FACTORS INFLUENCING CUSTOMER SATISFACTION OF FRESH HEMA COMPANY

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION IN INDUSTRIAL BUSINESS ADMINISTRATION

KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG

BUSINESS SCHOOL

KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG

2022

KMITL-2022-KBS-M-067-001

Thesis Title	Factors Influencing Customer Satisfaction of Fresh Hema Company
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Student ID	63611129
Degree	Master of Business Administration
Program	Industrial Business Administration (International Program)
Year	2022
Thesis Advisor	Asst. Prof. Dr. Nuttawut Rojniruttikul

ABSTRACT

As fresh products are perishable, difficult to transport and difficult to store, people prefer to go to supermarkets and vegetable markets for selection and purchase. The development of the new retail model has solved the problem that traditional fresh e-commerce companies can't experience in stores. However, if merchants want to get better user stickiness and higher product repurchase rate, they must make clear the impression factors of customer satisfaction in the new retail environment. In this research, the data is collected through questionnaire survey by taking Fresh Hema Company as a cast study, and the influencing factors of customer satisfaction of fresh e-commerce are obtained by multiple linear regression analysis, and the conclusions related to improving customer satisfaction are put forward.

ACKNOWLEDGEMENT

First of all, I would like to extend my sincere gratitude to my supervisor, Asst. Prof. Dr. Nuttawut Rojniruttikul, for his instructive advice and useful suggestions on my thesis. I am deeply grateful of his help in the completion of this thesis.

I am also very grateful to all other tutors and teachers for their direct and indirect help in giving me my thesis.

Special thanks should go to my friends who have put considerable time and effort into their comments on the draft.

Finally, I am indebted to my parents for their continuous support and encouragement.

Zhu Zhu

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CHAPTER 1

INTRODUCTION

1.1 Background and Significance

In recent years, e-commerce has developed rapidly in China, and many excellent e-commerce enterprises have emerged one after another. With e-commerce seizing the market on a large scale, the development of the real economy is hindered, and there is a weak trend. However, in order to attract more users, the network platform is blindly engaged in vicious competition and price wars, and it is not uncommon to sell low-quality fake and shoddy products. The advantages of online shopping gradually weaken with the increasing competition of e-commerce, and the dividends of e-commerce gradually disappear. As a leader in the e-commerce industry, Ali first proposed a new retail concept at Hangzhou Yunqi Conference in October 2016 to solve the two problems existing in traditional e-commerce. The first traditional online e-commerce has existed since its birth. There are obvious shortcomings that are difficult to make up, and it is an indisputable fact that online shopping experience is always inferior to offline shopping; Second, after moving forward at full speed in recent years, users' growth and traffic dividends of traditional e-commerce are gradually shrinking due to the widespread popularization of Internet and mobile Internet terminals, and the growth bottleneck faced by traditional e-commerce begins to appear. (Zhao & Xu, 2017). New retail refers to a new retail mode in which enterprises rely on the Internet and upgrade the production, circulation, and sales processes of commodities by using advanced technologies such as big data and artificial intelligence, thereby reshaping the business structure and ecological circle, and deeply integrating online services, offline experiences, and modern logistics. The new retail has four main characteristics, including online pages, physical storefronts, payment terminals, data systems, logistics platforms, marketing paths, etc., and embeds diversified functions such as shopping, entertainment, reading and learning, thus promoting the overall improvement of the four

major capabilities of the enterprise, such as online service, offline experience, financial support and logistics support, so that customers' requirements for convenience and comfort in the shopping process can be better met, thus increasing the ecological characteristics of user stickiness. Clear all kinds of barriers between retail channels in the way of "omnichannel", blur the existing boundaries of various subjects in the business process, break the realistic barriers such as time and space boundaries and product boundaries existing in the traditional business model in the past, and promote the rational and smooth flow of personnel, capital, information, technology and commodities, thus realizing the unbounded characteristics of interconnection and sharing of the whole business ecological chain; Meet people's requirements for personalization, instantaneity, convenience, interaction, precision and fragmentation in the shopping process; Satisfying people's consumption concept will gradually change from price consumption to value consumption, and more and more people begin to pay more attention to experiential characteristics. The emergence of new retail can better meet the arrival of the "customer sovereignty era". Combining offline with online can not only provide customers with goods or services with visual attributes such as visibility, audibility, touchability, sensibility and usability, but also gain more users by combining online with offline, reduce the amount of goods stocked, eliminate inventory, reduce costs, and provide customers with high-quality goods while giving them preferential prices.

2017 is called the first year of China's "new retail", and core enterprises such as Alibaba actively laid out "new retail". For a time, new retail species emerged one after another, and Fresh Hema became a phenomenon of great concern. In 2018, core enterprises further launched the battle for the dominance of "new retail". Weiman (2017), an American expert in "cloud economics" and known as the godfather of new retail, thinks that many practices of "new retail" in China have become global highlights, and Chinese enterprises are expected to become global leaders of "new retail". Generally speaking, "new retail" has shown an irresistible trend in reshaping the retail format. Fresh Hema is a new species of fresh supermarket hatched by Alibaba Group, which is a typical example of the practice of "new retail" mode and the first example of this format. Fresh Hema takes fresh food as its entry point and adopts the collaborative operation mode of online e-

commerce and offline physical stores. Since its establishment in Shanghai in 2016, by 2021, Alibaba has 338 Fresh Hema stores in China. In July, 2017, Hou Yi, founder and CEO of Fresh Hema, said in an interview with the news that the stores in Fresh Hema that have been operating for more than half a year have basically achieved profitability. Shanghai Jinqiao Store, the first store of Fresh Hema, currently has an average daily turnover of about 1 million yuan. By the end of July 2018, Fresh Hema had operated 7 mature stores for more than 1.5 years, with the average daily sales of a single store exceeding 800,000 yuan, and the overall efficiency exceeding 50,000 yuan, which was 2-3 times that of similar stores.

During the COVID-19 outbreak in early 2020, due to the extremely infectious nature of COVID-19, people could not go to the market to buy food materials as before, and the new retail industry became the first choice for customers to purchase. Many platforms poured in a large number of customers at one time, and many customers began to adapt to the consumption patterns of new retail. As a sales model to meet customers' new consumption expectations, it is necessary to pay attention to customer satisfaction if you want to retain customers for a long time after the outbreak. Therefore, this thesis will study the impact of customer satisfaction in the new retail environment and put forward relevant suggestions.

1.2 Recent Literatures on Home and Abroad

1.2.1 Recent Literatures on New Retail

New retail, which has been described as omni-channel retail in some literatures, is also called pan-retail. In reality, the rapid development of information technology has reshaped the traditional retail industry and brought about the prosperity of the e-commerce industry. However, with the passage of time, the model of the retail industry began to change, and the traditional online and offline models were no longer two opposite business models, and began to move towards integration and development. "New retail" has three main characteristics: one is the deep integration

of online and offline and modern logistics. Second, its core is to constantly meet the inner needs of customers. Third, continuously upgrade the digital application.

From the perspective of digital application: Big data technology has a great impact on the new retail business model, and points out that the ability of resource integration and in-depth analysis is the special competitiveness of its business model. (Li, 2020) If the enterprise wants to successfully build a new retail platform, it has to rely on big data technology. Du & Jiang (2017) First of all, it is necessary to connect the online platform with the offline entity data, and secondly, it needs the support of high technology.

From the perspective of integration and reorganization of online and offline supply chains: Guo (2019) pointed out that the external motivation for the development of new retail is the bottleneck in the development of e-commerce, the new retail that meets the diversified needs of customers has become a breakthrough in development, and the internal motivation is the continuous development of the new online and offline deep integration business model, which subverts the previous online and offline separate business model. And the new retail is characterized by "experiential, intelligent and unbounded". Xie & Vivi (2019) respectively combed the "new retail" logic of offline entity giants such as Suning and over the rainbow and online Alibaba and JD.COM, and put forward policy suggestions to help the development of online and offline retail formats. Chen H. (2018) summarized and analyzed the two major e-commerce companies entering the new retail industry at present, and obtained the result that online and offline development will accelerate. Jia & Cheng (2017) pointed out that online and offline integration of China's large-scale retail industry is an industry trend. Liu (2020) How can e-commerce make profits under the dual-channel condition? Zhang (2019) Under the background of new retail, the choice of sales channels by manufacturers and distributors. Baoyi (2020) The influencing factors of online and offline collaborative development are affected by the underlying logic, core support and upgrade guarantee. He (2020) constructed an omni-channel supply chain collaboration model, and verified the effectiveness of the model with the grain industry as the research object. Chen (2017) expanded the concept of offline stores, from the original experience space to a newly added port for online

business drainage. Zhang & Zhao (2019) introduced the evolution process from omni-channel products to omni-channel supply chain ecosystem. This thesis introduces omni-channel supply chain from three aspects of resource reorganization and integration: people, goods and market. It points out that omni-channel supply chain integrates omni-channel customer demand, omni-channel marketing strategy, omni-channel digital resources, omni-channel purchasing strategy, omni-channel retail terminal and omni-channel logistics resources. The optimization of omni-channel supply chain focuses on four factors that affect customer value, namely, quality, efficiency, brand and customer experience, thus reorganizing the whole supply chain, and finally maximizing customer value.

From the perspective of customer-centeredness: Mu (2020) New retail is customer-centeredness, and the fundamental purpose of the new retail industry is to meet the internal needs of customers quickly and at a high level. Luo (2019) established a basic hypothesis model of new retail consumption contribution based on customer experience, in which customer experience includes customer experience content, service quality, platform reputation, marketing strategy and perceived risk. Suo & Yao (2018) thinks that the new retail model should integrate online and offline and other resources, so as to bring new experience value to customers. Yan (2018) pointed out that the development of new retail is related to customer preference. Shi (2018) The reason for the rise of the new retail industry is to satisfy the inner needs of customers at any place and at any time. Similarly, Fang (2019) also agrees that if retail enterprises want to gain advantages in the competition under the omni-channel strategy background, they must thoroughly study the internal logic of the new retail business model, change the existing retail path and upgrade the retail ecology, so as to continuously meet the diversified shopping experience needs of customers.

From the perspective of modern logistics: Zheng (2020) The development direction of intelligent logistics in the new retail era. Wang (2019) studied customer satisfaction with unmanned retail, and gave five assessment dimensions: shopping effectiveness, timeliness, commodity price, commodity attribute and commodity quality. Wang (2019) used genetic algorithm to study the logistics distribution under the new retail mode. Xie (2019) analyzed the market supply and other

aspects, and constructed the evaluation index of fresh cold chain logistics from all aspects of logistics. Jiang (2019) studied the logistics capability of new retail enterprises from the perspective of subject, object, and carrier.

As far as foreign countries are concerned, Yiming (2019) thinks that the offline channels are sinking in the new retail environment. Xun (2019) studied the risk management in the new retail environment. Ya-Jun (2020) established an omni-channel management framework, which provided theoretical guidance for enterprises to implement new retail. Mariano (2020) studied the impact of online advertising on omni-channel retailing. Marshall (2019) studied the influence of online channels on intra-channel and inter-channel in omni-channel retailing and made an empirical analysis with a clothing company in the United States. Charan (2018) studied the risk factors of using electronic payment in omni-channel retailing, and Silvia (2015) pointed out the influence of online channels on retailing.

1.2.2 Recent Literatures on Fresh E-commerce

The change of information technology has injected new vitality into the agricultural economy, allowing customers to buy high-quality agricultural products online. Fresh e-commerce has always been one of the research hotspots of scholars at home and abroad.

From the perspective of cost analysis of fresh e-commerce: Yue (2020) analyzed the composition of sales cost of fresh e-commerce from two dimensions of initial cost and logistics cost. Wang (2019) made an empirical analysis by using analytic hierarchy process, activity-based costing and field investigation. Finally, it is concluded that there are three main factors that have the greatest impact on fresh e-commerce enterprises. The length of distribution distance, the choice of distribution node address and whether there is a high level of cold chain logistics technology. Dai (2020) pointed out that the main obstacles to the development of fresh e-commerce are the cost in cold chain logistics and transportation, the lack of uniform standards for the quality of fresh products, and the lack of customers' shopping experience.

From the perspective of distribution optimization: Liu (2020) studied the vehicle routing

problem with time window in the distribution of fresh e-commerce under time-varying network, and finally designed an algorithm. Wang (2019) designed the algorithm of fresh agricultural products distribution network in the same city. Tolini (2016) and Amorim (2014) respectively constructed the optimization models of carbon footprint, genetic algorithm and multi-objective distribution path. Sun (2019) has studied the logistics platform of the new retail, and thinks that the new retail has three requirements for logistics: intelligent logistics technology, precise control of front warehouse layout and inventory, and high-quality and instant distribution.

From the perspective of operation mode: Ji (2020) used system dynamics theory and Vensim model to find that compared with B2C mode, fresh e-commerce in online to offline has higher profit and lower total cost. Yu (2020) found that the synergy advantage of sharing economy can be brought into play to ensure the distribution of fresh e-commerce. Wang (2019) found that cooperatives can achieve a win-win situation by selling agricultural products through supermarket entities and supermarket e-commerce platforms.

1.2.3 Recent Literatures on Online Customer Satisfaction

Traditional e-commerce has been developed for a long time, and the research on customer satisfaction of traditional e-commerce has been carried out for many years, which is much more mature than fresh e-commerce. Traditional e-commerce in many countries has formed its own customer satisfaction influencing factor model. Therefore, this thesis does not describe the research status of customer satisfaction of mature traditional e-commerce, but mainly summarizes the current situation of customer satisfaction of fresh e-commerce under the new retail environment. The research on influencing factors of customer satisfaction can be described from four angles:

Qualitative analysis of the influencing factors of online customer satisfaction. Abroad: Buskin (1998), Ernst and Young (1998) first put forward the concept of e-satisfaction but did not do empirical research on its influencing factors. Chin-Fu Hoh (1999) compared traditional shopping with shopping under e-commerce mode and thought that the page design of website was one of the factors affecting the satisfaction of online customers. Hsu (2008), according to the characteristics

of e-commerce model itself, added e-service quality to the cause variable of satisfaction in ACSI model, and established an e-CSI model.

