

COVID-19 이후 온라인쇼핑 축제기간 중국 소비자의 충동구매행태 영향요인에 관한 실증연구-인식된 가치의 매개 역할을 중심으로*

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An Empirical Study on the Influencing Factors of Chinese Consumers' Impulse Buying Behavior During Online Shopping Festivals after COVID 19 – focused on the Meditating Role of Perceived Value

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Abstract

The paper studies the impulse buying behavior of Chinese consumers during the online shopping festivals of the specific situations and their influencing factors with empirical analysis. We carried out an empirical analysis on 302 Chinese consumers with shopping experience in the online shopping festival. The study result shows that (1) marketing stimulation, preferential promotion and features of consumers have a significant positive influence on the impulse buying behavior; while the freight reduction has no significant influence on impulse buying behavior; (2) the perceived value has a significant positive influence on the Chinese consumers to have impulse buying behavior; (3) perceived value works as an in the relationship between the marketing stimulation, preferential promotion and features of consumers and the impulse buying behavior, but it has no meditating role between the freight reduction and the impulse buying behavior.

Keywords: Online shopping festivals; Marketing stimulation; Preferential promotion; Features of consumers; Freight reduction; Perceived value; Impulse buying behaviors

JEL Classifications: M30, F23

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I. Introduction

Along with the ceaseless development of Internet information technology, e-commerce and social economy, online shopping has been a mainstream consumption form for consumers to buy commodities. In the past few years, the online new economy has been enriching our daily life for the shock of the COVID-19. People could satisfy their need for study, living and job through the network without going out. Hence, under the situation, consumers would tend to choose online shopping, so that they could browse much more commodities and enjoy lower prices without the limitation of time and space. Besides, it is very convenient and quick since people could make a purchase when accessing the Internet so that consumers have great flexibility in shopping. Compared with the traditional physical shopping scenery, the online shopping scenery could make consumers easier to have impulse buying behavior (Ahn and Kwom, 2020).

However, as for the study on impulse buying behavior, Dupont began to study consumers' impulse buying behavior in the late 1940s. Dupont company defined it as an unplanned buying with a difference from thoughtfully planned buying behavior. Most of the researchers in the early stage defined impulse buying behavior from an unplanned perspective. While with the continuous profound studies in the later period, some scholars raised a doubt on the definition of unplanned and thought it was too vague. Rook (1987) makes a better definition. He thinks that impulse buying behavior is more specific than the extended meaning of non-planned buying behavior and defines it to be a sudden, powerful and long-lasting impulsive desire generated by consumers

when the impulse buying behavior occurs and then consumers would buy somethings, i.e. the impulsivity, self-control and promotion stimulation of online shopping festival. The definition of impulsivity means a stable personality. It is an internal factor of consumers themselves and the important factor to affect impulsive consumption intention in individual characteristics.

Certainly, impulsive characteristics would be varied for the individual differences of consumers. Self-control means that consumers would have a process of self-control when they are affected by impulse buying, and the process includes three key points: setting up a clear target, having monitoring on behavior according to target and the ability to correct deviation from objectives. These three factors do not need to be satisfied at the same time to reach the self-restraint to reduce the impulse buying because the self-control would be failed once one of them is met. The failed self-control would cause the occurrence of impulse buying behavior. For the definition of promotion stimulation of online shopping festivals, Ahmad et al., (2019) believe that when consumers face limited and sudden discounts, they are more likely to produce impulse buying behavior than without such incentives; especially, the consumers would have more obvious impulse buying when they see the unexpected online shopping festivals promotion information in a shopping environment. The previous studies of impulse buying behavior focus on traditional shopping environment so as to innovatively set a study of the influencing mechanism of impulse buying behavior with the study object of Chinese consumers under the background of online shopping festivals, and provide a beneficial supplement for studies on impulse buying behavior in a specific

group and specific background network environment with the combination of the influence of time pressure, economic pressure and herd effect. So, why do consumers have impulse buying behavior? What is the law behind consumers' impulse buying behavior? The keys to these questions would have great practical significance in pushing a rational development of the Chinese e-commerce industry; on the other hand, it also means that the consumers' consumption ability is strengthening. The rapid development of the Chinese social economy steadily raises the per capita disposable income in China, and their purchasing ability is enhanced quickly. E-commerce enterprises also pay more and more attention to consumers, so that they would catch certain special festivals in a year to present some characteristic online shopping festivals. It could be seen that all major e-commerce enterprises keep presenting something new for gaining high profit during these festivals. The mainstream marketing forms of online shopping festivals are giving shopping vouchers, flash sales at midnight, reductions for certain amounts and flash sales with 1 yuan, etc. These promotion activities of these online shopping festivals would be eye-catching for consumers to keep stimulate their purchase desire. Compared with foreign countries, the study on impulse buying behavior in China is in a later beginning.

The previous studies on impulse buying behavior are from products, consumer psychology and personality traits and so on. This study aims to analyze how impulse buying affects consumers' consumption behavior through brand-new perspective and online shopping festivals. In other words, this study attempted to analyze the direct effect of marketing stimulation, promotion,

features of consumer and freight reduction on impulse purchases during the online festival. In addition, we tried to analyze whether these four variables have a mediating effect through the perceived value. This can be said to be differentiated from the research results that existing studies related to impulse purchase affect consumers' impulse purchases through price, product, and promotion activities. In particular, we intend to promote this study because it seems that consumers who have accumulated fatigue related to COVID-19 will express their consumption tendencies that have been suppressed through online festivals.

The purpose of this study is to provide a more purposeful promotion strategy of the online shopping festivals for consumers during the period to gain higher profit; and it would also provide critical practical guidance for other scholars to conduct research on the impulse buying behavior of consumers. Based on the above purposes, the paper would study the working mechanism of online shopping festivals on Chinese consumers' impulse buying behavior. So it could provide a reference for the marketing of e-commerce enterprises and enrich the theories of impulse buying behavior. Through the sorting of foreign and domestic literatures, the four characteristics classifications of online shopping festivals are confirmed, including marketing stimulation, preferential promotion, features of consumers and freight reduction. According to the S-O-R theory, a perceived value is introduced as an intermediate variable to explore whether the perceived value is an between online shopping festivals and consumers' impulse buying behavior. It would further dig out the working mechanism of online shopping festivals on consumers' impulse buying behavior; at the same time, a model would

be built up to have a study. Finally, there would be effective suggestions for e-commerce enterprises.

II. Literature Review and Research Hypotheses

1. Online shopping festival

Online shopping festivals are an operational approach that combines online culture, festive atmosphere and marketing strategies to stimulate consumers' desire to shop briefly and intensely through various means (Chen and Li, 2020). The most famous of these is the Black Friday shopping frenzy that began in the United States on the day after Thanksgiving and continues until Christmas. During the "Black Friday", in order to attract more attention from consumers, the stores are opened earlier than usual and opened for a longer time. At the same time, they launched a series of marketing means such as "buying earlier for getting cheaper, selling at a loss, sales promotion with limited amounts or in limited time" to stimulate consumers to actively participate in the shopping. In China, the most famous online shopping festival is the "Double 11 shopping carnival" held by Alibaba, which combines network culture and marketing means through an organic means. Colorful preferential activities and large-scale discount promotion let consumers get shopping benefits during the online shopping festival, at the same time, letting them enjoy the emotional experience of happy and excitement brought about by the crazy shopping.

