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Ternary economic analysis of blind-box marketing

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ABSTRACT

Blind-box consumption, a phenomenon sweeping through the retail market in China, is the process of buying an unlabelled box containing assorted and random novelty gifts from different retailers. Despite the intensity of its emergence, the extent of research on the phenomenon from a marketing perspective has been **scarce.** This paper identifies factors likely influencing Chinese consumers participating in blend-box consumption. These factors include brand familiarity emotional value and speculative potential. Conceptual issues discussed include the role of emotions and cognition as forces underpinning shopping behavior. The paper also highlights the marketing strategy features that have successfully driven the blend-box consumption experience.

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1. Introduction

Blind-box marketing which originated offline in early 2018, has rapidly gained in popularity in China and is becoming a new consumer force in the retail sector (MOB Research Institute, 2020). The Research Institute (Foresight Industry Research Institute, 2019) shows that 300,000 blind-box players are exchanging and trading in idle fish, a Chinese flea-market App on Smartphone. There are also various purchasing agents. Blind-box has become a circulation currency for blind-box players. The market size of the blind-box industry is expected to double by 2024, reaching RMB 30 billion (MOB Research Institute, 2020). According to a recent research report (iiMedia Research, 2021), people born after 1995 are important consumers of blind boxes, accounting for nearly 40% of the population. By 2023, the scale of China's fashing game market is expected to account for 23.03% of the global market. Based on the McKinsey China Consumer Special Issue survey, Generation Z (Gen Z) in China is a unique consumer group with a culture and self-identity that the previous generations did not have. Globally, it is estimated that 2.3 billion people of Gen Z are currently the world's most populous group, accounting for about one-third of the global population. It will be the

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leading consumer in the market in the future. As internationally defined, Gen Z refers to the generation born between 1996 and 2010. In 2002, about 260 million people in China belong to generation Z. Its members account for about 15% of the total population in China, and 11% of the world's generation Z population. According to the report of Shanghai first business data center (CBNdata), the annual expenditure of generation Z in China is as high as 4 trillion-yuan, accounting for about 13% of the total household expenditure in China. The consumption growth rate is far higher than that of other age groups. In addition, according to the forecast in the "China innovative economy report 2021" released by Huaxing capital, a Chinese financial institution, the overall consumption scale of generation Z in China will increase fourfold to 16 trillion yuan by 2035, which is the key to the growth of the consumer market in the future. For consumer product companies, understanding Gen Z is the top priority for making a difference in China's strong economic development (Winnews, 2022; Zhou, 2021).

Blind-box marketing is a trending strategy used by retailers to sell unlabelled products in a closed box or bag. The products are novelty items, with each blind-box offering unique products. The nature of a blind box is shrouded, which is the risk element for the consumer (Harrison et al., 2007; Nuryakin & Munro, 2019; Starmer, 2000). This product concept originated from Japan's lucky bag. Consumers only know which product they bought after unpacking. The shape of the doll may mainly be the role of IP (Intellectual property) in the fields of animation, comics, games, and novels (ACGN). Blind-box is also a figure designed by co-branding or signing a copyright agreement. Consumers' addictive consumption behaviour is the main factor driving the growth of the blind-box economy. Due to its popularity, more and more industries, such as clothing, agriculture products, and pets, have begun to use blind-box marketing to promote new products or clear inventory in the Chinese market (Alice, 2020; Chen, 2020; Ji, 2020; Jiang & Song, 2020; Lu, 2020; Wei, 2021).

From the utility and risk preference theories, blind-box marketing completely subverts the assumption of rational shopping. Still, it could improve consumers' expected utility in addition to the utility for consumers in having actual goods. People are willing to spend money to buy an uncertain product, or even buy a product repeatedly in the large hidden and super hidden categories where the return is not proportional to the investment. This experience often gives the rational shopper a logical thought process beyond the shopping routine (Peng et al., 2020; Xin et al., 2021; Zhao et al., 2021). Zhao et al. (2021) discussed the relationship between the reference price and risk preference customers. Chen (2020) believes that in purchasing and unpacking a blind box, an entertaining, emotional connection can be established, which makes the whole purchasing process more enjoyable. Expectation, satisfaction, surprise, and loss are the feelings generated by blind-box merchants. They are also a kind of design that occupies the minds of consumers. In other words, by collecting blind-box products, consumers can enhance their sense of identity and generate a certain sense of achievement.

It is undeniable that the blind-box concept is also the product of insight into consumer psychology. The seller grasps the game psychology of the purchaser and gives full play to the freshness and immersion experience brought by the "surprise economy" mode (Jiang & Song, 2020). This marketing approach is consistent with findings from a study by Davis et al. (2013). There is a system with 16 categories of psychological

motivation developed by William James McGuire (1974/1976) that helps marketers isolate motives in various consumption situations. They are organized into four categories - cognitive preservation motives, cognitive growth motives, affective preservation motives, and affective growth motives. This study found that hedonistic rather than utilitarian consumption positively impacts purchase and use. Consumers experience hedonic and utilitarian values through consuming games. Attention should be focused on perceived enjoyment, self-concept, self-integration and self-efficacy.

Brand familiarity, emotional value, investment influence, and speculative value can influence consumers' blind-box shopping behavior (Alice, 2020; Delgado-Ballester et al., 2012; Hu, 2019; Lu, 2020; Ruiz-Equihua et al., 2020; Zhao, 2020; Zhao & Chen, 2020). In this article, blind-box shopping behavior (**BBSB**) is a dependent variable, including the consumption experience and consumption amount of the blind-box. Concerning the motivations of **BBSB**, three independent variables are mainly discussed, namely, (1) brand familiarity of the blind-box (**BFBB**), (2) collection and emotional value of the blind-box ($\mathbf{BBSM_{CEV}}$), and (3) the investment and speculative value of the blind-box ($\mathbf{BBSM_{ISV}}$). The two mediating variables are consumers' perception of the advantages (**BBAC**) and disadvantages (**BBDC**) of a blind-box. In addition, demographics will be set as a moderator variable.

From the literature, the variable $\mathbf{BBSM_{CEV}}$ includes consumers' perceived community identification value, collection value, novelty value, and satisfaction value regarding BBSB. These are the spiritual satisfaction factors that consumers feel when buying a blind-box. The variable $\mathbf{BBSM_{ISV}}$ represents consumers' perceived investment value, investment convenience value, speculation value, and unique value of BBSB (Keating, 2020; Wyburn & Roach, 2012). Alice (2020) believes that buying and unpacking a blind-box helps establish an entertaining, emotional relationship. However, the expectation, satisfaction, surprise and risk feelings generated in the transaction process are all expected by blind-box merchants. In other words, by collecting blind-boxes, consumers can enhance their sense of identity and have a certain sense of accomplishment. Compared with other financial investment tools, the blind-box investment can yield relatively higher returns, operate with less risk, and heat up relatively quickly. Keating (2020) found there should be a community identification value for wine prices, affected by branding, historical quality, and reputation. Wyburn and Roach (2012) found that the increasing importance of American collectable comic-book prices was influenced by their title, scarcity, cover artist, and interior artist. Dimson and Spaenjers (2014), who also reviewed the investment performance of collectibles, found that these so-called emotional assets perform considerably better in the long run than investments in government bonds, treasury bills, and gold.

