

The impact mechanism and path optimization of blind box economy on residents' consumption from the perspective of uncertainty

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How to cite this paper: Lv, C. L., Zhou, Y. W., Tian, R., & Wang, Y. H. (2025). The impact mechanism and path optimization of blind box economy on residents' consumption from the perspective of uncertainty. *Economics & Business Management*, 2(2), 121-129. ISSN Print: 3079-5214; ISSN Online: 3079-5222.
<https://doi.org/10.63313/EBM.9097>

Published: 2025-07-25

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Abstract

Under the background of the dual circulation strategy, in-depth exploration of domestic market demand and comprehensive promotion of residents' consumption have become the key to promoting the sustained and healthy development of China's economy. As an emerging consumption model, the blind box economy has the characteristics of strong randomness, strong sociality, and strong collectibility, which helps to enhance the expectation experience of consumption activities. Whether this model can effectively stimulate residents' consumption deserves in-depth study. Based on the uncertainty theory, this project studies the impact mechanism of the blind box economy on residents' consumption and attempts to optimize its implementation path. Key research: (1) How does the blind box economy affect the consumption activities of different types of residents; (2) Revealing the internal mechanism of the blind box economy affecting residents' consumption from the perspective of uncertainty theory; (3) Based on the goal of sustainable and healthy development, optimize the implementation path of the blind box economy to stimulate residents' consumption. The research results of the project help to reveal the formation mechanism of residents' consumption activities under the influence of uncertain consumption patterns.

Keywords

Dual circulation; blind box economy; uncertainty

1. Introduction

In recent years, my country's blind box economy[1] has continued to be popular, and blind boxes have become increasingly popular among consumers. From trendy toys to cultural and creative products, from digital appliances to clothing and food, blind boxes have emerged in various industries and have become a new consumption trend. Therefore, it is of great significance to interpret its consumption activities and clarify the internal mechanisms and formation mechanisms behind related economic phenomena. As an important part of microeconomics, uncertainty theory

mainly focuses on people's economic decision-making. With the help of [2] the unstable state of things and multiple possible future results, it analyzes the psychological and behavioral patterns of different types of consumers in various economic activities to explain the essence of various economic phenomena in human society. Through in-depth exploration of consumer behavior and emotions, uncertainty theory provides a research paradigm and theoretical basis for a more comprehensive, profound and scientific interpretation and prediction of economic phenomena behind human economic behavior. Therefore, this paper mainly analyzes how the blind box economy affects the consumption activities of different types of residents from the perspective of uncertainty, interprets the internal mechanism of how the blind box economy affects residents' consumption behavior, and proposes an optimal path for the blind box economy to stimulate residents' consumption based on its actual dilemma.

2. The origin and development of blind boxes

Blind boxes originated in Japan in the late Meiji period and first appeared in the form of lucky bags. In order to clear inventory and promote sales, Japanese department stores at the time adopted the activity of selling lucky bags. The lucky bags usually contained goods of different styles but of higher value than the lucky bags. However, as the activities of selling lucky bags were fixed on specific festivals, a certain number of residents would go to department stores specifically to buy lucky bags. In the 1980s, the marketing ideas of lucky bags were borrowed, and the marketing model of "capsule toy machine" was formed. Compared with lucky bags, "capsule toy" is more concentrated in the fields of two-dimensional and ACG. For model enthusiasts, most of the products are also anime IP figures, toy models, jewelry pendants, etc. In the 1990s, blind boxes became popular in China in the form of "collection card marketing". It can be regarded as a local practice of blind box marketing, but the blind box products at this time appeared as gifts for other products. In the 21st century, the concept of blind boxes gradually took shape, mainly referring to toy boxes where consumers cannot know the specific product styles in advance, which have random attributes. With Pop Mart [3] signing multiple IP designers and launching a series of trendy blind boxes that are well-loved by consumers, the youth trend toy market has been activated in one fell swoop, greatly promoting the development of my country's blind box economy. In today's "everything can be a blind box" market, blind box marketing has become an important marketing model for all walks of life to win over young consumer groups.