Domestic: Gao (2004) based on Kotler's customer delivered value theory, considered the total value gained by customers and the total cost paid by customers, established the evaluation index system of customer satisfaction under B2C mode. Liu et.al. (2004) analyzed the influencing factors of online customer satisfaction under B2C mode, and constructed the index system and evaluation model of online customer satisfaction under B2C mode. Dong (2007), referring to Lee's evaluation model of customer satisfaction in online shopping, established a model of factors affecting customer satisfaction in e-commerce mode, including transaction security, website design, marketing planning, commodity information and service quality. Dai (2014) established the customer satisfaction evaluation model of logistics distribution service under B2C mode.

Empirical analysis of influencing factors of online customer satisfaction. Foreign countries: Lee (1999) established a customer satisfaction evaluation model for online shopping, and found that logistics support, after-sales service, product price and other aspects affect customer satisfaction for online shopping. According to Szymanski (2000), perceived convenience is the most significant factor affecting customer satisfaction. Heiner et al. (2004) used Szymanski's research method to empirically analyze the satisfaction of online customers in Germany and found that the most significant influencing factor was perceived convenience. Delone & Mclean (2004) found that service quality, information quality, website layout and system quality have significant influence on customer satisfaction. According to Namjae (2001), the factors that affect the satisfaction of online customers include product information, website design, payment methods, etc. Among them, the website design and the security of payment transactions have a significant impact on customer satisfaction. Matthew (2005) thinks that perceived information quality, perceived system quality and perceived service quality are the main factors that affect customer satisfaction of online shopping. Minho (2008) thinks that the factors that have a significant impact on Korean online shopping customer satisfaction are perceived safety, website pages and customer support for online shopping.

Domestic: Shen & Xie (2007) used multiple regression analysis on the influencing factors of customer satisfaction of online bookstores under B2C mode, and the results showed that customers' understanding of online bookstores and perceived service quality had a significant impact. Mi (2009) studied the customer satisfaction of online banking, and found that the usefulness, security, convenience, and responsiveness of online banking have a significant impact. Yu (2009) constructed the customer satisfaction index system and its evaluation model under B2C mode. According to the fuzzy comprehensive evaluation method, it was found that the significant influencing factors were enterprise reputation, employee service, system safety and reliability, commodity factors and convenience. Liu (2010) applied structural equation model to analyze the influencing factors of customer satisfaction under B2C mode, and found that corporate image, perceived value, perceived service quality and perceived product quality have significant impacts on customer satisfaction. Xie et al. (2011) used structural equation modeling method to empirically analyze that the factors that significantly affect customer satisfaction under B2C mode are transaction ability, website service ability and logistics distribution ability. Han (2011) constructed an evaluation model of e-commerce customer satisfaction with multi-attribute decision-making method. Sun et al. (2011) used AHP to construct the evaluation index system of customer satisfaction, and concluded that commodity information, logistics distribution and transaction level are the significant factors affecting customer satisfaction. Sun (2012) conducted an empirical study on the influencing factors of customer satisfaction under C2C mode by using structural equation modeling method, and the results showed that information quality and website system quality had a significant impact on online customer satisfaction. Hao & Zhu (2013) constructed the evaluation index system of customer satisfaction under B2C mode and obtained that the factors affecting customer satisfaction were website design, marketing planning and payment by using AHP.

Research on the influence of unilateral factors on online customer satisfaction. Foreign countries: Leslie (2004) found that website transaction ability and response speed have a significant impact on online shopping customer satisfaction. Lin & Sun (2009) studied that perceived website service quality has a significant impact on online shopping customer satisfaction. According to Hua

et al. (2014), innovation in e-commerce mode has a significant impact on customer service satisfaction.

Domestic: Cha & Wang (2006) studied the influence of important factors of website service quality and customer expectation on customer satisfaction of online shopping through structural equation model, and found that payment security, price factor and commodity quality have significant influence on customer satisfaction. Wang & Zhao (2010) found that customer satisfaction can significantly affect the value of enterprise shareholders. Liang (2013) discussed the influencing factors of international students' satisfaction with online customers in different regions from the perspective of international students and found that the delivery service has a significant impact on the satisfaction of international students in all regions with online shopping. Wang et al. (2014) constructed the evaluation model of customer satisfaction from the psychological perspective with the help of the concept of reference price, and found that if the customer's purchase price is lower than the customer's expectation before purchase, the customer's satisfaction and purchase price will be positively significant first and then inversely significant.

Research on customer satisfaction of online group purchase. Domestic: Pan (2012) built a customer satisfaction index model for restaurant group purchase, and through factor satisfaction-importance analysis, found that the factors that significantly affect customer satisfaction of online group purchase are service quality, after-sales service, and guarantee. Wang (2013) constructed an evaluation model of influencing factors of customer satisfaction in online group purchase, and analyzed that the factors that significantly affect customer satisfaction are the quality of goods, the environmental quality of merchants and website design. According to the analysis of influencing factors of satisfaction of group purchase customers in online to offline by Fu (2014), it is found that hardware quality, brand image and website design have significant positive effects on satisfaction of group purchase customers. Summarizing the current situation at home and abroad, the research on online customer satisfaction at home and abroad is mainly the influencing factors of different industry websites on customer satisfaction, and the influencing factors on customer satisfaction under e-commerce mode include website design, convenience, payment security, commodity

information, transaction ability, response time, service quality, system quality and navigation of online stores. In addition to the empirical analysis of questionnaire survey in China, structural equation modeling method, fuzzy comprehensive evaluation method, analytic hierarchy process and multi-attribute decision-making method are also used to evaluate the satisfaction of online customers in different industries. In a word, foreign countries pay attention to the research of measurement model and the design, convenience, and online payment security of websites under e-commerce mode, which affect customer satisfaction. In China, we focus on establishing measurement models and analyzing the influencing factors of customer satisfaction by using a large amount of data. The research on online to offline is also based on the analysis of business model, while online to offline is not as mature as B2C or C2C, so most scholars in China are studying in exploratory period, and there are relatively many research on online to offline represented by group purchase. As the fresh e-commerce industry is a newly developed industry in recent years, there is no suitable customer satisfaction model for fresh e-commerce.

According to the research of the above scholars, it can be found that most scholars think that Online Customer Satisfaction is influenced by Product Quality, Technology Platform, Customer Service and life communication. Some scholars believe that logistics and brand image will have an impact on Online Customer Satisfaction. However, this paper adopts multiple linear regression analysis. Logistics has a strong correlation with Technology Platform and Customer Service, brand image has a strong correlation with Product Quality and Customer Service, and the strong correlation will cause analysis errors, which will make the analysis of independent variables inaccurate. Therefore, this paper takes Product Quality, Technology Platform, Customer Service and life communication as independent variables, Customer Satisfaction as dependent variables, and makes an empirical analysis by questionnaire survey, and uses multiple linear regression model to analyze the influencing factors of fresh e-commerce customers. Finally, it puts forward some suggestions and countermeasures for fresh e-commerce industry to improve customer satisfaction.

1.3 Research Questions

1. What is the level of customer satisfaction of Fresh Hema Company?
2. What are the factors that affect customer satisfaction of Fresh Hema Company?

1.4 Research Objectives

1. To study the level of customer satisfaction of Fresh Hema Company
2. To study the factors influencing customer satisfaction of Fresh Hema Company

1.5 Conceptual Framework

The conceptual framework for this study defines independent and dependent variables as follows

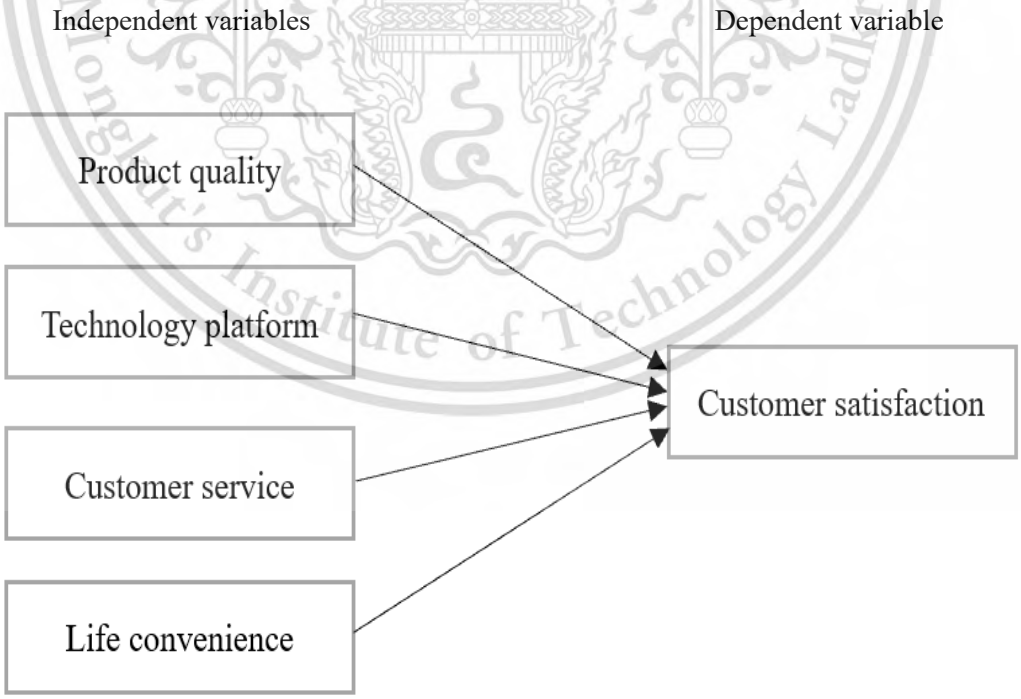

Figure 1.1 conceptual framework

1.6 Significance of the Study

1. the theoretical significance

The research on traditional customer satisfaction at home and abroad has been relatively mature, and many countries have built customer satisfaction evaluation models. The research on customer satisfaction in e-commerce mode at home and abroad mainly focuses on customer satisfaction in B2C and C2C modes. The research on customer satisfaction in traditional e-commerce has certain reference value for the research on customer satisfaction in fresh e-commerce, but it may not be all applicable. E-commerce is different from traditional e-commerce in adopting online to offline. The research on online to offline at home and abroad is mainly about business model, while a few are about satisfaction of group buying customers. There is not enough empirical research on the theoretical research of emerging e-commerce model.

Through empirical analysis, this thesis studies the influencing factors of customer satisfaction of fresh e-commerce and puts forward some countermeasures and suggestions for improving customer satisfaction of fresh e-commerce, and at the same time helps to supplement the deficiency of theoretical research on fresh e-commerce model, which has certain theoretical significance.

2. Practical significance

In recent years, most enterprises have entered the stage of total quality management, and the prerequisite for successful operation of enterprises is to obtain customer satisfaction. Customer satisfaction can represent the development of an enterprise. Therefore, if you want to stand out from the increasingly fierce competition environment, you must have higher customer satisfaction. Only with the support of customers, can we help the enterprise to develop in a longer and more stable way. The biggest difference between fresh e-commerce and traditional e-commerce industry is that fresh e-commerce adopts O2O business model. The combination of online and offline means that enterprises need to consider customer satisfaction from more aspects, and the products consumed offline have an important impact on customer satisfaction. The more complicated contact leads to the higher customer satisfaction of fresh e-commerce, the better the overall sales volume

and performance of websites and offline stores, and more customers will buy products with better evaluation, which can also generate higher customer stickiness and retain more customers, thus improving customer loyalty. On the contrary, if fresh e-commerce enterprises do not pay attention to customer maintenance and improve customer satisfaction of fresh e-commerce, enterprises will also face a more significant crisis.

Therefore, this thesis takes Fresh Hema Company as an example, from the perspective of fresh e-commerce customers, constructs an evaluation index system of fresh e-commerce customer satisfaction, studies the quantitative dependence between fresh e-commerce customer satisfaction and various influencing factors through multiple linear regression analysis, provides a new perspective for fresh e-commerce enterprises to operate better, and clarifies which factors have the most significant impact on fresh e-commerce customer satisfaction. According to the influencing factors of customer satisfaction of Fresh Hema Company, this thesis puts forward relevant suggestions and countermeasures, which provides reference and guidance for promoting the healthy development of fresh e-commerce industry, and it has certain practical significance.

3. Contribution to Existing Work

After searching the existing literature, the author found that the customer satisfaction of fresh e-commerce in the new retail environment is not perfect, and most of them are based on the cold chain distribution, while the research on the overall customer satisfaction is less. According to the basic characteristics of fresh e-commerce in the new retail environment, this thesis makes an in-depth analysis on the influencing factors of customer satisfaction of fresh e-commerce, and constructs an evaluation system of influencing factors of customer satisfaction of fresh e-commerce in the new retail environment with reference to relevant theoretical models, so as to help enterprises quickly find out the influencing factors and reasons of low customer satisfaction of fresh e-commerce, and puts forward relevant suggestions and countermeasures aiming at the influencing factors of customer satisfaction of Fresh Hema Company, providing reference and guidance for promoting the healthy development of fresh e-commerce industry. Its main contribution is to improve the evaluation system of influencing factors on customer satisfaction of fresh e-commerce

in the new retail environment.

1.7 Scope of Research

The target population of the research study includes the customer of Fresh Hema in China. The sample size is determined by calculation, and the confidence level is 0.95, therefore 368 customers are determined.

1.7.1 Variables

The variables obtained includes independent variables and dependent variables as followed.

Independent variable

1. Product quality
2. Technology platform
3. Customer service
4. Life convenience

Dependent variable

Customer satisfaction

1.7.2 Area of Study

Taking Fresh Hema Company as an example, this thesis studies the influencing factors of customer satisfaction in the new retail environment, constructs the evaluation index system of customer satisfaction of fresh e-commerce, studies the quantitative dependence between customer satisfaction of fresh e-commerce and various influencing factors through multiple linear regression analysis, provides a new perspective for fresh e-commerce enterprises to operate better, and clarifies which factors have the most significant impact on customer satisfaction of fresh e-commerce. In view of the low customer satisfaction of fresh e-commerce, this thesis puts forward relevant suggestions and countermeasures, which are applicable to fresh e-commerce enterprises adopting O2O as their business model and have certain reference value for other e-commerce

enterprises adopting O2O as their business model.

1.7.3 Timeframe of Research

Timeline / Steps	Nov-Dec 2021	Jan-Mar 2022	Apr-June 2022	Jul-Sept 2022	Oct-Nov 2022
1. Literature review and construct the conceptual Framework	←	→			
2. Write Proposal		←	→		
3. Collect and Analyze data			←	→	
4. Full thesis presentation				←	→
5. Review and Revise to final version					← →

1.8 Definition of Key Terms

1. Retail refers to a new retail mode in which enterprises rely on the Internet, upgrade the production, circulation, and sales process of commodities by using advanced technologies such as big data and artificial intelligence, and then reshape the business structure and ecological circle, and deeply integrate online services, offline experiences, and modern logistics.

