



# Master's degree thesis

**LOG950 Logistics**

**Does Service Quality and Customer Satisfaction Effect  
Customer Loyalty? ----An Case Study of A Chinese  
Electric Appliance Chain Rerailer**

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## **Preface**

This is the Master thesis of Yuan Pei. I finished my study program of Master of Science in Logistics as students at Molde University College. And the research has been carried out under the guidance of Professor Arnt Buvik.

First I would like to thank him for his tolerance, professional guidance, suggestions and comments. Without his great help, this research would not be accomplished. I would also like to say thanks to Svein Bråthen for his help and advices for the thesis topic selection and modification.

I would also say thank you to Mr. Dongchen Xia and Mr. Yang Lu, the two store managers of SUNING in my home town and the neighbour city. Without their helps, the data would not be collected in a free cost and easy way. Of course, I would like to say thank you to all of the staff in that two stores' customer service centre. It's my great pleasure to do the telephone survey with them.

At last, I must say thank you to my dear parents, other family members and friends. Without their support on funding, spirit, and everything, I would not finish my study successfully.

## **ABSTRACT**

The purpose of this master thesis is to test whether supplier's service quality and customer satisfaction affect customer loyalty, and to test if different customers have different loyalty intentions when customer segmentation was added into loyalty evaluation. All the analysis was based on case study of a Chinese famous traditional chain retailer which name is SUNING.

Chapter 1 introduced the research background and research questions. Chapter 2 enumerate some previous literature review and achievements have done by other researchers. Chapter 3 elaborated the reason why choose SUNING as case company and why study on its customer loyalty evaluation, followed by some introductions of the case company.

Chapter 4 stated the research model and research hypotheses, followed by logical reasons for why make such hypotheses. Research methodology was elaborated in Chapter 5. In this chapter, research setting was described at first, followed by the description of questionnaire development, preliminary test, sampling procedure and the method of data collection. Operationalization of variables was mentioned in Chapter 6, while Chapter 7 was related to the work of validation and reliability which contains construct validation, factor analysis, and consistency check. In Chapter 9, data analysis by the procedure of sample profile descriptions were stated at first. Then multiple regression analysis was applied to predict the regression model and to test hypotheses. The analysis results were satisfied on the whole.

In the last chapter, a short discussion of results, theoretical implications and managerial implications were stated. Finally, some limitations and future research plan was mentioned.

Keywords: Service Quality, Customer Satisfaction, Customer Loyalty, Chinese

traditional chain retailer, customer segmentation

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# **1 INTRODUCTION**

Chapter 1 offers the background of this study, followed by the research objectives description.

## **1.1 STUDY BACKGROUND**

In today's Chinese retail market, there is no doubt that E-commerce retail industries have become to be the dazzling stars, and there are so many advantages of this kind of business, such as no cost of renting physical store, low cost for employee wages, low cost on advertisement, easy for customer check information of products, etc.. Chinese government statistics show that in recent five year years, E-commerce industries has a fast development on online retailing and service which began to seriously take market share and customers from traditional retail industries.

More and more researchers started to study themes related to E-commerce. However, traditional retail industries should not be forgotten or ignored. Why? Because even E-commerce firms have low cost on some perspectives, most of them have no face-to-face customer service, customer cannot try products, false information of products always be found online, and most of the E-commerce companies have no their own logistics, they have to employ 3PLs to deliver products and service which may be hard to manage and control the service quality. Moreover, traditional retail industries still take the main part of the market share which supported by their strong funding and real physical products in stores for customer. Then, what will this kind of traditional retailers do to grasp their market share and to keep their customers by retaining customer loyalty and improving customer service to satisfy their potential outflowing customers? It is an important question, It is also a serious challenge.

From the perspective of customer, with the diversification of supplying market getting intense, the customer demand also getting diversified. Since customers

getting more and more knowledgeable, they will no longer satisfied with only product quality and price, more and more customers began to focus on the quality of attached service when they desire to buy a product and after their payment. That means with the improvement of customers' cognition of customer service which they thought suppliers can offer and must offer, customers will be more fastidious than ever before, and their loyalty to a brand or product or company, will be more elusory. How supplier can improve the services to satisfy customer and to gain customer loyalty enduringly will be an interesting subject for not only suppliers and academics, but also for customers themselves. Therefore, to understand the relationship between service, satisfaction and loyalty is crucial.