Due to the emotional utility of the novelties that come in the blind-box, consumers consider buying blind-box as an investment commodity. BBAC and BBDC can provide blind-box manufacturers with a better understanding of consumer needs, satisfaction, and concerns while designing or assembling the blind-box. The literature review included BBAC factors such as the artistic value, IP (intellectual property) value, culture value, and gambling value of blind-box. In addition, BBDC factors are measured through the quality risk, legal risk, unfair competition, and fraud risk of blind-box (Abarbanel et al., 2015; Ndubisi et al., 2014). Abarbanel et al. (2015) found gambling

behavior in response to online gambling site stimulus to be affected by task-relevant cues, financial trust, and gambling value. Ndubisi et al. (2014) found these are the moderating effects of perceived gambling value on the relationship between ethical ideology and gambling commitment.

Currently, information about blind-box is limited to business reports in China, and no article on the topic are reported through the Web of Science. From the perspective of consumption, the direct consumer groups of blind-box are Gen Z. They are impulsive, curious and competitive. Although some adults have independent thinking, they are also easily influenced by consumerism and the Animation, Comics, and Games (ACG) culture, and by "impulsive consumption" (iiMedia Research, 2021; Priporas et al., 2017; Vojvodić, 2018). The reasons for the popularity of blind-box consumption include (1) gaining a sense of community identity, (2) satisfying people's need for collection, (3) satisfying people's curiosity, and (4) bringing people a sense of achievement. Based on the McKinsey China Consumer Special Issue survey, and MOB Research Institute (2020), the novel sales method of blind-box meets the spiritual comfort needs and desires of a young Chinese population for collection and a sense of accomplishment after collection. This randomized experience makes consumers want to continue buying or collecting a complete series of goods (Alice, 2020; Chen, 2020; Ji, 2020; Jiang & Song, 2020; Lu, 2020; Wei, 2021).

This research model provides different economic perspectives on consumers' blind-box shopping motivation from a theoretical perspective. This study finds that consumers will buy blind-box due to risks. The reasons are: 1) physical risks, which are positively correlated with utility; and 2) cognitive bias, which predisposes acceptance of a risk probability. Chinese consumers' multiple blind-box shopping behavior might be due to their risk preference emphasis on small probability and the aversion to deterministic risk because the blind-box buyer will become a risk preference when the loss is determined. Their risk preference emphasis on small probability (Ayton & Fischer, 2004; Bleaney et al., 2015; Conlisk, 1993; Starmer, 2000).

From a different perspective, consumers will buy blind-box because of investment in expected utility. One of the reasons is that perceptions of investor benefit and utility are positively correlated, and the other is a cognitive bias favouring investment probability. Similar results are shown in the theories of the gambler's fallacy and the hot hand fallacy. That is, blind-box fans always believe they have bad luck in shopping several times in a row. As long as they buy more, they will have good luck in purchasing the goods they want in their mind. Both fallacies are probabilistic theories of cognitive bias caused by a lack of knowledge about things. Another interpretation distinguishes two different expectations of respect for human performance and natural events (Ayton & Fischer, 2004; Bleaney et al., 2015; Machina, 1989, 1987; Sauer, 1998; Starmer, 2000).

From the above discussion, the contributions of this paper are as follows. First, it supplements the literature of consumers' shopping behavior focusing of the utility diversity of blind-box by its specific dimensions of collection and emotional value, and its investment and speculative value. Although many papers have discussed the issues of consumer shopping behavior, few articles focus on shopping behavior which could be interpreted by its utility diversity, as in the case study of blind-box. Second, it supplements literature on the diversified evaluation criteria of new marketing techniques which

focus on blind-box marketing. Marketing in most papers means there is only a transaction method, not a consumer utility origin, but this should not be the optimal evaluation of blind-box marketing, which has created consumers' utility. Third, it supplements the literature on the mediators of consumers' blind-box shopping behavior, focusing on consumers' perceptions of the advantages and disadvantages of blind-box. Finally, it supplements the literature on consumers' blind-box shopping behavior moderators, including consumer demographic variables such as gender, age, income, and occupation.

From the above discussion, this paper explores the usefulness of a ternary economic analysis of blind-box marketing drawing upon consumer utility theory. The investigation has five sections: 1) introduction; 2) **hypotheses** and methods of the blind-box marketing and economy; 3) discussion of the statistical results and the causal relationships for blind-box shopping behavior; 4) discussion of the mediator and moderator effects for the multi-group analysis for blind-box shopping behavior; 5) presentation of conclusions and suggestions.

2. The hypotheses and methods

In China, the blind-box marketing tactics extended by the blind-box economy are being adopted dynamically by enterprises, so the purpose of this research is to study people's **BBSB** and its influencing factors through case studies of Chinese people who have experience in buying blind-box. However, there is very little research on consumer motives for buying blind-boxes. From the study of utility theory and risk preference theory, one possible motivation is risk-seeking, but it should be against much literature on risky choice, which proved most consumers are risk-averse to gambles (Gneezy et al., 2006; Harrison et al., 2007). Some literature has demonstrated consumers' risk preferences in goods are positive but not strong or neutral (Benzion et al., 2013; Bohm et al., 1993; Einav et al., 2012; Riddel, 2012, Dohmen et al., 2011, Tal et al., 2010). Another possible motivation is a utility derived from the suspense of buying a blind-box (Caplin & Leahy, 2001; Conlisk, 1993; Nuryakin & Munro, 2019). Therefore, to more comprehensively explain the blind-box shopping behavior of Gen Z consumers and compare the differences in their shopping behavior with other generations.