2. Fresh e-commerce refers to selling fresh products on the Internet, such as fresh fruits, vegetables, and fresh meat.

3. Product quality refers to the applicability of the product, that is, the degree to which the product can successfully meet the needs of users when in use. This definition has two meanings, namely, usage demand and satisfaction. For fresh products, customers' requirements are the safety and taste of fresh products, and customers' satisfaction depends on the cost performance of the products.

4. Technology platform refers to any hardware or software used to host applications or services. Fresh Hema Company is an online and offline operation mode, so the technical platform in this paper refers to both online application and offline store layout. Technology is the biggest difference between new retail and traditional e-commerce. Online operation must rely on mobile app program, and easy operation will greatly improve the repurchase rate of customers. At the same time, offline unmanned vending machines are also widely used, and a faster and more convenient shopping experience can also improve the repurchase rate of customers.

5. Customer service refers to an activity, which represents the performance level and management philosophy of an enterprise. From the perspective of enterprise management, service quality is an achievement of customer service. The service quality of fresh food includes tangibility, reliability, responsiveness, assurance, and empathy.

6. Life convenience refers to promoting the sales of goods and services, and the combination of the two. Service conveniences are those that can save shoppers' time or energy, including variables such as credit availability and extension of store hours. In the fresh e-commerce industry, the availability of parking lots, convenient business hours and the geographical location of supermarkets reflect the convenience of life. Convenience is an index that must be evaluated in retail industry, and the improvement of network coverage will significantly increase the customer satisfaction of fresh e-commerce.

7. Customer satisfaction refers to the matching degree between customer expectation and customer experience.

CHAPTER 2

LITERATURE REVIEW

This research aims to investigate the influencing factors of customer satisfaction in Fresh Hema. The researchers conducted literature, articles, and related research on the following topics.

2.1 Background of Fresh Hema

2.2 Concept and Theories of Customer Satisfaction

2.3 Concept and Theories of Factors Influencing Customer Satisfaction

2.4 Related research

2.1 Background of Fresh Hema

2.1.1 The Development of Fresh Hema

Selling goods and services to customers is the unchanging commercial essence of the retail industry for thousands of years. Whether it is an e-commerce enterprise or a traditional physical industry, its core business is actually the same. It is the only difference between the business place where there is no entity on the online business mode and the business place where the entity does not operate online. E-commerce enterprises have no offline entities, so they save store rent and labor costs, while physical industries have operating storefronts, which can give customers a better shopping experience. These two business models are not mutually incompatible and opposite. For the retail industry, no matter which business model is adopted, there are certain shortcomings. At present, both of them have developed to a certain stage, and at the same time, they are facing the problem of industry ceiling. At present, due to the revolution of electronic information technology, various technologies have provided various conditions for the integration of the two and the other, and finally contributed to the birth of a new retail business model.

The concept of new retail first appeared at Ali conference in 2016, which was mentioned by

Ma Yun in his speech. He pointed out that with the development of economy and technology, the pure online business has begun to shrink, and the future of new retail must be the combination of online and offline. Subsequently, the concept of new retail was put forward by Ali Research Institute, that is, "the data-driven pan-retail form centered on customer experience". To put it simply, the new retail business model is to use modern technology to constantly satisfy customers' ever-changing shopping desires, thereby increasing the number of times customers buy goods, allowing them to enjoy more convenient and comfortable services during consumption, turning goods into items that customers can reach within their reach, and allowing customers to spend unconsciously and continuously. After they just place an order, the goods can be delivered immediately. The new retail business model focuses on the rapid, efficient and cost-saving resource allocation, accurately and deeply grasps the customer's needs, and the superimposed live broadcast and community can stimulate the user's activity and obtain the feedback of customer experience in time. It runs through the traditional production, sales, logistics and other links, and involves new technologies such as big data. The core value of the new retail is to change life with technology, so as to improve the operational efficiency of the retail industry as much as possible.

2.1.2 The Concept of Fresh Hema

At present, there is no clear definition of this new concept in the industry. By analyzing all the descriptions now, new retail is another brand-new development direction after the so-called e-commerce era, centering on experience, data, and technology, and it is a unique business model in the post-Internet era. Specifically, merchants rely on the Internet to upgrade the products, services, marketing, and circulation modes provided by the existing business model as a whole through advanced technologies such as big data, face recognition and Internet of Things, and finally change the whole industry structure, thus creating a new business ecosystem. With the upgrading and transformation, they will deeply integrate the existing online business, offline experience, intelligent payment system and modern logistics industry. The new retail has found a new breakthrough for the confrontation between the online e-commerce industry and the offline

physical industry in the past, and the two will eventually move towards integrated development, from the original independent development to integration and mutual assistance; Offline entities can introduce new traffic to online, while customers can experience online products and services offline, satisfy customers' inner needs from all channels, and realize the industrial upgrading of retail industry.

2.2 The Definition and Characteristics of Fresh E-commerce

2.2.1 The definition of Fresh E-commerce

Traditional fresh e-commerce refers to enterprises that sell fresh products such as vegetables and fruits, meat, eggs and milk, seafood, etc. through e-commerce mode only on the online platform. Fresh e-commerce in the new retail environment is different from the traditional fresh e-commerce enterprises in the past, which have no physical business premises. This industry is a brand-new business format which includes both online and offline business segments and emerge on the basis of modern information technology and cold chain logistics. At present, the industry is in the early stage of rapid development. At present, in the new retail environment, the business models of fresh e-commerce are usually home mode, such as daily superior fresh food, or home superposition to store mode, such as box horse fresh food.

2.2.2 Characteristics of Fresh E-commerce

1. The implementation of high standards of cold chain logistics

Fresh products are special in nature, which can easily cause damage during transportation, so special measures should be taken to maintain the quality of fresh products. Cold chain logistics is a special transportation mode for the safe transportation of fresh products. In the process of logistics and transportation of fresh products, it is necessary to control various conditions such as temperature and humidity. Otherwise, under uncontrollable temperature and long transportation

process, fresh products will easily deteriorate, and customers will not be able to receive fresh and healthy fresh products with good quality.

2. The quality of fresh products is paid more attention

Fresh products are perishable and easily damaged products, and the fresh products themselves are the basis of attracting fresh e-commerce customers. In the current new retail environment, customers are personalized and are more willing to actively express their views. If customers buy fresh products with poor quality, the impact will far exceed that of traditional e-commerce, and these very negative customer evaluations will deter other customers, which will bring very serious impact to enterprises.

3. Highly dependent on modern information technology

Under the new retail environment, the business model of fresh e-commerce is no longer the traditional state of opposing development between online e-commerce and offline entities, but the deep integration of online and offline. The original idea of this business model is to introduce online customers into the business premises of real businesses, so that customers can increase their recognition of businesses after they truly perceive physical goods and store services in the store, and finally achieve the goal of increasing users' stickiness. Behind this mode of operation, advanced computer systems are needed to provide strong support for sharing data online and offline, and this mode of operation must also rely on the analysis of customer preferences by big data. Modern computer technology is the lifeline of the new retail model, which is more valued than traditional online e-commerce.

2.3 Concept and Theories of Customer Satisfaction

2.3.1 The Definition of Customer Satisfaction

1. The definition of customer satisfaction. As early as 1960s, Cardozo, a western scholar, put forward the word "customer satisfaction", arguing that "customer satisfaction is influenced by the

price paid by customers to get goods, the expectation of goods themselves and the process of getting goods". At present, there is no unified definition of customer satisfaction, among which there are three representative angles:

From the perspective of pay-harvest

Howard & Sheth (1969) thinks that it is the comparison between the price paid by customers to buy a certain food or service and the benefits gained in the later period. Churchill (1982) thought it was the difference between the energy, material resources and financial resources invested by customers and the gains from commodities.

From the perspective of emotional state

Hunt (1977) thinks that it is a feeling produced after the customer evaluates the goods or services. Oliver (1997) thinks that it is a kind of transient emotion generated by the information obtained from customers' experience when they buy goods. Brook & Reilly (1983) thinks that it is a kind of emotional reaction produced by customers to the location and environment of goods and the promotion of merchants in the shopping process.

From the perspective of expectation-performance.

Tse (1988) thinks that it is a kind of difference evaluation between the expectation of commodity in advance and the cognitive performance of commodity in later stage. Kotler (1991) thinks it is a level of perceived satisfaction, which compares the performance of goods with the expectation of customers. Fornell (1992) thinks that it is a kind of overall feeling produced by comparing the perceived quality of goods purchased by customers with the expected expectations before purchase. In this thesis, the customer satisfaction is not a behavior representing the customer, but a psychological feeling of the customer after the whole purchase process, that is, the feeling after comparing the customer's expectation with the product quality. When the quality of goods is close to the expected expectation, customers will feel satisfied because the expected value is consistent with the actual situation of goods. When the real quality is higher than expected, the customer's heart is full of joy and has a strong sense of satisfaction. The higher the actual quality than expected, the higher the degree of customer satisfaction, which will eventually turn satisfaction

into loyalty. On the contrary, there will be depression and dissatisfaction, and even complaints. As the name implies, customer satisfaction is the quantification of customer satisfaction, which is what we usually call customer satisfaction. Customer satisfaction is the evaluation of subjective feelings produced by customers in the whole process of consumption. Fresh e-commerce is different from traditional fresh industry. The customer satisfaction of fresh e-commerce includes not only the satisfaction of customers buying fresh food, but also various factors such as cold chain distribution and platform service. Therefore, this thesis understands the concept of customer satisfaction of fresh e-commerce as follows: customer satisfaction of fresh e-commerce is the evaluation of the whole process of purchasing fresh products by customers, including the degree to which online purchase, cold chain distribution, platform service and other aspects meet customer needs.

2. The theoretical basis of customer satisfaction. The understanding of "satisfaction" originated from psychology, and was later quoted into the marketing field, becoming the theory of "customer satisfaction". The fields involved in customer satisfaction include marketing, social psychology and other subjects, with strong theoretical basis as follows:

Expectation- Disconfirmation Theory

Oliver first put forward the expectation-unconfirmed theory. In his view, customers will have expectations before buying products, and when they buy products, they will have perceived performance in measuring quality and value. At this time, comparing expectations with perceived performance will produce different results, which will become unconfirmed. Customer satisfaction is related to the measurement of unconfirmed, and unconfirmed is related to customer's expectation and perceived performance. Therefore, customer satisfaction is defined as the function of expectation and perceived performance. When the expectation is consistent with the perceived performance, the customer feels satisfied. The lower the expectation is, the more satisfied the customer will be. On the contrary, the more dissatisfied the customer will be. This theory is a classic theory in the study of customer satisfaction, and it is also the basis of many other theories.

Contrast- Assimilation Theory

Anderson (1973) put forward the assimilation theory. He thinks that when there is an

imbalance between expectation and perceived performance, customers will change their cognition of products to meet expectations, to reduce the gap caused by cognitive imbalance. Customers can also adjust the gap with the help of expectations. Lemons (1972) defined the theory of contrast as "a situation in which the gap between a person's response to his true attitude and his attitude expressed through speech and behavior is widened". When the perceived performance is lower than expected, the customer's evaluation of the product will be lower than the actual situation, on the contrary, it will be better. Harvey (1957) combined the contrast theory and assimilation theory to explain the formation of customer satisfaction and thought that customer satisfaction is a function of the difference between expectation and performance. Customer cognition is divided into two parts: acceptance domain and rejection domain. If the difference between expectation and performance is small and falls in the acceptance domain, customers will use assimilation theory to reduce the gap between them. If there is a big difference between them and they fall into the rejection domain, the customer will use the contrast theory to amplify the difference.

Comparison Level Theory

This theory was put forward by Kelley (1959), who believed that customer satisfaction is a function of the objective attribute of a product or service and the level of comparison between customers, while the customer's previous purchasing experience and other people's evaluation will determine the level of comparison. If the product attribute is higher than the level of comparison, customers will feel satisfied. On the contrary, feel dissatisfied.

Equity Theory

The fairness theory put forward by American psychologist J.S. Adams was first used to study salary distribution. He thought that "fairness is the personal subjective feeling generated by comparing the ratio between the cost value paid and the salary received with the reference person under the same conditions". John (1978) applied the fair theory to marketing. He felt that the customer's satisfaction should depend on whether the customer could perceive that he had been treated equally. If he felt treated fairly, he would have a sense of satisfaction.

2.3.2 Customer Satisfaction Index Model

1. Foreign customer satisfaction index model

SCSB model

Since 1980s, many foreign scholars have made empirical research on customer satisfaction, and successively put forward customer satisfaction models to explain the formation mechanism of customer satisfaction. At present, the representative models are SCSB model, ACSI model and ECSI model. Sweden first established SCSB model. It is the earliest national customer satisfaction index model. (Liu J., 2005), as shown in Figure 2.1.

Figure 2.1: SCSB Model

Source: Liu (2005)

This model has evaluated more than 100 enterprises in 32 large-scale industries in Sweden, and has become the basis of measurement models in Sweden and many countries. The model includes five variables: perceived value, customer expectation, customer complaint, customer satisfaction and customer loyalty. Among them, customer expectations are exogenous variables, while perceived value, customer complaints, customer satisfaction and customer loyalty are endogenous variables.

ACSI model

In 1996, the United States established ACSI model, as shown in Figure 2.2. ACSI is a customer

satisfaction index model created by Fornell (1996), founder and chairman of Kroth Consulting Group, and others based on SCSB model. In order to distinguish between price and quality, the American satisfaction index model adds one more variable-perceived quality.

