

Research on the Path of Sustainable Development of Fresh E-Commerce Platform from the Perspective of Consumer Psychological Needs

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Abstract: With the continuous development of fresh e-commerce, the intensification of industry competition, and changes in the consumer environment, the sustainable development of fresh e-commerce platforms is facing great challenges. Consumers' demand for fresh e-commerce platforms is not limited to material aspects such as products, but also has high requirements for the psychological feelings and experiences formed between them and the fresh e-commerce platform. Whether this psychological demand is met largely affects consumers' repurchase rate, which in turn affects the sustainable development of the fresh e-commerce platform. This article focuses on the psychological experience and consumer psychological evaluation formed between consumers and fresh e-commerce platforms. By using a questionnaire survey to understand and collect the current psychological needs of consumers on fresh e-commerce platforms, we can further understand which factors affect the satisfaction of consumer psychological needs and provide improvement suggestions for the sustainable development of fresh e-commerce platforms. On the basis of consulting relevant literature, the questionnaire referred to the psychological contract scale used to measure consumer psychological needs in marketing contexts based on the theory of psychological contract. This survey questionnaire targets consumers who have experience purchasing fresh products online. The questionnaire collects and understands consumers' psychological needs for fresh e-commerce platforms through Wenjuanxing online, and uses descriptive statistics to analyze consumers' psychological evaluations of

fresh e-commerce platforms. The survey results show that consumers believe that the price setting of fresh e-commerce platforms is unfair and that after-sales service personnel cannot understand their needs well and provide suitable services, which has caused certain psychological pressure on consumers; On the other hand, consumers have a high evaluation of the quality assurance commitment, service response speed, and dispute handling attitude made by fresh food e-commerce platforms, which can better meet their psychological needs and expectations for the platform. Based on relevant theories and research results, this article believes that fresh food e-commerce platforms should focus on the psychological relationship formed between consumers and pay attention to the study of consumers' psychological needs. Specifically, fresh e-commerce platforms can improve from several aspects that consumers are more concerned about, such as price setting, service experience, and customer relationships, to better meet their psychological needs and ultimately achieve sustainable development of fresh e-commerce platforms.

Keywords: Sustainable Development; Fresh E-Commerce; Psychological Contract; Descriptive Statistics; Psychological Needs

1. Introduction

With the rapid development of the Internet, the habit of purchasing fresh produce online has gradually taken shape. According to Avery Consulting 2021 published China epidemic "after the era of" fresh survey data shows that 42.1% of the surveyed users in the fresh

platform purchases 2-3 times a week, 15.8% of the surveyed users 4-5 times a week [1], which to a large extent to promote the development of China's Fresh E-commerce. May 4, 2023, the NetSense E-commerce Research Center released the "2022 Annual China E-commerce Market Data Report", which shows that the Fresh E-commerce market size of about 560.14 billion yuan in 2022, a year-on-year growth of 20.25% [2]. Fresh E-commerce enterprises are constantly exploring and developing business models for better development of market potential, and currently there are front warehouse mode, self-built store mode and social e-commerce mode; in addition, the cold chain logistics to ensure the quality of fresh commodities is getting better and better with the support of technology and policy. According to the data of AiMedia Consulting, China's cold chain logistics market scale reached 637.1 billion yuan in 2022, with a year-on-year growth of 11.8%, and has maintained a high growth rate of more than 10% for many years. Business model innovation and the increasing perfection of cold chain logistics are promoting the rapid development of Fresh E-commerce, while the input of diverse capital makes the competition in the industry intensify. In this context, how to improve consumer satisfaction and turn incremental users into stock has become the key to the sustainable development of Fresh E-commerce platforms.

2. Literature Review

2.1 Psychological Contract

The concept of psychological contract was first proposed by the American psychologist social psychologist Argyris (1960), who pointed out that there is an invisible psychological contract between the employee and the organization in the organization, and this contract will affect the behavior of the employee [3]. With the application of psychological contract in organizational behavior and research gradually mature, some scholars began to introduce the theory into other fields. Roehling (1997) pointed out that the psychological contract can be extended to the relationship between the enterprise and external customers, the psychological contract theory began to be applied to the field of

