



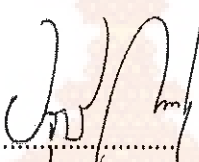
**IMPACT OF CONSUMER EMOTION'S ON CONSUMER
BEHAVIOR DURING THE DOUBLE ELEVEN ONLINE
SHOPPING FESTIVALS**

MR. HU SHOULIN

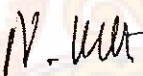
**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
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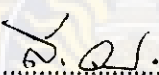
Independent Study	IMPACT OF CONSUMER EMOTION'S ON CONSUMER BEHAVIOR DURING THE DOUBLE ELEVEN ONLINE SHOPPING FESTIVALS
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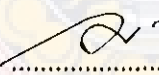
International College, Rajamangala University of Technology Krungthep approved this independent study as partial fulfillment of the requirements for the degree of Master of Business Administration


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ABSTRACT

As online shopping becomes prevalent, many e-commerce platforms have actively created the concept of online shopping festivals for marketing. However, scholars have little research on the online shopping situations created by large-scale activities such as online shopping festivals, and little attention has been paid to the influence of consumer sentiment and consumption behavior.

This paper selects some characteristics of online shopping festivals to study the impact of these characteristics on consumer sentiment. We find that urgency has the most significant impact on consumer behavior, followed by pleasure, and arousal has less impact on consumer behavior.

Based on the SOR model, this paper takes the characteristics of online shopping festivals as S, selects pleasure, arousal, and urgency as the state of the body, and takes consumer behavior as R, using the PLS-SEM model to measure the relationship between the characteristics of online shopping festivals and consumer emotions. Relationship between them, and find the strength of the correlation between them. We can know that: 1.the influence on consumer behavior is urgency, followed by pleasure and arousal with a minor influence. 2.the independent variable that attracts consumers the most is price discount, followed by convenience and festival atmosphere, and the least influential one is social interaction. 3.the most attractive path to consumer behavior is stimulating consumer urgency through a festival atmosphere.

Keywords: online shopping festival, pleasure, arousal, urgency, consumer behavior

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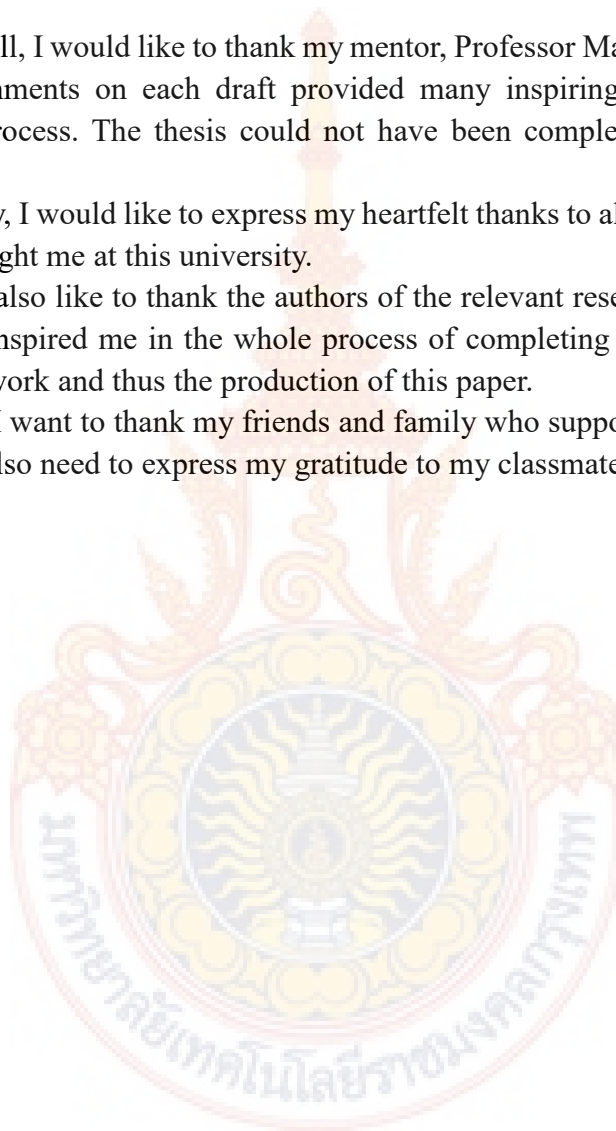


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CHAPTER 1

INTRODUCTION

1.1 Background and Rationale

With the continuous improvement of Internet infrastructure and continuous penetration of Internet services, the number of Internet users has maintained steady growth, and online shopping has become an indispensable part of people's lives. In order to continuously obtain traffic and users in the ultra-large-scale online consumer market and further increase sales, major e-commerce platforms have launched unique marketing methods, and online shopping festival activities have emerged as the times require.

An online shopping festival refers to a marketing activity in which merchants comprehensively use various stimulus factors to promote large-scale merchandise in a specific context to actively attract consumers to participate in shopping. Today, the online shopping festival has become an indispensable marketing activity for major e-commerce websites. Moreover, because there are many regional differences and different companies, one can now find different online shopping festivals every month. Examples are the "birthday promotion" of Lazada, the "4.4" shopping festival of Shopee, the "6.18" shopping festival of JD.com, and the overseas shopping festival of Amazon on November 28. Due to the convenience of online shopping, cross-regional competition is rampant, resulting in online shopping festivals with different sources almost every month.

Among the many online shopping festivals, the first one that appeared was "Cyber Monday" in 2005. This term refers to the Monday of the first week after Thanksgiving in the United States. People who have ended Thanksgiving Day return to work and often shop through office computers. On this day, online retail sales have reached the U.S. sales area for one year. As a result, the highest value is called Cyber Monday. Therefore, in the United States, e-commerce companies also regard the online emperor's day as an important day and have launched significant discounts, free shipping, and other preferential promotional methods to attract consumers.

Among the many online shopping festivals, the most influential with the highest sales is "Double Eleven," which refers to November 11 each year. As early as 1993, several students from Nanjing University were discussing how to be single, and they came up with the idea of the upcoming November 11 (because there are four Arabic numerals "1" in the date of this day, the number 1 symbolizes "Single") organize activities as "Singles' Day". Since then, Singles' Day has gradually developed into a campus fun culture in Nanjing universities and even universities worldwide. With groups of students bidding farewell to campuses, this festival has been gradually brought into society. Moreover, Singles' Day has become famous through social and online media. Since then, it has become an unofficial, non-traditional, and informal

entertainment festival famous in China.

Alibaba's shopping website Taobao Mall created the "Double Eleven" shopping festival in 2009, using the famous "Singles Day" among young people. This shopping festival quickly attracted the attention of young consumers, and its room for growth is impressive.

Table 1.1 Alibaba's sales over the years

Year	Sales (millions of RMB)	Change
2009	52	n/a
2010	936	+1700.00%
2011	5200	+455.56%
2012	19100	+267.31%
2013	35019	+83.35%
2014	57100	+63.05%
2015	91200	+59.72%
2016	120700	+32.35%
2017	168700	+39.77%
2018	213500	+26.56%
2019	268400	+25.71%
2020	498200	+85.62%
2021	540300	+8.45%

Source: The data comes from the Alibaba company report, it is collected and generalized by the author of this article

The popularity of the online shopping festival is reflected in the transaction amount and drives the development of the express delivery industry. The following is the number of express deliveries during the Double Eleven Shopping Festival (November 11 to November 16):

Table 1.2 The number of express deliveries during the double eleven

Year	Number of Packages (millions)	Change
2013	156	n/a
2014	278	78.21%
2015	467	67.99%
2016	657	40.69%
2017	812	23.59%
2018	1042	28.33%
2019	1292	23.99%
2020	2321	79.64%
2021	2935	26.45%

Source: The State Post Bureau of China, it is collected and generalized by the author of this article

This picture shows the goods for delivery at the shopping festival.



Source: Pictures from news reports,

https://photo.gmw.cn/2020-11/12/content_34361898.htm

From the above data, it can be seen that the online shopping festival has exploded with solid vitality. On the one hand, it satisfies the needs of e-commerce companies for large-scale centralized sales and rapid increases in turnover. On the other hand, it also meets the needs of consumers in the online shopping festival -- material, emotional and psychological needs. The initial development model of the online shopping festival was straightforward. Merchants engage in price wars and manipulate users' buying behavior. In this festival promotion model, e-commerce companies used excessive price levers, and customers shop on the entire network. However, the vertical development process of participation behavior in the festival has been neglected. Today's online shopping festival is no longer a simple shopping but also includes interactive behavior content, all of which are in line with the changes in users' shopping needs. Therefore, this article's research on the process of consumer participation in online shopping festivals will enable e-commerce companies to deepen their overall understanding of the specific interactions among consumer participation motivation, participation behavior, evaluation cognition, and future participation intentions in online shopping festivals. In this way, it can further deepen the understanding of the strategy of promotional activities and consumer behavior patterns during the shopping festival and improve the sales profits of e-commerce companies during the online shopping festival.