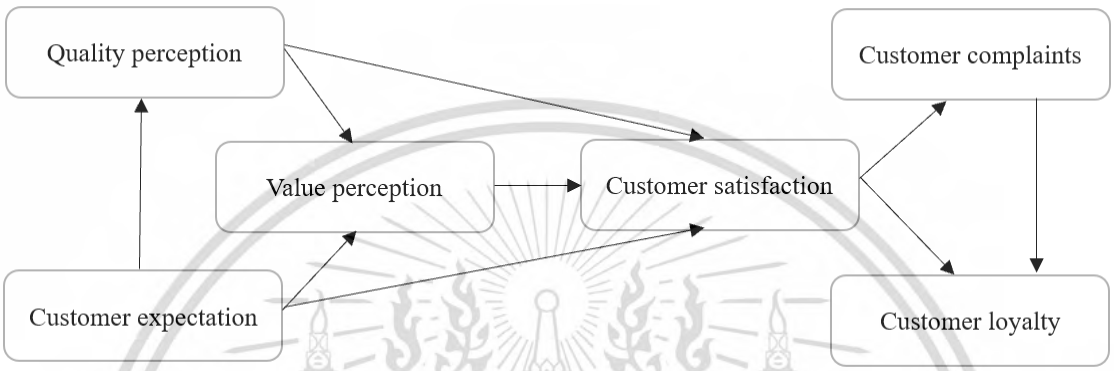

Figure 2.2: ACSI Model

Source: Fornell (1996)

The data of this model comes from more than 200 enterprises in more than 40 industries, which can measure the consumption satisfaction level of companies, industries, economic departments, and countries. Later, in 1998, the model was revised once, and the perceived quality in the model was divided into service perceived quality and product perceived quality, which was used to distinguish the differences in customer experience among various commodities.

ECSI model

Later, many countries have established customer satisfaction models suitable for domestic consumption, while Europe has established ECSI model, as shown in Figure 2.3. This model is also established on the basis of ACSI. Perceived value measurement increases the comparison with rivals, and customer loyalty increases the possibility of cross-purchase and recommendation to friends. The expected measurement items of customers are changed into the expectations of communication and products (Peng, 2011).

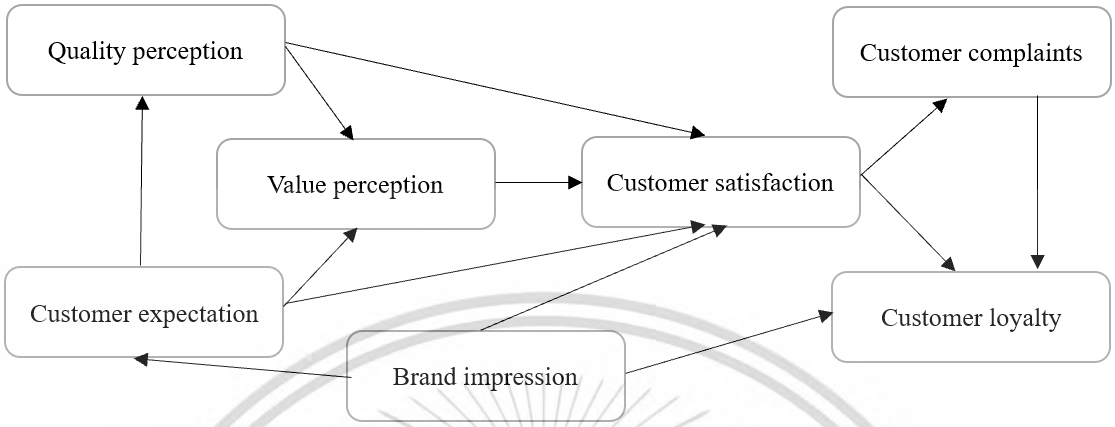

Figure 2.3: ECSI Model

Source: Peng (2011)

2. Domestic CCSI index model

In 1995, Zhao Ping first started the research on the evaluation of customer satisfaction in China. CCSI model is a representative customer satisfaction index model formed by domestic scholars on the basis of three models: SCSB in Sweden, ACSI in the United States and ECSI in Europe, combining with a large number of actual cases of domestic enterprises and customers, analyzing and collecting data, and constantly improving and scrutinizing (Wang, 2021).

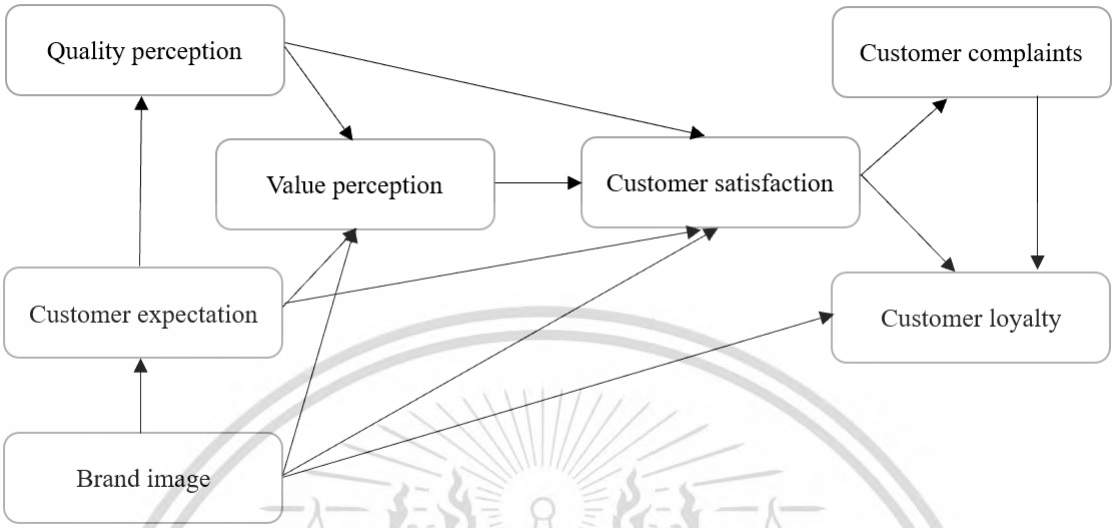

Figure 2.4: CCSI Model

Source: Wang (2021)

2.4 Related Research

In order to obtain reliable results of influencing factors of customer satisfaction of fresh e-commerce, this paper refers to many literatures and finds that influencing factors of customer satisfaction of fresh e-commerce are mainly divided into internal influencing factors and external influencing factors. This paper analyzes the current situation of fresh e-commerce in the new retail environment, then considers the current characteristics of the industry, refers to the results of customer interviews, and finally draws a conclusion to determine the influencing factors of customer satisfaction of fresh e-commerce in the new retail environment.

2.4.1 Internal Influencing Factors

The internal factors of customer satisfaction of fresh e-commerce in the new retail environment are mainly composed of product quality and technology platform:

In terms of product quality. The taste, weight of food and the recognition of food packaging box will have an impact on consumer satisfaction. Yang (2011) studied the influence of online word-of-mouth on consumers' repurchase intention, and proved that product quality has a significant influence on consumers' repurchase intention through empirical research. The characteristics of fresh products are perishable and difficult to preserve. Moreover, the quality of fresh products is not as easy to control as normal industrial products, and there is no uniform standard for fresh products, which makes it very difficult for fresh e-commerce to manage fresh products, and it is also difficult to unify the quality of fresh products online and offline. At the same time, fresh products still have problems in supply chain management, because they are easy to be corrupted and difficult to preserve, and there is a great gap between the quality of fresh products in each region, which leads to a huge difference between purchasing goods from the origin and purchasing goods from wholesalers. Good fresh products will be more resistant to logistics wear, storage, better quality and more attractive than ordinary fresh products at the right time, which brings great challenges to the product supply chain management of fresh e-commerce in the new retail environment. During the outbreak of COVID-19 in early 2020, the platform with stable supply chain was obviously more capable of operation, and could provide high-quality services to customers, and the customer satisfaction was often higher. And with the development of fresh e-commerce industry in the new retail environment, the products sold on shelves are not limited to fresh products, including imported food and daily necessities, and their functions are getting closer to those of ordinary supermarkets, but their product categories are far less complete than those of ordinary supermarkets. All aspects of product quality have a significant impact on customer satisfaction.

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In terms of technology platform. The website is the one that consumers must contact after logging in to the website. If faced with the complicated purchase process or the invariance of food retrieval, consumers are not easy to place orders quickly, and the low efficiency will also result in loss of traffic. Manes (1997) thinks that the convenience of the operating system and the exquisiteness of website design affect the satisfaction of online consumers. Pastrick (1997) points out that "simple and easy-to-navigate web pages will improve consumers' satisfaction, resulting in high satisfaction". Anderson and others believe that the convenience of online shopping refers to the simple and intuitive website interface, the convenience of information retrieval and the convenient transaction process. Parasuraman (2002) and others suggested that the e-commerce development direction of enterprises should turn to service. Scott (2005) thinks that whether the website can quickly respond to consumers' requirements is one of the factors that affect consumers' satisfaction. Minho (2008) and Srini (2002) think that the efficiency of websites in dealing with consumers' demands and their concern for consumers will have an impact on consumers' satisfaction. Xie (2000) thinks that the coordination ability and the ability to solve consumption

problems of website customer service staff have an impact on the service quality of website. The arrival of big data technology has brought great changes to the new retail business model (Li et.al., 2020). With the arrival of the "internet plus" era, science and technology have fundamentally changed life, and emerging technologies are constantly emerging. Mobile payment has completely changed people's consumption habits. Technologies such as "cloud computing" and "face recognition" can help enterprises provide better services to customers, while technologies such as big data can accurately analyze the needs of different customers and give them customized experiences. However, the powerful technology platform has brought huge operation and maintenance costs to enterprises, and also led to higher prices of products. It is difficult for many enterprises to choose between maintenance cost, product price and customer satisfaction, which shows that the quality of technology platform affects the customer satisfaction of fresh e-commerce.

2.4.2 External Influencing Factors

The external influencing factors of customer satisfaction of fresh e-commerce in the new retail environment are mainly determined by customers' sense of flexible service experience, convenience of life and value-added services that enterprises can provide.

From the perspective of customer service. The relationship between expectation, perceived service quality and customers satisfaction have been investigated in a number of research (Zeithaml, et al, 1988). They found that, there is very strong relationship between quality of service and customer satisfaction (Parasuramanet et.al, 1985). The higher level of perceived service quality results in increased customer satisfaction. When perceived service quality is less than expected service quality customer will be dissatisfied (Jain & Gupta, 2004). According to Cronin & Taylor (1992) satisfaction super ordinate to quality-that quality is one of the service dimensions factored into customer satisfaction judgment. Compared with the traditional retail industry, fresh e-commerce in the new retail environment has carried out technical reforms in cash register and other aspects, with stronger customer participation in the overall consumption process. However, there is a lack of pre-training for customers' consumption habits. For example, many people will not use

smart cash registers and other problems frequently occur. The level of service often affects the satisfaction of fresh e-commerce customers.

From the perspective of living convenience, the new retail business model does not have the advantage of large-scale replication, which leads to less network coverage. At present, most of the fresh e-commerce companies under the new retail background are concentrated in the first-and second-tier cities with large population density, and the requirements for the location of stores (micro-warehouses) are extremely high, resulting in a low coverage rate of outlets. Many customers come here, but the distance is too far, resulting in the loss of final customers; Moreover, the delivery range of a storefront (micro-warehouse) is fixed, so many people can't experience consumption, and can't attract new customers. Even customers who are attracted by subsidies won't choose to make a second purchase on the platform because of the distance and delivery range. The improvement of network coverage will significantly increase the customer satisfaction of fresh e-commerce, but it will take a long time to improve the network coverage.

From the perspective of value-added services, the diversification of customers' needs in the new retail era and their ever-changing needs make it impossible for them to rely only on a single consumption mode. New science and technology have promoted the development of new retail, but the upgrading of technology and the change of customers' endogenous needs will bring about constant changes in the industry, such as just stacking online purchase and distribution at the beginning, and then performing offline shopping experience in the store. Then, the fresh products they bought don't want to take home, but they want to be used directly in the store, and even need to stack social functions on the platform. Customer needs are constantly improving and changing, which requires enterprises to provide more value-added services from various aspects to meet their consumption needs, improve the satisfaction of fresh e-commerce customers, and ultimately enhance user stickiness.

CHAPTER 3

METHODOLOGY

This study is survey research brings the information obtained to explain the influencing factors of customer satisfaction of Fresh Hema. This study will be studied in the following order.

3.1 Population and Sample

3.2 Instrument

3.3 Data Collection

3.4 Method of data analysis

3.5 Reliability Analysis and Validity Test of Data

3.6 Ethical Consideration

3.1 Population and Sample

3.1.1 Population

According to statistics, in 2020, the average daily active number of Fresh Hema Company is 2.957 million, and users use it once every 3-5 days on average. In this paper, it is calculated that each user shops in Fresh Hema once every four days. The number of active users of Fresh Hema Company is about 2,957,000*4 which is equal to 11,828,000 people

3.1.2 Samples

Convenient sampling is a non-probabilistic sampling method in which respondents are randomly selected by investigators at a specific time and a specific location in a specific community to match the research topic.

Before confirming the sample size, it is necessary to determine the confidence level and standard deviation. Confidence interval refers to the estimation interval of overall parameters constructed by sample statistics. The most common confidence intervals are 90%, 95% and 99% confidence. The confidence level set in this paper is 95% confidence. Standard deviation refers to

the difference between the responses received and the average. Low standard deviation means that all values will be clustered around the average, while high standard deviation means that they are distributed in a wider range with very small and very large outliers. Since no investigation has been conducted, the standard deviation of this paper is 0.5, which will help to ensure that the sample size is large enough.

The sample size used in this study changed the confidence level to Z score by setting the 95% confidence level, and obtained Z=1.96. And the error of no more than 5% is calculated by calculating the sample size from the following calculation formula:

Necessary Sample Size=$(Z\text{-score})^2$*StdDev*(1-StdDev)/$(\text{margin of error})^2$

$=((1.96)^2*.5(5))/(.05)^2$

=384.16

The sample of at least 385 people is required with an error of not more than 0.05 (or 5.0%) with a 95% confidence level, considering the total sampling, the samples were considered qualified and increasing reliance on information.

3.2 Instrument

Researchers use the questionnaire as a tool to collect data from samples. The design of the questionnaire has certain principles, including clear theme, reasonable structure, convenient for mathematical statistics, easy to understand and appropriate number of questions, etc. All the questions in the questionnaire come from Period Research. The designed questions are purposeful and logical, and they should be arranged according to the thinking of the investigators as far as possible. As the questionnaire questions mainly come from English literature, and the responders of the questionnaire are all users in China, I have invited English experts to translate the questionnaire questions into Chinese, and several experts have confirmed the correctness of the translation. Therefore, the language of the question is easy to understand, in line with the reading level of the public, and it can also meet the needs of quantitative analysis when the questionnaire

is statistically summarized. The structure of the questionnaire includes two parts: fresh e-commerce customer satisfaction and the influencing factors of fresh e-commerce customer satisfaction. The questionnaire is composed of related research papers and theories, and it is used to collect data from 385 samples. This is a 5-point Likert scale, where 1 is the lowest level and 5 is the highest level. By setting the criteria for giving each score to 1, the higher the score, the higher the satisfaction.