## **1.2 RESEARCH OBJECTIVES**

The general aim of this study is to find out and to understand the relationship between service quality, customer satisfaction and customer loyalty of two chain stores which belong to the case company---SUNING GROUP. Further, to offer some suggestions for the case company and to provide some insights for future research.

There are also some specific research objectives should be mentioned in this study. First of all, the two-two relationship between service quality, satisfaction and loyalty respectively should be tested which aim to find if there are positive relationships among those three variables. Secondly, to analysis if different customer segmentations will have different level of customer loyalty, from this analysis, SUNING can revise its business strategy and understand customer deeply.

## **2 LITERATURE REVIEW**

The purpose of this section is to describe the core theories of service quality, customer satisfaction and customer loyalty which will be the theoretical basis for this study. Although the relative literatures and theories of service quality, customer satisfaction, and customer loyalty are most belong to the study of marketing and business administration, since the coherence and generality of these basic theories, they can be applied in the research of supply chain management appropriately.

Section 2.1 outlines the definition of service quality and some mainstream research development of service quality. Section 2.2 describes the concept of customer satisfaction, the debatable argument related to customer satisfaction. Section 2.3 reviews different definitions of customer loyalty claimed by different researcher in previous academic studies, loyalty dimensions, loyalty phases and types. Section 2.4 outlines the previous study and debates of the relationship between service quality, customer satisfaction and customer loyalty. A short summary is given in section 2.5.

### **2.1 SERVICE QUALITY**

Reviewing the recent history of relevant academic research, since 1980s, the words “service quality” started to appear in academic journals, academic debates, managerial courses, and so on. It is easy to find the reasons why researchers, businesses, even customer themselves started to focus on and to study on the “service quality” or we can say “the quality of service”: the economic globalization revealed its importance for the first time, the western industries intended to seek some profitable ways for the increasing competition and differentiating themselves, even consumers also began to learn more about their purchase behaviour which maybe led them to pay more attention on the service quality that provided by different kinds of merchant organisations and of course service organisations.

#### ***2.1.1 Definitions of Service Quality***

Since the business world have changed from monopoly economy in western countries and planned economy in eastern countries into market-oriented economy, or we can say competitive economy, service quality is considered as a competitive factor of firms which can helps firms to gain sustainable competitive advantage. And because of this, researchers started to do research on customer service quality in different business industries such like retail industry (Dabholkar et al., 1996), manufacturing industry (Maclaran and McGowan, 1999; Sinha and Ghoshal, 1999), banking industry (Malhotra et al., 2005; Sureshchander et al., 2002a, 2002b, 2003), and hospitality industry (Presbury et al., 2005; Bouranta et al., 2009).

Parasuraman, Zeithaml and Berry (1985) define that service quality has comparative function between consumer expectations and actual service performance. And they also indicate that service quality is an intricate and abstract concept since it has three unique features: intangibility, inseparability and heterogeneity. There was an interesting debate appeared from 1990s, some customer satisfaction researchers define that customer service quality is a more specific judgment and a factor of satisfaction (cf. Oliver, 1993). On the contrary, the service quality researchers posit service quality as a general and long-term evaluation and satisfaction as a specific, short-term evaluation. For instance, Parasuraman, Zeithaml and Berry (1988) defined service quality as “the comprehensive assessment of a specific company that roots in comparing this company’s performance with the consumers’ general expectations of how companies in this industry should perform”. Service quality entails customers’ estimation of the general excellence of a service (Zeithaml, 1988) and represents the sum total of customers’ perception of a service (Gummesson, 1991). They emphasize the difference between customer perceptions and expectations of service, and they believe that evaluating customer service quality can help firms to identify the gaps between expectations and perceptions.

However, no matter what the result of this debate is, there is an obvious perspective that almost all the researchers in different academic field agreed: service quality has

powerful influence on today's enterprise performance, customer satisfaction, customer loyalty and economic benefit. Especially in the field of marketing in which service can be a profitable activity, and in the field of supply chain management in which service can be one of the intangible connection factors among actors in upstream, downstream and end customers.