1.2 The Statement of the Research Problem

Today, the competition in the online shopping market is becoming more and more fierce, and more and more e-commerce companies are emerging and innovating, allowing consumers to have many choices. Online shopping festivals such as Double Eleven, Double 12, and JD.com's 618 are constantly being launched by e-commerce. Research shows that online shopping festivals combine the specific characteristics of online shopping and the festive atmosphere. Compared with online shopping, it also shows its uniqueness. This also challenges e-commerce enterprises to continue developing online shopping festivals to a certain extent. This paper takes the Online Shopping festival of Singles' Day as an example, focusing on consumers' participation behavior and decision-making process during the festival.

This paper can help e-commerce enterprises to understand the critical factors of consumers' participation in online shopping festivals and find the most effective way to stimulate consumers' emotions.

1.3 The Objectives of the Research Study

The research objectives of this paper include:

1. To understand the behavior of consumers during the online shopping festival;
2. To determine the key factors that impact consumer behavior;
3. To find the key emotions that impact consumer behavior;
4. To find the critical path to impact on consumer behavior.

1.4 The Research Hypothesis

1.4.1 Independent variables factors

This study uses price discount, holiday atmosphere, social interaction, and convenience as independent variables and makes the following hypothesis:

H1: Independent variables have a positive impact on consumer emotions.

1.4.2 Emotions and consumer behavior

H2: Consumer emotions have a positive impact on consumer behavior.

1.4.3 The mediating effect of consumer emotions

H3: Consumer emotions have a mediating effect on the influence of independent variables on consumer behavior.

1.5 The Benefits of the Study

Based on the theoretical research on the behavior of current consumers in participating in online shopping festivals, this paper chooses to start from the level of motivation theory and deeply study the behavioral decision-making process of online shopping festival consumers. This paper mainly studies consumers' emotions and behaviors and discusses the relationship between the two. It supplements the theoretical defects existing in the research on consumer behavior of online shopping festivals and

provides valuable research for many parties involved in shopping festivals.

Specifically, this article can help with:

1. Consumers: Consumers examine the critical factors of the entire consumption behavior and provide a reference for consumers to consume reasonably;
2. Sellers: Sellers understand the focus of consumers and optimize products and sales behavior;
3. E-commerce platform: Through the research on consumer behavior, let the platform find a more effective path to optimize the sales platform;
4. Researcher: At present, there are few specialized researchers on online shopping festivals, perfecting this research gap;
5. Future research: Provide a practical reference for online shopping festivals and consumer path research.

1.6 The Scope of the Study

The main research scope of this paper is as follows:

1. The main research object of this paper is the consumers who participated in the Double Eleven Shopping Festival;
2. The primary influence of the Double Eleven Shopping Festival is in China, so the research object of this paper is mainly in China;
3. Double Eleven is an informal festival popular among college students, so the research objects are mainly composed of young people with a bachelor's degree or above.

1.7 The Limitation of the Research

This article proposes a decision-making process model that studies consumer motivation, behavior, evaluation cognition, and willingness to participate in online shopping festivals. However, since online shopping groups are mainly young people, it may not be enough to cover all consumer groups.

The sample studied in this article is affected by the network coverage, which may cause the sample to be concentrated in regions, especially in major cities in China. If researchers in other regions need to refer to it, please pay attention to the impact of other cultural differences on consumers.

This paper mainly studies the motivation, behavior, and effect of consumers in the online shopping festival and makes a detailed classification and analysis of the variables in each process. However, this article does not cover the participation of merchants. The research on all the objects of the online shopping festival is mainly limited to analyzing the perspective of the consumer's behavior process.

1.8 Further Research

First, this research reveals the relationship between the atmosphere of online shopping festivals and consumer behavior, expands the scope of research on purchase intentions, and enriches research theories on online buying behavior. Based on

summarizing previous studies, this research introduces the shopping process, analyzes the nodes in consumers' shopping process, explores the internal mechanism of consumer online purchase intentions, and expands the theory of online purchases.

Second, this study is based on the SOR framework and studies the mechanism of environmental stimuli that ultimately affect purchase intentions through the body. However, different from the general application based on the SOR model, they mainly consider the impact of environmental stimuli on positive emotions. Therefore, this article focuses on the impact of environmental stimuli on positive emotions. In addition to the influence of positive emotions (pleasure and arousal), this paper also discusses the relationship between emotion and purchase intention from the perspective of negative emotion (urgency).



CHAPTER 2

RELATED DOCUMENTS AND RESEARCH

2.1 Definition of Terms

2.1.1 Consumer emotion

Emotion is the subjective state of an individual's emotional response to the object stimulus encountered. It has an evident and systematic influence on the individual's psychological process and behavior. A potential internal stimulus triggers purchase (Sherman, E., Mathur, A., & Smith, R.B.1997). Environmental stimuli will trigger a series of perceptual, psychological, and thinking activities and lead to emotional and perceptual changes in consumers. The consumer's emotional state is consumption emotion, which is relatively essential in retail research. Many scholars regard consumption emotion as an intermediate variable and believe that the emotional response caused by the store environment is an essential determinant of consumption. It can be seen that consumption emotion is a kind of reaction and explanation of an individual to the external environment, which originates from spontaneous introspective perception and physical conditioned reflex, and thus forms of behavior. The subjective feelings of emotions refer to the feelings such as sadness and happiness that an individual generates after being stimulated by external environmental factors. When the individual's needs are met, it will produce positive emotions. On the contrary, the emotions produced are negative.

2.1.2 Dimensions of consumer sentiment

Existing Emotion studies mostly agree with Russell et al.'s (1980) dichotomy of consumer emotions, which divides emotions into two dimensions: pleasant emotions and arousal emotions (Wu Jinfeng, Chang Yaping, Pan Huiming,2014; Floh and Madlberger, 2013; Liu Yang, Li Qi, Yin Meng,2018). Watson and Tellegen (1985) adopt self-reporting emotions. The research method proposed a ring model similar to Russell et al. (1980): the positive-negative emotion model.

In the context of online shopping festivals and emotions such as pleasure and arousal, which will affect consumer behavior, emotions such as urgency, anxiety, and burnout under time pressure will also affect their behavior. In addition to positive emotions in the online environment, negative emotions can also impact consumer behavior (Zhang Chubing, Wang Xuyan, Li Dongjin. 2017). Therefore, this article summarizes the consumer emotions studied into three dimensions: pleasure, arousal, and urgency. Pleasure and arousal are positive emotions, and urgency is a negative emotion. The sense of pleasure refers to the degree to which consumers feel happy and satisfied in the atmosphere of the online shopping festival. The sense of arousal refers to the degree to which consumers feel excited and stimulated in the atmosphere of the

online shopping festival; the sense of urgency refers to the degree to which consumers feel happy and satisfied in the atmosphere of the online shopping festival. Finally, there is a degree of eagerness, upset, and impatience in the shopping festival atmosphere.

2.1.3 Concept definition of online shopping festival

Shopping promotion activities are an essential part of marketing activities. However, when companies maintain existing consumers or introduce new products into the market, they often use different incentives to attract consumers and change their buying behavior (Yin Chen. 2013).

The researcher found many articles on the general characteristics of promotions, but there are not many types of research on holiday promotions and consumer behavior focusing on online shopping festivals. Scholar Han Jun (2014) proposed that online shopping festivals refer to marketing in which merchants provide one or several short-term incentives to stimulate target consumers to produce immediate or intense buying behavior responses under a specific festival background. Activity during shopping festivals in the retail industry, such as Christmas, due to the high consumer demand and the great promotion efforts of merchants, the activity strategies of the shopping festival often play a vital role in promoting sales. According to statistics, sales during the winter festival promotion period account for 25-40% of total annual retail sales in the United States. Due to the rapid development of the Internet, shopping activities characterized by the Internet have also developed rapidly.

Ni Jiangwei (2010) pointed out that network promotion uses various e-commerce companies through research on network marketing strategies. A collection of various activities that stimulate consumer demand through marketing methods, thereby triggering consumer buying behavior.

Through the study of online promotion, scholars have carefully defined the definition of an online shopping festival. For example, Zhang Xiang (2006) believes that the concept of online festival shopping and promotion, online festival sales refer to the leading e-commerce in a certain period. Furthermore, the combination of online culture and promotion methods to stimulate consumer buying behavior of marketing activities also believes that online festival sales consumers' psychological and emotional needs in holiday promotions should also receive more attention.

Wang Yang (2013) pointed out two reasons for the emergence of online shopping festivals through research on the development of online festival promotions: on the one hand, the rapid development of Internet users requires e-commerce companies to carry out large-scale promotional activities to increase sales urgently; On the other hand, because online shopping festival promotions cater to consumers, especially young people's emotional needs for fashion and entertainment.

The documents mentioned above have made a basic definition of online shopping festivals to some extent or particular. It can be seen that online shopping festivals are the extensive use of various stimuli for e-commerce companies in the specific context of online festivals. Factors encourage consumers to actively participate in a marketing

activity that purchases goods or services in large quantities.

2.1.4 Mode characteristics of online shopping festival

In the research field of online shopping festivals, scholars have also begun to study the characteristics of its model. Compared with traditional shopping promotions, online shopping festivals also have unique features. For example, scholar Liu Shu (2011) researched and analyzed the online shopping promotion festivals and traditional promotion methods from three aspects: (1) The difference between space and time: in space, the online shopping festivals broke the geographical restrictions, and the coverage expanded to the world. Online promotions can be carried out 24 hours a day in terms of time. (2) Information exchange and communication methods: two-way communication and negotiation can be conducted for online shopping festival promotions, and transactions can be concluded without a meeting. (3) Consumer groups and behaviors: online festival promotions are mainly for the online public with a wide consumption range.