The tool used to collect data in this study was a questionnaire using questionnaires that were read by the respondents and fill in the answer manually which is divided into 2 parts consisting

3.2.1 Personal Factors

As a questionnaire, by giving marks on the personal factors of the respondents the questionnaire consisted of 10 items, namely gender, age, monthly income, education, marital status, time of first use, purchase frequency, type of purchase, location, occupation, 10 items.

3.2.2 Customer Satisfaction and Influencing Factors

It is a question about the source of influencing factors of customer satisfaction of fresh e-commerce. The influencing factors of customer satisfaction in this paper come from four aspect, number 33 questions.

1. Product quality, 9 items.
2. Technology platform, 6 items.
3. Customer service, 7 items.
4. Life convenience, 5 items.

Customer satisfaction

Customer satisfaction refers to the matching degree between customer expectation and customer experience, 6 items.

Table 3.1 The Sources (Creators) of Questionnaire Items

Variables	Questions	Sources
Product Quality	Fresh product types	Lu, P. H., & Lukoma, I. (2011)
	Freshness of fresh products	Abubakar, B., Mavondo, F., & Clulow, V. (2001)
	Cost-effectiveness of fresh products	
	Details of information description of fresh products	
	Authenticity of fresh product information description	Li Dongxue, Wu Chuliang &Zou Linfeng. (2022)
	The usefulness of fresh product information description	
	The timeliness of fresh product information description	Mattsson, K. (2009)
	The similarity between the information of the website and the real product	
	Consistency between website information and merchants' sources of goods	
Technology Platform	APP payment system security	Li Dongxue, Wu Chuliang,&Zou Linfeng. (2022)
	Confidentiality of personal information	
	App operation convenience	Wang, S. (2016)
	Personalized service convenience	
	Visual effects of web design	Li Dongxue, Wu Chuliang,&Zou Linfeng. (2022)
	Convenience of on-site intelligent cash register	

Table 3.1 (Cont.)

Variables	Questions	Sources
Customer Service	Service personnel's attitude Service personnel's service awareness	Lu, P. H., & Lukoma, I. (2011)
	Professional service	Noyan, F., & Simsek, G. G. (2011)
	The timeliness of the website's handling of consumer complaints	Mattsson, K. (2009)
	Punctuality of after-sales service	
	Efficiency of after-sales service	
	Timeliness of website refund	
Life Convenience	The shop is very close	Imbuga, D. (2005)
	The business hours of shops are reasonable	
	The traffic near the shop is convenient	Abubakar, B., Mavondo, F., & Clulow, V. (2001)
	Convenient parking and shopping near the store	Biesok, G., & Wyród-Wróbel, J. (2018)
	Shop location is easy to find	
Customer Satisfaction	At Hema you get value for your money	Noyan, F., & Simsek, G. G. (2011)
	You are likely to purchase again from Hema	
	Your issue was effectively resolved	Wang, S. (2016)
	You are likely to recommend Hema to others	
	Shopping at Hema is the right decision	Noyan, F., & Simsek, G. G. (2011)
	I am satisfied with service that I get from Hema	Biesok, G., & Wyród-Wróbel, J.(2018)

Source: Author

Then, the whole model is analyzed and verified by SPSS statistical software. In order to avoid the problems of low questionnaire recovery rate and poor questionnaire response quality, through the author's alumni resources and social relationships, contact the relevant employees of Fresh Hema Company to help distribute the questionnaire. The questionnaire was distributed mainly through interviews, telephone calls, e-mails, and mobile phone link sharing.

Instrument testing

This study has been tested for accuracy (Validity) and confidence. (Reliability) of the questionnaire as follows.

Validity: Before being used for data collection, researchers improve according to the research purpose and suggestions, and adopt questionnaires developed for many experts to consider and check the validity of the content and the applicability of the language (wording) used, so as to make it readable and easy to understand.

Confidence Reliability:

The research questionnaire was developed and revised according to experts' suggestions and tested with 30 people to determine whether the question is meaningful, whether it is capable or not, and then used the questionnaire to test confidence by using SPSS program to find the percentage of confidence. As a reliability program to check the quality of equipment, Cronbach α coefficient method is adopted. Items with Cronbach α coefficient should have a value of 0.70 or higher. Values higher than 0.70 are considered highly reliable, and items with Cronbach α coefficient should have a level of 0.5 to 0.65 or medium (Cronbach, 1951).

3.3 Data Collection

E-commerce has just emerged in recent years and is deeply loved by students and office workers. The survey object of this paper is consumers with experience in using it. Due to regional differences, the influence of different regional factors is different, and the results will be greatly influenced by regions. In view of this, the groups surveyed in this paper are mainly from Jiangsu

Province. Design the questionnaire on the questionnaire network and distribute it through several ways: one is the link address of the questionnaire website; An in-person interview through a paper version. In the end, 407 questionnaires were distributed, 357 electronic questionnaires and 50 paper ones were obtained. The collected questionnaires were screened and checked, and the unqualified questionnaires with incomplete answers or obvious random filling were removed. The final valid questionnaires were 385. The whole survey time of the questionnaire is 2 weeks.

3.4 Data Analysis

The data obtained from the questionnaire and recorded in code is completed, processed with SPSS for Windows program, and analyzed according to logic, comparable to the relevant theoretical concepts, and to make the analysis clear, statistics must be used for data analysis as follows:

1. Descriptive statistics

- Find out the frequency and percentage of personal factors including gender, age, education level, work, marital status, income status.

-Find out the average and standard deviation of customer satisfaction and the influencing factors of customer satisfaction of Fresh Hema Company.

-Determine the frequency, percentage, average and standard deviation of customer satisfaction and influencing factors of customer satisfaction of Fresh Hema Company.

Arithmetic Mean

It is used for a test on factors affecting customer satisfaction and parts 2 using formulas for group data.

$$\bar{x} = \Sigma x/n$$

$\bar{x}$ = Mean of the sample

x = Each score value

n = Number of data

Standard Deviation is used to analyze and interpret different data, which is used together with the mean, to characterize the distribution of each score, calculated by a formula.

$$S.D = \sqrt{[n \Sigma x2-(\Sigma x)2]/n(n-1)}$$

S = Sample standard deviation

X = Each person's score value

n = Total number of people

2. Inferential Static Statistics

-Using simple linear regression analysis to analyze the factors affecting customer satisfaction, the significant level is 0.05. and 0.01

Hypothesis 1: Product quality has a positive influence on customer satisfaction.

Hypothesis 2: Technology platform has a positive influence on customer satisfaction.

Hypothesis 3: Service quality has a positive influence on customer satisfaction.

Hypothesis 4: Convenience of life has a positive influence on customer satisfaction.

3.5 Reliability Analysis and Validity Test of Data

3.5.1 Reliability Test of Data

Reliability is regarded as the reliability of measurement results. Usually, when measuring the same characteristics, the more items, the higher the reliability of the measurement table. In this paper, the factors influencing customer satisfaction are evaluated, and various indicators are designed to measure the reliability of each indicator. There are four kinds of reliability tests: half reliability method, α reliability coefficient method, duplicate reliability method and retest reliability method. In practice, the appropriate method can be selected according to the purpose and type of measurement. In this paper, the α reliability coefficient method is used to evaluate the internal consistency of measurement variables, which belongs to the internal consistency coefficient. The reliability coefficient of α is between 0 and 1. Generally, the reliability coefficient of α is greater

than 0.7, which indicates that the questionnaire has high reliability. The larger the value, the higher the reliability. The reliability of the above samples was tested by SPSS 27. The overall reliability coefficient of Table 3.1 is 0.983>0.7, indicating that the overall reliability of the scale is very high, and it has passed the reliability test.

Table 3.2 Reliability Results

Variables	Cronbach's Alpha	N of Items
product quality	0.937	9
technology platform	0.944	6
customer service	0.940	7
life convenience	0.926	5
customer satisfaction	0.935	6
Overall	0.983	33

From Table 3.2, the reliability indexes of all variables greater than 0.7 and above 0.9, indicating that the reliability of the scale is very high, and it has passed the criteria for reliability test.

3.5.2 Validity Test of Data

It refers to whether the design and measurement method of validity scale can detect what the questionnaire really measures and the degree of conformity. The questions designed in this paper are determined by referring to relevant literature at home and abroad, communicating with consumers with fresh e-commerce consumption experience and relevant academic experts, so the content validity is good. Usually, Bartlett sphericity and KMO measurement are tested. KMO is to test whether the partial correlation between variables is small, its value is between 0 and 1, and the measurement value above 0.9 indicates that the test is very good; 0.7-0.8 indicates that the inspection is generally good; The following 0.5 indicates that the inspection fails. Bartlett sphericity tests whether the correlation matrix is identity matrix, and Sig less than 0.05 indicates that the test

is passed. In this paper, KMO and Bartlett tests are carried out on 33 measurement indexes. As shown in Table 3.3, KMO is 0.980, and Bartlett sphericity test is 0, indicating that it has passed the validity test.

Table 3.3 KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.978
Bartlett's Test of Sphericity	Approx. Chi-Square	13299.495
	df	496
	Sig.	0.000

3.6 Ethical Consideration

In the research project, researchers considered all ethical factors in the process of data collection and analysis. Researchers ensure that the collected data is only used for this specific project. Respondents were not asked too many personal questions, and their personal information was not shared with others. The research ensured the privacy of all information collected from participants (Wilcox, 2012). Participants should not be harmed under any circumstances, and their dignity should be respected. Before asking questions in the survey, you should get the full consent of all the interviewees.

In the situation, about the Covid-19 procedure for the survey

1. Clean your hands with alcohol before you put your mask on, as well as before and after you take it off, and after you touch it at any time.

2. Make sure it covers both your nose, mouth, and chin.

3. When you take off a mask, store it in a clean plastic bag, and every day either wash it if it is a fabric mask or dispose of a medical mask in a trash bin.

4. Do not use masks with valves.

CHAPTER 4

ANALYTICAL RESUITS

Fresh Hema is the head company in the fresh e-commerce industry in the new retail environment and has been the focus of attention in the industry since its birth. His parent company designed it as a new format integrating supermarkets, convenience stores, vegetable markets and restaurants. Fresh Hem is the leader of fresh e-commerce in the new retail environment, and its business model has attracted many small platforms to follow suit.

At present, Fresh Hema stores are always located in areas with a large number of people, some near residential areas and some near office buildings. Generally, there are thousands of square meters when the store covers a small area, and about 10,000 square meters when there are many, and it is claimed that its "floor efficiency" is as high as 3 to 5 times that of ordinary supermarkets (Wang et.al., 2019). Fresh Hema supports online and offline full-scene purchase of fresh products, and even innovatively develops catering business online and offline, supports dining in stores, and supports processing and distribution of fresh products. Under the supply chain, some innovative catering businesses have been developed, which support dining in stores and processing and distribution of fresh products. Fresh Hema advocates experiential consumption, and uses in-store catering, fresh food, grain and oil, daily chemical products, etc. to let consumers experience contact intuitively, which is in line with consumers' habit of selecting and buying fresh products in stores. After the trust between the platform and customers is established, consumers can spend online with confidence.

This chapter aims to achieve the goal of studying the influencing factors of Fresh Hema customer satisfaction by investigating various dimensions of Fresh Hema users' usage. This chapter is divided into six sections. The first part is the descriptive analysis of data, that is, from the details of respondents. The second part is the data statistics and collation, which is the user's view on the influencing factors of customer satisfaction, that is, product quality, technology platform, customer service and life convenience. Make a descriptive analysis of each project. Make a descriptive

analysis of each project. In the third part, according to the analysis and assumptions in the second chapter, the model will be constructed by multiple linear regression. The fourth part analyzes the correlation of variables. The fifth part will analyze the regression results. The last part will summarize the results of this research.

To complete this research, 385 questionnaires were distributed to Fresh Hema users. Because the questionnaire is distributed online, the distribution of the questionnaire is unfair.

There were 385 questionnaires which had been collected after a period of 2 weeks. The data from questionnaires are screened out by the researcher and via SPSS version 27. It was found that 22 respondents are not met with the criteria; therefore, 22 questionnaires have been removed to ensure the cleanliness of the data. However, the researcher continuously distributed the questionnaires and collected the remaining 22 respondents to complete 385 questionnaires in order to process the next analysis stage. Finally, the total of 385 completed questionnaires were received.

4.1 Socio-Demographic Information

Based on the sample collected through the distribution of questionnaires, the respondents' social-democratic data in this section. The descriptive analysis of the influencing factors of Fresh Hema customer satisfaction is shown in Table 4.1

Table 4.1 Frequencies and Percentages of Sample Demographics (n=385)

Demographic	Frequency	Percent
Gender		
Male	221	57.4
Female	164	42.6
Age		
Less than 20 years	135	35.1

Table 4.1 (Cont.)

Demographic	Frequency	Percent
20-30 years old	133	34.5
31-40 years old	72	18.7
31-40 years old	34	8.8
51-60 years old	8	2.1
60 years above	3	0.8
Education level		
Grade 12 or lower	85	22.1
Diploma	55	14.3
Bachelor degree	216	56.1
Higher than bachelor degree	29	7.5
Occupation		
Private Company Employee	141	36.6
Government Employee/State Enterprise Officer	61	15.8
Entrepreneur/Business Owner	11	2.9
Private business/ Freelance Worker	53	13.8
Student	119	30.9
Marital Status		
Single	264	68.6
Married	105	27.3
Divorced / widowed / separated	16	4.2
Monthly Income		
Less than 3,000 RMB	160	41.6
3,001-6,000 RMB	94	24.4
6,001- 10,000 RMB	90	23.4
10,001-20,000 RMB	34	8.8

Table 4.1 (Cont.)