More simply, Gerson and Richard F. (1993) defined service quality as whatever the consumer perceives as service quality. And Santos (2003) defined that quality of service is a measure of how the level of delivery of services meet customer expectations. While Fogli (2006, p.4) defined customer service quality as an overall estimation or view relating to a specific service; the consumer's general impressions of the relative superiority or inferiority of the organization and its service. Service quality is a cognitive judgement. Reviewing the service quality definition from 1980s to 21 century, we can see visibly the dominant player of service quality is not provider, but customer.

### ***2.1.2 Mainstream Development of Service Quality***

Grönroos (1990) and Lehtinen and Lehtinen (1991) claimed that service quality contains three dimensions, that is, the "what", the "how" and the image formed by current and potential consumers.

In addition, Parasuraman et al (1985) did much specific research and interviews related to service quality, and summarized five gaps between marketer and customer:

- 1: Consumer's Expectation--Management's Perception Gap, this gap will influence customer's evaluation on the quality of service.
- 2: The gap between Management's perception of customers' expectation and Service Quality Specifications. This gap may affect the quality of service from the customer's view.
- 3: The gap between Service Quality Specifications and Service Delivery, and this gap

may influence the service quality from the customer's position.

4: The gap between Service Delivery and External Communications, and it will influence the quality of service from the customer's viewpoint.

5: The gap between Customer's Expected Services and Customer's Perceived Services.

Based on previous study and interviews, Parasuraman, Zeithaml and Berry (1985) pointed out ten dimensions of service quality: Courtesy, Access, Competence, Reliability, Communication, Tangibles, Responsiveness, Security, Credibility, and Understanding. After three years' research, in 1988, Parasuraman et al collapsed their dimensions from ten to five: Assurance, Empathy, Reliability, Responsiveness, and tangibles. Actually these five dimensions are similar to other researchers' outcome which indicated that the quality of service is composed by three primary aspects: outcome quality, physical service environment quality, and interaction quality. The reliability dimensions represents the service outcome aspect, while the tangibles dimension represents the physical environment aspect, then assurance, empathy, and responsiveness represent the aspects of interaction quality.

And around these five dimensions of service quality, they revealed an instrument which then became a famous tool for measuring service quality: SERVQUAL, which can help service companies and retailing companies in evaluating consumer expectations and consumer perceptions of service quality. It also help managers to focus on the core areas where need to be taken attention and action to improve the quality of service (Parasuraman et al 1988).

We did not apply SERVQUAL as the basis of our questionnaire since the focal firm required me to use their existing questionnaire to do research. However, there are many questions related to those five dimensions respectively.



## **2.2 CUSTOMER SATISFACTION**

As one of the factors to test business activities' outcomes, customer satisfaction has been focused and studied by academics and businesses for a long time, e.g. Yi (1990) mentioned that customer satisfaction was recognized in marketing thought and practice as a central construct as well as an important objective of every business activity. Oliver (1980) and Churchill and Surprenant (1982) also stated that consumer satisfaction is one of the important outcomes of marketing activities.

### ***2.2.1 What Is Customer Satisfaction?***

Satisfaction is a special form of the attitude of customers. It is a general, post-purchase phenomenon corresponds to how much the customer likes or dislikes the service when they finish experiencing it (Bearden and Teel 1983; Woodside, Frey and Daly 1989). Moreover Wangenheim (2003) defined satisfaction as a result of the comparison between expected performances and perceived performances throughout the consumer relationship.

There is also a debate between researchers which in the perspective of customer transactional and in the perspective of cumulative. Oliver (1993) explained that transactional satisfaction represents the perceptions of a firm's performance on the most recent transactions, or an immediate post-purchase evaluation.

Yet, the researchers which from the cumulative perspective think customer satisfaction is a evaluative judgment on the basis of accumulative experiences on purchasing a certain product or service rather than a transaction-specific phenomenon. They defined that customer satisfaction is an evaluation in view of the overall purchase and consumption experiences with a product or service with the passage of time (Johnson and Fornell, 1991; Fornell et al., 1996), and customer satisfaction is recognized as connection between processes culminating purchase and consumption with post-purchase phenomena such as attitude change, repeat

purchase, and brand loyalty (Churchill and Surprenant, 1982). Similarly, Thaibaut and Kelly (1959) also claimed that customer satisfaction is a cumulative, attitude-like concept.