Based on the previous studies and descriptions about the online shopping festivals conducted by other scholars, it can

be known that the online shopping festival is a kind of marketing strategy for e-commerce enterprises to make use of the specific situation of online festivals and use various stimulating factors to carry out large-scale commodity promotion. It will encourage consumers to actively participate in short-term crazy shopping during the online shopping festival, so as to make the e-commerce enterprises obtain significant profits (Khanna and Sampat, 2015). However, with the diversification of research perspectives and research methods, in addition, comparing the differences between consumers' shopping in holiday situations and those in non-holiday conditions, consumers' behaviors in the online shopping festivals have been understood in depth. At present, with the rise of Wechat, Kakao Talk, QQ, Weibo, TikTok, mobile Internet and other interactive platforms, as well as the rapid development of interactive technology, consumers' interaction in online shopping (such as social interaction, sharing promotion information of commodity online shopping festival, communication and sharing of participating experience, etc.) is increasing continuously, which has gradually become one of the characteristics of online shopping festivals.

From researches on consumers' buying behaviors during the "Black Friday" conducted by Simpson et al., (2011), it is also found that nearly 60% of consumers directly place orders to buy goods when they see a large-scale promotion of goods during the online shopping festival, only less than 20% of them will examine the products' labels, and only 10% of consumers will compare the categories and prices of commodity.

First, starting with the "Black Friday" shopping carnival of the United States, and later the online version of "Internet Monday"

was created by using network marketing, which has achieved good sales results. Through comparative research on "Black Friday" and "Internet Monday" shopping carnivals, to explore the key factors affecting consumers' participation in shopping festivals, respectively. In addition, Xu et al., (2015) conducted studies on consumers' shopping behaviors and found that whether in online shopping or offline shopping, consumers' social needs will be shown in the shopping situation. As for the consumers, sharing the feeling brought about by the shopping process with their family members and friends is also an important part of the shopping experience, what's more, this shopping experience will also be affected by social relations and personal factors to some extent.

Kotler (1999) classified the online shopping festival into twelve categories, including discount, coupon, refund payment for goods, lottery, extra gifts, product guarantee, portfolio sales of free trial products, cross-selling, network display and exhibition, etc. Peter and Anandkumar (2013) analyzed three e-commerce platforms, that is, Yixun, Vipshop and Taobao, and they found that e-commerce platforms generally has eight categories of online shopping festival characteristics, mainly including price reduction, discount, redeemable coupon, lottery, free shipping, flash sales, return gift, etc. Ubeja and Kusuma (2014) got five categories of online shopping festival by analyzing the marketing strategies launched by e-commerce platforms during the festival, they are pre-sale mode, purchase restriction strategy, snatching red packet, free shipping, and mobile ports. According to the above research results at home and abroad, at the same time, this paper looks up some literature on the classification of online shopping festivals made by Chinese

consumers, thus determining four common characteristic classifications of online shopping festivals during the period of online shopping festivals to be studied in this paper, including marketing stimulation, preferential promotion, features of consumers and freight reduction.

2. Impulse buying behavior

Relevant researches on impulse buying behaviors began in the 1950s, some scholars equate it with unplanned consumption, that is, a buying activity suddenly happening without any plan before, with the characteristics of immediacy and spontaneity. With the deepening of studies, many scholars believe that impulse buying behavior is caused by the strong and irresistible stimulation of consumers, which may come from enterprises' marketing activities, shopping environment, products themselves and so on. At the same time, impulse buying behavior is defined as an emotional behavior, Rook (1987) believed that when people have a sudden, strong, and lasting mood to buy a product, impulse buying behavior occurs, and this impulsivity has an element of pleasure and arouses consumers' emotional conflicts at the same time.

Akram et al., (2017) believed that e-commerce enterprises set up online shopping festival activities would affect consumers' impulse to buy significantly. When the enterprises launch online shopping festival activities, such online shopping festival advertising is more attractive, which will make people feel that they can get a lot of benefits, but also trigger the impulsive consumption of consumers. Luo et al., (2010) had constructed an integrated model on impulse buying behavior through some researches, including some marketing stimulating factors such as online shopping festival

activities and product display. When facing with the promotion activities in online shopping festival, consumers will improve the overall evaluation in the process of consumption, thus affecting their consumption behaviors and leading to the impulse buying behavior.

By interviewing online consumers, Dawson and Kim (2010) found that some characteristic classifications of online shopping festival, such as free freight and price discount, could best drive consumers to have impulse buying behavior. By studying various types of online shopping festival characteristic classifications, Shang et al., (2020) found that the factor can stimulate consumers' impulsive consumption desire most is the promotion information of online shopping festival, which is unexpected. Followed by the characteristic classifications of limited time and limited amount promotion, Guo et al., (2017) studied the influence brought about by discount promotion, freight reduction, special price promotion, coupons in online shopping festival characteristic classification on impulsive consumption, it was found that each type of them had different effect. Among them, the special price online shopping festival promotion has the greater impact, and the freight reduction's impact is relatively small. Chatterjee and Shukla (2020) believed that on the one hand, the scarce characteristic classification had a significant impact on the unplanned buying behavior in the online shopping environment; on the other hand, time-limited discounts were more likely to stimulate consumers' impulse buying behavior than general discounts in the online shopping environment. Tu et al., (2017) pointed out that spending a certain amount in online shopping festival promotion had an impact on impulse consumption. At the same time, they divided it into three different forms

for separate verification, which proved that reduction promotion when reaching a certain amount in online shopping festival had the biggest impact on impulsiveness of consumers' buying behavior, it can stimulate consumers to spend impulsively.

Mehrabian and Russell(1974) proposed the S-O-R model, namely the stimulus - organism - response model, to explain the process that environment influenced human behaviors. S-O-R theory is a relatively classical one in explaining the pattern of consumers' behaviors. Aggarwal and Rahul (2017) applied S-O-R theory in marketing studies and they put forward the stimulus-organism-response pattern targeting consumers' behaviors. S-O-R theory holds that consumers' internal cognition is affected by external stimulation, then they have a certain degree of motivation or attitude, which in turn affects their consumption behavior. Some factors that affect consumers' emotion or cognition are called stimulus. Yadav et al., (2021) described consumers' behaviors with S-O-R theory, noting that marketing factors and environmental factors constitute stimuli, such as promotional activities, sales environment, etc. Consumer's emotion or cognition plays an important role in the process from stimulus to response, which is called the organism, such as some psychological activities like perceived value and perceived risk. Finally, consumers will produce psychological or behavioral reaction, which is called response, such as impulse buying desire, impulse buying behavior, etc. This paper studies the impact of online shopping festival on consumers' impulse buying behavior, so the online shopping festival is a stimulating factor. Through affecting the perceived value of consumers, it further induces the consumption impulse of consumers, and this process is the

same as the action mechanism of S-O-R model, this is why the S-O-R model is used as the theoretical basis. According to the comprehensive researches on domestic and foreign literature, we can find that influencing factors about consumers' impulsive buying behavior can be discussed from the following four aspects, namely marketing stimulation, preferential promotion, features of consumers and freight reduction. Among which the preferential promotion is a way to attract consumers, it mainly includes price preference of commodities, degree of discounts, etc.;