marketing. At present, there are more studies on psychological contract in the marketing field, including the psychological contract between enterprises and their cooperative members, the psychological contract between consumers and e-commerce platforms, and the psychological contract between consumers and the anchor with goods. In order to better measure the psychological contract in marketing situations, Luo referred to Rousseau's (1990) dimensional division of the psychological contract, and argued that there are also two dimensions of transactional psychological contract and relational psychological contract in marketing situations, and developed a corresponding measurement scale [4]. Shen Xuewu, Nie planning (2007) in based on the conceptual nature of psychological contract [5], based on ROUSSEAU's (1995) classic psychological contract scale, adjusted for the online consumer context, and referring to Luo Haicheng's (2005) questionnaire design, from the two dimensions of transactional psychological contract and relational psychological contract to scale design, the scale has 12 items, the first six questions are used to measure the transactional psychological contract of online consumers, and the last 6 items measure the relational psychological contract of online consumers. She et al. [6], Chen et al. [7] argued that there is also a psychological contract between consumers and live hosts in online e-commerce live streaming, and developed a measurement scale from the dimensions of transactional norms and relational dimensions. Based on the previous literature, this paper argues that there is also a psychological contract between consumers and Fresh E-commerce platforms, and that the psychological contract between consumers and e-commerce platforms affects the sustainable development of e-commerce platforms, and for this reason, we draw on the scale developed by Shen Xuewu et al. (2007) to measure the psychological contract between consumers and e-commerce platforms.

2.2 The Development of Fresh E-commerce Platforms

With the rapid development of Fresh E-commerce platforms in recent years, the

competition of Fresh E-commerce platforms has been intensifying, and most of the e-commerce platforms have suffered losses or even gone bankrupt one after another in the competition, which greatly affects the sustainable development of the Fresh E-commerce platforms, and thus attracts enough attention from scholars. The current research of scholars mainly focuses on the following aspects: first, Tu et al. [8] study the development of Fresh E-commerce platforms from the perspective of consumer purchase willingness and satisfaction; second, Gao [9] study the development of Fresh E-commerce platforms from the perspective of the supply chain; and third, Huo et al. [10] study the development of Fresh E-commerce platforms from the perspective of the business model. e-commerce platform to conduct research.

In summary, at present, scholars are more concerned about the development of Fresh E-commerce platforms, and they have also studied the development of Fresh E-commerce platforms from different perspectives, but they have not formed a unified viewpoint. Fresh E-commerce as a new type of business model, its essence is still to realize the economic value of realizing the economic value in the case of meeting consumer demand by continuously meeting consumer demand, and then obtain the development. Although the supply chain and business model will affect the development of Fresh E-commerce platform, the development and change of these two aspects are centered on the premise of realizing consumer demand or the pursuit of better customer satisfaction, from this point of view, the development of Fresh E-commerce platform should first focus on consumer demand and satisfaction. In addition, studies have shown that the psychological contract between consumers and e-commerce platforms will largely affect consumer satisfaction and their willingness to repeat purchases, while the willingness to repeat purchases is the embodiment of the platform's user loyalty, and the level of user loyalty directly affects the sustainable development of the platform. The higher the user loyalty, the higher the probability of repeat purchase, the more favorable to the sustainable development of e-commerce platform. Based on this, this paper intends to study the sustainable development of Fresh

E-commerce platform from the perspective of psychological contract.

3. Conceptual Model

This paper proposes the following research framework based on the division of consumer psychological contract dimensions and the scale developed by Luo Haicheng (2005) and Shen Xuewu (2007), etc., as shown in Figure 1. The framework is constructed on the premise that among the factors affecting the development of Fresh E-commerce platforms, such as customer satisfaction, supply chain management, and the business model of Fresh E-commerce platforms, it is believed that customer satisfaction is the most important factor affecting the development of Fresh E-commerce platforms, for this reason, in this paper, we first focus on the impact of customer satisfaction on Fresh E-commerce platforms, and do not take the impact of the other two factors into account for the time being.

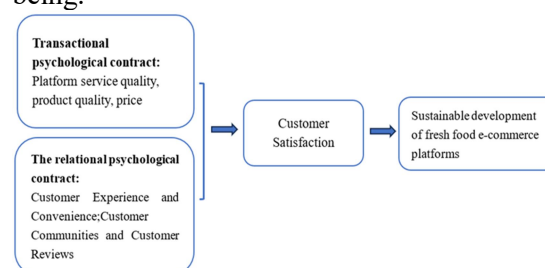


Figure 1. Research Framework

As shown in Figure 1, this research framework takes the sustainable development of Fresh E-commerce platform as the dependent variable, the psychological contract of consumers as the independent variable, and customer satisfaction as the mediating variable. Among them, consumer psychological contract is subdivided into transactional psychological contract and relational psychological contract, and platform service quality, product quality, price, etc. are taken as specific factors affecting the transactional psychological contract between consumers and Fresh E-commerce platforms; and customer experience and experience, customer community and customer evaluation, etc. are taken as specific factors affecting the relational psychological contract between consumers and Fresh E-commerce platforms.