In this study, **BBSB** is measured by the consumer's blind-box shopping experience (**EBBSB**) and its shopping amount (**ABBSB**). The influencing factors include BBSB's motivations, **BBSB**'s mediators, and **BBSB**'s moderators. The first blind-box shopping motivation - **BFBB** is calculated by one of three top-10 brands in the Chinese market, including POPMART, Lucky Box, HOOO (FORWARD-THE ECONOMIST, 2019), and other with blind-box marketing ($\mathbf{BFBB_P}$, $\mathbf{BFBB_L}$, $\mathbf{BFBB_H}$, $\mathbf{BFBB_O}$). Brand familiarity refers to the number of exposures to a particular brand accumulated in a consumer's memory. The so-called brand contact experience includes the ways consumers are contacted by advertising, seen in stores when shopping, learned through introductions by others, and have purchased or used the brand's products. As of now, brands are focusing on combining brand characteristics with the blind-box methods for social media marketing. (Bhaduri & Copeland, 2021; Delgado-Ballester et al., 2012; Liang & Fu, 2021; Milas & Mlacic, 2007; Ruiz-Equihua et al., 2020; Schaefer et al., 2006) Take the POPMART blind-box as an example. Most consumers know POPMART mainly

because of the IP (Intellectual property) image of "Molly." Molly launches a new series every quarter to maintain the brand's popularity. Build a complete supply chain system from development and design to production and sales. Independent development of IP derivatives and licensing market so that "Molly" has more added value (Chen, 2020). Alba and Hutchinson (1987) a pointed out from customer perspective that consumer knowledge includes two components: familiarity and expertise.

The second blind-box shopping motivation - **$BBSM_{CEV}$** is measured by the consumer's perceived community identification value (**CIV**), collection value (**CV**), novelty value (**NV**), and satisfaction value (**SV**) from BBSB. The third blind-box shopping motivation - **$BBSM_{ISV}$** is measured by the consumer's perceived investment value (**IV**), investment convenience value (**ICV**), speculative value (**SPV**), and the unique value (**UV**) from BBSB. Wei (2021) believes that by injecting product culture into blind-box, handmade toys increase the value of toys and their stories and improve the value of cultural products. Let these popular IPs become the main incentive for consumers to buy blind box products. Sorting out the currently limited blind-box related research and consumer market observations found that the artistic value, intellectual property value, cultural value of the blind-box brand and if these blind-box buyers can use a small amount of money to buy a higher-value gambling mentality (Alice, 2020; Hu, 2019; Lu, 2020; Zhao, 2020; Zhao & Chen, 2020). At the level of life application, blind-box has no use value. Still, when it comes to the artistry of digital games, emotional expression, artistic reflection, and innovation. It should be within the artistic standard (Huang & Zhu, 2020).

However, the blind-box should be the product of art and game. Blind-box is the product of design, producing considerable economic benefits by meeting players' emotional needs and aesthetic experiences. According to Zhao and Chen (2020), these align with and lead to consumers' aesthetics—many blind-box launch new products in series, effectively improving brand recognition and consumer adhesion. Given this, POPMART, a well-known blind-box brand, has a sales volume of 817 million Chinese Yuan from January to June 2020 alone. Compared with 543 million Yuan in the same period of 2019, it has increased by 50.5% (Chen, 2020). The characteristics of its products focus on the four primary attributes of artists mining, IP incubation operation, consumer touch, and the promotion and cultivation of fashion play culture (Chen, 2020). In addition, POPMART, founded in 2010, was listed in Hong Kong on December 11, 2020 and is becoming one of China's most prominent and fastest-growing trend toy companies. (Chen, 2020; iiMedia Research, 2021).

Regarding the blind-box collection, Savva et al. (2020) believe that high-net-worth individuals worldwide can turn their hobbies into a source of long-term capital gains. (Jorda et al., 2017; Russell, 1982). According to Barclays (2012) survey, the average high-net-worth individual has almost 10% of his wealth invested in art, antiques, jewelry, wine, and other luxury goods with limited supply. However, compared to pure collection and lottery, the blind-box group is a dynamic psychological process with an accumulative effect. Pointed out that in addition to providing a sense of security, collecting things can also give individuals a way to define themselves.

The mediator of **BBSB** influences the relationship between **BBSB** and its motivations (**BFBB, $BBSM_{CEV}$, $BBSM_{ISV}$**), which include **BBAC** and **BBDC**. **BBAC** is measured by the consumer's perceived artistic value (**AV**), IP value (**IPV**), culture value (**CUV**), and

gambling value **(GV)** of blind-box. Finally, **BBDC** is measured by consumers' perceived quality (**QR**), legal (**LR**), unfair competition (**UC**), and fraud risk (**FR**) of the blind-box. According to the literature review, the relationship between blind-box consumption, investment behavior, and causes are affected by recognizing the advantages and disadvantages of blind-box. The recognition of the benefits of blind-box is to bring a better visual experience to consumers. The "uncertainty" of blind-box has great charm. The joint name of blind-box and IP protects the value of IP and increases public attention. Zeng (2021) believes that blind-box is such a symbol representing "cute interest." Its emotion is brought into sense and appreciation and becomes the emotional cornerstone of their pursuit by players. In addition, the moderator of **BBSB** affects the relationships among **BBSB**, their mediators (**BBAC** and **BBDC**) and their motivations (**BFBB, BBSM**$_{CEV}$, **BBSM**$_{ISV}$), which included consumer's demographic variables such as gender, age, income, and occupation.

Based on the literature review, the influencing factors of consumers' willingness to buy blind-box products, gender, income level, and age have a significant relationship. In addition, the higher income group has important consumption intention. The student group with a 2000-5000 RMB monthly income is also one of the primary consumers of blind-box products. They also have higher requirements for blind-box products' style, packaging, and novelty (Alice, 2020; Liu, 2020; Zhao & Chen, 2020). According to the survey by Alice (2020), blind-box consumers aged 18-24 accounted for 32%, followed by consumers aged 25-29 and 30-34, accounting for 26% and 20%, respectively. Among them, 75% are females. From the hot-selling of trendy toys like the blind-box, it can be inferred that the design and sales methods of the blind-box have indeed met the values and spiritual needs of Chinese contemporary young consumers. As for the purchase motivation of virtual shopping, Hota and Derbaix (2016) found that boys pursue promotion and power in virtual shopping or games, while girls participate in virtual retail shopping because they need social affirmation and recognition.

Based on the literature review, to explore the influence of different factors more comprehensively on blind-box shopping behavior, demographic variables are defined as moderator variables to understand whether they will impact other factors on blind-box shopping behavior results. Kotler (1991) and Kotler and Andreasen (1991) believe that demographic variables refer to the demographic characteristics of relevant data such as population density, population distribution, education level, age, the economic and social background of the research object. However, Chen (1992) believed that different variables and ways could simultaneously segment the market to understand the market structure truly. It can be divided into two categories: personal-related variables and situation-related variables.

The structural equation model with PLS-PM was used to analyze data collected by snowballing online questionnaires in China. The package smartPLS (3.0 version) has been employed for estimating the Partial Least Squares Path Modeling (PLS-PM), which provided a framework for analyzing the following-mentioned structural equations (Hwa et al., 2020; Ramayah et al., 2018, 2016). This PLS-PM is a reflective model, and the bootstrap replication was set as 5000.