Demographic	Frequency	Percent
Monthly Income		
Above than 20,000 RMB	7	1.8
How long have you been buying the product at Hema?		
Less than one year	161	41.8
1-2 years	144	37.4
3-4 years	63	16.4
More than 4 years	17	4.4
How often do you use application for purchasing the product at Hema?		
Less than once a week	156	40.5
Once or twice a week	126	32.7
3-4 times a week	79	20.5
5-7 times a week	18	4.7
More than 7 times a week	6	1.6
What product category do you purchase most often at Hema?		
Meats	120	31.2
Vegetables	80	20.8
Fruit	104	27.0
Other products	81	21.0

From table 4.1, the sample consisted of 221 (57.4%) male respondents and 164 (42.6%) female respondents. The majority of the respondents are from the age group of less than 20years old for 135（35.1%）respondents and 20 to 30 years old for 133 (34.5%) respondents, 30 to 40 years old

for 72 (18.7%) and 41 to 51 years old for 34(8.8%) and minimal respondents fell within the range of 51 to 60 years old for 8 (2.1%) and 60 year above for 3 (0.8%) respectively. From the education level, the greater number of respondents is achieved Bachelor Degree for 216 (56.1%), followed by Grade 12 or lower for 85 (22.1%), Diploma for 55 (14.3%) respondents, and Master Degree for 29 (2.1%). Refer to the occupation, the private company employee occupied the highest amount for 141 (36.6%) respondents, followed by the student for 119 (30.9%) respondents, government employee/state enterprise officer for 61 (15.8%) respondents, private business/ freelance worker for 53 (13.8%) respondents, and entrepreneur/business owner for 11 (2.9%) respondents respectively. In terms of marital status. The majority of the respondents are single for 264(68.6%) respondents, married for 105 (27.3%), and divorced / widowed / separated for 16 (4.2%) respondents respectively. In term of monthly income, most of the respondents earned less than 3,000 RMB for 160 (41.6%), followed by 3,000-6,000 RMB for 94 (24.4%), 6,000-10,000 RMB for 90 (23.4%), 10,000-20,000 RMB for 34 (8.8%), and above 20,000 RMB for 7 (1.8%). In terms of how long have you been buying the product at Hema, most respondents have been used for less than a year for 161 (41.8%), 144 (37.4%) respondents have used it for one to two years, 63 (16.4%) respondents have used it for three to four years, and 17 (4.4%) respondents have used it for more than four years. Focusing on how often do you use application for purchasing the product at Hema, the majority of respondents are used Less than once a week for 156 (40.5%), followed by Once or twice a week for 126 (32.7%), 3-4 times a week for 79 (79%), 5-7 times a week for 18 (4.7%)，and More than 7 times a week for 6(1.6%). From the point of what product category do you purchase most often at Hema, often buy Meats for 120 (31.2%) respondents, often buy Fruit for 104 (27.0%) respondents, often buy other products for 81 (21.0%) respondents, and often buy Vegetables for 80 (20.8%) respondents.

4.2 Influence Factors and Customer Satisfaction

The following section is a description of the five study variables in the research framework. There are four independent variables which are product Quality, technology platform, customer

service and life convenience, and one dependent variable which refer to customer satisfaction. All variables are measured by using 5 point-Likert-scale with remark of mean value as follows:

Mean value between 1.00-1.80 is “Strongly disagree”

Mean value between 1.81-2.60 is “Disagree”

Mean value between 2.61-3.40 is “Neutral”

Mean value between 3.41-4.20 is “Agree”

Mean value between 4.21-5.00 is “Strongly Agree”

Then, the descriptive analysis of these variables is presented as below:

4.2.1 Product Quality

There are nine questions included in this independent variable The descriptive analysis, mean and standard deviation of Product quality, is shown in Table 4.2. The analysis result is an outcome from data of 385 respondents.

Table 4.2 Mean and S.D. of Product Quality

Product quality	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Overall						4.14	0.665	Agree
Fresh product types	4 (1.0)	9 (2.3)	24 (6.2)	201 (52.2)	147 (38.2)	4.24	0.758	Strongly Agree
Freshness of fresh products	3 (0.8)	10 (2.6)	28 (7.3)	219 (56.9)	125 (32.5)	4.18	0.736	Agree
Cost-effectiveness of fresh products	5 (1.3)	13 (3.4)	64 (16.6)	169 (43.9)	134 (34.8)	4.08	0.873	Agree

Table 4.2 (Cont.)

Product quality	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Details of information description of fresh products	3 (0.8)	8 (2.1)	55 (14.3)	163 (42.3)	156 (40.5)	4.20	0.815	Agree
Authenticity of fresh product information description	4 (1.0)	12 (3.1)	50 (13.0)	166 (43.1)	153 (39.7)	4.17	0.847	Agree
The usefulness of fresh product information description	3 (0.8)	11 (2.9)	61 (15.8)	200 (51.9)	110 (28.6)	4.05	0.792	Agree
The timeliness of fresh product information description	4 (1.0)	12 (3.1)	55 (14.3)	187 (48.6)	127 (33.0)	4.09	0.827	Agree
The similarity between the information of the website and the real product	3 (0.8)	16 (4.2)	61 (15.8)	176 (45.7)	129 (33.5)	4.07	0.853	Agree
Consistency between website information and merchants' sources of goods	4 (1.0)	11 (2.9)	54 (14.0)	174 (45.2)	142 (36.9)	4.14	0.836	Agree

From table 4.2, the average value and standard deviation of Fresh product types are 4.24 and 0.758, respectively, and the average value and standard deviation are higher than the whole level. The average value of Freshness of fresh products is 4.18, and the standard deviation is 0.736. The average value is higher than the overall level, and the standard deviation is higher than the overall level. In terms of cost-effectiveness of fresh products, the average value is equal to 4.08, and the standard deviation is equal to 0.873. The average value is lower than the overall level, and the standard deviation is higher than the overall level. In terms of details information description of fresh products, the average value is 4.20, and the standard deviation is 0.815. The average value is higher than the overall level, and the standard deviation is higher than the overall level. The authentication of fresh product information description has an average value of 4.17 and a standard deviation of 0.847, which is higher than the overall level and standard deviation. The usability of fresh product information description has an average value of 4.05 and a standard deviation of 0.792. The average value is lower than the overall level and the standard deviation is higher than the overall level. The timeline of fresh product information description has an average value of 4.09 and a standard deviation of 0.827. The average value is lower than the overall level and the standard deviation is higher than the overall level. The similarity between the information of the website and the real product has an average value of 4.07 and a standard deviation of 0.853. The average value is lower than the overall level and the standard deviation is higher than the overall level. The mean value of consistency between website information and merchants' sources of goods is 4.14, and the standard deviation is 0.836. The mean value is equal to the overall level, and the standard deviation is higher than the overall level. The overall mean of Product Quality equals to 4.14, and the standard deviation equals to 0.665, which can be interpreted that the users perceive of good quality of the Product quality provided by Fresh Hema.

4.2.2 Technology Platform

There are six questions included in this independent variable The descriptive analysis, mean and standard deviation of Technology platform, is shown in Table 4.3. The analysis result is an outcome from data of 385 respondents.

Table 4.3 Mean and S.D. of Technology Platform

Technology platform	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Overall						4.11	0.728	Agree
APP payment system security	2 (1.0)	13 (2.3)	51 (6.2)	201 (52.2)	118 (38.2)	4.09	0.784	Agree
Confidentiality of personal information	3 (0.8)	15 (3.9)	60 (15.6)	181 (47.0)	126 (32.7)	4.07	0.840	Agree
App operation convenience	2 (0.5)	14 (3.6)	51 (13.2)	163 (42.3)	155 (40.3)	4.18	0.834	Agree
Personalized service convenience	3 (0.8)	14 (3.6)	52 (13.5)	166 (43.1)	150 (39.0)	4.16	0.847	Agree
Visual effects of web design	3 (0.8)	12 (3.1)	52 (13.5)	193 (50.1)	125 (32.5)	4.10	0.803	Agree
Convenience of on-site intelligent cash register	5 (1.3)	11 (2.9)	57 (14.8)	190 (49.4)	122 (31.7)	4.07	0.832	Agree

From table 4.3, the average value of APP payment system security is 4.09, and the standard deviation is 0.784. The average value is lower than the overall level, and the standard deviation is higher than the overall level. The average value of confidentiality of personal information is 4.07,

and the standard deviation is 0.840. The average value is lower than the overall level, and the standard deviation is higher than the overall level. The average value and standard deviation of app communication are 4.18 and 0.834, respectively. The average value and standard deviation are higher than the whole level. The average value of personalized service communication is 4.16, and the standard deviation is 0.847. The average value is higher than the overall level, and the standard deviation is higher than the overall level. In Visual effects of web design, the average value is 4.10, and the standard deviation is 0.803. The average value is lower than the overall level, and the standard deviation is higher than the overall level. The average value and standard deviation of the courtesy of on-site intelligent cash register are equal to 4.07 and 0.832, respectively. The average value is lower than the overall level, and the standard deviation is higher than the overall level. The overall mean of Technology platform equals to 4.11, and the standard deviation equals to 0.728, which can be interpreted that the users perceive of good quality of the Technology platform provided by Fresh Hema.

4.2.3 Customer Service

There are seven questions included in this independent variable The descriptive analysis, mean and standard deviation of Customer service, is shown in Table 4.4. The analysis result is an outcome from data of 385 respondents.

Table 4.4 Mean and S.D. of Customer Service

Customer service	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Overall						4.14	0.707	Agree
Service personnel's attitude	2 (0.5)	12 (3.1)	48 (12.5)	173 (44.9)	150 (39.0)	4.19	0.808	Agree

Table 4.4 (Cont.)

Customer service	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Service personnel's service awareness	4 (1.0)	11 (2.9)	68 (17.7)	173 (44.9)	129 (33.5)	4.07	0.846	Agree
Professional service	3 (0.8)	15 (3.9)	49 (12.7)	185 (48.1)	133 (34.5)	4.12	0.829	Agree
The timeliness of the website's handling of consumer complaints	2 (0.5)	15 (3.9)	56 (14.5)	175 (45.5)	137 (35.6)	4.12	0.832	Agree
Punctuality of after-sales service	4 (1.0)	10 (2.6)	55 (14.3)	178 (46.2)	138 (35.8)	4.13	0.826	Agree
Efficiency of after-sales service	3 (0.8)	9 (2.3)	57 (14.8)	172 (44.7)	144 (37.4)	4.16	0.814	Agree
Timeliness of website refund	2 (0.5)	13 (3.4)	50 (13.0)	174 (45.2)	146 (37.9)	4.17	0.815	Agree

From table 4.4, service personnel's attitude has an average value of 4.19 and a standard deviation of 0.808, which is higher than the overall level and standard deviation. Service personnel's service awareness has an average value of 4.07 and a standard deviation of 0.846. The average value is lower than the overall level and the standard deviation is higher than the overall level. The average value and standard deviation of professional are 4.12 and 0.829, respectively. The average value is lower than the overall level and the standard deviation is higher than the overall level. The average value and the standard deviation of the structure of after-sales service are 4.13 and 0.826, respectively. The average value is lower than the overall level and the standard deviation is higher

than the overall level. The Efficiency of after-sales service has an average value of 4.16 and a standard deviation of 0.814, which is higher than the overall level and standard deviation. Timeliness of website refund has an average value of 4.17 and a standard deviation of 0.815, which is higher than the overall level and standard deviation. The overall mean of Customer service equals to 4.14, and the standard deviation equals to 0.707, which can be interpreted that the users perceive of good quality of the Customer service provided by Fresh Hema.

4.2.4 Life Convenience

There are five questions included in this independent variable The descriptive analysis, mean and standard deviation of Life convenience, is shown in Table 4.5. The analysis result is an outcome from data of 385 respondents.

Table 4.5 Mean and S.D. of Life Convenience

Life convenience	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Overall						4.08	0.745	Agree
The shop is very close	2 (0.5)	24 (6.2)	65 (16.9)	168 (43.6)	126 (32.7)	4.02	0.891	Agree
The business hours of shops are reasonable	1 (0.3)	14 (3.6)	57 (14.8)	187 (48.6)	126 (32.7)	4.10	0.798	Agree
The traffic near the shop is convenient	4 (1.0)	14 (3.6)	60 (15.6)	178 (46.2)	129 (33.5)	4.08	0.829	Agree
Convenient parking and shopping near the store	2 (0.5)	14 (3.6)	59 (15.3)	174 (45.2)	136 (35.3)	4.11	0.829	Agree
Shop location is easy to find	5 (1.3)	12 (3.1)	61 (15.8)	167 (43.4)	140 (36.)	4.10	0.869	Agree

From table 4.5, the average value of the shop is very close is 4.02, and the standard deviation is 0.891. The average value is lower than the overall level, and the standard deviation is higher than

the overall level. The average value of the business hours of shops are rational is 4.10, and the standard deviation is 0.798. The average value is higher than the overall level, and the standard deviation is higher than the overall level. The traffic near the shop is convenient, the average value is 4.08, the standard deviation is 0.829, the average value is equal to the overall level, and the standard deviation is higher than the overall level. The average value of traditional parking and shopping near the store is 4.11, and the standard deviation is 0.829. The average value is higher than the overall level, and the standard deviation is higher than the overall level. In terms of Shop location is easy to find, the average value is 4.10, and the standard deviation is 0.869. The average value is higher than the overall level, and the standard deviation is higher than the overall level. The overall mean of Life convenience equals to 4.08, and the standard deviation equals to 0.745, which can be interpreted that the users perceive of good quality of the Life convenience provided by Fresh Hema.

4.2.5 Customer Satisfaction

There are six questions included in this dependent variable The descriptive analysis, mean and standard deviation of Customer satisfaction, is shown in Table 4.6. The analysis result is an outcome from data of 385 respondents.

Table 4.6 Mean and S.D. of Customer Satisfaction

Customer satisfaction	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
Overall						4.10	0.695	Agree
At Hema you get value for your money	2 (0.5)	11 (2.9)	65 (16.9)	182 (47.3)	125 (32.5)	4.08	0.806	Agree
You are likely to	3	13	57	179	133	4.11	0.830	Agree

Table 4.6 (Cont.)