4. Fresh E-Commerce Platform Customer Satisfaction Survey

In order to objectively understand the customer satisfaction situation of the Fresh E-commerce platform, this paper adopts a questionnaire survey to collect relevant data. This survey selects Guangdong Province, where Fresh E-commerce consumers are more active, as the research location, and takes consumers aged 20-60 with online shopping experience as the research object.

4.1 Questionnaire Design

The questionnaire adopted the psychological contract measurement scale of online consumers by Shen Xuewu et al. and designed 18 questions. Among them, 6 questions in the first part are mainly to understand the basic information of the respondents, and a total of 12 questions in the second part are mainly to measure the psychological contract between consumers and Fresh E-commerce platforms, which is measured using a 5-point Likert scale.

4.2 Questionnaire Survey

The questionnaire was pre-surveyed before formally conducting the survey, and the results showed that the reliability Cronbach. α coefficient of the questionnaire was 0.92, and the validity KMO value was 0.81, which showed that the reliability and validity of the questionnaire scale was very good. The questionnaire was set up through the questionnaire star tool and distributed to the respondents through WeChat/QQ and other tools. The research time is July 10, 2023 - July 24, 2023, a total of 185 questionnaires were distributed, 180 valid questionnaires were recovered, and the effective recovery rate of the questionnaire was 97.30%.

4.3 Analysis of Survey Results

4.3.1 Basic information of the respondents

From the situation of questionnaire recovery, the male to female ratio of the investigated is 49:51, of which the distribution of age, education and occupation is shown in Table 1.

Table 1. Summary of the Basic Information of the Respondents

Basic Information	Project	Quantity (person)	Proportion (%)	Satisfaction Score
Gender	Male	49	49	3.85
	Female	51	51	3.77
Age	18-25 years old	70	70	3.86
	25-30 years old	12	12	3.80
	30-35 years old	4	4	3.77
	Over 35 years old	14	14	3.61

Education level	High school and below	24	24	4.08
	Junior college	37	37	3.67
	Undergraduate	34	34	3.85
	Postgraduate and above	5	5	3.32
Profession	Student	49	49	3.84
	Faculty/Government Staff	7	7	3.46
	Staff	17	17	3.71
	Other	27	27	3.92

As shown in Table 1, those with graduate education and above, teachers or government staff have relatively low satisfaction with Fresh E-commerce platforms, with satisfaction scores of 3.32 and 3.46, respectively. According to the 5-point Likert scale, The higher the score, the higher the satisfaction, and vice versa. From the above results, it can be seen that the staff satisfaction of teachers/government staff and undergraduate degree is not very high.

4.3.2 Analysis of survey results

(1) Overall satisfaction analysis

According to the results of the questionnaire survey, the overall satisfaction of consumers is 3.81, the satisfaction index is 73.25%, and the complaint index is 5.5%. According to the measurement results of the Psychological Contract between consumers and the Fresh E-commerce platform, the survey results show that the satisfaction score of the Transaction Psychological Contract between consumers and the Fresh E-commerce platform is 3.65, and the satisfaction score of the Relational Psychological Contract is 3.98. In addition, the satisfaction rate and complaint rate of these two types of indicators are shown in Table 2. From the results, it can be seen that consumers are not very satisfied with the responsibility fulfillment or service quality of the Fresh E-commerce platform.

Table 2. Measurement of the Psychological Contract between Consumers and Fresh E-commerce Platforms

Project	Satisfaction rate (%)	Generally (%)	Complaint rate (%)
Trading Psychological Contract	73.33	21.33	5.33
Relational Psychological Contract	73.17	21.17	5.67

As shown in Table 2, the relationship Psychological Contract between consumers and Fresh E-commerce platforms has a high complaint rate, and the relationship Psychological Contract will directly affect consumer loyalty. In addition, according to the psychological emotional experience

cascade theory, customer satisfaction is divided into six levels. Satisfied [79-70%], general [69-60%], dissatisfied [59-50%], very dissatisfied [49-0%]. As shown in Table 2, the satisfaction index of consumers on Fresh E-commerce platforms is between 70-79%. Only when consumers are satisfied or very satisfied will they recommend or repeat purchases to relatives and friends around them. Therefore, from this perspective, the overall consumer satisfaction of the Fresh E-commerce platform needs to be further improved in order to stabilize the customer stock. And improve consumer loyalty, and finally realize the sustainable development of the Fresh E-commerce platform.