According to the above research results at home and abroad, at the same time, this paper looks up some literature on the classification of online shopping festivals made by Chinese consumers, thus determining four common characteristic classifications of online shopping festivals during the period of online shopping festivals to be studied in this paper, including marketing stimulation, preferential promotion, features of consumers and freight reduction. This paper further explores the impact of online shopping festival on consumers' impulse buying behavior from the perspective of online shopping festival. This paper presents the following assumptions based on the above study:

- H1: Online shopping festival has a significant positive impact on impulse buying behavior
- H1a: Marketing stimulation has a significant positive correlation with consumers' impulse buying behavior
- H1b: Preferential promotion has a significant positive correlation with consumers' impulse buying behavior
- H1c: Features of consumers have a significant positive correlation with consumers' impulse buying behavior

- H1d: Freight reduction has a significant positive correlation with the consumers' impulse buying behavior

2.3 Perceived value

Chinomona et al., (2014) believed that the online shopping festival and perceived value are complementary with each other, perceived value was attached to the online shopping festival activities. The contact and use of online shopping festival activities will enhance the perceived value of consumers, that is, only when consumers identify with the enterprises' online shopping festival promotion behavior in the shopping process, they will actively participate in the online shopping festival promotion activities. Ailawadi et al., (2001) believed that the online shopping festival promotion could allow consumers to meet their own diverse needs in shopping process, to let them enjoy the happiness of shopping, and thus improving consumers' overall evaluation on the shopping process. Kim and Park (2017) analyzed the promotion strategies of online shopping festival from two dimensions of function and pleasure. Their research found that consumers had two different cognitions on the online shopping festival promotion, that is, monetary promotion and non-monetary promotion. Money nature refers to directly and indirectly reduce the price of unit products, etc., while non-money refers to mood relaxation, entertainment and exploration feeling, etc.

In general, monetary promotion of online shopping festival will make consumers have more functional benefits, and non-monetary promotion will bring more hedonic benefits to consumers. At the same time, each characteristic classification of online shopping

festival contains not only one kind of interest, many of them are a collection of two interests, integrating functional benefits and hedonic benefits. Mencarelli and Lombart (2017) held that characteristic classification of online shopping festival needed to consider many interest factors in consumers' perceived value, such as the time saving, convenience, value transfer, pleasure, and exploration. Therefore, they conducted empirical research on the membership discount, coupons return and buying return three characteristic classifications of online shopping festival. The study found that online shopping festival promotion has a significant impact on the shopping perceived value of member consumers, namely discount has the greatest impact on consumers, and with the best comment. When the online shopping festival promotion occurs, since different members enjoy different treatment for different promotion products in online shopping festival, their perceived value is also different, while consumers have the lowest perceived value on coupons return.

This paper studies the influence of online shopping festival on consumers' impulse buying behavior. According to the S-O-R theory, online shopping festival is the stimulating factor, which affects consumers' cognition and emotion. In addition, the perceived value belongs to consumers' cognition and emotion, which is consumers' overall evaluation on products and the whole consumption process in the online shopping festival. It includes the value of consumers' emotion and experience in shopping process, and the balance of obtained benefits and payed costs. From the research conducted by Suparno (2020), it was pointed out that perceived value had an impact on consumers' consumption behavior, that is, the higher the consumers' perceived value,

the stronger the consumers' desire for goods, which made it easier to trigger impulse buying behavior. Therefore, this paper introduces perceived value as a variable to explore the influence of online shopping festival promotion on impulse buying behavior.

It can be known from the above literature that, on the one hand, the online shopping festival promotion activities of e-commerce enterprises will affect consumers' perceived value, and on the other hand, different characteristic classifications of online shopping festival will bring different perceived value to consumers. However, scholars have only studied part of characteristic classifications of online shopping festivals. With the development of online shopping, new characteristic classification of online shopping festival has emerged. On this basis, this paper studies how the e-commerce enterprises influence consumers' perceived value through the characteristic classification of online shopping festival. Moreover, this paper discusses the degree of impact brought about by different characteristic classifications of online shopping festival on perceived value, so as to provide e-commerce enterprises with thoughts in improving customers' perceived value, thus helping them to deal with the increasingly intense market environment. Based on the above research, this paper puts forward the following assumptions:

- H2: Online shopping festival has a significant positive impact on perceived value
- H2a: Marketing stimulation has a significant positive correlation with perceived value
- H2b: Preferential promotion has a significant positive correlation with perceived value
- H2c: Features of consumers have a significant

positive correlation with perceived value

H2d: Freight reduction has a significant positive correlation with perceived value

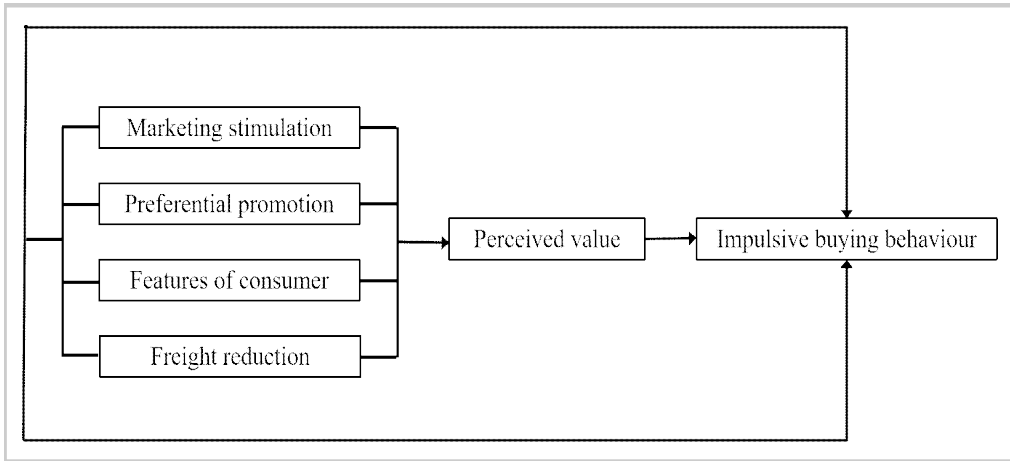
Jeffrey and Hodge (2007) believed that perceived value was linked with impulse consumption, and its process of action is the process that consumers' generate emotion and cognition of commodities. In addition, the external influencing factors will have a stimulating effect on consumers' buying behavior and trigger impulse consumption. When Song and Qu (2019) analyzed the relationship of online shopping impulse consumption, they found that the perceived value had a great impact on the customers' buying decision during the online shopping process. When consumers' desire of buying was stimulated, they would have a strong perceived value, thus creating an impulse to shopping, and finally decided to buy the commodity only after thinking a short time.

From the above literature, it can be concluded that whether in offline shopping environment or online shopping environment, perceived value can significantly affect the impulse buying behavior, the greater the perceived value, the easier it is to trigger impulse buying behavior, and higher perceived value is more likely to induce consumers' shopping impulse. Consequently, this paper discusses whether perceived value has a significant positive impact on consumers' impulse buying behavior in the context of online shopping festivals.