To provide a clearer visualization of the **hypotheses** developed in the present study, the path diagrams of the model (**Hypotheses**) are illustrated in Figure 1. The paths of the model (**Hypotheses**) are:

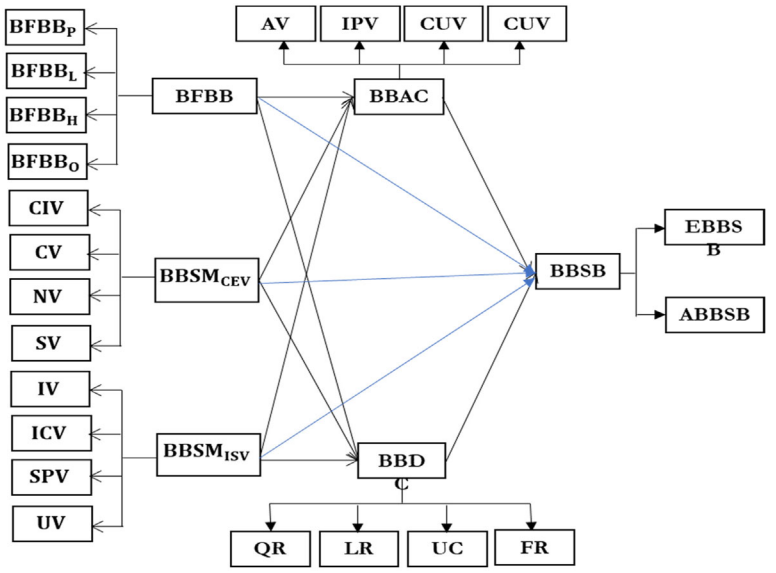


Figure 1. The hypotheses and research design.
Data Source: This Paper.

$$BBSB = \alpha_1 + \beta_1 BFBB + \beta_2 BBSM_{CEV} + \beta_3 BBSM_{ISV} + \epsilon_1 \quad (1)$$

$$BBSB = \alpha_2 + \beta_4 BBAC + \beta_5 BBDC + \epsilon_2 \quad (2)$$

$$BBAC = \alpha_3 + \beta_6 BFBB + \beta_7 BBSM_{CEV} + \beta_8 BBSM_{ISV} + \epsilon_3 \quad (3)$$

$$BBDC = \alpha_4 + \beta_9 BFBB + \beta_{10} BBSM_{CEV} + \beta_{11} BBSM_{ISV} + \epsilon_4 \quad (4)$$

$$BBSB = \alpha_5 + \beta_{12} BFBB + \beta_{13} BBSM_{CEV} + \beta_{14} BBSM_{ISV} + \beta_{15} BBAC + \beta_{16} BBDC + \epsilon_5 \quad (5)$$

where ϵ_1, ϵ_2, ϵ_3, ϵ_4, ϵ_5 are residual terms. Equation (1) tests the alternative hypothesis of H_1 that BFBB, $BBSM_{CEV}$, $BBSM_{ISV}$ has a significant effect on BBSB ($\begin{matrix} BFBB \\ BBSM_{CEV} \\ BBSM_{ISV} \end{matrix} \rightarrow BBSB$), and H_1 is supported by the consumption and investment theory literature that consumers' BBSB could be increased by their BFBB, $BBSM_{CEV}$, and $BBSM_{ISV}$. Similarly, Equation (2) (3) (4) and (5) tests the alternative hypothesis of H_2 that the mediating variables have significant mediating effects in the relationship between the independent variable and dependent variables ($\begin{matrix} BFBB \\ BBSM_{CEV} \\ BBSM_{ISV} \end{matrix} \rightarrow \begin{matrix} BBAC \\ BBDC \end{matrix} \rightarrow BBSB$), and H_2 could be supported by the consumption and investment theory literature that consumers' BBSB would be mediated by BBAC and BBDC. Furthermore, the hypothesis H_3 assumes that there are substantial differences in H_1 and H_2, with regard to respondents' characteristics (gender, generation, occupation and monthly income).

From the above discussion, the **hypotheses** of this paper are:

$\mathbf{H}_1$: There is a significant causal relationship between consumer's shopping behavior and its motivation. $\left(\begin{matrix}\text{BFBB}\\ \text{BBSM}_{\text{CEV}}\\ \text{BBSM}_{\text{ISV}}\end{matrix} \rightarrow \text{BBSB}\right)$

$\mathbf{H}_2$: There are the significant mediator effects of consumer's perception of the advantages and disadvantages of blind-box on $\mathbf{H}_1$. $\left(\begin{matrix}\text{BFBB}\\ \text{BBSM}_{\text{CEV}}\\ \text{BBSM}_{\text{ISV}}\end{matrix} \rightarrow \begin{matrix}\text{BBAC}\\ \text{BBDC}\end{matrix} \rightarrow \text{BBSB}\right)$

$\mathbf{H}_3$: There are the significant moderator effects of consumer's demographic variables such as gender, age, income, and occupation on $\mathbf{H}_1$ and $\mathbf{H}_2$.

3. The statistical results for the blind-box shopping behavior

For this study, an online questionnaire was sent in March 2021. A total of 666 valid responses were received. The investigation employed virtual snowball sampling, using Wechat to expand its geographical scope and representativeness. Because this article has just identified that the buyers of blind-boxes are mainly generation Z, the 10 initial samples in the first stage are generation Z. please help them recommend visitors who may have experience buying blind boxes and expand the number of samples step by step until 666. But interestingly, the recommended samples are slowly non-Z generations, so it was necessary to include individuals from other generations. (Hofman-Kohlmeyer, 2021; Leal et al., 2021; Torabi et al., 2021) Hofman-Kohlmeyer (2021) investigated branded content generated by players in simulation video games by snowball sampling. Leal et al. (2021) used an online survey on the impacts of COVID-19 and social isolation on academic staff and students at universities by snowball sampling. Torabi et al. (2021) focused on the impact of policies adopted by rentier states on tourism plans and poverty reduction in rural areas of Turan National Park by snowball sampling.

The descriptive statistics of the respondents' characteristics are presented below. (1) Gender: 45.5% of respondents are males, and the others are females. (2) Generation: 79.0% of respondents are z generation, and the others are not. (3) Occupation: 56.9% of the respondents are students, and the others are not. (4) Monthly income: the respondents had an average monthly income of RMB 3,573.6 (standard deviation = 1,188.2).

The descriptive statistics of Chinese consumers' shopping bahavior of the blind-box (**BBSB)** and its affecting factors are provided below. In detail, 74.0% of respondents had the experience for **BBSB**, and their average amount for **BBSB** was RMB 360.0 (standard deviation = 346.3). More than half of the respondents were familiar with brands of blind-box, followed by POPMART (54.8%), Lucky Box (18.0%), HOOO (17.4%), and others (11.9%).