From the perspective of service quality, Parasuraman, Zeithmal and Berry (1988) and Caruana et al. (2000) defined that customer satisfaction is an outcome of comparison between what consumers expect about the services provided by supplier and what the consumers actually received. Gerson and Richard F. (1993) expound that consumer satisfaction is a consumer's perceptions that his or her expectations have been met or exceeded. Customers buy something and they expect it to work properly. If it does, customers will be satisfied, but if it does not, customers will be dissatisfied.

### ***2.2.2 Why Customer Satisfaction?***

Measuring one organization's success is a large project which not only contains markers' perspective such as profit, scale, market share etc. but also contains customers' perspective such as consumers' expectations, customer satisfaction and customer loyalty. Why customer satisfaction is important, and what is the importance of customer satisfaction?

There is a consensus among almost all researchers: customer satisfaction is one of the fundamental factors of customer loyalty. Repeat purchase and positive word of mouth by customers can be enhanced through satisfaction (Reichheld and Sasser, 1990). High satisfaction can let customers to have intention to increase loyalty, and show less motivation to switch for alternatives (Fornell, 1992). In another word, satisfied consumers have more motivation to stay and to reject alternatives. In a word, customer satisfaction significantly affects both behavioural and attitudinal aspects of customer loyalty.

Satisfied customers do more business with you and more often. They also refer others to you. But if customers are not satisfied, they will stop doing business with

you. All the things you do to achieve quality and provide excellent service are not important at all if you do not work to satisfy the customer (Gerson and Richard F., 1993). In another word, the more customers satisfied, the more they will spend. The more they spend, the more profits which greater than your cost on providing perfect service.

From the views above, we can see that customer satisfaction can be the link between services, sales, customer retention, and finally leads to profits.

## **2.3 CUSTOMER LOYALTY**

Customer loyalty is “the market place currency of the 21<sup>st</sup> century” (Singh and Sirdeshmukh, 2000). Aaker (1992) and Reichheld and Teal (1996) also claimed that customer loyalty is an important theoretical issue and practical issue for all the marketing personnel and academic researchers. Why researchers treat customer loyalty as money? Why academics focus on loyalty? The reasons are obviously. Because customer loyalty is the most important factor which can significantly influence consumer retention, then consumer retention will reduce the marketing cost and increase profits. Numerous empirical studies have supported this viewpoint (e.g. Jones and Sasser, 1995; Hogan et al., 2003). Moreover, Oliver (1999) discusses that if a firm’s customers are satisfied, then their defection rates with respect to repurchase behaviour toward a firm’s products can be as high as 90%. Reichheld and Sasser (1990) also stated that a 5 percent increasing of consumer retention can result in a 25 to 85 percent incensement on profitability.

### ***2.3.1 Definitions of Loyalty***

There are numerous concepts elaborated by different researchers and organizations in different academic field and different industries. Oliver (1999) defined that customer loyalty is a deeply held commitment to repurchase or re-patronize preferred products, services, or brands consistently, which can cause repetitive

purchasing in the same brands, despite situational influences and marketing efforts having the potential to cause switching behaviour. Ganesh, Arnold, and Reynolds (2000) explained loyalty as an integration of both commitment to the relationship and other overt loyalty behaviours.

In the table below, some other researchers also give loyalty in different definitions.

**Table 2.1: Other Definitions Related to Loyalty**

|   |  |
|---|--|
| Selnes, 1993                                | Loyalty expresses an intended behaviour related to product of service, including the likelihood of future purchases or renewal of service contracts, or conversely, how likely it is that the customer will switch to another brand or service provider.   |
| Pritchard, Havitz and Howard, 1999          | Loyalty (L) is a composite blend of brand attitude(A) and behaviour(P[B]) , with indexes that measure the degree to which one favours and buys a brand repeatedly, where $L = P[B]/A$  |
| Kandampully and Suhartanto, 2000            | A loyal customer is one who repurchases from the same service provider whenever possible, and who continues to recommend or maintains a positive attitude towards the service provider.  |
| Khatibi, Abod, Ismail and Thyagarajan, 2002 | Loyalty refers to the strength of a customer's intent to purchase again goods or services from a supplier with whom they are satisfied.  |
| Sirdeshmukh, Deepak, Singh and Sabol, 2002  | Consumer loyalty is indicated by an intention to perform a diverse set of behaviours that signal a motivation to maintain a relationship with a focal firm, including allocating a higher share of the category wallet to the specific service provider, engaging in positive word-of-mouth and repeat purchasing. |

Elizabeth R. Davis (2006) summarizes that loyalty can be defined in terms of repeat purchasing, a positive attitude, long-term commitment, intention to continue the relationship, expressing positive word-of- mouth, likelihood of not switching, or any combination of these.