Customer satisfaction	Level of opinion					Mean	S.D.	Level
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency/Percentage							
purchase again from Hema	(0.8)	(3.4)	(14.8)	(46.5)	(34.5)			
Your issue was effectively resolved	2 (0.5)	8 (2.1)	59 (15.3)	191 (49.6)	125 (32.5)	4.11	0.772	Agree
You are likely to recommend Hema to others	5 (1.3)	14 (3.6)	50 (13.0)	189 (49.1)	127 (33.0)	4.09	0.846	Agree
Shopping at Hema is the right decision	3 (0.8)	7 (1.8)	57 (14.8)	200 (51.9)	118 (30.6)	4.10	0.768	Agree
I am satisfied with service that I get from Hema	3 (0.8)	7 (1.8)	62 (16.1)	195 (50.6)	118 (30.6)	4.09	0.778	Agree

From table 4.6, at Hema you get value for your money, the average value is 4.08, the standard deviation is 0.806, the average value is lower than the overall level, and the standard deviation is higher than the overall level. In you are profitable to purchase again from Hema, the average value is 4.11, and the standard deviation is 0.830. The average value is higher than the overall level, and the standard deviation is higher than the overall level. In your issue was effectively resolved, the average value is 4.11, and the standard deviation is 0.772. The average value is higher than the overall level, and the standard deviation is higher than the overall level. In you are likely to recommend Hema to others, the average value is 4.09, and the standard deviation is 0.846. The average value is lower than the overall level, and the standard deviation is higher than the overall

level. In shopping at Hema is the right decision, the average value is 4.10, the standard deviation is 0.768, the average value is equal to the overall level, and the standard deviation is higher than the overall level. In I am satisfied with service that I get from Hema, the average value is 4.09, and the standard deviation is 0.778. The average value is lower than the overall level, and the standard deviation is higher than the overall level. The overall mean of Life convenience equals to 4.10, and the standard deviation equals to 0.695, which can be interpreted that Fresh Hema has high customer satisfaction.

4.3 Setting and Data Description

4.3.1 Data Description

In this study, the influencing factors of Fresh Hema's customer satisfaction will involve four variables: product quality (PQ), technology platform (TP), customer service (CSE) and convenience of life (LC).

1. Product Quality (PQ): Product quality refers to the applicability of the product, that is, the degree to which the product can successfully meet the user's needs when in use. For fresh products, customers' requirements are the safety and taste of fresh products, and customers' satisfaction depends on the cost performance of the products.

2. Technology Platform (TP): Technology is the biggest difference between new retail and traditional e-commerce. Online operation must rely on mobile app program, and easy operation will greatly increase the repurchase rate of customers. At the same time, offline unmanned vending machines are also widely used, and a faster and more convenient shopping experience can also improve the repurchase rate of customers. The technology platform in this paper refers to both online application and offline store layout. Customers want to have a satisfactory technology platform experience, and the operability and convenience of the technology platform can affect customer satisfaction.

3. Customer service (CSE): Customer service is the ability of fresh e-commerce to improve

customer loyalty to the enterprise, increase customer stickiness and constantly meet the changing consumer demand of customers in the new retail environment. Customers will compare the perceived service with the expected service, and if the former fails to reach the latter, customer satisfaction will decline.

4. Convenience of life (LC): convenience is an index that must be evaluated in retail industry, and the improvement of network coverage will significantly increase the customer satisfaction of fresh e-commerce.

4.3.2 Model Setting

According to the above research, this paper takes product quality (PQ), technology platform (TP), customer service (CSE) and life convenience (LC) as independent variables, and customer satisfaction (CSA) as dependent variables to establish a model, which basically contains the factors that affect customer satisfaction. This paper will use this model to estimate the impact of customer satisfaction factors.

$$CSA=\alpha+\beta 1PQ+\beta 2TP+\beta 3CSE+\beta 4LC+\varepsilon$$

Where α is a constant term, ε is an interference term, and $\beta 1$, $\beta 2$, $\beta 3$ and $\beta 4$ are the coefficients of the variables to be estimated.

4.4 Pearson Correlation Analysis Method

4.4.1 Correlation Analysis Method

Under certain conditions, different variables have relations and laws that are not easy to be observed, and this relationship is called correlation. The correlation analysis method used in this research is to reveal the objective relations between different things, so as to deepen the understanding of things and get regular things. The index used to describe the degree of correlation

between things is called correlation coefficient, which is recorded as R, and its calculation formula is:

$$r=[N\sum XY-(\sum XY)]/[N\sum X^2-(\sum X)^2][N\sum Y^2-(\sum Y)^2]$$

Where x is an explanatory variable, y is a response variable, and the data is represented by an ordered number of pair (x, y). The range of correlation coefficient is [1,1], and the greater its absolute value, the stronger its correlation. The closer the correlation coefficient is to 0, the weaker the correlation will be. This paper mainly uses Pearson correlation coefficient, which is an important statistical index to quantitatively describe the close degree of correlation between variables. Pearson correlation coefficient is the best choice when the sample satisfies binary Gaussian distribution.

4.4.2 Correlation Analysis

Pearson correlation analysis is used to analyze the correlation between product quality (PQ), technology platform (TP), customer service (CSE), life convenience (LC) and customer satisfaction (CSA). Import the data into SPSS 27 and analyze its correlation. See Table 4.7 for the results.

Table 4.7 Pearson Correlation Analysis

Variable	Product quality	Technology platform	Customer service	Life convenience	Customer satisfaction
Product quality	1				
Technology platform	.837**	1			
Customer service	.817**	.887**	1		
Life convenience	.817**	.868**	.857**	1	
Customer satisfaction	.835**	.869**	.877**	.909**	1

** $p < .01$

Form table 4.7, it shows that Pearson correlation coefficients among product quality (PQ), technology platform (TP), customer service (CSE), life convenience (LC) and customer satisfaction (CSA) are 0.835, 0.869, 0.877 and 0.909 respectively. This shows that there is a positive correlation between product quality (PQ), technology platform (TP), customer service (CSE), convenience of life (LC) and customer satisfaction (CSA), and Pearson correlation coefficient is greater than 0.8, showing a strong correlation, while P value is far less than 0.01, that is, the correlation between variables is significant. In addition, the correlation between living convenience (LC) and customer service (CSE), technology platform (TP) and product quality (PQ) means that living convenience (LC) has the greatest impact on customer satisfaction, followed by customer service (CSE), while technology platform (TP) and product quality (PQ) have little impact on customer satisfaction.

4.5 Regression Analysis and Test of Influencing Factors

Table 4.8 Regression Analysis of Factors Influencing Customer Satisfaction

Variable	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig.	VIF
Constant	0.192		2.347	0.019*	
Product quality	0.157	0.150	4.15	0.000**	3.904
Technology platform	0.099	0.103	2.226	0.027*	6.476
Customer service	0.244	0.248	5.679	0.000**	5.708
Life convenience	0.452	0.485	11.797	0.000**	5.056
R^2 = 0.873; SEE = 0.249; sig = 0.000**					

* p < .05 ; ** p < .01

From table 4.8, multiple linear regression is used for hypothesis testing as shown in Figure 4.3, the R^2=0.873 indicates that all the independent variables of the model could explain 87.3% variation of customer satisfaction. According to VIF, when 0 < VIF < 10, there is no multicollinearity; When 10 < VIF < 100, there is strong collinearity; When VIF＞100, there is

serious collinearity. It can be seen from Table 4.8 that all independent variables have VIF less than 10, therefore there is no multicollinearity among variables in the model. The results show that all independent variables reject the original hypothesis. That is to say, "product quality", "technology platform", "customer service" and "life communication" have significant influence on the explained variable "customer satisfaction" respectively.

4.6 Hypothesis Testing

From this result, it was shown that the proposed model is consistent with empirical data.

Table 4.9 Summary of Hypothesis Testing

Hypothesis	Results
Hypothesis 1: Product quality has a positive influence on customer satisfaction.	Support
Hypothesis 2: Technology platform has a positive influence on customer satisfaction.	Support
Hypothesis 3: Service quality has a positive influence on customer satisfaction.	Support
Hypothesis 4: Convenience of life has a positive influence on customer satisfaction.	Support

From table 4.9, all four hypotheses are supported therefore product quality, technology platform, service quality and convenience of life has positive influence on customer satisfaction.

CHAPTER 5

CONCLUSION AND DISCUSSION

Fresh Hema's customer satisfaction promotion strategy refers to changing the internal operation links of the company from the various influencing factors of customer satisfaction, so as to finally achieve the purpose of improving customer satisfaction. With the continuous development of the fresh e-commerce industry in the new retail environment, customers' perception of the services and products that the industry can provide is getting higher and higher, and they are increasingly pursuing differentiation and personalization. Enterprises need to constantly adopt various effective ways to satisfy consumers from all angles, so as to improve customer satisfaction. Through multiple linear regression analysis, it can be seen that the overall customer satisfaction level of Fresh Hema is still relatively high, but if it only stops at the present situation and does not make improvement, it will definitely cause customer dissatisfaction in the long run, and eventually lead to the loss of customers. Therefore, Fresh Hema must improve customer satisfaction no matter from any angle. Starting from the problems found in the fourth chapter of this chapter, according to the problems existing in the influencing factors of Fresh Hema's customer satisfaction, the corresponding improvement countermeasures are given, so as to improve customer satisfaction.

5.1 Conclusion

In the research on the influencing factors of Fresh Hema's customer satisfaction, in order to clearly express the data results, it is divided into five evaluation intervals according to Likert scale, and these five areas correspond to the five assignments of Likert scale respectively. The descriptive results show that the average Product quality is 4.14, the average Technology platform is 4.11, the average Customer service is 4.14, and the average life communication is 4.08. According to the average value of each independent variable, it can be seen that customers' satisfaction with Product quality and Customer service is high, while that of Technology platform and Life convenience is

low. The main problems of Product quality are low-cost performance of fresh products, little usefulness of fresh product information description and low similarity between website pictures and real products. The main problems of Platform are low confidentiality of personal information and inconvenient use of on-site intelligent cash registers. The main problems of Customer service are service staff's lack of service awareness, service staff's low professionalism, and website's slow handling of consumer complaints. The main problems of Life convenience are the distance between shops and the poor traffic facilities near shops.

According to the results of the regression equation, life convenience has the greatest impact on customer satisfaction, followed by customer service, product quality and technology platform. According to the results, Fresh Hema needs to solve the problems of life convenience and customer service as much as possible, and the product quality and technology platform also need to be improved.

The influencing factors of customer satisfaction in Fresh Hema are analyzed and summarized, and a questionnaire survey is conducted among the specific people who have consumed in Fresh Hema. Then, the questionnaire data is collected, and the descriptive problems are systematically analyzed. Then, the relevant data of the collected influencing factors of customer satisfaction are analyzed by regression, and the proportion of related variables of influencing factors of customer satisfaction affecting customer satisfaction is calculated. From the result, although customers' overall satisfaction with Fresh Hema is relatively high, there is still a lot of room for improvement in terms of Life convenience, Customer service, Product quality and Technology platform. To improve customer satisfaction, these aspects need to be strengthened.

5.1.1 Conclusion of Product Quality

The ratio of Product quality is positive, which indicates that the improvement of Product quality will lead to the improvement of customer satisfaction. Every percentage point increase in Product quality will lead to the improvement of customer satisfaction by 0.157 percentage points. This indicates that Product quality has a small impact on customer satisfaction, but Fresh Hema

can't ignore the impact of Product quality.

The overall score of Product quality is high, and there are three main problems. Because of the high cost, the price level of Fresh Hema is always on the high side. Although Fresh Hema's target customers are post-80s and post-90s who are willing to pay more for better service, the post-80s and post-90s account for as much as 53.2% of the research population, but the customer satisfaction of Fresh Hema's price level is still very low, which indicates that Fresh Hema's price level is generally unacceptable to consumers, which directly points to the cost control problem of Fresh Hema. Although there are various kinds of products, Fresh Hema is not useful enough for the description of fresh products. Many customers can't get a satisfactory answer from Fresh Hema's description, which leads to customers choosing the wrong product or not choosing the right product, thus affecting customer satisfaction. Fresh Hema adopts the mode of online and offline full-scene purchase of fresh products, which will lead to the problem of low similarity between the information of website pictures and the real products. Many pictures of products on the APP are quite different from the products actually bought, which will greatly affect customer satisfaction. The difference between the diagram used by Fresh Hema in APP and the real thing is too big, which will cause the misunderstanding of customers and make them lose trust.

5.1.2 Conclusion of Technology Platform

The ratio of Technology platform is positive, which means that the improvement of Technology platform will lead to the improvement of customer satisfaction. Every percentage point increase of Technology platform will lead to the improvement of customer satisfaction by 0.099 percentage points. Although the Technology platform has little impact on customer satisfaction, excellent Technology platform often makes customers willing to buy products again.

The overall score of Technology platform is low, and the two indicators with the biggest problems are low confidentiality of personal information and inconvenient use of on-site intelligent cash registers, both of which are related to Fresh Hema's single payment method.

Fresh Hema, as a new retail format of Ali Group, only binds the payment system of Ali Group.

However, in order to promote Fresh Hema's own APP, the mobile phone clients of payment APP and e-commerce applications owned by Ali Group only have the function of browsing Fresh Hema products, but not the function of final payment. If you want to buy goods in Fresh Hema, you must download its mobile phone app and bind the payment software of Ali Group, and finally you can complete the payment through the payment system of Ali Group. This not only violates the rights of customers, but also may lead to the disclosure of customer information.

Not only online purchases must be made through Fresh Hema's own mobile phone application, but also offline payments must be made through Fresh Hema's mobile phone application. Even when online payment is made, the Fresh Hema store site does not support cash payment, which directly leads to a decline in the satisfaction of many elderly people or customers who are not good at using smart phones. Moreover, the WIFI speed of Fresh Hema site is very slow, and customers can hardly download the APP on site immediately. Many customers who arrive at the store for the first time and do not have a mobile phone application installed, After purchasing goods, customers who found that they couldn't get to the store last time at the automatic cash register and didn't install the APP, found that they couldn't make checkout payment at the automatic cash register after purchasing goods, and were forced to spend a long time downloading and installing the APP or giving up buying the purchased goods. These behaviors not only violate the rights of customers, but also may lead to the leakage of customer information and seriously affect customer satisfaction.

5.1.3 Conclusion of Customer Service

The ratio of Customer service is positive, which indicates that the improvement of Customer service will lead to the improvement of customer satisfaction. Every percentage point increase of Customer service will lead to the improvement of customer satisfaction by 0.244 percent. Customer service has a great influence on customer satisfaction. In today's customer-centered business model, customers are the main factor driving the value of enterprises. Only by improving customer service can we improve customer satisfaction and create more value for enterprises.

With regard to Customer service, Fresh Hema is overall high, and the main problems are that

service personnel are not aware of service, their professionalism is not high, and the website is slow to handle consumer complaints. These three indicators are related to offline service and complaint handling speed, indicating that there may be a shortage of staff in Fresh Hema's offline stores and online customer service, which may lead to the problems that some customers who arrive at the store for the first time will not use offline automatic cash registers, and will not get timely guidance and slow online complaint handling.