Among different categories of collection and emotional value of the blind − box ($\mathbf{BBSM}_{\mathbf{CEV}}$), novelty value **(NV)** had the highest approvement among respondents (40.1%), followed by collection value **(CV)** (36.8%), satisfaction value **(SV)** (35.4%), and community identification value **(CIV)** (33.3%). Among different categories of investment and speculative values ($\mathbf{BBSM}_{\mathbf{ISV}}$) investment convenience value **(ICV)** had the highest approvement among respondents 38.0%), followed by **UV** (36.8%), investment value **(IV)** (36.2%), and speculative value **(SPV)** (35.3%).

Table 1. The independent-sample T-test and variance analysis of Chinese consumers' BBSB and its predictors.

			BBSB	
			EBBSB	ABBSB
Predictors	BFBB	$BFBB_P$	0.8 (−0.5)	10.5***
		$BFBB_L$	45.1***(−3.5**)	3.5*
		$BFBB_H$	98.9*** (−5.3***)	26.3***
		$BFBB_O$	302.2*** (6.6***)	29.4***
	$BBSM_{CEV}$	CIV	2.5 (−3.7***)	4.8**
		CV	5.2* (−3.4**)	3.7*
		NV	27.6*** (−2.4*)	1.7
		SV	10.0** (−3.1**)	3.0*
	$BBSM_{ISV}$	IV	0.7 (−3.2**)	3.6*
		ICV	1.5 (−3.3**)	3.7*
		SPV	2.4 (−2.9**)	3.0*
		UV	15.2*** (−2.6*)	1.9
	BBAC	AV	12.9*** (−3.1**)	2.9*
		IPV	23.3*** (−3.01**)	2.7*
		CUV	8.3** (−2.8**)	2.4
		GV	26.3*** (−2.9**)	2.5
	BBDC	QR	8.1** (7.2***)	15.1***
		LR	5.1* (7.5***)	18.0***
		UC	5.2* (8.7***)	22.7***
		FR	8.1** (8.1***)	18.2***
	respondents' characteristics	Gender	0.0 (4.4***)	6.6***
		Generation	3.8 (0.9)	5.8***
		Income	7.4*** (−4.1***)	16.0***
		Occupation	3.3 (−8.9***)	37.1***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
Data Source: This Paper.

Among different categories of blind-box advantage cognitions (**BBAC**), respondents approved mostly with gambling value **(GV)** (39.5%), followed by culture value **(CUV)** (39.3%), artistic value **(AV)** (37.2%), and IP value **(IPV)** (36.9%). Among different categories of **BBDC**, respondents approved mostly with quality risk **(QR)** (35.4%), followed by unfair competition **(UC)** (32.4%), fraud risk of blind-box **(FR)** (31.2%), and legal risk **(LR)** (28.2%).

The results of variance analysis about Chinese consumers' **BBSB** and its predictors are shown in Table 1. As it is shown in Table 1, most variables of the **BFBB** (brand familiarity of blind box)**, $BBSM_{CEV}$, $BBSM_{ISV}$, BBAC, BBDC** (the blind-box disadvantage cognitions) and respondents' characteristics had significant effects on BBSB, whereas the effect of familiarity of POPMART (**$BFBB_P$**) and Generation on consumption experience of blind-box shopping behavior **(EBBSB)** is not significant. In addition, the effect of **NV, UV, CUV,** and **GV** on amount **(ABBSB)** is not significant. Its meaning is that the influencing factors of Chinese consumers' **BBSB** discussed in this paper are meaningful significant mediating effect of **$BBSM_{ISV}$→BBDC→BBSB** is positive.

In Table 2, there are the values of average Cronbach's alpha (α), Dillon-Goldstein's rho (rho), composite reliability (C.R.), variance extracted (AVE), outer loading (O.L.), and collinearity statistics (VIF) on variables **BBSB, BFBB**, **$BBSM_{CEV}$**, **$BBSM_{ISV}$**, **BBAC, BBDC**, and **BBSB.** From Table 2, the PLS-SEM of Chinese consumers' **BBSB** and its influencing factors should have acceptable reliability, validity, and suitability. CR of 0.7 is the acceptable threshold (Hair et al., 2010), and Shiau and Chau (2016) suggested that AVE and VIF should be greater than 0.5. The results of BBFB might not meet the minimum requirements for CR, AVE, and VIF. they simply mean that respondents'

Table 2. The Values of α, rho, C.R., AVE, CL, VIF of The Variables BFBB, $BBSM_{CEV}$, $BBSM_{ISV}$, BBAC, BBDC and BBSB.

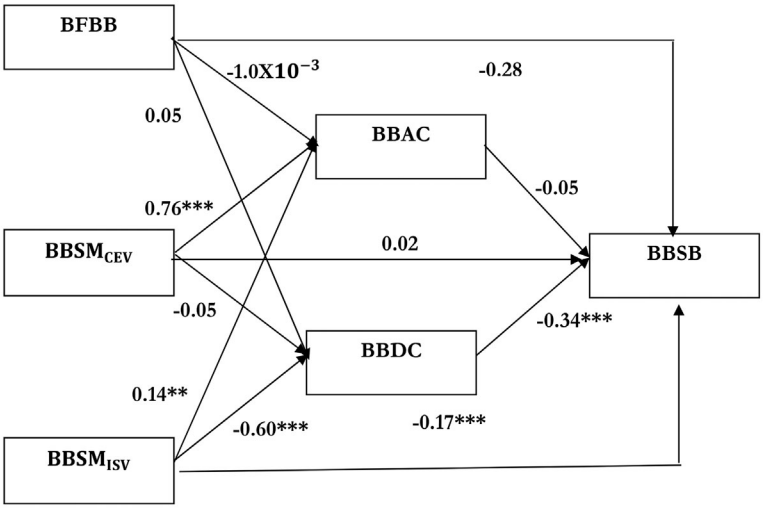
Variables	α	rho	CR	AVE	Indicators	OL	VIF
BFBB	0.33	0.33	0.03	0.29	$BFBB_P$	0.02	14.32
					$BFBB_L$	-0.46	9.64
					$BFBB_H$	-0.23	9.42
					$BFBB_O$	0.94	5.17
$BBSM_{CEV}$	0.92	0.92	0.94	0.80	CIV	0.89	3.05
					CV	0.93	4.04
					NV	0.86	2.42
					SV	0.89	2.88
$BBSM_{ISV}$	0.89	0.89	0.93	0.76	IV	0.89	2.97
					ICV	0.91	3.39
					SPV	0.88	2.66
					UV	0.81	3.10
BBAC	0.93	0.93	0.95	0.82	AV	0.91	3.26
					IPV	0.92	3.42
					CUV	0.90	1.75
					GV	0.91	3.30
BBDC	0.86	0.86	0.90	0.70	QR	0.86	2.14
					LR	0.83	2.00
					UC	0.84	1.97
					FR	0.83	1.85
BBSB	0.76	0.82	0.89	0.80	EBBSB	0.93	1.61
					ABBSB	0.86	1.61
		R^2 and adjusted R^2 for BBAC are 0.78 and 0.76; R^2 and adjusted R^2 for BBDC are 0.41 and 0.41; R^2 and adjusted R^2 for BBSB are 0.10 and 0.10.					