### **2.3.2 Loyalty Dimensions and Loyalty Phases**

Dick and Basu (1994) identified that loyalty has two dimensions: attitudinal and behavioural, which are determined by the degree of the relationship between relevant attitudes and repeat patronage. And many researchers support this point of

view (e.g. Salegna and Goodwin, 2005; Garland and Gendall, 2004).

Moreover, Cronin and Taylor (1992) gave an elaboration of the difference between these two dimensions: from the attitudinal perspective, loyalty is derived from psychological involvement and preference, and loyal customer always pay attention to brand reputations, re-patronize motivations and price insensitiveness. While the perspective of behavioural approach is always on the basis of the monitoring of the repeated purchase frequency and brand switchings.

Oliver (1999) pointed out customers are firstly theorized to become loyal in cognitive sense, then in affective sense, still later in a conative manner, and at last in a behavioural manner, which he explained as action inertia. His research elaborated the loyalty-forming process of consumer from consciousness to behaviour. To be specific, Oliver thinks there are four phases about real loyalty: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty (Oliver, 1999). The explanations are showed as follows in Table 2.2:

**Table 2.2: Different Loyalty Phases and Short Explanation**

| Phase  | Explanation   |
|--|---|
| <b>Cognitive Loyalty</b><br>(loyalty to information such as price, features, and so forth)                       | Based on brand belief only<br>Based on prior or vicarious knowledge or on recent experience-based information   |
| <b>Affective Loyalty</b><br>(directed toward the brand's likeableness/ "I buy it because I like it")             | A liking or attitude toward the brand has developed on the basis of cumulatively satisfying usage occasions.<br>Commitment at this phase is referred to as affective loyalty and is encoded in the consumer's mind as cognition and affect. |
| <b>Conative Loyalty</b><br>(when the consumer focuses on wanting to rebuy the brand/ "I am committed to buy it") | Influenced by repeated episodes of positive affect toward the brand.<br>Imply a brand-specific commitment to repurchase.<br>At this phase, the consumer desires to repurchase may be an anticipated but unrealized action.                  |
| <b>Action Loyalty</b><br>(commitment to the action of rebuying)  | The motivated intention in the previous loyalty state is transformed into readiness to act, and consumers show more desires to overcome obstacles which might prevent the repurchase action.  |

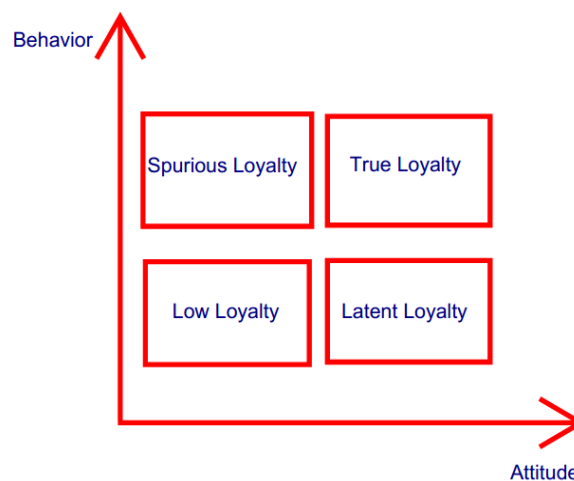
Oliver (1999) mentioned that completing the cognitive-affective-conative

frameworks and entering the final action, phase brings the attitude-based loyalty model to the behaviour of interest, the action state of inertial repurchasing.

### 2.3.3 Loyalty Types

Dick and Base (1994) mentioned that there are four kinds of loyalty on the basis of the degrees of behaviour and attitude: they are spurious loyalty, true loyalty, low loyalty and latent loyalty. The potential relationship is showed as follows:

**Figure 2.1: Four Kinds of Loyalty**



By reviewing previous researchers' studies, Elizabeth R. Davis (2006) also summarized loyalty types as follows:

**Table 2.3: Loyalty Types Summarized By Elizabeth R. Davis (2006)**

|                      |   |
|----------------------|---|
| Passionately Loyalty | Customers do business with the type of company they can “trust to always act in their best interest – without exception” (Hart and Johnson 1999)  |
| Polygamy Loyalty     | Customers who are loyal to more than one brand.   |
| Spurious Loyalty     | Customers stay with a supplier because they perceive no other alternatives or because of low involvement or little perceived differentiation. (Zeithaml, Berry and Parasuraman, 1996; Dick and Basu, 1994)                              |
| Ultimate Loyalty     | The convergence of product, social, and personal forces with logical, personal and communal sustainers that motivates consumers to want only one particular brand and be uninfluenced by competitors’ marketing efforts. (Oliver 1999). |

## **2.4 RELATIONSHIP BETWEEN SERVICE QUALITY, SATISFACTION AND LOYALTY**

### ***2.4.1 Relationship between Service Quality and Customer Satisfaction***

For over half a century’s study, researchers have formed one consensus that customer service quality and customer satisfaction are different, but closely related concepts (Spreng and Mackoy, 1996). And two main debatable arguments about the precise relationship between service quality and customer satisfaction: One argument is that customer service quality influences customer satisfaction positively (e.g. Yee et al, 2010), and service quality is the antecedent of customer satisfaction. This viewpoint was supported by many academics’ researches such like Parasuraman et al. (1988), Cronin and Taylor (1992), Harris and Harrington (2000), Lee and Hwan (2005), etc. On the contrary, another statement is that customer satisfaction is the antecedent of customer service quality (e.g. Bolton and Drew, 1991; Blodgett and Wakefield, 1999). In this study, we also gave a hypothesis that service quality can

influence customer satisfaction positively, the same as most researchers' argument.

### **2.4.2 Relationship between Customer Satisfaction and Customer Loyalty**

There are also some debatable arguments mentioned by academics and organizations. The main three viewpoints are stated as follow:

Viewpoint 1: Customer satisfaction directly effects customer loyalty.

Viewpoint 2: Customer satisfaction does not impact customer loyalty.

Viewpoint 3: In some industries, customer satisfaction is strongly related to customer loyalty, but in some other industries, customer satisfaction does not impact customer loyalty as strongly as other variables.

Vast majority of researchers who study on business and consumer context support viewpoint 1, and the Table 2.4 below shows their opinions.

**Table 2.4: Authors and Opinions That Support Viewpoint 1**

| <b>Author</b>  | <b>Opinion</b>   |
|--|--|
| Selnes, 1993   | Satisfaction has a direct effect on loyalty when customers are able to evaluate product quality through their experience with the product and service. |
| Foenell et al, 1996  | Satisfaction has a positive effect on loyalty in all of the sectors.   |
| Biong,1993; Hallowell, 1996;<br>Daugherty, Stank and Ellinger, 1998;<br>Bloemer et al,1999;<br>Stank et al, 2003 | Satisfaction has a strong influence on loyalty.  |
| Wangenheim, 2003   | Satisfaction has a significant influence on both active and passive loyalty.   |

However, the opposite argument---viewpoint 2 are also supported by many researchers such as Khatibi, et al (2002), Guenzi and Pelloni (2004). Moreover, some researchers which study on some specific industries support the viewpoint 3 such as Garbarino and Johnson (1999), Bruhn and Grund (2000).

Beside these three main arguments, there are still some special viewpoints supported by other researchers, such as Oliver (1999) who mentioned six



representations of satisfaction and loyalty and Elizabeth R. Davis (2006) who adds the psychological variables into loyalty analysis. However, in this paper, we followed viewpoint 1 and give a hypothesis that customer satisfaction has a positive effect on customer loyalty.

#### ***2.4.3 Interrelationship between Service Quality, Customer Satisfaction, and Customer Loyalty***

For over half a century, almost every researcher which study on marketing, supply chain management, business administration and other relate field intend to find the interrelationships between service quality, customer satisfaction, and customer loyalty. However, they did not do too many deep studies and elaborations, most of them always focus on the one-for-one relationship among service quality, customer satisfaction, and customer loyalty. And the research achievements have been already shown in the first two section of this part. That maybe one important reason why there is no one consensus view about the interrelationships between service quality, customer satisfaction, and customer loyalty.