5.1.4 Conclusion of life Convenience

The ratio of Life convenience is positive, indicating that the improvement of Life convenience will lead to the improvement of customer satisfaction. Every percentage point of life friendship will lead to the improvement of customer satisfaction by 0.458 percentage points. The influence of Life convenience on customer satisfaction is the largest among all independent variables. The problems related to Life convenience need to be solved first by Fresh Hema.

The overall score of Life convenience is low, and the two indicators with the biggest problems are the distance between the stores and the poor traffic facilities near the stores, mainly because the distribution range of Fresh Hema is three kilometers near the stores, which is a very rigid rule, and the number of stores is only distributed in first-and second-tier cities. Many consumers feel that they have to take a long way to go to the stores to spend money, and they may be unable to enjoy the distribution service because their home address is remote. In terms of store opening hours, the opening hours of Fresh Hema are close to those of traditional supermarkets, and there are certain disadvantages compared with the 24-hour opening hours of new retail convenience stores. The new retail convenience store is another business model of the new retail industry. Its storefront area is small, and there are only a few salespeople. At the same time, it uses automatic cash registers and other technical platforms. Its distribution personnel often adopt outsourcing mode, the overall cost is lower than that of Fresh Hema, and its business hours can often be 24 hours. Because of the close location strategy, these new retail convenience stores often exist around Fresh Hema, which leads consumers to compare the two.

5.2 Product Quality Promotion Strategy

As the core competitiveness of product enterprises, it is very important for enterprises. Although it is generally believed that the price of Fresh Hema products is high, it is also recognized by customers for the product quality and high service level provided by Fresh Hema that match the price level. This is in line with the fact that Fresh Hema's target customers are middle class. Fresh Hema's customers are mainly young people and office workers. Compared with the traditional vegetable market, the meat, vegetables and seafood provided by Fresh Hema are of better quality and more time-saving when purchasing, and are deeply loved by customers. Of course, Fresh Hema still has some problems in terms of Product quality, such as low-cost performance of fresh products, little usefulness of fresh product information description and low similarity between website pictures and real products. In view of the above problems, the following suggestions are put forward.

5.2.1 Optimize Supply Chain Management

For fresh e-commerce, supply chain plays a vital role in market competition at any time. Fresh supply chain affects the gross profit margin of enterprises, and the gross profit margin of getting goods from the place of origin far exceeds the way of getting goods from third-party channels; At the same time, the supply chain also affects the logistics loss. High-quality fresh products are more resistant to transportation and storage, and have a longer shelf life, better appearance, and will also reduce the return loss of consumers; The supply chain also determines the user experience. Although the COVID-19 epidemic is an excellent development opportunity for fresh e-commerce, many enterprises have various problems in the supply chain due to the repetitiveness of the epidemic, so they can't make up the goods in time. Therefore, the establishment of fresh supply chain is the most important thing. Behind the competition of fresh e-commerce product quality is the competition of supply chain. Fresh Hema relies on the platform of the parent company to establish a supply chain from the agricultural base with the buyer system. Nearly 30% of the products come from the strategic cooperation base, and the official "ID card" is marked for the

high-quality products. However, in order to go further on the road of enterprise development, high-quality products are marked with official "ID cards" to attract more consumers to buy.

5.2.2 Optimize Industrial Structure

Different regions have different preferences for products, even consumers in the commercial area and those in the residential area in the same city choose different products, which will eventually lead to different repurchase rates of the same products in each store of Fresh Hema, while the categories of products supplied by HM Company in the same city are almost the same. We should give full play to the subjective initiative of stores, rely on HM's powerful data system, subdivide the market around each store, and optimize the product structure (Wang Z., et.al., 2019), optimize or broaden the products with high repurchase rate, and reduce the stock quantity of products with low repurchase rate.

5.3 Technology Platform Promotion Strategy

Fresh Hema's overall score on the Technology platform is low, and the main problems are low confidentiality of personal information and inconvenient use of on-site intelligent cash registers. Fresh Hema's APP must be bound before it can be used, which inevitably involves the user's personal information and leads to the problem of personal information leakage. At the same time, the application platform can only browse goods, but it cannot make the final payment, which causes inconvenience to users and also causes users' concerns about the confidentiality of personal information. Secondly, when cashing in the store, there is only an automatic cash register. When the traffic volume is large, there will be a lack of staff guidance, which will make it difficult for the first-time customers who can't use the cash register to buy, and eventually lead to the loss of customers. In view of the above problems, the following suggestions are put forward.

5.3.1 App Optimization

Add anonymous login function, reduce the collection of customers' private information as

much as possible, and solve customers' concerns about the confidentiality of personal information from the root. At the same time, it is necessary to change the rules that force users to pay by using Fresh Hema mobile phone application and give certain rewards and subsidies to consumers who use application settlement, so that customers can accept it more easily and improve customer satisfaction.

5.3.2 Offline Cashier Optimization

First of all, Fresh Hema's unmanned checkout counter will cause many elderly people or customers who are not good at using smart phones to have trouble shopping. It is necessary to set up at least one manual checkout counter in each offline store to ensure that customers can pay in cash. Secondly, the online store will set up an area that can provide consumers with high-speed WIFI, so that customers who arrive at the store for the first time can use the WIFI in the store to download Fresh Hema's APP for free. Write the payment chart on the top of the intelligent cash register to ensure that customers can understand the settlement and cash register method by themselves, and there must be a sufficient number of instructors beside the cash register to help customers who encounter difficulties in payment.

5.3.3 Improve the Vitality of Community Operation

Fresh Hema currently superimposes communities and towns in the APP, thus increasing the activity of APP users, and finally increasing user stickiness. However, as a fresh platform, it can properly cooperate with the food community to form a "social+shopping" business model (Liu & Ma, 2019). For example, adding a shopping cart function under the gourmet application allows platform customers to purchase all materials with one click.

5.4 Customer Service Promotion Strategy

Fresh Hema has a high overall score in Customer service, which mainly has some problems, such as poor service awareness of service personnel, low professionalism of service personnel, and

slow website handling of consumer complaints. Customer has a great influence on customer satisfaction, and Fresh Hema needs to improve Customer service to make customers have a better customer experience. In view of the above problems, the following suggestions are put forward.

5.4.1 Optimize Post Setting

Fresh Hema can set leisure time and busy time according to the daily business volume of the storefront. When busy, it can recruit hourly workers, or outsource some employees to meet the different needs of employees in leisure time and busy time. For outsourced employees, the corresponding performance evaluation mechanism should be introduced first. If a third party is selected for online business, the evaluation system should also be connected with the third party. Through the final evaluation of consumers, we urge the whole staff to ensure high-quality service, make customers loyal to the brand and improve their repurchase rate. At the same time, Fresh Hema needs to recruit an appropriate number of online customer service, and strengthen the training related to the speed and ability of customer service to deal with problems, so that the problems complained by consumers can be solved as soon as possible.

5.4.2 Strengthen Staff Training

Fresh Hema needs to strengthen the training of service staff's service awareness, professional guidance of service, standardize the service content and scope standards of service staff, establish the performance evaluation mechanism of service staff, give corresponding rewards to service staff who meet the examination standards, improve staff's enthusiasm, and finally provide timely help to customers.

5.5 Life Convenience Promotion Strategy

Life convenience has the largest impact on customer satisfaction, but the overall score is the lowest among the four factors. Fresh Hema needs to focus on solving related problems. The main problems of Life convenience are the distance between shops and the poor traffic facilities near

shops. Because of the small distribution area of stores and the small number of stores, many customers are unable to make long-term purchases in Fresh Hema. In view of the above problems, the following suggestions are put forward.

5.5.1 Strengthen Intelligent Distribution

Fresh Hema can no longer mechanically locate the three kilometers around the store in terms of distribution scope, but re-divide it according to the specific neighborhood conditions around the store. If the traffic environment is appropriate, the area that can be radiated by logistics can be appropriately expanded. At the same time, a new algorithm is introduced to optimize the distribution cost and speed, so as to improve customer satisfaction.

5.5.2 Improve the Flexibility of Network Layout

Fresh Hema's outlets are not comprehensive, and there are also residential areas in the intersection areas of first-tier cities, which can appropriately increase the number of facades to meet customer needs. However, the services provided by Fresh Hema Store, which cooperates with third-and fourth-tier supermarkets, can't meet customers' needs. Therefore, Fresh Hema still needs to make a rational layout in third-and fourth-tier cities to exert its brand effect.

5.6 Summary

To sum up, this chapter, based on the previous chapter, combined with the current situation of Fresh Hema, comprehensively applied relevant theoretical knowledge and put forward promotion strategies for customer satisfaction. It is of great practical significance to improve Fresh Hema's customer satisfaction, increase its user stickiness and improve its overall performance.

Under the new retail background, fresh e-commerce is in a period of vigorous development. Because of the influence of COVID-19 epidemic, people can't go out. Traditional offline consumers have switched to online, and the turnover has soared for a while. However, it is the real test for fresh e-commerce enterprises whether they can retain customers after the epidemic.

On the basis of domestic and foreign scholars' research on customer satisfaction, combined with the characteristics of fresh e-commerce under the new retail background, this paper draws the influencing factors of fresh e-commerce's customer satisfaction, and makes a case study of Fresh Hema through multiple linear regression to prove the relationship between relevant factors and customer satisfaction, and draws the following conclusions: First, Fresh Hema's customer satisfaction is generally good, but there are still some problems. For example: low-cost performance of fresh products, less usefulness of information description of fresh products, low similarity between website pictures and real products, low confidentiality of personal information, inconvenient on-site intelligent cash registers, weak service awareness of service personnel, low professionalism of service personnel, slow website handling of consumer complaints, long distance between shops and poor traffic facilities near shops, etc. These problems need to be further improved to improve the overall level of customer satisfaction. Second, according to the existing problems, the improvement strategies are put forward from four aspects, including product quality, technology platform, customer service and life convenience.

5.7 Limitation and Recommendation

The research deficiency has the following three points:

1. Under the new retail environment, the fresh e-commerce industry is developing and changing at present, and its future development is also influenced by the overall economic environment and government policy guidance. At present, the index design of this paper is based on the consideration of the past and present situation of the industry, which may lack the foresight of the index and the investigation and grasp of the future industry changes.

2. The sample distribution is uneven. Because of the epidemic situation, the questionnaires distributed in this paper are mostly electronic questionnaires. The groups surveyed in this paper are mainly from Jiangsu Province. Because of regional differences and uneven development of fresh e-commerce, the influence of different regional factors is different, and the results will be greatly

influenced by the regions. Therefore, this paper is only a regional study, and can't represent the overall situation of Fresh Hema's consumer satisfaction, because different regions will be affected by many local factors. In the future research, the questionnaire can be collected from all parts of the country, and then the differences of each area can be compared and analyzed to study the overall satisfaction.

3. After regression of the influencing factors of customer satisfaction (R^2 =0.873) which shows that all the independent variables of the model explain the 87.3% variation of customer satisfaction, which also means that the independent variables of this paper may not be considered comprehensively enough. In the future research, we can try to add more independent variables, such as logistics and brand value.

Although there are some shortcomings in this paper, some achievements have been made in the research of influencing factors of customer satisfaction of fresh e-commerce in the new retail environment, hoping to provide some help for fresh e-commerce and its related enterprises in improving customer satisfaction.

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APPENDIX

APPENDIX A

Questionnaire

APPENDIX A

QUESTIONAIRE

Part 1: General Information of respondents

Instruction: Please mark √ in the in front of the item that best describes your reality.

1. Gender

( ) Male ( ) Female

2. Age

( ) Less than 20 years ( ) 21–30 years

( ) 31–40 years ( ) 41-50 years

( ) 51-60 years ( ) over 60 years

3. Monthly Income

( ) Less than 3,000 RMB ( ) 3,001-6,000 RMB

( ) 6,001- 10,000 RMB ( ) 10,001-20,000 RMB

( ) Above than 20,000 RMB

4. Education

( ) Grade 12 or lower ( ) Diploma

( ) Bachelor degree ( ) Higher than bachelor degree

5. Marital Status

( ) Single ( ) Married

( ) Divorced / widowed / separated

6. How long have you been buying the product at Hema? (Year?)

( ) Less than one year ( ) 1-2 years

( ) 3-4 years ( ) More than 4 years

7. How often do you use application for purchasing the product at Hema?

( ) Less than once a week ( ) Once or twice a week

( ) 3-4 times a week ( ) 5-7 times a week

( ) More than 7 times a week

8. What product category do you purchase most often at Hema?

( ) Meats ( ) Vegetables

( ) Fruit ( ) Other products

9. Location (city or area)

.....

10. Occupation

.....

Part 2: The question is about the influencing factors and customer satisfaction of Fresh Hema.

Information:

1. The purpose of this questionnaire is to study your views on the influencing factors of customer satisfaction of Fresh Hema, and each factor has five levels of opinions.

2. Put the mark in the box that best describes your situation or opinion with only one answer.

3. There are 40 questions in total, please answer them all.

(5 = Strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly disagree)

No.	Variable	Opinion Level				
		5	4	3	2	1
	Product quality					
1.	Fresh product types					
2.	Freshness of fresh products					
3.	Cost-effectiveness of fresh products					
4.	Details of information description of fresh products					
5.	Authenticity of fresh product information description					
6.	The usefulness of fresh product information description					
7.	The timeliness of fresh product information description					
8.	The similarity between the information of the website and the real product					
9.	Consistency between website information and merchants' sources of goods					
	Technology platform					

10.	APP payment system security					
11.	Confidentiality of personal information					
12.	App operation convenience					
13.	Personalized service convenience					
14.	Visual effects of web design					
15.	Convenience of on-site intelligent cash register					
	Customer service					
16.	Service personnel's attitude					
17.	Service personnel's service awareness					
18.	Professional service					
19.	The timeliness of the website's handling of consumer complaints					
20.	Punctuality of after-sales service					
21.	Efficiency of after-sales service					
22.	Timeliness of website refund					
	Life convenience					
23.	The shop is very close					
24.	The business hours of shops are reasonable					
25.	The traffic near the shop is convenient					
26.	Convenient parking and shopping near the store					
26.	Shop location is easy to find					
	Customer satisfaction					
28.	At Hema you get value for your money					
29.	You are likely to purchase again from Hema					
30.	Your issue was effectively resolved					
31.	You are likely to recommend Hema to others					

32.	Shopping at Hema is the right decision					
33.	I am satisfied with service that I get from Hema					

On a scale of 1 to 10, how satisfied are you with your in-store experience today?

In your own words, describe how you feel about Hema.

BIOGRAPHY

Name	Mr. Zhu Zhu
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