$^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.
Data Source: This Paper.

evaluations of BBFB are not consistent, but these should not make the results unreliable. This is because the measures for BBFB in this paper come from external measurement items, which is not the same as for the theory of validity and reliability (internal measurement); for example, BBFB should not be identical across all respondents.

The evaluation model on PLS-SEM of Chinese consumers' **BBSB** and its affecting factors has been presented in Figure 2. The results in Figure 2 are: (1) Only the relationship among **BBSB** and $\mathbf{BBSM_{ISV}}$ is significant, and it means that the alternative hypothesis of H_1 is partially supported. (2) Only the mediating effects of **BBDC** on the relationship between $\mathbf{BBSM_{ISV}}$ and **BBSB** is significantly adverse, and it mean that the null hypothesis of H_2 is supported, that the alternative hypothesis of H_2 is partially supported.

From Figure 2, most of the causal relationships between Chinese consumers' blind-box shopping behavior and their motivations are not significant. Moreover, the meaningful causal relationship of $\mathbf{BBSM_{ISV}}\rightarrow$**BBSB** is negative. And most of the mediator's role of Chinese consumers' blind-box advantage and disadvantage cognitions on their shopping behavior and their motivations are not significant. Moreover, the consumers' blind-box shopping behavior might be for the utility from the uncertainty of blind-box, with consumers paying limited attention to the benefits and probability of blind-box. The indifference curve of the blind-box buyer might be concave because the blind-box buyer is enjoying the stimulation and fun when taking risks. At the same time, blind-box buyers might predict its expected utility with its subjective probability, which is more than the objective probability of the blind. Some blind-box buyers might overestimate the value of the blind-box for their lack of correct understanding and judgment of the rules of the blind-box, for their multiple mental accounts, or their variety of cognitive biases



	Specific Indirect Effect
BFBB → BBAC → BBSB	-0.02
BFBB → BBDC → BBSB	$-1.0X10^{-4}$
$BBSM_{CEV}$ → BBAC → BBSB	-0.04
$BBSM_{CEV}$ → BBDC → BBSB	0.02
$BBSM_{ISV}$ → BBAC → BBSB	-0.01
$BBSM_{ISV}$ → BBDC → BBSB	0.21***

Figure 2. The Evaluation Model on PLS-SEM of Chinese Consumers' BBSB and its affecting factors.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
Data Source: This Paper.

(Kaneko, 2020; Robert, 2021). Chinese consumers' multiple blind-box shopping behavior might be due to their risk preference emphasis on small probability and the aversion to deterministic risk because the blind-box buyer will become a risk preference when the loss is determined. Robert (2021) thought people's decision under risk would be its option carries the greatest expected utility. Kaneko (2020) found people's small cognitive bound would cause its preference relation involves many incomparabilities, from the viewpoint of bounded rationality, the expected utility might be different.

This paper explains the moderating effects of the Chinese consumers' gender (see Table 3) by multi-group analysis, which includes two-way ANOVA and PLS-SEM (González-Serrano et al., 2021; Wibawa et al., 2021). From Table 3, there are significant moderating effects of Chinese consumers' gender on their BBSB, the causal relationships among their BBSB and their motivations, and the mediating outcomes of BBAC and BBDC. Therefore, the alternative hypothesis of H_4 in Chinese consumers' gender is partially supported. González-Serrano et al. (2021) used a multi-group analysis with PLS-SEM to predict the entrepreneurial intentions of sports sciences students. Wibawa et al. (2021) used multi-group analysis and PLS-SEM to investigate the applicability of the job demands and resources model.

4. Multi-group analysis for the blind-box shopping behavior

This article uses demographic variables such as gender, age, income, and occupation to understand multi-group analysis for blind-box shopping behavior. This paper explains

Table 3. Multi-group analysis of Chinese consumers' gender.

Variables	Indicators	Male (M) Approval, Mean	Female(F) Approval, Mean	Significance (M-F)
BFBB	$BFBB_P$	48.18%	60.33%	**
	$BFBB_L$	19.47%	16.80%	–
	$BFBB_H$	16.50%	18.18%	–
	$BFBB_O$	19.47%	5.51%	***
$BBSM_{CEV}$	CIV	33.33%	33.33%	–
	CV	35.31%	38.02%	–
	NV	38.61%	41.32%	–
	SV	35.64%	35.26%	–
$BBSM_{ISV}$	IV	36.30%	36.09%	–
	ICV	38.61%	37.47%	–
	SPV	35.64%	34.99%	–
	UV	35.64%	37.74%	–
BBSB	EBBSB	66.01%	80.72%	***
	ABBSB	318.48	394.63	**
		Coefficient (M)	Coefficient (F)	
BFBB → BBSB		0.25	−0.41***	***
$BBSM_{CEV}$ → BBSB		0.16	−0.04	***
$BBSM_{ISV}$ → BBSB		−0.26*	−0.10	***
BFBB → BBAC → BBSB		-1.00×10^{-4}	-3.00×10^{-4}	*
BFBB → BBDC → BBSB		0.02	−0.01	***
$BBSM_{CEV}$ → BBAC → BBSB		0.01	0.03	***
$BBSM_{CEV}$ → BBDC → BBSB		0.06	-1.00×10^{-4}	***
$BBSM_{ISV}$ → BBAC → BBSB		0.01	4.00×10^{-3}	–
$BBSM_{ISV}$ → BBDC → BBSB		0.23***	0.16***	***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
Data Source: This Paper.

the moderating effects of the Chinese consumers' gender by multi-group analysis, which includes two-way ANOVA and PLS-SEM. From Table 3, the experience and amount of blind-box shopping by women is significantly higher than those of men. Their reason is that the products listed in this paper are primarily popular with women, so the effect of blind-box marketing might improve consumers' expected utility, but consumers' utility of the products themselves should still be the most crucial consideration.

Table 3, the significant causal relationship of **$BBSM_{ISV}$→BBSB** for male consumers is negative, and the crucial causal relationship of **BFBB→BBSB** for female consumers is negative. And the significant mediating effects of **$BBSM_{ISV}$→BBDC→BBSB** for male and female consumers are positive. The significant mediating impact for male consumers is significantly larger than that for female consumers. The reason for these results might be women are more prone to impulsive consumption of things they like.

This paper explains the moderating effects of the Chinese consumers' generation (see Table 4). From Table 4, there are significant moderating effects of Chinese consumers' generation on their **BBSB**, the causal relationships among their **BBSB** and their motivations, and the mediating outcomes of **BBAC** and **BBDC**. Therefore, the alternative hypothesis of $\mathbf{H}_3$ in the Chinese consumers' generation is supported. From Table 4, The amount of blind-box shopping by non- generation Z was significantly higher than those of generation Z. Their reason should be that the average income of non- generation Z is more significant than it of generation Z, so the effect of blind-box marketing should not only be practical on generation Z, but also for non- generation Z.