H3: Perceived value has a significant positive correlation with consumers' impulse buying behavior

Mesiranta (2009) held that promotional activities and perceived value complemented each other. Perceived value is attached to the promotional activities, so the contact and use of promotional activities would make consumers feel the value. Fang et al., (2016) had found that when consumer's perceived value was high, enterprises were more likely to stimulate their willingness to consume, thus inducing consumers to have impulse buying behavior. According to the S-O-R theory, consumers present four categories of characteristic classifications under the promotional stimulation of shopping festival launched by the e-commerce enterprises, including marketing stimulation, preferential promotion, features of consumers and freight reduction. Consumers will evaluate the whole consumption process, namely consumers perceived value plays the role. Because in promotion activities consumers not only can save monetary costs, but also can truly feel the utility brought about by product or service itself. At the same time, they can feel the value of emotion and experience during the shopping process, so consumers are more likely to occur consumption impulse at this moment. Through sorting and classifying the literature and based on studies in this paper, it is concluded that the characteristic classification of online shopping festival has a significant positive impact on the impulse buying behavior, what's more, the perceived value plays an role between them. Therefore, this paper studies these four characteristics: marketing stimulation, preferential promotion, features of consumers and freight reduction. Therefore, in this paper, perceived value is taken as the mediating variable between online shopping festival promotion and impulse consumption, so as to study its role between them, and the following

Fig. 1. Research Model



assumptions are put forward:

- H4: Perceived value plays a mediating role between online shopping festival and consumers' impulse buying behavior
- H4a: Perceived value plays a mediating role between marketing stimulation and consumers' impulse buying behavior
- H4b: Perceived value plays a mediating role between preferential promotion and consumers' impulse buying behavior
- H4c: Perceived value plays a mediating role between features of consumers and consumers' impulse buying behavior
- H4d: Perceived value plays a mediating role between freight reduction and consumers' impulse buying behavior.

III. Research Methodology

1. Research Model

In summary, this paper draws on S-O-R theory to investigate online shopping festivals as a stimulus to cause impulsive buying behaviour by influencing consumers' perceived value (The specific model diagram is shown in Figure 1).

2. Questionnaire design

The questionnaire in this study consisted of two parts. The first part is divided into basic information, including gender, age, education background, occupation, living city or region, monthly income, whether there is shopping experience in the online shopping festival, single consumption amount in the online shopping festival, the total annual amount of consumption in online shopping and the types of platforms when participating in the online shopping festival. The second part is the main part, which is mainly used to measure the relevant

variables of this study, including marketing stimulation, preferential promotion, features of consumers, freight reduction, perceived value and impulse buying behavior, and all of the variables involved are measured by using the 5-point scoring method. From 1 point to 5 points.

indicates the different degrees from total disagreement to full consent. The measures of four characteristic classifications, namely marketing stimulation, preferential promotion, features of consumers and freight reduction, are all taken on the mature scales of scholars at home and abroad. Marketing stimulation is selected from Madhavaram (2004) and Dittmar (1995), there are 5 questions in total. Preferential promotion is selected from researches conducted by Chan (1996) and Beatty (1998), there are 6 questions in total. Features of consumers is selected from the study of Russell (1976) and Rook (1987), there are 5 questions in total. Freight reduction is selected from the study of Zeng (2006), with a total number of 3 questions. Perceived value comes from the studies carried out by Holbrook (1999) and Zeithaml (1988), with a total number of 4 questions. Impulse buying behavior is selected from the study of Rook (1987), there are 6 questions in total.

3. Descriptive statistical analysis

This paper mainly distributes the questionnaire in the form of online survey, with the aid of Wenjuanxing website to send the link of questionnaire to WeChat moments, QQ groups, Baidu Tieba., Sina Weibo and other platforms. A total number of 320 questionnaires were distributed and finally returned 302. finally, the number of returned valid questionnaires is 302, with the recovery rate of 94.38%. The reason for

choosing the form of online questionnaire survey is that this form has some advantages that paper questionnaires do not have. On the one hand, the form of online questionnaire is not easy to be disturbed by external factors, and the filling process is not limited by time or space. In addition, it saves a lot of manpower and material resources. On the other hand, when filling in the online questionnaire, the survey objects have subjective initiative, they can choose whether to fill in or not. What's more, when the survey objects decide to fill in the questionnaire, their attitudes are very correct and positive, which can avoid the psychology of filling for coping with the investigator to some extent. Moreover, survey objects can freely choose when and where to fill in, which ensures the reality of answers. In addition, considering the impact of COVID-19, it can ensure the sample size of questionnaire and reduce the face-to-face contact at the same time. To sum up, these are reasons why this study chooses the online questionnaire.

In order to gain a clearer understanding of the structural characteristics of the survey objects, we performed separate statistical analyses on gender, age, education background, consumption in the online shopping festival, and the participating online shopping festival platforms, detailed information are shown in Table 1.

From the basic information data of survey objects, it can be known that men accounts for 39.1% and women for 60.9%, so the gender ratio allocation meets the study requirements of this paper. In terms of age distribution, people aged from 20 to 29 do the most online shopping, with the proportion of 40.4%. Followed by people aged from 30 to 39 and from 40 to 49, with the proportion of 26.5% and 22.9%,

Table 1. Descriptive statistical analysis

Items	Categories	Number of samples	Percentage
Gender	Male	118	39.1
	Female	184	60.9
Age	20–29 years old	122	40.4
	30–39 years old	80	26.5
	40–49 years old	69	22.9
	50–59 years old	28	9.3
	Over 60 years old	3	0.9
Education background	Below specialist qualification	65	21.5
	Specialist qualification	84	27.8
	Bachelor degree	85	28.2
	Master degree	55	18.2
Occupation	Doctor degree	13	4.3
	Student	83	27.5
	Public servant	16	5.3
	Employee in enterprise	116	38.4
	Employee in public institution	58	19.2
Monthly income	non-working people and others	29	9.6
	Less than 3000 yuan	57	18.9
	3000–5000 yuan	98	32.5
	5000–8000 yuan	103	34.1
	8000–10000 yuan	30	9.9
Online consumption experience	More than 10000 yuan	14	4.6
	Yes	287	94.5
Amount in single consumption	No	15	5.5
	Less than 200 yuan	72	23.8
	200–500 yuan	104	34.4
	500–1000 yuan	91	30.1
	1000–2000 yuan	26	8.6
Total consumption in a year	More than 2000 yuan	9	3.1
	Less than 1000 yuan	63	20.9
	1000–2000 yuan	91	30.1
	2000–3000 yuan	69	22.8
	3000–5000 yuan	60	19.9
Shopping platforms	More than 5000 yuan	19	6.3
	Taobao	289	95.7
	Jingdong Mall	245	81.1
	Jumei. Com	79	26.2
	Dangang	68	22.5
	Poison	147	48.7
	Vipshop	79	26.2
Suning	49	16.2	
	Others	39	12.9

respectively. In terms of the data on education background of survey objects, it is shown that people with bachelor degree

accounts for the highest proportion, which is 28.2%. People with specialist qualification accounts for 27.8%, followed by people

below specialist qualification and master degree, accounting for 21.5% and 18.2%, respectively. According to the data of occupational distribution, enterprise employees occupies the highest proportion, with the number of 38.4%, students takes 27.5%, employees of public institutions accounts for 19.2%, besides, the proportion taken by non-working people and others as well as the civil servants are relatively low, with 9.6% and 5.3%, respectively. From the perspective of monthly income of the survey objects, it can be seen that most people's monthly income is concentrated in 3000-5000 yuan and 5000-8000 yuan, accounting for 32.5% and 34.1%, respectively. The second category is people with monthly income of less than 3000 yuan, accounting for 18.9%, people with monthly income of 8000-10000 yuan and more than 10000 yuan is less, accounting for 9.9% and 4.6%, respectively. According to the survey on their online consumption experiences, it is found that 94.5% of them have online consumption experiences.