(2) Satisfaction status of the surveyed fresh food platforms

Judging from the feedback from the respondents, Meituan bi-mallis the platform most frequently used by consumers, followed by Temu, followed by Daily Fresh, JD Daojia, and Dingdong. Among these platforms, Hema Fresh has the highest satisfaction, followed by Daily Fresh, JD Daojia, Dingdong and Tmall Supermarket. The lowest satisfaction is the TAOCAICAI platform under the Taobao platform. The satisfaction score of Meituan Shopping with the highest frequency is 3.79. This is shown in Figure 2.

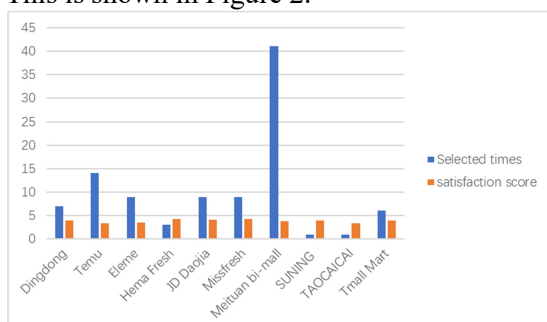


Figure 2. Usage and Satisfaction Scores of Fresh E-commerce Platforms

According to the research framework in Figure 1, the Transaction Psychological Contract between consumers and the Fresh E-commerce platform is measured from several aspects such as platform interface design, product price, quality and service quality, and the overall satisfaction score is 3.65. Among them, consumers are relatively satisfied with the interface design of the Fresh E-commerce platform, with a score of 3.7, while their satisfaction with the service quality of the after-sales service personnel on

the platform is relatively low, with a score of only 3.59. The specific data are shown in Table 3.

Table 3. Measurement of Psychological Contract between Consumers and Fresh E-commerce Platforms

Evaluation Item	Satisfaction Score	Overall Score
Q11 The platform is willing to provide a simple and efficient interface and really considers my comfort	3.7	3.65
Q12 The platform really treats me as a regular customer, and will give real price discounts or free services	3.64	3.65
Q13 The platform will provide fast service, they are not willing to waste my waiting time	3.64	3.65
Q14 The platform will not let me use expensive products that are not suitable for me to make money	3.68	3.65
Q15 The after-sales service personnel of the platform understand my needs	3.59	3.65
Q16 When I have questions about related services, the platform will sincerely explain and deal with them seriously	3.63	3.65

(3) Measurement results of the Psychological Contract between consumers and Fresh E-commerce platforms

According to the research framework in Figure 1, the Relationship Psychological Contract between consumers and Fresh E-commerce platforms is evaluated and measured from the aspects of consumer experience, consumer convenience and evaluation. According to the characteristics of the relationship between consumers and e-commerce platforms in online transactions, the above three aspects are set into the following six questions for measurement. According to the survey results, the overall satisfaction score of this item is 3.98, among which consumers have a relatively high evaluation of the service and quality assurance of the Fresh E-commerce platform, with the highest score of 4.02, which is compared with the highest score of 3.7 in the Transaction Psychological Contract. Consumers are more satisfied in this regard. The specific evaluation items and their satisfaction scores are shown in Table 4.

Table 4. The Psychological Contract Measurement of the Relationship between Consumers and Fresh E-commerce Platforms

Evaluation Item	Satisfaction Score	Overall Score
Q21 Once a business dispute arises, the platform will consider my interests and take the responsibility	4.01	3.98
Q22 The platform will sincerely provide	4.02	3.98

me with reliable, assured and high-quality services		
Q23 The after-sales service personnel of this platform really respect me, not perfunctory	4.02	3.98
Q24 The platform makes a long-term quality and credit guarantee for the goods I purchased	4.01	3.98
Q25 The after-sales service personnel of this platform really care about my personal work and life	3.9	3.98
Q26 The platform is really valuing the personal friendship relationship with me	3.92	3.98