Liu Liying (2011), taking the Double Eleven shopping festival as an example, summarizes the characteristics of the network shopping festival model: (1) The discounts are relatively substantial. For example, on Double Eleven, many merchants launched activities such as 50% off, free shipping, limited-time purchases, red envelopes, cashback coupons, and other activities. This is also the primary motivation for consumers to participate in online promotional activities. (2) Promotional activities involve a large scale. For example, during the Double Eleven Shopping Festival, merchants do not carry out promotional activities for some products. However, they are a large-scale and wide-covered promotional activity on many online platforms. Therefore, during the shopping festival, consumers can always find the goods they need. (3) The early stage of publicity is decisive. One month before Double Eleven, e-commerce companies invested a lot of material and financial resources in advertising, which made the consumption concept of Double Eleven deeply rooted in the hearts of the people.

2.2 Literature Review

2.2.1 Research on the theory of consumer behavior process

In the related research on the acceptance model of classical technology, there is an obvious flaw in the research on the relationship between user intention and behavior. Its main theoretical models (TAM, TRA, and TPB) regard behavior as the ultimate research goal. However, the user's decision-making can be studied as a dynamic and variable behavior process. Bagozzi and Gopinath (1999) believe that the relationship between intention and behavior should be constructed as a process inspired by goals and motivations. Bagozzi (2007) also believes that the construction of this process model will also make up for the research deficiencies between intention, behavior, and goal acquisition. It is also essential for the successful adoption and use of technology.

At present, scholars have also paid specific attention to and researched the process of consumer shopping behavior. According to literature research on consumer decision-making, consumer behavior in purchasing decision-making includes a multi-stage decision-making process. The main stages of consumer online shopping decision-making include demand cognition, information search, comparative evaluation, and purchase and post-purchase stages (Karimi, S., Papamichail, K. N., & Holland, C. P. 2015). For example, HSU et al. (2006) uses a two-stage model to explore the dynamic changes of variable factors from the pre-use stage to the use stage and analyzes the impact of this change on consumers' future online shopping intentions.

Holtzman (1989) proposed a commonly used three-stage model in related research on the decision-making process, including willingness formation, evaluation decision, and post-decision evaluation. This model has also been further enriched and applied in research. For example, to further reveal the relationship between consumer participation in e-WOM writing and future purchase intentions, Yoo, C. W., Sanders, G. L., & Moon, J. (2013) constructed a process model to enhance online shopping loyalty. Starting from the consumer's participation motivation factors, it analyzes its impact on specific behaviors, perceptions, and future behavior willingness during the participation process. In addition, to analyze in-depth the factors that affect online shopping behavior and the subsequent results that it triggers, Lim (2015) proposed a complete model of the consumer online shopping behavior process. Furthermore, the study expanded the influence of online shopping consumer intentions and attitudes, attitudes to online shopping willingness, and a comprehensive study on the influence of actual online purchase results on future purchase behavior and trust.

However, neither the consumer's preparation for participation nor the merchant's sales behavior in the shopping festival is entirely in line with the general characteristics of traditional online shopping. The online shopping festival usually reflects consumer shopping spree, merchants' active preparations, and the specific characteristics of social alleys. In addition, traditional online shopping and consumer behavior research in shopping festivals mainly focus on consumer shopping participation behaviors in stages. Therefore, it can be seen that we still have research on different individuals participating in shopping festivals and process development. Therefore, we will transform our research on consumer intention to participate in shopping festivals into an in-depth analysis of influencing factors that affect consumer online shopping festival participation behaviors, participation behaviors in shopping festivals, and the overall process of forming post-participation effect evaluation on future participation willingness into the study.

2.2.2 Research on self-perception

Self-Perception theory believes that the user's behavior is the basis for evaluating products or services, which means that the more users use, the more favorable it is to make a favorable evaluation (Bern D. 1972). The theory also shows that people generally do not form specific evaluations of daily behaviors unless they practice such

behaviors. Since then, researchers have used the self-cognition theory as the theoretical basis for studying consumer feedback mechanisms. Many studies have found that past user behavior impacts the evaluation of future behavior intentions (Song, P., Zhang, C., Chen, W., & Huang, L. 2009) and found that users' technology use behavior impacts perceived benefits and has a positive impact.

In order to understand the formation of consumer evaluation in more detail, it is necessary to regard customer value evaluation not only as a comprehensive evaluation tool but also as a multidimensional and heterogeneous concept. For example, Kreis and Mafhel (2014) distinguished three dimensions of value: economic value, psychological value, and interactive value. Economic value is considered the most significant perceived value in the study of consumer loyalty (Magi. 2003). Psychological value and interactive value reflect the ability of the product to enhance the concept of social self-cognition (Sweeney and Soutar, 2001). Based on the above theories, the differentiation of consumer perceived value will be used to explore the consumer evaluation experience of online shopping festivals.

2.2.3 The dimensional definition of consumer perceived value

Perceived value is considered the overall evaluation of the utility of products and services after consumers weigh the benefits and costs of obtaining products or services. This research starts from the psychological level of consumers and expounds on the perceived value from the critical role of perceived benefit in perceived value, the psychological trade-off between perceived benefit and price, and the measurement of all the benefits obtained by paying. Murphy (2000) pointed out that perceived value is an instinctive evaluation of people's perception of things, and it is the psychological estimation and weighing of the benefits and losses of products or services by consumers. Payn and Holt (2001) studied the theoretical roots of perceived value and pointed out that the roots of the perceived value theory are customer satisfaction theory, consumer value theory, service quality theory, and extended product theory. Holbrook (2006), through empirical research on perceived value, believes that perceived value is an evaluation experience and divides consumer perceived value into four dimensions: economy, entertainment, social interaction, and altruism. He Qiaoyun (2007) constructed a three-dimensional model of customer perceived value based on cost, quality, and performance in the online shopping environment through investigations on shopping websites such as Taobao and JD.com, cost value, quality, and performance value. Zhang Yanjing (2014) used Sweeney's customer-perceived value thinking model to reference and proposed five dimensions of customer-perceived value in online festival shopping promotion: quality value, price value, service value, emotional value, and social value.

2.3 Main Theory

2.3.1 Stimulus-Organism-Response (SOR) theory

The Stimulus-Organism-Response (S-O-R) environmental psychology model was first proposed by Mehrabian and Russell (1974) to explore the impact of the environment on human behavior. This model illustrates how the physical environment affects people's internal state and behavior. Many scholars (Song, J. et al.2013; Wu et al. 2014) have widely applied this model to many consumers behavior studies. The framework provides a Structure used to identify the relationship between environmental stimuli (stimulus), organisms, and responses. In the context of online shopping, stimuli can influence various elements in online shopping user interaction (such as product presentation, website aesthetic design, interactive technology) on consumer behavior, and emotional state is Intervening Variable.

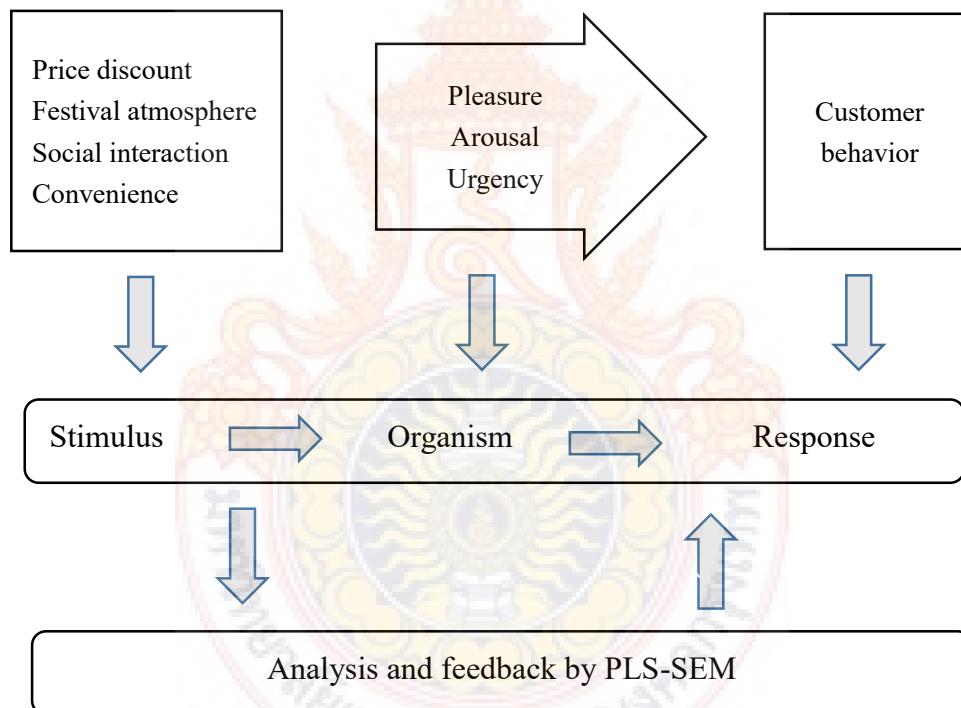


Figure 2.1 The SOR diagram (Methodologies Model by Researcher Made)

2.3.2 Research on purchase intention based on SOR model

Since Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001) introduced the SOR model to the context of online shopping, the SOR model has been widely used in the study of consumer purchase behavior in the e-commerce environment.