From the perspective of the amount spent in single consumption in the online shopping festival of survey objects, most consumers are concentrated on 200-500 yuan in a single consumption, accounting for 34.4%, followed by the group with the consumption amount of 500-1,000 yuan, accounting for 30.1%, then less than 200 yuan, accounting for 23.8%. The amount of single consumption accounts for 1,000-2,000 yuan and more than 2,000 yuan take relatively low proportions, with 8.6% and 3.1%, respectively. According to the data of consumers' total consumption in a year, the amount of 1,000-2,000 yuan takes the largest proportion, accounting for 30.1%, followed by people group who spend 2,000-3,000 yuan, accounting for 22.8%, then people groups of less than 1,000 yuan and

3,000-5,000 yuan, accounting for 20.9% and 19.9%, respectively. People who spend more than 5,000 yuan takes the proportion of 6.3%. As for the choice of consumers' online shopping platforms, this questionnaire sets a multiple choice. The results show that most surveyed people choose Taobao, accounting for 95.7%. The proportion for people who use the Jingdong Mall accounts for 81.1%, which is only second to Taobao. The Poison accounts for 48.7%. In addition, 26.2% for Jumei, com, 22.5% for Dangang, 26.2% for Vipshop, 16.2% for Suning, and the left 12.9% for other shopping platforms. The analysis of data mentioned above shows that the basic information of survey objects in this paper is basically in line with the present condition of consumers. Therefore, the data collected in this survey has a certain degree of representativity, authenticity and reliability.

4. Analysis on reliability and validity

The reliability test is used to test whether the data of collected questionnaire is stable and reliable. The Cronbach's Alpha coefficient is usually adopted. As can be seen from Table 2, all of the Cronbach's Alpha coefficients of marketing stimulation, preferential promotion, features of consumers, freight reduction, perceived value and impulse buying behavior are above 0.6, indicating that the scale of this study has high consistency and stability, that is, it has passed the reliability test.

Secondly, in order to test the correctness of things to be measured by the scale, the validity analysis will be performed on the questionnaire data. According to Table 3, the value of KMO is 0.878, and the significant P value of Bartlett sphericity test is 0.000 (less

Table 2. Table of reliability analysis of variables

Variables	Title	If item dropped	Cronbach's Alpha	Cronbach's Alpha
Marketing stimulation	A1		.679	.727
	A2		.683	
	A3		.659	
	A4		.698	
	A5		.683	
Preferential promotion	B1		.748	.781
	B2		.742	
	B3		.751	
	B4		.751	
	B5		.764	
	B6		.753	
	B7		.767	
Features of consumers	C1		.627	.735
	C2		.673	
	C3		.664	
	C4		.656	
	C5		.727	
Freight reduction	D1		.538	.691
	D2		.555	
	D3		.564	
Perceived value	E1		.538	.649
	E2		.555	
	E3		.576	
	E4		.564	
Impulse buying behavior	G1		.562	.656
	G2		.572	
	G3		.536	
	G4		.523	
	G5		.562	
	G6		.573	

than 0.001), so the factor analysis can be performed. Factor analysis is performed by using exploratory principal component extraction, and the Kaiser-normalized orthogonal rotation method. It is required that the load of index in common factor is greater than 0.4, among which factor loading of C4, E3, F2 and F5 is less than 0.4,

Therefore, this study excluded C4, E3, F2 and F5. Besides, the coefficients of factor loading of all variables are greater than 0.4, among which the minimum value of marketing stimulation is 0.438; the minimum value of preferential promotion is 0.464; the minimum value of features of consumers is 0.453; the minimum value of freight reduction is 0.564;

Table 3. KMO and Bartlett tests for measuring variables

KMO and Bartlett tests		
KMO (Kaiser–Meyer–Olkin).		.878
	Approximate chi-square	3277.481
Bartlett sphericity test	Degree of freedom	496
	Significance	.000

Table 4. Factor loadings

	1	2	3	4	5	6
A3	.632	.308	.123	.044	.150	.112
A5	.620	.039	-.147	.034	.342	.196
A1	.580	.207	.294	.229	-.010	.083
A4	.470	.114	.290	.134	.028	.311
A2	.438	.105	.122	.170	.242	.295
B2	.186	.691	.034	.194	-.068	.236
B5	.124	.630	-.028	.092	.069	.071
B1	.232	.611	.244	.117	.106	.109
B4	.031	.568	.244	.020	.427	.078
B3	.220	.551	.116	.229	.319	-.028
B6	-.002	.464	.112	.290	.121	.307
C1	.008	.103	.789	.107	.142	.077
C3	.252	.257	.629	.001	.122	.128
C2	.092	.135	.583	-.092	.208	.340
C5	.274	-.028	.453	.400	.323	.154
D1	.071	.152	.020	.710	.175	.114
D2	.125	.249	.055	.656	.114	.158
D3	.252	.189	-.007	.564	.250	.054
E1	.076	.045	.209	.195	.652	.255
E2	.252	.153	.201	.159	.613	.000
E4	.265	.196	.081	.198	.501	.190
F3	.231	.109	.098	.122	.260	.680
F1	.196	.272	.117	.205	-.011	.608
F4	.177	.078	.258	.043	.265	.447

the minimum value of perceived value is 0.501; the minimum value of impulse buying behavior is 0.447. And all the indexes of factor loading after rotation are above 0.4, which shows that these study variables can be efficiently extracted. Results of the analysis are shown in Table 4.

IV. Results

1. Correlation analysis

This study adopts the Pearson correlation analysis method. According to Table 5, it can be seen that the four characteristic classifications of online shopping festival and

Table 5. Correlation of individual measures

Pearson Correlation									
	S.D	Mean	Preferential promotion	Freight reduction	Perceived value	Impulse buying behavior	Marketing stimulation	Features of consumers	VIF
Preferential promotion	.497	3.710	1						1.829
Freight reduction	.618	3.738	.562**	1					1.550
Perceived value	.591	3.653	.534**	.460**	1				1.000
Impulse buying behavior	.548	3.700	.575**	.429**	.516**	1			-
Marketing stimulation	.495	3.809	.542**	.467**	.523**	.583**	1		1.684
Features of consumers	.606	3.602	.498**	.372**	.505**	.500**	.526**	1	1.521

*p<0.05, ** p<0.01

impulse buying behavior, perceived value, perceived value and impulse buying behavior are significant under 0.01 confidence interval. The correlation coefficients between marketing stimulation, preferential promotion, features of consumers, freight reduction and impulse buying behavior are 0.583, 0.575, 0.500 and 0.429, respectively, and they are significantly correlated at the 0.01 level. The correlation coefficients between marketing stimulation, preferential promotion, features of consumers, freight reduction and perceived value are 0.523, 0.534, 0.505, and 0.460, respectively. And they are significantly correlated at the 0.01 level. The correlation coefficient of perceived value and impulse buying behavior is 0.516, and it is significantly correlated at the 0.01 level. Therefore, this study can construct the structural equation model to perform the next step of regression analysis. Since the correlation coefficient value between variables in Table 5 is generally less than 0.5,

the multicollinearity problem is not very serious.