5. Countermeasures for Sustainable Development of Fresh E-commerce Platforms

5.1 Enhance the Understanding of Customer Satisfaction

With the rapid development and popularization of cold chain technology, the competition among Fresh E-commerce enterprises has gradually shifted from business model and logistics service to consumer-centered competition. The essence of competition in business model and logistics service is still to pursue high customer satisfaction, develop business model design around consumer behavior and provide appropriate logistics service. From this point of view, the sustainable development of Fresh E-commerce platform is to meet the premise of the general policy environment, through constantly meet consumers and achieve high customer satisfaction. At present, there are a lot of better Fresh E-commerce platform began to realize this and take various measures to meet the needs of consumers, such as Dingtone grocery shopping, Meituan grocery shopping and other well-known Fresh E-commerce platform in order to obtain a high degree of consumer satisfaction, the implementation of rapid delivery and timely and appropriate treatment of after-sales problems. Even so, from the results of the current research, the current consumer satisfaction with Fresh E-commerce platform is still not high. Consumer satisfaction is low, it is difficult to produce repeat purchase behavior, or will not recommend to friends around. Therefore, Fresh E-commerce platforms need to further strengthen the understanding of customer satisfaction and research to find out the key factors affecting consumer satisfaction in order to achieve sustainable development. In addition, in the

popularization of health and environmental protection concepts, consumers' awareness of low-carbon and environmental protection is also increasing, and Fresh E-commerce platforms need to focus on providing services that focus on green and other factors in order to obtain high customer satisfaction.

5.2 Sincerely Give Customers Price Concessions

With the development of big data and other technologies, some Fresh E-commerce platforms have appeared the phenomenon of big data "kill familiarization". In the price of goods on the difference between new and old customers set, resulting in some of the old customers found this phenomenon after decisively leaving the platform to other platforms. The emergence of these phenomena is the Fresh E-commerce platform merchants in order to quickly recover the costs of the early stage and take a means, but this means will precisely hurt those consumers who are more loyal, thus making the platform more than it is worth. For Fresh E-commerce platform, to better retain customers need to sincerely give customers price concessions, and need to protect the quality of goods, so as to better retain customers.

5.3 Strengthen the Training of Platform Service Personnel's Business Skills

Fresh E-commerce platform customer satisfaction comes from the consumer experience to a large extent, and this experience is mainly concentrated in the after-sales link in the personnel service process. At present, most of the Fresh E-commerce platform after-sales service personnel quality is uneven, in the process of providing services did not well understand the needs of consumers, resulting in low customer satisfaction. Therefore, the Fresh E-commerce platform needs to strengthen the relevant training of platform service personnel in order to improve the service level of personnel.

5.4 Focus on Distinguishing between Target Customers and Maintaining a Good Relationship with them

When the Fresh E-commerce platform carries out customer relationship maintenance, on the one hand, it is necessary to distinguish the

quality users among the existing customers, and on the other hand, it is necessary to maintain a good customer relationship with the existing customers. For the former, the age of 30 years old or above, teachers or government workers and company employees should be the quality users of Fresh E-commerce platform, most of these consumers belong to the middle class, with strong consumption ability, but the satisfaction of this type of consumer group in this research is low. For the latter, Philip Kotler, the father of marketing, believes that the way for enterprises to acquire new customers is to make the best use of them. Kotler believes that the cost of acquiring new customers is 5 times the cost of retaining existing customers, and that a 5% reduction in customer turnover will increase the profitability of the enterprise by more than 25%. Based on this, Fresh E-commerce platforms need to maintain existing customer relationships in order to achieve better sustainable development. Fresh E-commerce platforms need to focus on developing and maintaining good customer relationships while providing quality services. Incorporate customer care in the daily operation process, in addition to focusing on the process of consumer service experience, but also appropriate attention to the customer's work and personal situation, in order to enhance the strength of the relationship and improve customer loyalty.

6. Conclusion

In the increasingly competitive Fresh E-commerce market, Fresh E-commerce platforms, in addition to providing high-quality cold chain logistics services to protect the quality of commodities and innovating business models to better reduce operating costs, it is more important to improve consumer satisfaction because consumer satisfaction will directly affect the sustainable development of Fresh E-commerce platforms. For this reason, Fresh E-commerce platforms need to improve customer satisfaction in the operation of the understanding and research, focus on distinguishing between target customers and maintain a good relationship with them, to avoid big data to kill the behavior of consumer dissatisfaction.

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