Not only research on methodology, but many Chinese scholars have also conducted various researches on online shopping behavior, including the impact on consumer behavior from various perspectives.

Table 2.1 Overview of the reviewed sources

Authors	Purpose	Type of Source	Summary Points
Wang Chong, Chen Dafeng, (2019)	To find out what influences buying decisions	Scholarly publications	Compared with other variables, e-commerce popularity, perceived product quality, and product brand are dominant in the system of dimension elements that affect consumers' purchasing decisions.
Yao Qian (2015)	The impact of seller reputation on consumer behavior	Theses & Dissertations	Seller reputation cues impact perceived value, and their interaction is significant.
Gao Lin, Li Wenli, & Ke Yulong. (2017)	To find out how word of mouth works	Theses & Dissertations	Argument valence and information source activity were significantly positively correlated with affective responses and significantly positively correlated with cognitive responses.
Chen Yang, He Youshi, & Jin Shuai. (2018)	To find the mode of action of the community atmosphere	Scholarly publications	Community consciousness plays a partial mediating role in the relationship between community control climate and impulsive buying
Zhang Beijia. (2017)	To find the highlights of one's return policy	Professional sources	The influence on consumers' purchase intention is ranked in descending order of return operation, return cost and return time limit.

CHAPTER 3

RESEARCH METHODS

3.1 Research Location

This article focuses on data collection for consumers on the Double Eleven online shopping festival. Because our respondents are consumers who participate in the Double Eleven Online Shopping Festival, their most important regions are mainly in China.

One of the characteristics of online shopping is to transcend regionality. The questionnaire collects data through the Internet, and it is not possible to determine the specific region of China in advance. However, based on the collected information, we can conclude, combined with the consumption habits of various places, the degree of economic development in different regions, and the degree of network infrastructure construction—analysis.

3.2 The Conceptual Framework

This paper will take consumers as the research object, mainly to study those who participated in the Double Eleven Shopping Festival. During the research process, this paper will set several variables that affect consumers and compare the correlation of the influence of these variables on consumer sentiment. Through the research on consumers, we can find the factors that consumers are most concerned about, make up for the theoretical defects of the existing research on consumer behavior in online shopping festivals, and optimize their behaviors for platforms and merchants. Provide better theoretical basis and data support for consumer services.

This paper takes price discount, holiday atmosphere, social interaction, and convenience as independent variables, pleasure, arousal, and urgency as intermediate variables, and consumer behavior as dependent variables to form a SOR behavior model for data collection and behavior exploration.

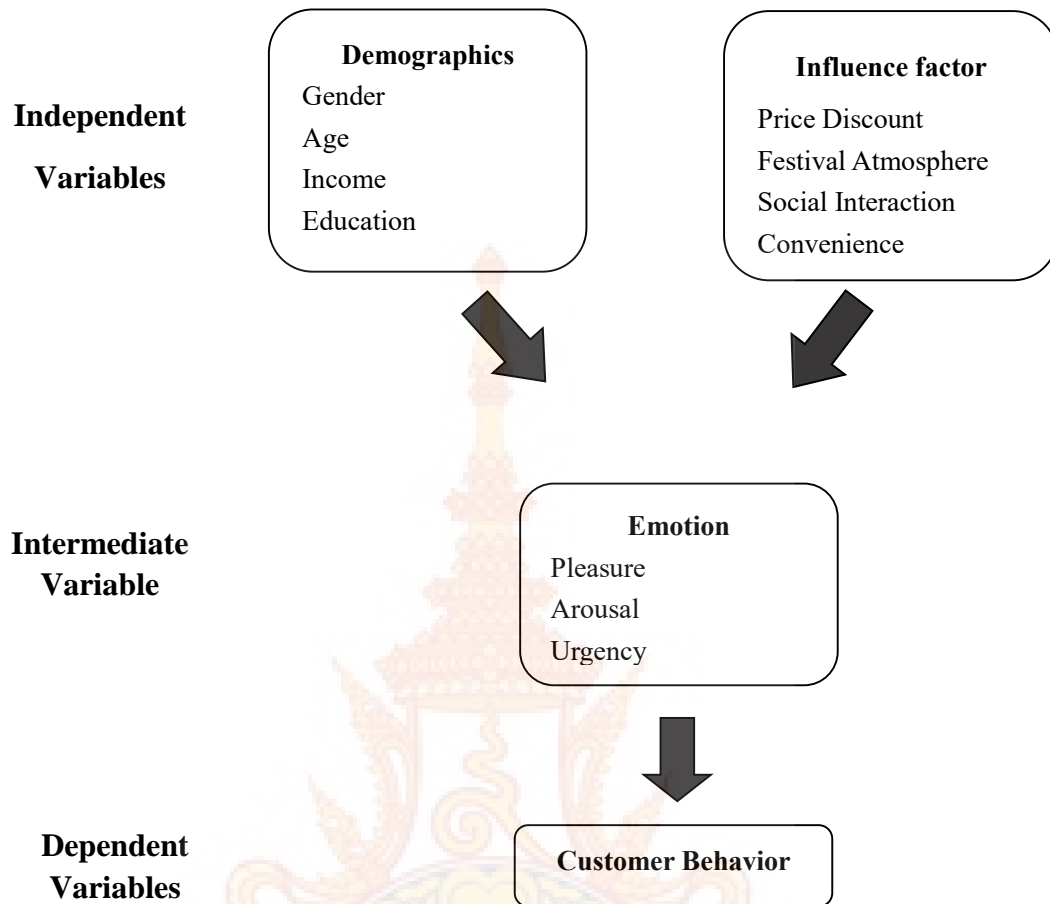


Figure 3.1 The conceptual framework (researcher made)

This article summarizes the consumer emotions studied into three dimensions: pleasure, arousal, and urgency. Pleasure and arousal are positive emotions, and urgency is a negative emotion.

Pleasure is a measure of how happy and satisfied consumers feel in the shopping process of the online shopping festival;

Arousal is a measure of the degree of excitement and excitement consumers feel when shopping at the online shopping festival;

Urgency measures consumers' urgency, unease, and impatience when shopping online during the online shopping festival.

3.3 Research Respondents

This study explores the influence mechanism of the online shopping festival atmosphere on consumer behavior. Therefore, the selected respondents are all consumers who have participated in the online shopping festival. During the data collection phase, no specific population will be targeted.

We analyze and classify consumers through data collection and analysis of all

consumers, analyzing consumer behavior, especially the point of action of consumer emotions in consumer behavior. Then through the differences in the behavior and emotions of different consumers, analyze the reasons, and put forward reasonable suggestions to consumers and businesses.

3.4 The Research Sampling Methods

This article collects consumer data from the Double Eleven online shopping festival, mainly uses questionnaires to make consumer behavior and consumer sentiment variables, and tries to find the differences between different consumers and the impact on consumer behavior and sentiment - Correlation Analysis.

This article chooses pleasure, arousal, and urgency as the intermediate states. Among them, pleasure and arousal are positive emotions, urgency is negative, and consumer behavior is used as the response variable using the intelligent PLS test model.

3.5 Data Collection

In China, the people who mainly use English are those with higher education levels. Due to the Double Eleven online shopping festival, the primary shopping influence is in China. In order to avoid errors, this questionnaire will be conducted in China in Chinese.

This questionnaire will collect data through an open online questionnaire. There are many different survey websites in China. In order to avoid errors, this questionnaire will find two or more different websites (www.wenjuan.com and www.wjx.com) for data collection.

In addition to consumer data receipts, this article will also quote some overall consumption data, mainly from reports from related companies or governments.

3.6 Research Questionnaire

This questionnaire consists of three parts: The first part is the prerequisite to knowing whether the respondent participated in the online shopping festival. If one has participated in the online shopping festival, continue to answer. Otherwise, it will end directly. The second part is the basic information about consumers, including consumption, gender, age, education level, and income. The third part is the variable measurement question of the questionnaire to understand the critical factors in the process of consumer behavior and to measure the sense of pleasure, arousal, and urgency. This part of the variables uses a 5-point scale (strongly disagree, disagree, neutral, agree, and strongly agree) to analyze purchase intentions and rank them from 1 to 5.

Details can be found in the questionnaire section of the appendix.

3.6.1 Measurement of independent variables

The measurement of each online shopping festival atmosphere dimension is mainly based on mature scales and related literature research. Therefore, this paper mainly measures slave variables from the four dimensions of price discount, festival

atmosphere, social interaction, and convenience. For the dimension of price discounts, we mainly refer to Laurent's (2000) and Hao Liaogang's (2008) research and use Q8, Q9, Q10, and Q11 to measure. For the dimension of a festival atmosphere, we mainly refer to the research of Wang Zhihui (2017), using Q12, Q13, Q14, Q15 for measurement; for the social dimension, refer to the research of Chang Yangbo (2012), use Q16, Q17, Q18, Q19 for measurement; for the convenience dimension, mainly refer to Hou Qinglin (2011) and Xu Dawu (2016) study, using Q20, Q21, Q22, Q23 for measurement.