2. Regression analysis

1) Regression analysis on the four characteristic classifications and impulse buying behavior in online shopping festival

Based on the standard coefficient and Sig value shown in the Table 6, it can be known that significant positive correlation existing between the impulse buying behavior and three characteristic classifications of online shopping festival, namely marketing stimulation, preferential promotion and features of consumers. However, the relationship between freight reduction and impulse buying behavior is not significant. In other words, H1a, H1b, H1c are verified, but H1d is not verified. At the same time, the three characteristic classifications of

Table 6. Regression analysis of the four characteristic categories of online shopping festivals and impulsive buying behaviour

Coefficient ^a		Unstandardized Coefficients		Standardized Coefficients	t	P	95.0% confidence interval for B	
		B	Std. Error	Beta			Lower limit	Upper limit
1	Constant	.463	.207		2.236	.026	.055	.871
	Preferential promotion	.319	.064	.290	5.009	.000	.194	.445
	Freight reduction	.052	.047	.058	1.096	.274	-.041	.145
	Marketing stimulation	.340	.061	.308	5.547	.000	.220	.461
	Features of consumers	.156	.048	.173	3.274	.001	.062	.250

Dependent variable : Impulse buying behavior

marketing stimulation, preferential promotion and features of consumers have different effects on impulse buying behavior. In the above regression analysis, the standardized coefficient of marketing stimulation is 0.308, and that of the preferential promotion, the features of consumers are 0.290, 0.173, respectively. The data results above show that without the influence of external factors and in the characteristic classification of online shopping festival, marketing stimulation is the most influential factor that can cause consumers' impulse buying behaviors during the online shopping festival.

2) Regression analysis on the four characteristic classifications and perceived value in online shopping festival

According to the standard coefficient and Sig value shown in the Table 7, it can be known that significant positive correlation

existing between the impulse buying behavior and four characteristic classifications of online shopping festival, namely marketing stimulation, preferential promotion, features of consumers and freight reduction. In other words, H2a, H2b, H2c, H2d are verified. But the four characteristic classifications of marketing stimulation, preferential promotion, features of consumers and freight reduction have different effects on perceived value. In the above regression analysis, the standardized coefficient of marketing stimulation is 0.213, and that of the preferential promotion, features of consumers and freight reduction are 0.220, 0.227, 0.152, respectively. The results of above data show that without the influence of external factors and in the characteristic classifications of online shopping festival, features of consumers is the most influential factor that can lead to consumers' impulse buying behavior during the online shopping festival.

Table 7. Regression analysis of the four characteristics of the online shopping festival categories and perceived value

Coefficient ^a							
Models	Unstandardized Coefficients		Standardized Coefficients	t	P	95.0% confidence interval for B	
	B	Std. Error	Beta			Lower limit	Upper limit
Constant	.373	.232		1.608	.109	-.084	.830
Preferential promotion	.262	.071	.220	3.668	.000	.121	.403
1 Freight reduction	.145	.053	.152	2.743	.006	.041	.249
Marketing stimulation	.254	.069	.213	3.698	.000	.119	.390
Features of consumers	.221	.053	.227	4.137	.000	.116	.326

Dependent variable : Perceived value

Table 8. Regression analysis of perceived value and impulsive buying behaviour

Coefficient ^a							
Models	Unstandardized Coefficients		Standardized Coefficients	t	P	95.0% confidence interval for B	
	B	Std. Error	Beta			Lower limit	Upper limit
Constant	1.953	.170		11.503	.000	1.619	2.287
1 Perceived value	.478	.046	.516	10.427	.000	.388	.569

Dependent variable : Impulse buying behavior

3) Regression analysis on the perceived value and impulse buying behavior

According to the standard coefficient and Sig value shown in the Table 8, it can be known that significant positive correlation existing between the perceived value and impulse buying behavior. Specifically, it can be seen from the regression analysis data that the standardized coefficient between

perceived value and impulse buying behavior is 0.516, and it is significant when significance level is below 0.01. Hence, the impact of perceived value on impulse buying behavior is positive, that is, the higher the perceived value of consumers, the higher the possibility of impulse buying behavior. Thus demonstrating the H3 hypothesis that perceived value has a significant positive correlation on impulse buying behavior.

Table 9. Total effects, direct effects, and mediating effects of perceived value, marketing stimulation, and impulse buying behavior

	Effect value	Boot SE standard error	Boot LLCI lower limit	Boot ULCI upper limit	Proportion of effect
Total effect	0.6337	0.0521	0.5313	0.7362	
Direct effect	0.4619	0.0588	0.3462	0.5776	72.89%
Mediating effect of perceived value	0.1718	0.0363	0.1035	0.2448	27.11%

4) Analysis on the meditating role of perceived value

In this paper, self-sampling was conducted through Bootstrap and carried out the study by using the Process program added to the SPSS24.0 statistical analysis software system, selecting Model4 and setting the perceived value as the meditating variable, so as to tests the impact of marketing stimulation, preferential promotion, features of consumers and freight reduction on impulse buying behavior. The regression study of specific meditating effect is analyzed as follows: First, regression analysis on perceived value plays an role between marketing stimulation and impulse buying behavior. By using the Bootstrap self-service sampling method, the values of upper limit and lower limit obtained in direct effect of marketing stimulation on impulse buying behavior as well as the mediating effect of perceived value in 95% confidence interval do not contain 0, and all values are greater than 0, as shown in Table 9. Marketing stimulation can not only directly affect consumers' impulse buying behavior, but also further affect consumers' impulse buying behavior with the help of the role of perceived value. The direct effect of marketing stimulation is 0.4619, accounting for 72.89%, and the

mediating effect of perceived value is 0.1718, accounting for 27.11%. From the above values, we can see that perceived value plays an role between marketing stimulation and impulse buying behavior. Because the setting of the risk scale assigns negative value, the obtained mediating effect is positive, but in fact it is negative. Consequently, it is verified that perceived value plays a partial positive role between marketing stimulation and impulse buying behavior, so the hypothesis H4a is valid.