However, the marketing model of "everything can be a blind box +" is worth discussing. In the past, "blind box +" pets ignored the right to life of animals and turned blind boxes into "death boxes"; "blind box +" beauty products, the novel form is backed by near-expiry products, turning blind boxes into "packing boxes"; "blind box +" meals, following the trend brings waste, turning blind boxes into "food box-

es", and many people buy boxes and abandon them. Under the blind box model, social phenomena such as scarcity and addiction, panic buying and hoarding, hype and price gouging are closely linked. Merchants who attempt to make profits often produce in large quantities, and consumers who are deeply trapped in it often purchase in large quantities, which seriously causes waste of resources, chaos in the marketing environment and disorder in the consumption order. Therefore, it is of great practical significance to interpret consumers' consumption behavior, deconstruct the marketing mechanism of the blind box economy, and propose an optimization path for the blind box marketing mechanism based on the actual problems existing in the blind box economy.

3. Analyzing the blind box economy with uncertainty theory

In economics, the basic framework for the study of uncertainty is the expected utility theory proposed by von Neumann and Morgenstern, which is used to describe how completely rational individuals make decisions in the face of risk. Each individual has his or her own subjective utility function, which maps material benefits to the individual's subjective satisfaction level. When making decisions, individuals always choose the option that maximizes their expected utility. The convexity of the utility function reflects the individual's preference for risk. A concave utility function corresponds to risk aversion, while a convex utility function corresponds to risk love, and a flat utility function corresponds to risk neutrality. In risk decision-making, different decision makers[5] may have their own views and feelings. However, as a criterion for evaluating economic behavior, there should be certain standards and principles. Therefore, it is inappropriate to use different utility curves for different consumer decisions. Based on the different impacts of the blind box economy on the consumption activities of residents with different risk preferences, this paper uniformly divides residents into three categories: risk preference, risk neutrality, and risk aversion. It deconstructs and analyzes the impact of the blind box economy on the consumption of these three types of residents, and further explores the uncertainty economic principle of the blind box economy.

Consumer psychology believes that under certain circumstances, people are stimulated by specific environments to generate needs, needs generate purchasing motivations, and purchasing motivations stimulate people's purchasing behavior. Its basic model is the internal mechanism that constitutes general consumer behavior.

In real life, residents' consumption behavior is generally caused by consumption motivations. [6] Generally speaking, consumption motivations include rationality, impulse, survival, compulsion, habit, fashion, inducement, self-confidence, and conservatism. Different types of consumers have different purchasing motivations due to differences in age, personality, etc. Combining the promotional methods and product design of the blind box economy, the blind box caters to residents' needs for product consumption motivations. Its consumption mechanism is shown in Table 1.

Table 1. Blind box consumption mechanism of different types of residents

Consumption type	Consumption motivation	Explanation of motivation	Consumption behavior
Risk-seeking type	Impulsive, fashionable, induced	Pay attention to the appearance and novelty of products, and are easily influenced by the outside world or changes in social trends.	Meet the needs and preferences of the time
Risk-neutral type	Forced, habitual	Prefer to buy familiar products, and do not think before buying or spend against their will out of consideration for interpersonal relationships.	Suppress consumption desires and consume passively
Risk-averse type	Rational, confident, conservative	Focus on checking the intrinsic quality and special functions of products, have a set of self defined selection criteria, and are not influenced by the outside world.	Get the maximum consumption satisfaction with the minimum expenditure, so as to make the best use of the benefits

4. Problems of blind box economy

As an emerging consumption model, the blind box economy has the characteristics of strong randomness, strong sociality, and strong collection. It helps to enhance the expectation experience of consumption activities and can effectively stimulate residents' consumption. However, the blind box economy has its own limitations in real life.

(1) Product quality issues: Since consumers cannot predict the specific information of the products in the blind box, some merchants may take this opportunity to sell inferior, counterfeit and fake products. This not only damages the rights and interests of consumers, but also affects fair competition in the market. The quality of goods will also become uneven under this uncertain perspective. The existence of the blind box economy makes consumers face greater risks when purchasing goods. Consumers may purchase inferior, counterfeit and fake goods due to information asymmetry, causing economic losses and psychological pressure.

(2) The problem of inflated prices: Some merchants take advantage of the mystery of blind boxes to inflate prices, causing consumers to incur unnecessary expenses when purchasing. At the same time, due to information asymmetry, consumers are often unable to accurately value goods. Merchants use the uncertainty of blind boxes as a gimmick to continuously raise the prices of blind box products.