Table 3.1 Measurement of independent variables

Independent Variables	Questionnaire	Reference
Price Discount	Q8. What attracts me most during the online shopping festival is the discount factor	Laurent (2000) Hao Liaogang (2008)
	Q9. What I am most satisfied with is the strength of the product discount	
	Q10. I am most satisfied that there is a discount on the item I need	
	Q11. Discounts always allow me to buy more quantities	
Festival Atmosphere	Q12 I will actively search for relevant information	Wang Zhihui (2017)
	Q13. I love the festival atmosphere of the online shopping festival	
	Q14. I always increase my shopping budget	
	Q15. I am used to buying items during the online shopping festival	
Social Interaction	Q16. I will refer to the opinions of my friends when I shop	Chang Yangbo (2012)
	Q17. I would love to share my shopping list	
	Q18. I am very concerned about my friend's shopping information	
	Q19. I like to go to the online shopping festival with my friends	
Convenience	Q20. I can shop anytime	Hou Qinlin (2011) Xu Dawu(2016)
	Q21. I can buy items that are not available locally	
	Q22. I can have more choices	
	Q23. I can have better service	

3.6.2 Measurement of intervening variable

The measurement of pleasure and arousal has formed a relatively mature scale. At present, the relatively mature scale developed by Mehrabian and Russell (1974) and drawing on the research of Kim and Lennon (2010) measures the experience in online shopping festivals (Q24) and feeling (Q25) to measure pleasure and engagement (Q26) and excitement (Q27) measures were set for arousal. This paper is based on the research of Mehrabian and Russell (1974), from the preparation time for the online shopping festival (Q28) and feelings during the online shopping festival (Q29) to measure consumer urgency.

Table 3.2 Measurement of intervening variables

Intervening Variable	Questionnaire	Reference
Pleasure	Q24. Online shopping festival always gives me a pleasant experience	Mehrabian and Russell (1974) Kim and Lennon (2010)
	Q25. There is no difference between the online shopping festival and the usual shopping	
Arousal	Q26. I will remind my friends not to miss the online shopping festival	
	Q27 I am excited about the online shopping festival	
Urgency	Q28. I always take the time to prepare my shopping list	Mehrabian and Russell (1974)
	Q29. I always feel urgency during the online shopping festival	

3.6.3 Measurement of dependent variable

The measurement of consumer behavior has formed a relatively mature scale. At present, the most common one is the scale used in the research by Dodd et al. (1991). Based on the above scale, this paper designs three scales based on the research of Wu Jinfeng et al. (2014). Questions about consumer behavior, measuring the attractiveness of online shopping festivals (Q30), and the budget input of online shopping festivals (Q31).

Table 3.3 Measurement of dependent variable

Intervening Variable	Questionnaire	Reference
Customer Behavior	Q30. I will continue to pay attention and participate in the online shopping festival	Dodds et al. (1991) Wu Jinfeng et al. (2014)
	Q31. I plan to focus on shopping at the following online shopping festival	

3.7 Data Statistical Analysis

Considering the relatively small sample size of this study and the non-normality of the sample distribution, the structural equation modeling method (PLS-SEM) based on partial least squares estimation was used for model fitting. Compared with the structural equation model (CB-SEM) based on analysis of covariance, PLS-SEM is more suitable for exploring causal relationships between variables. At the same time, to ensure the validity of the questionnaire, this study conducted a small-scale prediction before the official questionnaire was released. Then, the reliability analysis and validity analysis of the sample data is carried out to confirm that the reliability and validity of the scale meet the evaluation requirements.

Partial Least Squares Structural Equation Modeling (PLS-SEM) is a structural equation modeling method that allows the estimation of complex causal relationships in path models with latent variables. The reason why PLS-SEM is used for measurement also includes the following reasons:

- a. The research objective of this paper is an exploratory study of theoretical development;
- b. The structural model includes one or more formative facets;
- c. The relationship between the observed variable and the latent variable can be accurately estimated,
- d. PLS-SEM is suitable for a smaller sample size because when there are fewer mothers, compared to the transaction volume and the number of participants of the Double Eleven shopping festival, the number of several hundred is also a smaller sample;

We will use the following aspects of PLS-SEM: (1) To measure the reliability and validity of the model testing questionnaire and data; (2) Structural equation model analysis to observe path coefficients and significance between variables; The data we need to detect includes the following:

Table 3.4 Measurement data and standards

Test data	Test standard	Remark
Cronbach's α of each latent variable	≥ 0.7	Bagozzi and Yi (1988)
Composite Reliability	≥ 0.7	Bagozzi and Yi (1988)
Convergent Validity	≥ 0.7	Hulland, 1999
Average Variance Extracted, AVE	≥ 0.5	Bagozzi and Yi (1988)
Significance level P-value	≤ 0.05	Bootstrapping

CHAPTER 4

DATA ANALYSIS RESULT

4.1 Questionnaire Analysis

4.1.1 Data collection

The number of questionnaires received in this survey was 903. According to the reverse questions set in the measurement items of the questionnaire, the questionnaires with logical contradictions were eliminated. At the same time, the questionnaires with incomplete basic information and the same answer results were also eliminated, and finally, 636 questionnaires were obtained for the research, with an effective rate of 70.43%.

4.1.2 Survey sample distribution

Before the empirical analysis, the basic information statistical analysis was carried out on the sample data.

The analysis results are shown in table 4.1. Men accounted for 42.06%, and women accounted for 57.94%. Regarding age, the consumers surveyed were mainly distributed in the range of 22-35 years old, accounting for 63.84% of the total, and other ages accounted for 36.16%. In terms of online shopping frequency, 89.78% of consumers have less than six times, and the total proportion of more than 10.22%. Among the annual income options, consumers with an annual income of less than 150,000 (RMB) account for the most significant proportion of the total, 87.42%. On the other hand, the proportion of consumers with more than 150,001 was 12.58%. In terms of educational background, the surveyed consumers were mainly undergraduates, accounting for 75.16%, and other options totaled 24.84%. Specific to the last Double Eleven Online Shopping Festival, 85.22% of consumers purchased 2 to 10 different items, and 14.78% of consumers who only purchased one item and more than ten items.

Table 4.1 Survey sample distribution

Questionnaire	Options	Number of Samples	Percentage
Gender	Male	270	42.45%
	Female	366	57.55%
Age	Under 21 years old	89	13.99%
	22 to 26	184	28.93%
	27 to 35	222	34.91%
	35 to 45	111	17.45%

	Over 45 years old	30	4.72%
Monthly online purchase frequency	1 to 3 times	394	61.95%
	4 to 6 times	177	27.83%
	7 to 9 times	52	8.18%
	10 times or more	13	2.04%
Annual Income	Less than 70,000	331	52.04%
	70001 to 150000	225	35.38%
	150001 to 350000	39	6.13%
	350001 to 500000	27	4.25%
	500001 or more	14	2.20%
Education	High School	38	5.97%
	Bachelor	478	75.16%
	Master	112	17.61%
	Doctoral degree and above	8	1.26%
Last Double Eleven shopping festival, how many different items did you buy?	One piece	48	7.55%
	Two to five pieces	351	55.19%
	Six to ten pieces	191	30.03%
	More than ten pieces	46	7.23%

4.2 Statistical Analysis of Questionnaires

4.2.1 The reliability of the measurement model

4.2.1.1 Reliability Test of Independent Variables

It can be seen from table 4.2 that the Cronbach's α values of Price Discount, Festival Atmosphere, Social Interaction, and Convenience are 0.754, 0.707, 0.708, and 0.793, respectively. All of which meet the evaluation criteria recommended by Hulland (1999), indicating that the items of each dimension of the atmosphere of the online shopping festival are satisfied and have high reliability. Moreover, the combined

reliability (C.R.) of Price Discount, Festival Atmosphere, Social Interaction, and Convenience are all greater than 0.8, which is in line with the evaluation standard of $C.R. \geq 0.7$ suggested by Bagozzi and Yi (1988), indicating that each dimension of the independent variable also has high internal consistency reliability.

Table 4.2 Reliability test of independent variables

Variable	Questionnaire	Cronbach's α	Composite Reliability
Price Discount	Q8 Price Discount	0.754	0.841
	Q9 Price Discount		
	Q10 Price Discount		
	Q11 Price Discount		
Festival Atmosphere	Q12 Festival Atmosphere	0.707	0.835
	Q13 Festival Atmosphere		
	Q14 Festival Atmosphere		
	Q15 Festival Atmosphere		
Social Interaction	Q16 Social Interaction	0.708	0.837
	Q17 Social Interaction		
	Q18 Social Interaction		
	Q19 Social Interaction		
Convenience	Q20 Convenience	0.793	0.865
	Q21 Convenience		
	Q22 Convenience		
	Q23 Convenience		

4.2.1.2 Reliability test of intervening variable

It can be seen from table 4.3 that the Cronbach's α values of pleasure, arousal, and urgency are 0.778, 0.814, and 0.714, respectively, all of which are greater than 0.5, meeting the evaluation criteria recommended by Hulland (1999), indicating the questions of pleasure, arousal, and urgency. Item has high reliability. Furthermore, the combined reliability (C.R.) of pleasure, arousal, and urgency are all greater than 0.7, which is in line with the evaluation standard of $C.R. \geq 0.7$ recommended by Bagozzi and Yi (1988), indicating that the measurement items of pleasure, arousal, and urgency have high internal consistency reliability.