Reviewing the studies of the interrelationship between service quality, customer satisfaction, and customer loyalty, Cronin and Taylor (1992) concluded that customer service quality is antecedent to customer satisfaction. Also, customer satisfaction has an effect on customer loyalty, but customer service quality did not in any of the industries. While Taylor, Stephen, and Baker (1994) found that customer satisfaction moderates the relationship between service quality and customer loyalty. On the other hand, Caruana (2000) claimed that service quality, customer satisfaction and customer loyalty are related to each other. And this view is supported by majority researchers (e.g. Butcher et al., 2001; 2004; Cheng et al., 2008). Kumar et al. (2009) also stated that high quality of service will generate higher customer satisfaction so that to increase customer loyalty. Santouridis and Trivellas (2010) offered a more specific statement that illustrates customer service, price system and billing system are the three dimensions related to customer service quality which have the more

significant positive impacts on customer satisfaction, which in turn has significant positive influences on customer loyalty.

In this paper, we followed most researchers' view and give a hypothesis that service quality and customer satisfaction both have significant and positive effects on customer loyalty, while service quality also has significant and positive effects on customer satisfaction.

## **2.5 SUMMARY**

The dissertation of service quality, customer satisfaction and customer loyalty was argued for over half a century. Why it is still interest and attractive? Because there are always debatable arguments related to the influence of these three concepts, and different academics in different research fields always got different results for them. By reviewing the previous study, the research can be much scientific and objective. By using those theories on the research of the customer which named as the end point of all the supply chains will help the case company to revise their future develop orientation of customer service.

### 3 CASE COMPANY INTRODUCTIONS



#### 3.1 WHY CHOOSE SUNING GROUP? WHY CHOOSE CUSTOMER?

The following text describes several reasons for the purpose of choosing SUNING as the focal company and choosing service, satisfaction and customer loyalty as the research object. And the explanations were done from the perspectives of general external environment, SUNING's internal environment, upstream suppliers' perspective.

##### ***3.1.1 The General External Environment***

Reviewing the Chinese retail market of 2012, it is easy to see that in this year, the electric retail industries became to be the biggest winner in Chinese retail market. These burgeoning enterprises started to plunder the market share from the traditional retail industries with little portent by reducing prices of commodities, increasing advertisement and promotions. More and more electric retail enterprises emerged in the retail market because of the low investment of establishment, low investment on warehouse management, few staffs and wages, and the free cooperated types with upstream suppliers.

As the leader of Chinese traditional electric appliance retailer, SUNING saw the threat and challenge from these electric retail industries. If see the annual report of SUNING, it is obvious that the profits and market share started to decline, and SUNING's market influence also declined. Although SUNING has strong funding and numerous customers and upstream suppliers, its investment on warehouse building, logistics system building and the rigorous contracts with suppliers all made the profits reduced. More and more customers began to compare the products and services both online and offline. How to confront the threat and challenge? One answer is that to keep the customers and attract more new customers. Speak of customer retention, there is an important factor must be taken into account seriously, that is

customer loyalty. How to increase customer loyalty by analysis service quality and customer satisfaction became to be SUNING's one arduous problem. And this research is aim to test whether SUNING's service and customer satisfaction will effect customer loyalty, and to test what kind of customer have high loyalty to this traditional retailer.

### ***3.1.2 The Internal Environment***

To face to the challenge of electric retail companies, SUNING also established an online retail store named "SUNING E-GO". However, compare with other powerful electric retail companies such as "TAOBAO", "AMAZON", and "360 BUY", "SUNING E-GO" was much younger and immature. If see SUNING'S annual report, we can find that the profit from SUNING E-GO was much lower than its physical retail stores. But SUNING E-GO has a unique advantage that is the support from SUNING GROUP. Because of SUNING's stimulating strategies, its online store and physical stores became to be competitors, and they offer same products in same price. The main reason of this strategy is to keep the market share, however, the strategy also made both online store and offline stores compete with each other internally. As the main part of SUNING's business, traditional offline retail stores should never be ignored. Therefore, to analysis and to understand the expectation and the evaluation of loyalty of the customers which belong to offline physical stores is a good way for SUNING's traditional stores keeping customers and contributing more profits to SUNING GROUP.