(3) Overconsumption problem: The marketing method of the blind box economy can easily trigger consumers' desire to buy, leading to overconsumption among some consumers. This not only increases the economic burden on consumers, but may also lead to a waste of resources. Consumer psychology believes that under certain circumstances, people are stimulated by specific environments to generate needs, needs generate purchasing motivations, and purchasing motivations stimulate people's purchasing behavior. The blind box economy uses this psychology to induce some consumers to continuously generate purchasing behaviors for specific prod-

ucts in a blind box, thereby achieving the purpose of increasing sales.

(4) Imperfect laws and regulations: At present, the laws and regulations on the blind box economy are still imperfect, and the violations of some merchants cannot be effectively supervised and punished. In addition, there are no relevant regulations on the proportion of each specific product in the blind box product, which will result in a situation where the proportion of a specific product that more consumers want to draw is less than that of other specific products, even reaching 1:100, resulting in the situation that such products are particularly scarce. This situation will stimulate some consumers to continue to buy blind box products in order to get their favorite products, resulting in irrational consumption. On the other hand, some people may see the hidden business opportunities in this situation. After obtaining such products from various channels, they take advantage of the fact that some consumers want to get this specific product very much and drive up the price to sell it, thus leading to a series of related consumer market chaos.

(5) The problem of underage consumption: According to relevant reports and data, underage consumers account for a considerable proportion of the blind box market, and this phenomenon will cause a series of social problems. Compared with adult consumers, underage consumers have weaker self-control. When consuming blind box products, they may be induced to continue consuming and are more likely to overconsume. At the same time, most minors have limited economic capacity and cannot support continuous blind box consumption behavior. They may use their parents' online shopping platform accounts to buy blind boxes without their parents' knowledge. This needs to be stopped and interfered with to a certain extent, both for the family economy and for the physical and mental development of minors.

(6) Impact on the market and society: The disorderly development of the blind box economy may disrupt the market order and undermine the market environment of fair competition. At the same time, the illegal behavior of some businesses may cause unfair competitive pressure on other law-abiding businesses. For society, the overdevelopment of the blind box economy may lead to waste of social resources and overconsumption. This is not only not conducive to the sustainable development of society, but may also cause social conflicts and disputes.

5. Solutions to the blind box economy problem

(1) Strengthen the construction of laws and regulations

Accelerate the research and promotion of legislation and regulations for the blind box market, clarify that the probability of winning and the rules of the game must be announced to the public for blind box sales, and the probability cannot deviate from the reasonable and legal scope. At the same time, information related to product quality and services should be fully disclosed to protect consumers' right to know. For illegal and criminal acts in the blind box economy, such as suspected fraud and

gambling, clear legal boundaries must be drawn so that there is a law to follow, effectively reduce the risk of blind box consumption speculation, and promote the healthy development of the blind box market.

(2) Set up a negative list for market access

Clearly define the types of goods that are prohibited from sale. For medicines, medical devices, toxic and harmful items, flammable and explosive items, live animals, etc. that are not suitable for entering the blind box field, it is clearly stated that they cannot be sold in the form of blind boxes, so as to curb the flow of illegal products into the blind box market from the source. At the same time, increase the punishment of illegal products, and severely punish blind box products that touch the legal red line. In addition to applying administrative fines, administrative penalties such as restricting business activities, ordering suspension of production and business, and revoking business licenses can be imposed on those in serious circumstances.

(3) Implement information disclosure and traceability system

Establish a blind box information database, attach a QR code to each blind box product, and scan and enter the full process information of the product from production to transportation and sales into the product traceability code. Consumers and relevant sampling inspection departments can obtain the full process information of the product by scanning the code. Relevant government departments can cooperate with data integration and analysis technology companies to use big data to collect and analyze information by category, and conduct special and strict review of the reliability of product sources and the integrity of the industrial chain to eliminate "three no" products and counterfeit products.

(4) Restrict excessive consumption by minors

Blind box operators shall not sell blind boxes to minors under the age of 8. When selling blind box products to minors aged 8 and above, they should confirm that they have obtained the consent of the relevant guardians and provide a prominent reminder of this. This is to protect the consumption rights and physical and mental health of minors. Strengthen parental supervision and education. As guardians, parents should strengthen education and guidance to help minors establish correct consumption concepts and behavioral habits and eliminate blind following and comparison psychology. At the same time, manage mobile phone fingerprints, passwords and APPs with payment functions to prevent minors from knowing important information such as mobile payment accounts and passwords, and reduce the possibility of minors paying on their own.