Table 4.3 Reliability test of intervening variable

Variable	Questionnaire	Cronbach's α	Composite Reliability
Pleasure	Q24 Pleasure	0.778	0.857
	Q25 Pleasure		
Arousal	Q26 Arousal	0.814	0.878
	Q27 Arousal		
Urgency	Q28 Urgency	0.714	0.840
	Q29 Urgency		

4.2.1.3 Reliability test of dependent variables

It can be seen from table 4.4 that the Cronbach's α value of Customer Behavior is 0.770, which is greater than 0.5, which meets the evaluation standard recommended by Hulland (1999), indicating that the question item of Customer Behavior has high reliability. At the same time, the combined reliability (C.R.) of purchase intention was 0.853, which was greater than 0.7, which also met the evaluation standard of $C.R. \geq 0.7$ suggested by Bagozzi and Yi (1988), indicating that the Customer Behavior measurement item had high internal consistency reliability.

Table 4.4 Reliability test of dependent variables

Variable	Questionnaire	Cronbach's α	Composite Reliability
Customer Behavior	Q30 Customer Behavior	0.770	0.853
	Q31 Customer Behavior		

4.2.2 Validity test of the measurement model

4.2.2.1 Convergent validity test

The convergent validity test results of all variables are shown in table 4.5. It can be found that the factor loading values of Price Discount, Festival Atmosphere, Social Interaction, and Convenience are all greater than 0.7, and the measurement item factor loadings of Pleasure, Arousal, Urgency, and Customer Behavior are also all greater than 0.7, indicating that the measurement items of these variables have high factor loadings. Therefore, the validity of the measurement items of each variable meets the requirements. At the same time, the average extraction variance (AVE) of these variables is more significant than 0.5, which meets the standard of $AVE \geq 0.5$ suggested by Bagozzi and Yi (1988), indicating that the measurement model has good convergent validity.

Table 4.5 Convergent validity test

Variable	Questionnaire	Factor Loading	AVE
Price Discount	Q8 Price Discount	0.717	0.571
	Q9 Price Discount	0.797	
	Q10 Price Discount	0.726	
	Q11 Price Discount	0.776	
Festival Atmosphere	Q12 Festival Atmosphere	0.797	0.630
	Q13 Festival Atmosphere	0.796	
	Q14 Festival Atmosphere	0.774	
	Q15 Festival Atmosphere	0.786	
Social Interaction	Q16 Social Interaction	0.819	0.631
	Q17 Social Interaction	0.774	
	Q18 Social Interaction	0.763	
	Q19 Social Interaction	0.790	
Convenience	Q20 Convenience	0.830	0.617
	Q21 Convenience	0.716	
	Q22 Convenience	0.819	
	Q23 Convenience	0.790	
Pleasure	Q24 Pleasure	0.777	0.571
	Q25 Pleasure	0.733	
Arousal	Q26 Arousal	0.773	0.644
	Q27 Arousal	0.831	
Urgency	Q28 Urgency	0.821	0.637
	Q29 Urgency	0.775	
Customer Behavior	Q30 Customer Behavior	0.770	0.593
	Q31 Customer Behavior	0.799	

4.2.2.2 Discriminant validity test

The discriminant validity test results of all variables are shown in table 4.6, where the values on the diagonal of the correlation coefficient matrix of these variables are the square root values of AVE. It can be seen from the analysis results that the square root value of AVE of all variables is greater than the correlation coefficient with other variables, which meets the criterion of discriminant validity test, that is, $AVE \geq 0.5$, indicating that each variable in the measurement model has good discriminant validity.

Table 4.6 Discriminant validity test

Variable	Φ1	Φ2	Φ3	Φ4	Φ5	Φ6	Φ7	Φ8
Price Discount (Φ1)	0.755							
Festival Atmosphere (Φ2)	0.441	0.793						
Social Interaction (Φ3)	0.391	0.513	0.794					
Convenience (Φ4)	0.227	0.250	0.342	0.785				
Pleasure (Φ5)	0.454	0.452	0.450	0.394	0.755			
Arousal (Φ6)	0.436	0.390	0.403	0.362	0.623	0.802		
Urgency (Φ7)	0.298	0.363	0.351	0.243	0.382	0.516	0.798	
Customer Behavior (Φ8)	0.375	0.512	0.437	0.296	0.528	0.581	0.679	0.770

4.2.3 Parameters and hypothesis testing of structural models

4.2.3.1 Analysis of the Influence of Independent Variables on Consumer Emotions

In order to explore the influence of Independent Variables on pleasure, this paper estimates the influence of four Independent Variables on emotions and conducts a significant test, and the analysis results are shown in table 4.7.

From the table, we can find that the significance level (P-value) is less than 0.05, and these data are consistent with the detection target and meet the model requirements.

Table 4.7 The influence of independent variables on emotions

Action Path	Path Coefficient	t	VIF	P-value	R ²
Price Discount → Pleasure	0.248	6.166	1.309	0.000	0.363
Festival Atmosphere → Pleasure	0.195	3.758	1.502	0.000	
Social Interaction → Pleasure	0.175	3.805	1.507	0.000	
Convenience → Pleasure	0.229	4.894	1.151	0.000	
Price Discount → Arousal	0.265	5.528	1.309	0.000	0.303
Festival Atmosphere → Arousal	0.140	2.592	1.502	0.010	

Social Interaction → Arousal	0.155	3.202	1.507	0.001	0.185
Convenience → Arousal	0.213	4.876	1.151	0.000	
Price Discount → Urgency	0.122	2.381	1.309	0.018	
Festival Atmosphere → Urgency	0.197	3.888	1.502	0.010	
Social Interaction → Urgency	0.165	3.234	1.507	0.001	
Convenience → Urgency	0.109	2.194	1.151	0.029	

1. Price Discount Factors

In order to increase sales and profits in the online shopping festival, most of the merchants on the e-commerce platform use large-scale discount promotions to attract consumers to buy goods. As a tempting mechanism, price promotion can make consumers feel happy emotions, which can touch their emotions. However, at the same time, discount promotion can reduce consumer self-control, prompting consumers to produce impulsive buying behavior.

Studies have shown that special prices can increase the value consumers obtain from transactions and, at the same time, have an impact on consumer sentiment and shopping experience (Petrescu and Murphy, 2013).

2. Festival Atmosphere Factors

In contemporary times, consumers have transformed from product satisfaction to spiritual satisfaction when purchasing products, and they expect more emotional pleasure from product consumption. The online shopping festival creates a festival atmosphere through large-scale publicity and even professional methods. This festival atmosphere can bring higher emotional pleasure and awaken consumers, making them more likely to be emotionally attracted and have impulse shopping (Han Jun 2014).

3. Social Interaction Factors

The online shopping festival attracts many consumers to participate actively. Consumers form solid social interaction by sharing promotional information and shopping decisions with their relatives and friends. Numerous studies have shown that when the community has frequent social interactions, an effective social atmosphere can be generated, promoting members to have fun and pleasure (Sun Yi, Lu Yaobin, & Wei Guoji. 2016). Ruan Yanya and Li Qi (2017) also found that when consumers are in an interactive and positive social atmosphere, it is easier to obtain hedonic value, bringing higher trust and a more pleasant browsing experience, thereby increasing the possibility of purchasing.

4. Convenience factor

Online shopping has different characteristics than offline shopping. Because there are no time and place restrictions, online shopping has a substantial convenience, and because the Internet can provide more information, consumers can also have more choices. These convenient conditions can increase consumer consumption possibilities (Li Sheqiu and Tang Dingna, 2017).

Through table 4.7 and the following data analysis description, we verified and passed Hypothesis 1:

H1: Independent variables have a positive impact on consumer emotions.

4.2.3.2 Analysis of the influence of emotions on customer behavior

In order to explore the influence of pleasure, arousal, and urgency on Customer Behavior, this paper also estimates the influence of pleasure, arousal, and urgency on Customer Behavior and conducts a significant test. The analysis results are shown in table 4.8.

From the table, we can find that the significance level (P-value) is less than 0.05, and these data are consistent with the detection target and meet the model requirements.

Table 4.8 The influence of emotions on customer behavior

Action path	Path Coefficient	t	VIF	P-value	R ²
Pleasure → Customer Behavior	0.221	5.126	1.648	0.000	0.560
Arousal → Customer Behavior	0.186	3.994	1.917	0.010	
Urgency → Customer Behavior	0.498	12.381	1.374	0.000	

Through discounts and creating a festival atmosphere, the shopping festival can arouse consumers and effectively promote consumers' purchase behavior. Consumers who include many impulse shopping behaviors also say that they feel happy during the shopping process, and this emotion motivates them to make purchase behaviors (Zhang Chubing et al., 2017). Studies have also shown that in limited decision-making, when the promotion cut-off point is approaching, negative emotions will prevail and positively impact consumer decision-making (Peng Jing and Lu Changbao, 2017).

Through table 4.8 and subsequent data analysis, we verified and passed Hypothesis 2:

H2: Consumer emotions have a positive impact on consumer behavior.

4.2.3.3 Analysis of the influence of independent variables on consumer behavior

In order to explore the influence of Independent Variables on consumer behavior, the influence of four Independent Variables on consumer behavior was also estimated and tested for significance. The results are shown in table 4.9.