Table 4, the significant causal relationship of **$BBSM_{ISV}$→BBSB** for generation Z is negative, and the critical causal relationship of **BFBB→BBSB** for non - generation Z is negative.

Table 4. Multi-group analysis of Chinese consumers' generation.

Variables	Indicators	Generation Z (Z) Approval, Mean	Non - Z (N) Approval, Mean	Significance (Z-N)
BFBB	$BFBB_P$	60.07%	35.00%	***
	$BFBB_L$	15.40%	27.86%	**
	$BFBB_H$	13.69%	31.43%	***
	$BFBB_O$	13.50%	5.71%	**
$BBSM_{CEV}$	CIV	31.37%	40.71%	-
	CV	34.60%	45.00%	-
	NV	38.59%	45.71%	-
	SV	33.65%	42.14%	-
$BBSM_{ISV}$	IV	33.65%	45.61%	-
	ICV	35.55%	47.14%	-
	SPV	33.27%	42.86%	-
	UV	34.79%	44.29%	-
BBSB	EBBSB	73.19%	77.14%	-
	ABBSB	338.88	439.29	**
		Coefficient (Z)	Coefficient (N)	
BFBB → BBSB		0.28	-0.41***	***
$BBSM_{CEV}$ → BBSB		0.02	-0.06	***
$BBSM_{ISV}$ → BBSB		-0.20**	0.09	***
BFBB → BBAC → BBSB		-2.50×10^{-5}	4.07×10^{-4}	*
BFBB → BBDC → BBSB		0.02	-0.05	***
$BBSM_{CEV}$ → BBAC → BBSB		0.07	-0.06	***
$BBSM_{CEV}$ → BBDC → BBSB		-0.02	0.21*	***
$BBSM_{ISV}$ → BBAC → BBSB		6.96×10^{-3}	-0.05	***
$BBSM_{ISV}$ → BBDC → BBSB		0.20***	0.17*	***

*$p < 0.05$,**$p < 0.01$, ***$p < 0.001$.
Data Source: This Paper.

And the significant mediating effects of **$BBSM_{ISV}$→BBDC→BBSB** for generation Z and non - generation Z are positive, and the significant mediating impact for generation Z is significantly larger than that for non - generation Z. And the significant mediating effects of **$BBSM_{CEV}$→BBDC→BBSB** for and non - generation Z are positive. The reason for these results might be the income of non - generation Z being more than the amount of **BBSB**, so they are prone to impulsive consumption items or shopping.

In China, around year 2012, a small number of blind-box began to be discussed. Until 2016, Chinese blind-box became the hot search keywords on the Internet platform. This period is a period of rapid economic development in China. In this period, Gen Z gradually grew into the main force of consumption. However, young people in this era do not have a rich spiritual life. Blind-box was born out of the demand for consumers with strong spiritual and emotional needs of design (Bejtkovský, 2016; Gouws & Tarp, 2016; Harber, 2011; Zhao & Chen, 2020; Zheng et al., 2021). For Gen Z consumers, their in-store shopping experience should include social interaction, novelty, entertainment, instant gratification, interaction and enjoyment. Therefore, the synergy of these factors will affect the creation of the unique in-store shopping experience for Gen Z (Chaston, 2012; Krishen et al., 2016; Vojvodić, 2018). The members of Gen Z are technologically savvy, highly educated, creative and innovative (Krishen et al., 2016; Priporas et al., 2017). Zheng et al. (2021) revealed that younger generation's health consciousness, environmental consciousness, food safety consciousness, price consciousness, novelty consciousness, and trust are factors that significantly affect purchase intention of organic foods.

This paper solved the moderating effects of the Chinese consumers' monthly income (see Table 5). From Table 5, there are significant moderating effects of Chinese consumers'

Table 5. Multi-group analysis of Chinese consumers' monthly income.

Variables	Indicators	Lower Income (L) Less than 3000 Approval, Mean	Higher Income (H) More than 3000 Approval, Mean	Significance (L-H)
BFBB	$BFBB_P$	58.76%	42.68%	***
	$BFBB_L$	15.94%	24.39%	*
	$BFBB_H$	14.74%	25.61%	**
	$BFBB_O$	12.95%	8.54%	-
$BBSM_{CEV}$	CIV	30.48%	42.17%	-
	CV	34.66%	43.29%	-
	NV	38.45%	45.12%	-
	SV	33.27%	42.07%	-
$BBSM_{ISV}$	IV	32.87%	46.34%	-
	ICV	34.66%	48.17%	-
	SPV	33.67%	40.24%	-
	UV	33.86%	45.73%	-
BBSB	EBBSB	70.92%	83.54%	***
	ABBSB	319.72	483.23	***
		Coefficient (L)	Coefficient (H)	
BFBB → BBSB		0.29	-0.30	***
$BBSM_{CEV}$ → BBSB		0.02	0.03	-
$BBSM_{ISV}$ → BBSB		-0.13	-0.17*	***
BFBB → BBAC → BBSB		3.30×10^{-5}	-3.10×10^{-5}	-
BFBB → BBDC → BBSB		8.96×10^{-3}	-0.02	***
$BBSM_{CEV}$ → BBAC → BBSB		0.04	0.04	-
$BBSM_{CEV}$ → BBDC → BBSB		-0.01	0.02	***
$BBSM_{ISV}$ → BBAC → BBSB		4.98×10^{-3}	7.55×10^{-3}	***
$BBSM_{ISV}$ → BBDC → BBSB		0.17***	0.21*	***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
Data Source: This Paper.

monthly income on their **BBSB** and the mediating outcomes of **BBAC** and **BBDC**. Therefore, the alternative hypothesis of $\mathbf{H_3}$ in Chinese consumers' monthly payments is partially supported. From Table 5, The experience and amount of blind-box shopping by consumers with higher income is significantly higher than those of consumers with lower income. Their reason should be that the price of **BBSB** is much less than the income of consumers with higher income, so they are prone to impulsive consumption of things they like.

Table 5, the significant causal relationship of $\mathbf{BBSM_{ISV}}$→**BBSB** for consumers with higher income is negative. And the significant mediating effects of $\mathbf{BBSM_{ISV}}$→**BBDC**→**BBSB** for consumers with higher income and lower income are positive. The significant mediating impact for consumers with a higher income is significantly more effective than that for consumers with a more down payment. The reasons for these results might be the consumers with higher income should have more life experience or knowledge, so when they care about the expected utility from blind-box, the investment and speculative values of blind-box and blind-box disadvantage cognitions would be more likely their considerations of **BBSB** than the consumers with lower income.