Second, regression analysis on perceived value plays an role between preferential promotion and impulse buying behavior. By using the Bootstrap self-service sampling method, the values of upper limit and lower limit obtained in direct effect of preferential promotion on impulse buying behavior as well as the mediating effect of perceived value in 95% confidence interval do not contain 0, and all values are greater than 0, as shown in Table 10. Preferential promotion can not only directly affect the impulse buying behavior of consumers, but also further affect the impulse buying behavior of consumers with the help of the role of perceived value. The direct effect of preferential promotion is 0.4764, accounting for 73.92%, and the mediating effect of perceived value is 0.1681, accounting for

Table 10. Total, direct and mediated effects of perceived value, Preferential promotion and impulsive buying behaviour

	Effect value	Boot SE standard error	Boot LLCI lower limit	Boot ULCI upper limit	Proportion of effect
Total effect	0.6445	0.0519	0.5424	0.7467	
Direct effect	0.4764	0.0581	0.3621	0.5908	73.92%
Mediating effect of perceived value	0.1681	0.0364	0.1013	0.241	26.08%

Table 11. Total, direct and mediating effects of perceived value, Features of consumers and impulsive buying behaviour

	Effect value	Boot SE standard error	Boot LLCI lower limit	Boot ULCI upper limit	Proportion of effect
Total effect	0.4526	0.0452	0.3636	0.5416	
Direct effect	0.2913	0.0491	0.1947	0.388	64.36%
Mediating effect of perceived value	0.1613	0.0304	0.1063	0.2247	35.64%

26.08%. From the above values, we can see that perceived value plays an role between preferential promotion and impulse buying behavior. Because the setting of the risk scale assigns negative value, the obtained mediating effect is positive, but in fact it is negative. Consequently, it is verified that perceived value plays a partial positive role between preferential promotion and impulse buying behavior, so the hypothesis H4b is valid.

Third, regression analysis on perceived value plays an role between features of consumers and impulse buying behavior. By using the Bootstrap self-service sampling method, the values of upper limit and lower limit obtained in direct effect of features of consumers on impulse buying behavior as well as the mediating effect of perceived value in 95% confidence interval do not contain 0, and all values are greater than 0,

as shown in Table 11. Features of consumers can not only directly affect the impulse buying behavior of consumers, but also further affect the impulse buying behavior of consumers with the help of the role of perceived value. The direct effect of features of consumers is 0.2913, accounting for 64.36%, and the mediating effect of perceived value is 0.1613, accounting for 35.64%. From the above values, we can see that perceived value plays an role between features of consumers and impulse buying behavior. Because the setting of the risk scale assigns negative value, the obtained mediating effect is positive, but in fact it is negative. Consequently, it is verified that perceived value plays a partial positive role between features of consumers and impulse buying behavior, so the hypothesis H4c is valid.

Fourth, regression analysis on perceived

value plays an role between freight reduction and impulse buying behavior. As can be seen from the previous contents, the direct effect test of freight reduction on impulse buying behavior is not significant. According to the effect test process, the variable that does not meet relevant conditions will no longer do regression analysis of effect. It is directly concluded that perceived value does not play an role between freight reduction and impulse buying behavior, so the hypothesis H4d is not valid.

V. Conclusions and Implications

1. Conclusions

This study takes S-O-R as the theoretical basis to explore the impact of four characteristic classifications of online shopping festival on Chinese consumers' impulse buying behavior. The study results are discussed below.

First, we carried out an analysis on the impact of four characteristic classifications of online shopping festival on the impulse buying behavior. According to the data analysis about the impact carried by four characteristic classifications of online shopping festival, namely marketing stimulation, preferential promotion, features of consumers and freight reduction, on impulse buying behavior, it can be known that hypotheses H1a, H1b, H1c are established. However, the hypothesis H1d is not established, that is, marketing stimulation, preferential promotion, and features of consumers have significant positive impact on impulse buying behavior, and freight reduction has no significant impact on impulse buying behavior.

At the same time, the effects brought

about by three characteristic classifications of marketing stimulation, preferential promotion and features of consumers are different. From the standardized coefficient of regression analysis, we can see that the influencing extent on impulse buying behavior is marketing stimulation, preferential promotion and features of consumers. Three characteristic classifications of marketing stimulation, preferential promotion and features of consumers may lead to consumers' impulse buying behavior. Because these three characteristic classifications adopted by the e-commerce enterprises during online shopping festival will make consumers feel that they have gotten more preferential treatment than usual, which will make them have a sense of value satisfaction. At the same time, as the online shopping festival has characteristics of entertainment and fashion, consumers often immerse in the atmosphere of online shopping festival, so they do not want to miss this special festival, that is, they tend to do impulse buying behavior under the stimulation of characteristic classifications of online shopping festival. But the three characteristic classifications do not have the same degree of impact on impulse buying behavior, among which the marketing stimulation has the greatest influence.

In recent years, e-commerce enterprises launch a variety of marketing means continuously for attracting consumers to purchase. The appearance design of products, creating a rush buying atmosphere and emphasizing the brand performance are new stimulating ways in online shopping festivals nowadays. During the online shopping festival, all major e-commerce companies will show their products to consumers through their own sales platforms, and consumers shall buy some goods within

the time period stipulated in the online shopping festival. It is undeniable that when consumers buy commodities, they pay more attention to the factors such as appearance design and brand performance of the products (Monfared et al., 2020). In other words, for products with the same quality, the more fashionable the design is, the more they will be stimulated for buying impulse, and for products with the same price, the better the brand performance, the more they will have the desire to buy. At the same time, the form of preferential promotion is also very popular among consumers. So far, several main preferential promotion methods adopted by the e-commerce enterprises during online shopping festivals include red packets or shopping coupons, reduction with a certain amount, buy one and get one free, etc.

In other words, during the online shopping festival, consumers can experience the satisfaction in heart when they snatch up the red packets or coupons, which meets their emotional needs of fashion, entertainment and knowledge. With the stimulation of this process, consumers will have the desire to buy, so it is most likely to produce impulse buying behavior. Compared with the marketing stimulation and preferential promotion, although features of consumers have a direct effect on consumers' buying behavior, the impact brought about by features of consumers on consumers' impulse buying behavior is weaker than that of the marketing stimulation in accordance with data analysis conducted in this paper. In fact, with the introduction of the psychological concept, the endogenous factor of consumer characteristics has attracted wide attention from scholars. Consumers' values, impulsive personalities and the pleasure generated during the buying process will all affect consumers' unplanned willingness to buy

during the online shopping festival (Zhao et al., 2019).

Second, we conducted an analysis on the impact of four characteristic classifications of online shopping festival on the perceived value. According to the data analysis about the impact carried by four characteristic classifications of online shopping festival, namely marketing stimulation, preferential promotion, features of consumers and freight reduction, on perceived value, it can be known that hypotheses H2a, H2b, H2c and H2d are established. In other words, marketing stimulation, preferential promotion, features of consumers and freight reduction have significant positive impact on perceived value. But the effects brought about by these characteristic classifications of marketing stimulation, preferential promotion, features of consumers and freight reduction are different, among which the influencing extent is features of consumers, preferential promotion, marketing stimulation and freight reduction. During the promotion period of the online shopping festival, features of consumers, preferential promotion, marketing stimulation and freight reduction can all affect consumers' perceived value. E-commerce enterprises use different forms to provide delivered value to consumers during the online shopping festival, so that they get more psychological satisfaction, the actual utility brought to consumers by the reduction of commodity prices compared with other periods is a kind of rational value. At the same time, the process utility brought by characteristic classifications of online shopping festival to consumers is a perceptual value (Wang et al., 2019). Because the perceived value of consumers is derived from psychology, the four characteristic classifications of marketing stimulation, preferential promotion, features

of consumers and freight reduction perform different mechanisms as for consumers. Preferential promotion and freight reduction are active means, while marketing stimulation and features of consumers are passive ways. Preferential promotion and freight reduction have strong initiative and controllability, only the qualification is required, consumers generally have a sense of satisfaction and enjoyment (Mohamud, 2018).