(5) Strengthen the supervision of blind box consumption

Establish and improve the third-party supervision mechanism, establish and improve the third-party supervision mechanism for the amount of hidden items released and the probability of extraction of blind boxes, and ensure the openness and transparency of the probability of extraction of blind boxes. At the same time, strengthen market supervision and crack down on market makers, infringement

and piracy, counterfeiting and other behaviors, and purify the blind box market environment. Strengthen blind box quality supervision and carry out comparative tests, random inspections, comprehensive evaluations and other projects in a timely manner to ensure quality and improve the overall quality of blind box products.

(6) Guide rational blind box consumption

Strengthen publicity and education, strengthen publicity and education on the blind box economy through media, social platforms and other channels, guide consumers to treat blind box consumption rationally and avoid blindly following trends. Smooth complaint channels, establish a consumer complaint mechanism for blind box products, promptly handle consumer complaints, and communicate and negotiate with operators on behalf of consumers to urge operators to comply with relevant regulations and fulfill legal obligations.

(7) Promote industry self-discipline and social supervision

Promote industry self-discipline, encourage blind box operators to establish blind box industry associations, jointly formulate industry standards, and promote industry self-discipline. Give full play to the role of social supervision, guide Internet platforms to supervise and manage blind box transactions on the platform, and take punitive measures such as reducing scores and limiting account rights for operators with improper behavior. At the same time, give full play to the role of consumer associations, open up complaint channels, and protect consumer rights.

6. Conclusion

Blind box economy refers to a business model that uses the fact that buyers cannot predict the specific contents of goods as a selling point. When consumers buy blind boxes, they often know nothing about the types and quality of goods. The stimulation and expectation brought by this unknown nature become the main factors that attract consumers. The blind box economy has a profound impact on residents' consumption with its unique sales method and strong social attributes. According to the survey, the target of blind box purchase is mostly young people with risk preference. The uncertainty and surprise of blind boxes stimulate their desire to buy, prompting them to constantly try and buy new blind box products. Blind boxes have social attributes. With the rise of the blind box economy, buying blind boxes as gifts for friends has become a trend. Therefore, even risk-neutral and riskaverse consumers will have the need to buy blind boxes. Blind boxes also have collection value. Some young consumers regard blind boxes as a collection or investment product. They pursue rare styles and limited editions, hoping to get economic returns through collection and resale. This mentality prompts them to continue to invest money and time in the blind box market.

Blind boxes satisfy consumers' emotional needs to a certain extent, but there are also potential risks of over-consumption and gambling psychology, as well as challenges such as information asymmetry, uncertainty effect, sunk costs, uneven prod-

uct quality, inflated prices, imperfect laws and regulations, underage consumption problems, and disorderly development of the blind box economy that may disrupt market order and undermine the market environment of fair competition. For society, the overdevelopment of the blind box economy may lead to the waste of social resources. This is not only not conducive to the sustainable development of society, but may also cause social contradictions and disputes.

Therefore, it is necessary to guide consumers to consume rationally and strengthen consumer

education and the cultivation of rights protection awareness. By establishing a transparent information disclosure mechanism, implementing an information disclosure traceability system, strengthening the construction of laws and regulations, setting up a negative list for market access, introducing a return and repurchase mechanism, innovating pricing strategies, strengthening after-sales service and value-added services, focusing on the improvement of product culture and social attributes, and strengthening market supervision and industry self-discipline, it will help guide rational blind box consumption and promote industry self-discipline and social supervision. The blind box economy is also expected to achieve healthier and more sustainable development.

In the future, the blind box economy is expected to continue to grow and develop on the basis of

standardization, bringing more opportunities to the retail industry and cultural and creative industries. At present, the possible development trends of the blind box economy in the future include continued growth in market size, an increase in personalized customization and limited edition products, crossborder cooperation and diversified development, technological innovation and intelligent operation, strengthening of socialization and sharing functions, and improvement of regulatory policies and market standardization. These trends will jointly promote the blind box economy to develop in a more mature, healthy and sustainable direction.

In summary, as an emerging consumption model, the blind box economy attracts the love of young people with its uniqueness, and has broad development prospects and huge market potential. However, we cannot ignore the problems it has. While pursuing market expansion, blind box companies also need to pay attention to issues such as product quality and consumer rights protection, maintain fair competition order in the market, and promote the healthy and sustainable development of the blind box economy.

Acknowledgements

Funded by the Innovation and Entrepreneurship Training Program for College Students of Anhui University of Finance and Economics(202310378269)

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