The study solves the moderating effects of the Chinese consumers' occupation (see Table 6). From Table 6, there are significant moderating effects of Chinese consumers' occupation on their **BBSB** and the mediating outcomes of **BBAC** and **BBDC**. Therefore, the alternative hypothesis of $\mathbf{H_3}$ in Chinese consumers' profession is supported. From Table 6, The experience and amount of blind-box shopping by students is significantly higher than the others. Their reason could be that most of the student's income is not earned by their work, so they may be prone to impulsive consumption.

Table 6. Multi-group analysis of Chinese consumers' occupation.

Variables	Indicators	Students (S) Approval, Mean	Non-Students (NS) Approval, Mean	Significance (S-NS)
BFBB	$BFBB_P$	47.49%	64.46%	***
	$BFBB_L$	21.37%	13.59%	**
	$BFBB_H$	26.12%	5.92%	***
	$BFBB_O$	7.12%	18.12%	***
$BBSM_{CEV}$	CIV	38.26%	26.83%	–
	CV	42.48%	29.27%	–
	NV	47.76%	29.97%	*
	SV	41.95%	26.83%	–
$BBSM_{ISV}$	IV	40.11%	31.01%	–
	ICV	43.54%	30.66%	–
	SPV	37.47%	32.40%	–
	UV	43.54%	27.87%	–
BBSB	EBBSB	86.28%	57.84%	***
	ABBSB	465.04	221.25	***
		Coefficient (S)	Coefficient (NS)	
BFBB → BBSB		−0.32***	0.28*	***
$BBSM_{CEV}$ → BBSB		0.14	−0.17	***
$BBSM_{ISV}$ → BBSB		−0.34***	7.90×10^{-4}	***
BFBB → BBAC → BBSB		-2.50×10^{-4}	-3.00×10^{-3}	***
BFBB → BBDC → BBSB		0.05*	0.03	***
$BBSM_{CEV}$ → BBAC → BBSB		0.02	0.10	***
$BBSM_{CEV}$ → BBDC → BBSB		0.14**	−0.07	***
$BBSM_{ISV}$ → BBAC → BBSB		5.0×10^{-3}	0.01	***
$BBSM_{ISV}$ → BBDC → BBSB		0.27***	0.14**	***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
Data Source: This Paper.

From Table 6, the significant causal relationship of **BFBB→BBSB** for students is negative, but it is for non-students is positive; and the meaningful causal relationship of **$BBSM_{ISV}$→BBSB** for students is negative, and the significant mediating effects of **$BBSM_{ISV}$→BBDC→BBSB** for students and non-students are positive. The significant mediating impact for a student is significantly larger than that for non-students. The significant mediating effects of **$BBSM_{CEV}$→BBDC→BBSB** for students are positive. Their reason could be that the products listed in this paper are primarily popular with students, so the impact of blind-box marketing might improve a consumer's expected utility, but consumer's utility of the products themselves should still be the most critical consideration. It is also important to note that students are motivated toward impulsive buying.

5. Conclusion

From a theoretical, this research model provides a different outlook on shopping motivation. Nowadays, consumers' consumption concepts are changing. In addition to the original value of commodities, psychological and other factors are considered relevant in the transaction process. The traditional **hypotheses** of rational man can no longer reasonably explain all consumer' consumption behavior.

This study found that the attractiveness of blind-box products to consumers mainly lies in the uniqueness and unknowingness of their products. This kind of sales method has not received attention in the literature in the past, but now it drives surprising economic rewards. The results show that when young people are satisfied with their material life, they are more inclined to pursue the spiritual satisfaction obtained from

purchasing goods. While consumers know the risks of blind-box shopping, they also feel the fun and pleasure of consuming blind-boxes. The findings of this research overturn past perceptions of consumer shopping behavior. In this regard, the paper has identified a gap in the literature concerning emotions and investment motives, the cognitive impact of the advantages and disadvantages of commodities, and shopping behavior.

More importantly, the emergence of the blind-box consumption model allows more manufacturers to perceive the different psychological needs of today's consumers. The study has found that consumers' buying behavior toward blind-boxes is not entirely derived from the blind-box products themselves, but more from the happiness that the blind-boxes bring to the mind, thus enhancing consumer' perceptions of the value of the blind-boxes. The moment of opening a blind-box is one associated with a feeling of gambling. However, it is interesting that most blind-box shopping behaviors found in the research should be impulsive shopping behaviors. Therefore, when consumers know the disadvantage of buying a blind-box, they will sensibly reduce their impulse to consume this product.

The research has also found that women have more blind-box shopping experiences than men. Consumers with a high average monthly income are willing to invest more money in blind-box consumption, and the result of such behavior does not vary with age. This result coincides with Chen's (2020) research on blind-box purchase intention. It can be inferred that consumers with higher incomes may be more likely to have impulsive shopping behaviors. Therefore, this research provides manufacturers with new ideas by exploring new business opportunities driven by the blind-box economy. The blind-box phenomenon can sweep the entire Chinese market in just a few years because the merchants have met the psychological needs of the players and have improved their purchasing experience in buying the blind-box experience. The mystery and value created by blind-box shopping capture consumers' rational and irrational shopping behaviors. The different emotional experiences of different consumer groups in blind-box shopping and the perception of the advantages and disadvantages of the blind-box affect the blind-box shoppers' choice of the blind-box brand. Considering that different demographic variables have different demand behaviors for blind-box, how to use precise market positioning and select the most frequently contacted products and well-known brands as the entry point. Further use of diversified marketing methods and diversified products to meet the recognition of target consumers will be a problem that enterprises should actively consider.

For most literature thought blind-box consumers should be Generation Z, this paper tried to justify this thought, so the sample structure is set that more ratio of respondents is for Generation Z. From the empirical results, the above thought is not stand, and the effect of blind-box marketing might be applied for the other generations. This should be the future study that diversity of blind-box marketing.

Despite the interesting findings this study, there are still some issues of concern. One limitation derives from our using a snowball sampling technique to collect matching binary data across multiple groups. Data generated by this technique may violate many assumptions in probability statistics (Neuman, 2002). Second, there is currently no experimental research on blind-boxes. Therefore, to understand the

current status blind- box marketing techniques more effectively in different industries, researchers can conduct research on relevant factors for different ethnic groups and industries in the future. This can provide a more accurate understanding of how to use blind-box sales techniques effectively. Furthermore, the future study of blind-box is its strategic effect, the results of blind-box marketing for the consumer is that every customer faces the same choice, and for the firm could minimizes the risk that its price is too high for some goods that turn out to be valued lowly by consumers. The future study of blind-box is its social effect, for its consumers are inclined to a herd mentality and the lead of peers.

Disclosure statement

No potential conflict of interest was reported by the authors.

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