Third, we carried out an analysis on the impact of perceived value on consumers' impulse buying behavior. According to the data analysis about the impact carried by perceived value on consumers' impulse buying behavior, it is known that H3 is established, that is, perceived value has significant positive effect on consumers' impulse buying behavior. Peng et al., (2019) have concluded that, during the online shopping festival, on the one hand, consumers feel the real value of goods because of discounted prices, on the other hand, consumers feel the experience value during consumption process, but no matter what kind of value, it is a psychological trade-off between what consumers give and what they get. The greater the perceived value, the more likely they are to have impulse buying behavior. As a matter of fact, consumers will always proceed from the rational and actual value of goods as well as the perceptual shopping experience, so as to realize the evaluation on perceived value according to the actual value of products and the feeling of purchase. The higher the perceived value, the easier it is to stimulate consumers to have a buying impulse (Lim, 2015).

Fourth, we conducted an analysis on the role of perceived value. According to the data analysis of the role of perceived value in four characteristic classifications of online

shopping festival, namely marketing stimulation, preferential promotion, features of consumers and freight reduction, on consumers' impulse buying behavior, it is found that H4a, H4b and H4c are established. In other words, perceived value plays an role in the influence of marketing stimulation, preferential promotion and features of consumers on their impulse buying. It shows that due to the transmission of perceived value and under the stimulation of online shopping festival's promotion, consumers' impulse to buy are triggered. In other words, the three characteristic classifications of marketing stimulation, preferential promotion and features of consumers will cause impulse buying behavior because of the high value perceived by consumers. Because the characteristic classification of freight reduction is not established in the direct effect test, and it does not meet the condition in the effect test, so the effect test is no longer carried out, and directly concluding that perceived value does not play the role between freight reduction and consumers' impulse buying behavior, that is, H4d is not established. All in all, e-commerce enterprises should pay more attention to improving the perceived value of consumers, thus finding the meeting point between characteristic classifications and consumers' impulse buying desire, so as to give play to the greatest value of building the online shopping festival.

2. Implications

From the research results of this paper, it can be known that due to different effects brought about by the four characteristic classifications of online shopping festival on consumers' impulse buying behavior, so e-commerce enterprises need to give the

greatest practical and psychological delivered value to consumers during the online shopping festival. In addition, as for the e-commerce enterprises, due to the improvement of consumers' perceived value, they are more likely to produce impulse buying behavior, so as to achieve the maximum utility of online shopping festival. Therefore, according to these considerations, combined with the literature reference and data analysis results of this paper, some implications on the e-commerce enterprises are put forward as follows:

First, we can use various marketing methods flexibly. According to the research on four characteristic classifications of online shopping festival, namely marketing stimulation, preferential promotion, features of consumers and freight reduction, it is concluded that marketing stimulation, preferential promotion, features of consumers and freight reduction will cause consumers to produce impulse buying behavior, so e-commerce enterprises should pay special attention to the impact of shopping festivals. Since in these special days, the promotion activities held by e-commerce enterprises can stimulate consumers impulse buying activities to a great extent, so e-commerce enterprises should grasp the short-term effect brought about by online shopping festival and make use of the limited time to obtain more profits.

Ryu (2019) believed that diversified marketing methods, on the one hand, can truly save monetary costs for consumers and help them get more returns. On the other hand, with the popularity of online shopping, consumers do not interest in the usual marketing methods, and they are more eager for e-commerce to launch a mode with entertainment and stimulation. Therefore, e-commerce enterprises should pay attention

to the diversification of marketing forms during the annual online shopping festival, to consider various factors that influence consumers' buying behaviors comprehensively, and give play to the effect that each influencing factor should achieve. Only in this way, they can stimulate consumers' desire to buy as much as possible, and then encouraging consumers to produce impulse buying behavior.

Second, we need to pay attention to improving the perceived value of consumers. According to the study carried out in this paper, e-commerce enterprises launch a variety of marketing methods during the online shopping festival, thus producing purchase stimulation, so as to promote consumers' buying impulse. In this process, perceived value plays an important role, so e-commerce enterprise takes various marketing methods during the online shopping festival, especially paying attention to improving the perceived value of consumers. The first one is marketing stimulation, which is mainly to make consumers have an impulse not to miss the activity, such as the panic buying at zero o'clock held by Tmall in the "Double 11" online shopping festival, flash sale held by Jingdong Mall in the "618" online shopping festival, etc., all of them inspire consumers' shopping enthusiasm.

Therefore, e-commerce enterprises can adopt more atmosphere-building strategies that can trigger consumers' enthusiasm during the online shopping festival. In one respect, this action will bring consumers an intuitive sense of really obtaining profits. On the other side, it will give consumers a strong psychological satisfaction, so that letting consumers have the impulse to go shopping. The second one is preferential promotion. Song and Qu (2019) believed that

e-commerce enterprises need to adopt strategies such as distributing red packets or shopping coupons at specific time points in the online shopping festival, which can not only let consumers enjoy practical value, but also let them experience entertainment value, thus triggering impulse buying behavior. Furthermore, when adopting the preferential promotion methods, the e-commerce enterprises should also pay attention to the time and mode of distribution. In terms of the releasing time, because the shopping festival has short-term effect, which generally lasts for one to two days, so it should be noticed that the releasing time needs be set in advance. The suitable time node is before one week of the online shopping festival, so as to let consumers better prepare for shopping. Putting the products into the shopping cart means to let consumers have psychological preparation ahead of time. At the same time, for customers who have gotten red packets or shopping coupons and other preferential benefits, e-commerce enterprises should do a good job of reminder service, so that consumers will gain a sense of respect, thus improving the perceived value. As for the releasing modes of preferential promotion, e-commerce enterprises can use diversified ways, for example, cooperating with other enterprises, service providers, social platforms, including browsing for giving, download issuance or points redemption etc. in this way, consumers can focus on the online shopping festival launched by e-commerce enterprises based on the understanding of other platforms' advertising and information.

The limitations are as follows. First, there is limitation in groups of questionnaire,

because this paper only investigates the consumer groups from Shanghai city, Jiangsu province and Zhejiang province in China through the network questionnaire survey, so the results can not represent all online consumers. In the future research, the number of samples can be increased through expanding the scope of survey objects, making the study on consumers' impulse buying behavior more comprehensive and specific. Second, the perceived value is not divided from different dimensions. Although it is verified that perceived value plays an role in online shopping festival and consumers' impulse buying behavior, there is no division of the specific dimensions of perceived value. Later researches can analyze the effect of specific dimensions when verify the effect of online shopping festival and consumers' impulse buying behavior. Third, there are many factors affecting impulse buying behavior, and this paper only studies the impact of marketing stimulation, preferential promotion, features of consumers and freight reduction. Future research can add other factors to study the impact of online shopping festival on consumers' impulse buying behavior, such as advertising, sales atmosphere and other factors can also be discussed in detail, so as to explore how internal factors influence consumers' impulse buying behavior. In addition, to analyze the effect's degree of these factors on consumers' impulse buying behavior. Finally, due to ability constraints and limited research resources, the follow-up research of this paper hopes that more experts and scholars can explore together, and to improve the contents about consumers' impulse buying behavior.

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