From the table, we can find that the significance level (P-value) is less than 0.05, and these data are consistent with the detection target and meet the model requirements.

Table 4.9 The influence of independent variables on consumer behavior

Action path	Total Effect	Indirect Effect	t	P-value
Price Discount → Customer Behavior	0.165	0.165	5.008	0.000
Festival atmosphere → Customer Behavior	0.167	0.167	4.294	0.000
Social Interaction → Customer Behavior	0.150	0.150	4.663	0.000
Convenience → Customer Behavior	0.145	0.145	4.405	0.000

Research shows that consumer behavior is affected by both emotional and cognitive responses, and emotional responses play a partial mediating effect in the relationship between the external environment and purchase intention (Gao Lin et al., 2017). Wang Qiuzhen et al. (2014) verified this point of view under the online group-buying model. The study found that price discounts and the number of purchasers affect consumer emotions (pleasure and arousal) and impulse purchase intentions. Liu Jianxin and Li Dongjin (2017) also found that psychological ownership and psychological resistance will jointly mediate the effect of product scarcity appeal on purchase intention. In addition, expected regret will further partially mediate their effect on purchase intention, enhancing consumer urgency to buy behavior. Finally, Yang Qiang and Shen Aachen (2017) studied the influence mechanism of new product pre-release content on consumer behavior. Also, they found the relationship between pleasure and arousal in new product pre-release content (price and innovation) and consumer behavior play a mediating effect. From previous studies, it can be seen that emotion plays a vital role in the relationship between online stimulation and consumer behavior.

Through table 4.9 and subsequent data analysis, we verified and passed Hypothesis 3:

H3: Consumer emotions have a mediating effect on the influence of independent variables on consumer behavior.

4.2.3.4 Intervening variable analysis of emotions

In order to explore the influence of pleasure, arousal, and urgency between each item of Independent Variables and Customer Behavior, the Intervening Variables of pleasure, arousal, and urgency in each path were also tested. Pleasure, arousal, and urgency in Independent Variables impact Customer Behavior. There are multiple mediating effects on the influence path.

Table 4.10 Intervening variable analysis of emotions

Action path	Intermediate Effect	Standard Deviation	t	P-value
Price Discount →Pleasure →Customer Behavior	0.055	0.015	3.769	0.000
Price Discount →Arousal →Customer Behavior	0.049	0.014	3.422	0.001
Price Discount →Urgency →Customer Behavior	0.061	0.027	2.292	0.022
Festival atmosphere →Pleasure →Customer Behavior	0.043	0.015	2.796	0.005
Festival atmosphere →Arousal →Customer Behavior	0.026	0.013	1.984	0.048
Festival atmosphere →Urgency →Customer Behavior	0.098	0.028	3.541	0.000
Social interaction →Pleasure →Customer Behavior	0.039	0.013	3.020	0.003
Social interaction →Arousal →Customer Behavior	0.029	0.013	2.295	0.022
Social interaction →Urgency →Customer Behavior	0.082	0.027	3.064	0.002
Convenience →Pleasure →Customer Behavior	0.051	0.015	3.470	0.001
Convenience →Arousal →Customer Behavior	0.004	0.013	3.128	0.002
Convenience →Urgency →Customer Behavior	0.054	0.025	2.154	0.032

From the data analysis results in table 4.10, we can know that:

(1) Pleasure, arousal, and urgency play a compound and multiple mediating roles between Price Discount and Customer Behavior. Among them, the Intervening Variable of pleasure is 0.055, the Intervening Variable of arousal is 0.049, and the Intervening Variable of urgency is 0.061, accounting for 33.33%, 29.70%, and 36.97% of the total impact of Price Discount on Customer Behavior.

(2) Pleasure, arousal, and urgency play a compound and multiple mediating roles between Festival Atmosphere and Customer Behavior. Among them, the Intervening Variable of pleasure is 0.043, the Intervening Variable of arousal is 0.026, and the Intervening Variable of urgency is 0.098, which accounts for 25.74%, 15.57%, and 58.68% of the total effect of Festival Atmosphere on Customer Behavior.

(3) Pleasure, arousal, and emergency play a compound and multiple mediating

roles between Social Interaction and Customer Behavior. Among them, the Intervening Variable of pleasure is 0.039, the Intervening Variable of arousal is 0.029, and the Intervening Variable of urgency is 0.082, which account for 26%, 19.33%, and 54.66% of the total influence of Social Interaction on Customer Behavior.

(4) Pleasure, arousal, and urgency play a compound multiple mediating roles between Convenience and Customer Behavior. Among them, the mediating effect of pleasure is 0.051, arousal is 0.004, and urgency is 0.054, accounting for 46.79%, 3.67%, and 49.54% of the total effect of Convenience on consumer purchase intention.

4.3 Hypothesis Test Results and Final Model

Through the above analysis, various hypotheses proposed in this research were tested, and the summary results are shown in table 4.11:

Table 4.11 Hypothesis test results

Research Hypothesis	Result
H1: Independent variables have a positive impact on consumer emotions.	Pass
H2: Consumer emotions have a positive impact on consumer behavior.	Pass
H3: Consumer emotions have a mediating effect on the influence of independent variables on consumer behavior.	Pass

According to the hypothesis test results, each path of this paper's structural model is tested, and the final model is shown in Figure 4.1.

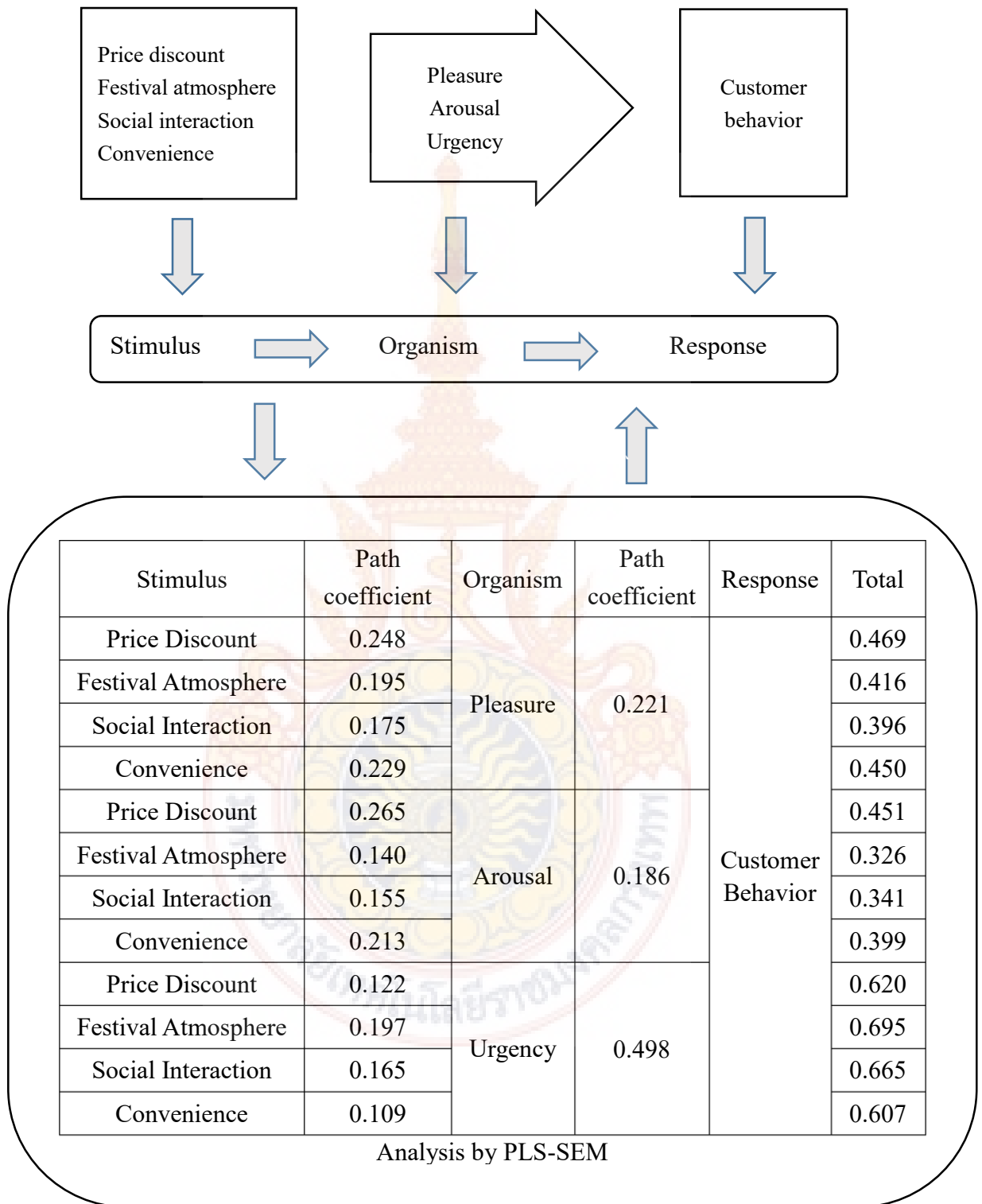


Figure 4.1 Model analysis results (researcher made)

Based on the analysis of the data, we can know that:

(1) The influence on consumer behavior is urgency, followed by pleasure and arousal with a minor influence.

