumer's emotional weight has increased, they pay more attention to the goods for the satisfaction of emotional needs and personalized personal satisfaction rather than its production of the standardized value of the goods received is also an important factor affecting the consumer whether to buy the goods. From the perspective of irrational economists, experience economy shows that the real process of commodity trading is not cold and completely rational, but an irrational process full of emotional fluctuations, in which consumers do not aim at maximizing marginal benefits, but at maximizing happiness. In the blind box economy, every purchase behavior of consumers is in a psychological game with the enterprise, the joy of purchasing unknown goods to bring uncertainty in return, so that consumers in the "self-actualization", the reshaping of the main body of value creation as well as through the memory of the utility of the psychological pulse of change and get happy, prompting consumers to repeatedly buy the goods, and experience the pleasure of unboxing [8].

3.3. The Blind Box Economics with Mental Accounts

Consumer behavior in this state mainly refers to the process of psychological estimation of economic transactions by the consumer, whereby the individual analyzes different consumer items in accordance with psychological perceptions, forming a virtual account in an irrational state. In case of changes in transactions, the consumer's psychology changes accordingly. This is mainly influenced by the mental cognitive system. That is, under different mental accounts, one transaction item is not affected by the budget of other transaction items. In the blind box market, consumers buy blind boxes belong to the hedonic behavior, in such a case, consumers can not completely reach the rational state, in the process of transaction, if consumers have psychological hesitation, the virtual account established by the consumers will change accordingly, and then it is easy to appear irrational consumption behavior. The main group of consumers under the blind box economy is the youth group, most of their income comes from their parents, and some of them are paid for their work, and they lack the money consumption plan, and the estimation of the psychological account is not reasonable enough in such a case, which leads to irrational consumption and stimulates the development of the blind box economy [9].

3.4. Availability-inspired and Blind Box Economy under the Flip-flop Effect

Availability-inspired mainly refers to the fact that when consumers analyze a matter, they usually opt for efficient forms, focusing on the information that can be easily extracted and ignoring a great deal of other information. Under the blind box economy, marketing promotion mainly relies on celebrities with high traffic or net stars to conduct video promotion to create a consumer atmosphere in which it is easy to extract a limited amount of money, and at the same time, some consumers will develop a bragging mentality if they extract a hidden amount of money. In such a case, it brings a kind of wrong message to the mass consumers that it is easier to extract the limited model blind box, which will mislead the consumers into the availability inspiration. In the process of blind box transaction, consumers take extracting the hidden model as the ultimate goal, although they know that the probability of being able to extract it is low, but under the availability inspiration, they will produce probability cognitive bias, overconfidence, and magnify the success rate, thus guiding consumers to buy the blind box. In addition, the flip-flop effect mainly refers to a gambler's mentality, where people are more willing to take risks when facing losses and want to avoid losses by investing more money with the help of the small probability and randomness of risks. Under the blind box economy, when consumers do not get the hidden money after investing a certain amount of money, they will have loss aversion psychology, and will be nostalgic for the cost they have already invested, and at the same time, under the influence of availability inspiration, they will over-expansion the small probability events and increase the investment in blind box purchase, wanting to avoid loss and experience the joy of random return [10].

4. Summary

With the rapid development of the new economic form, the consumer's consumption concept has been transformed, and their transactions not only consider the inherent value of goods, but also consider the environment, psychological factors and other factors. The traditional assumption of rational economic man has been unable to reasonably explain part of the consumption situation of market consumers, and behavioral economics from the human psychology and subjective decision-making aspects of consumer behavior, the herd mentality, the psychology of comparison and conspicuous consumption, the experience of the economy, the psychological account and the anchoring effect, the availability of inspiration and the flip-flop effect and other theories to analyze the mystery of the fire of the blind box economy is of great significance in guiding significance.

Behavioral economics provides the theoretical basis and analysis path for the hot economy of blind box, and the emergence of "blind box boom" also reflects the transformation of consumer psychology and consumer behavior, which provides a new orientation for the development of market economy.

Some research predicts that the market size of blind box will reach about 250 trillion in 2025, which is a huge market potential. However, we must note that blind box consumption as a characterization of irrational consumption choices brings infinite potential, but there are also need problems, for example, there are blind zones in the regulation of blind box market, product quality control work is not in place, induced consumption is ubiquitous, and the secondary market is flooded with fake products, etc. Based on the research of behavioral economics, combined with the practice of blind box economic development, the state should introduce relevant policies to strengthen the regulation of the blind box market, combat false and exaggerated propaganda behavior, maintain the market economic order, and increase the cost of violating the law. Enterprises pursue economic profits while should shoulder social responsibility, consciously maintain the development environment of the blind box industry, to avoid undue competition, promote healthy competition, promote the development of the whole industry to a higher quality. At the same time, as the main body of blind box consumption - consumers can also join together to safeguard their legitimate rights and interests, based on rational choice to make the right consumer behavior, in the harvest of the fun of removing the blind box at the same time, and no longer for their own irrational consumer behavior "chopping hand".

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