(2) The independent variable that attracts consumers the most is price discount, followed by convenience and festival atmosphere, and the least influential one is social interaction.

(3) The most attractive path to consumer behavior is stimulating consumer urgency through a festival atmosphere.



CHAPTER 5

CONCLUSION

5.1 Research Conclusions

5.1.1 The influence of independent variables on consumer emotions

From the previous research, it can be pointed out that each dimension of the online shopping festival has a significant positive impact on pleasure, and the impact from strong to weak is Price Discount, Festival Atmosphere, Convenience, and Social Interaction.

Each dimension of the online shopping festival also has a significant positive impact on arousal, and the impact from strong to weak is Price Discount, Convenience, Social Interaction, and Festival Atmosphere.

Among the influences of various dimensions of the online shopping festival on urgency, compared with Price Discount and Convenience, Festival Atmosphere and Social Interaction have a more significant influence on urgency.

It can be seen that the influences of each dimension of the online shopping festival on pleasure, arousal, and emergency are different. Next, we will discuss the relationship between them.

5.1.2 The influence of consumer sentiment on consumer behavior

This study found that consumer pleasure and arousal can significantly and positively affect purchase intention, consistent with previous conclusions. It also found that consumer urgency also directly impacts purchase intention, which indicates that the higher the pleasure, the higher the purchase intention. The higher the consumer's willingness to buy, the lower the consumer's willingness to buy; if the arousal is more robust, the consumer's willingness to buy is higher. Otherwise, the consumer's willingness to buy is low; if the urgency is more vital, the consumer's willingness to buy is low; The higher the purchase intention of consumers, the lower the purchase intention.

Pleasure, arousal, and urgency have different influences on consumer purchase intention. However, the urgency has the most obvious influence on consumer purchase intention. The possible explanation is that due to the number of goods and time constraints during the shopping festival, there may be an "opportunity cost" among consumers. Therefore, perception increases the possibility of purchase. In other words, consumers will regret missing the golden period of shopping online shopping festival, so the impact of consumer's urgency on consumer purchase intention is more prominent.

The influence of pleasure and arousal on consumer purchase intention is relatively small, indicating that as the shopping festival gradually enters a mature stage, consumer attitude towards the online shopping festival has gradually changed from

excited and active in the early stage to passive, inertia, goods and services. Consumers' quality has become the focus of consumer attention, consumer shopping has become more rational, and the positive experience generated during the shopping process has no longer a noticeable impact on their purchases. As a result, consumer pleasure and arousal affect consumer willingness to buy impact is relatively small.

5.1.3 Mediating role of consumer emotions

According to the previous analysis, consumer pleasure and arousal mediate to varying degrees between independent variables and consumer purchase intention. That is, the influence of independent variables on consumer purchase intention is partly realized through the internal state of consumers.

Pleasure has a mediating effect on the influence path between each dimension of the independent variable and consumer purchase intention, which indicates that the stronger the positive influence of Price Discount, Festival Atmosphere, Social Interaction, and Convenience, the higher the consumer's pleasure, and the consumer's purchase intention higher.

Arousal has a mediating effect on the influence path between various dimensions of the online shopping festival and consumer purchase intention, which indicates that the stronger the positive influence of Price Discount, Festival Atmosphere, Social Interaction, and Convenience, the higher the consumer's arousal, the more consumers will buy, the higher the will.

Urgency also has a mediating effect on the influence path between various dimensions of the online shopping festival and consumer purchase intention, which indicates that the stronger the positive influence of Price Discount, Festival Atmosphere, Social Interaction, and Convenience, the higher the consumer's urgency, and the higher the consumer's willingness to buy. The higher the willingness to buy, the arousal and urgency play a mediating role.

However, in the comparison, it was found that the mediating effect of urgency between Price Discount, Social Interaction, and Consumer Purchase Intention was more apparent. In contrast, the mediating effect of pleasure and arousal between Price Discount, Convenience, and Consumer Purchase Intention was more pronounced.

5.2 Research Limitations

Compared with existing research, this paper combines the characteristics of online shopping and festival e-commerce platforms, mainly focusing on the four dimensions of Price Discount, Festival Atmosphere, Social Interaction, and Convenience, constructs a "SOR" research model, and measures the mediating effect of consumer emotions. The degree of influence of the following online shopping festival on consumer purchase intention. Although this paper is innovative to a certain extent, due to the influence of many aspects, this research has certain limitations, mainly including the following three aspects:

(1) Although this paper has made a certain degree of refinement on the division

of the influencing factors of the Double Eleven online shopping festival, it may not cover the whole connotation of the online shopping festival. Furthermore, with the continuous development of the online shopping festival, there is a need to further explore what the online shopping festival covers in the later research. Therefore, it is necessary to continue to explore other explanatory variables or Intervening Variables in the future.

(2) The division and definition of online shopping festivals and consumer sentiment in this paper may be innovative, but the independent, intervening, and dependent variables are all measurement variables. In addition, there may be causal interpretation problems and some variables, such as urgency and lack of relative. For a mature scale, the design of a small number of questions is based on research and real-world problems. Therefore, the design of the scale needs to be further improved.

(3) This paper uses the partial least squares method to process the data. This processing method has lower requirements on the sample size, and this study also reaches the minimum recommendation of the sample size using this method. However, if the sample size can be expanded, the study result will be more stable and convincing.

5.3 Research Outlook

Based on various limitations, the research in this paper has limitations to a certain extent. Combined with the shortcomings of this study, this paper also puts forward some suggestions:

(1) Although the interpretation effect of the "SOR" model established in this study is equal to or higher than that of the general structural equation model, there is still room for improvement. In addition, the intervening variable in this study mainly studies the effect of emotion (pleasure, arousal, and urgency) on the impact of consumer behavior without variables involving the perception dimension. Therefore, more intervening variables can be included in future research to make the model more comprehensive.

(2) The educational background distribution of the subjects in this study is relatively concentrated. In order to make the study more convincing, the number and scope of the study samples can be further expanded in future research to make the sample characteristics more dispersed.

(3) In this study, Price Discount, Festival Atmosphere, Social Interaction, and Convenience are placed in the same dimension for research, and the interaction between factors is not considered. Future research can add moderating variables such as online word of mouth, the number of purchasers, and other factors for discussion, and can also classify different factors to study the interaction between different levels of factors on purchase intention.

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APPENDIX

QUESTIONNAIRE

Instruction

Hello, this is a questionnaire about consumer behavior analysis during the Double Eleven Online Shopping Festival. Please make your choice based on your actual situation. Thank you for your participation.

Part I: Pre-Question

1. Did you participate in the last Double Eleven online shopping festival?

- ☐ If yes, please continue to answer the question
☐ If not, please stop. Thank you.

Part II. Basic information about the consumer

2. Your gender:

- ☐ Male ☐ Female

3. Your Age:

- ☐ Under 21 years old ☐ 22 to 26 ☐ 27 to 35
☐ 36 to 45 ☐ Over 46 years old

4. Your usual monthly online purchase frequency:

- ☐ 1 to 3 times ☐ 4 to 6 times ☐ 7 to 9 times ☐ 10 times or more

5. Your Annual Income:

- ☐ Less than 70,000 ☐ 70001 to 150000 ☐ 150001 to 350000
☐ 350001 to 500000 ☐ 500001 or more

6. Your Education

- ☐ High School ☐ Bachelor ☐ Master's ☐ Doctoral degree and above

7. At your last Double Eleven shopping festival, how many different items did you buy?

- ☐ 1 piece ☐ 2 to 5 pieces ☐ 6 to 10 pieces ☐ More than 10 pieces

Part III. Please read the problem description and rate it according to your actual behavior or your feelings. This part is ranked from 1 to 5 (strongly disagree, disagree, neutral, agree, and strongly agree). Thanks.

Item	Question	1	2	3	4	5
8	During the online shopping street, the most attractive thing for me is the discount factor:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	What I am most satisfied with is the strength of the product discount:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	I am most satisfied that there is a discount on the item I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

need:

- | | | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 11 | Discounts always allow me to buy more quantities: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12 | I will actively search for relevant information: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13 | I love the festival atmosphere of the online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14 | I always increase my shopping budget: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15 | I am used to buying items during the online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16 | I will refer to the opinions of my friends when I shop: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17 | I would love to share my shopping list: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18 | I am very concerned about my friend's shopping information: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19 | I like to go to the online shopping festival with my friends: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20 | I can shop anytime: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21 | I can buy items that are not available locally: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22 | I can have more choices: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23 | I can have better service: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24 | Online shopping festival always gives me a pleasant experience: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25 | There is no difference between the online shopping festival and the usual shopping: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26 | I will remind my friends not to miss the online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27 | I am excited about the online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28 | I always take the time to prepare my shopping list: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29 | I always feel urgency during the online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30 | I will continue to pay attention and participate in the online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31 | I plan to focus on shopping at the next online shopping festival: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

BIOGRAPHY

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ACADEMIC BACKGROUND

Bachelor's Degree with a major in Business Administration from Beijing Economic and Technological College, Beijing, China in 2006 and Master's Degree of Business Administration at Rajamangala University of Technology Krungthep, Bangkok, Thailand in 2022

EXPERIENCES

Sourcing Engineer at Loo's Metal Gift Manufacturing Co. LTD. from 2006 to 2011
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