### ***3.1.3 From The Perspective of Upstream Suppliers***

As to the upstream suppliers, in general, they are much tend to cooperate with the enterprises which have physical stores, since these traditional retailers have better ability of storage, that means they can purchase products with more numbers and types than electric retailers. Another reason is that most electric retailers have no their own logistic service, they have to employ 3PLs, and most complaints from customer is related to the delivery service which may influence their purchasing

activities. And customer complaints may influence the cooperation between upstream suppliers and electric retailers more or less. Moreover, the most important worry for upstream suppliers is that the prospect of online retail market is ambiguous. That is why most upstream suppliers pay more attention to the traditional offline retailers, such as SUNING. Hence, SUNING has many advantages by the support from upstream suppliers, and its mission for now is to keep customers, to satisfy them by offering perfect service, and to get more loyalty which may consolidate the cooperation with suppliers.

### **3.2 GENERAL INTRODUCTION OF SUNING**

SUNING Group---the largest commercial enterprise in China, a leader of Chinese home appliances chain retailer. It was established in Nanjing, China in 1990. After 22 years' development, SUNING has formed a large chain network that covered over 300 cities in Chinese mainland, and it has already entered the markets abroad. So far, SUNING has possessed nearly 1,664 offline chain stores and 150,000 staff. The total operation revenue in 2012 is close to 98.357 billion yuan (Chinese currency).

SUNING Appliance is one of the "National Key 15 Largest Commercial Enterprises in China" specially supported by the Chinese Ministry of Commerce. It ranks the 50th place among Top 500 Enterprises in China, the 2nd place among Chinese non-governmental enterprises and the 1st place among Chinese Commercial Circulation Enterprises. According to the magazine of Forbes, SUNING was once ranked among the Top 50 Asian Enterprises and the 1st place of Top 2,000 Largest Enterprises Worldwide for its retailing business in China. Its brand value is worth 81.568 billion yuan. In July of 2004, SUNING Appliance was listed in Shenzhen Stock Exchange Market, and became to be the first listed home appliance chain enterprise featured by IPO (Initial Public Offerings) in China. It is also one of the home appliance chain companies with the highest market value worldwide.

### **3.3 A CHAIN NETWORK COVERING URBAN AND RURAL, DOMESTIC AND OVERSEAS MARKETS**

With the development principle of fast, steady and standardized duplication, SUNING Appliance has established a chain network covering six levels of markets, including municipalities directly under the Central Government, provincial capitals, sub-provincial cities, prefecture-level cities, counties (county-level cities), and economically developed towns. By the end of 2012, SUNING has nearly 1,664 chain stores in China and abroad and has kept a rate of adding more than 200 stores per year. By 2020, the total number of its chain stores worldwide will reach 3,500, and the sales volume will reach 350 billion yuan. Based on the leading role in the domestic market, in 2009, in order to accumulate experience in internationalized operation and take in excellent operation and management ideas of overseas electrical appliance chain business industry, SUNING Appliance acquired the Company of LAOX in Japan. In the same year, it acquired Hong Kong Citicall Appliance Ltd. and entered the Hong Kong market. It took Hong Kong as the bridge tower for its overseas development and then began to explore a road of internationalized operation.

### **3.4 MARKETING**

Cooperative win-win through integration of social resources is the marketing tenet of SUNING. After more than 20 years of consistent exploration, SUNING Appliance has formed multiple sales channels of retailing at stores, key-accounts sales, SUNING Online Store, distributing and wholesale, thus having carried out all-round services for upstream suppliers and downstream consumers.

#### ***3.4.1 Offline Retailing --- Segmentation of Multi-type Consumption***

Taking the consumers' needs as the core, SUNING has continuously made innovations in the store patten from such aspects as market, business district, location, floorage, commodities and supporting service. From the first generation

store specializing in selling air-conditioners, it has developed into the seventh generation EXPO Store till now, having formed the four major types of retailing stores of EXPO stores, stores of standard size, stores at counties and towns as well as boutiques. It has a chain network covering urban and rural areas, providing convenient, fast and thoughtful home-appliance service for hundreds of millions of Chinese households.

#### ***3.4.2 Carrying Out Win-Win Cooperation to Create a High Efficient Supply Chain***

Cantered on making quick reactions and providing quick service to the clients, SUNING has established fine cooperative partnerships with tens of thousands of well-known Chinese and foreign home appliance suppliers with the help of the platform of SCS System, thus having created a high efficient supply chain through coordination of commodities, supply chains, markets, talented people and communicative mechanisms.

### **3.5 SERVICE INNOVATION**

#### ***3.5.1 More Enthusiastic and Thoughtful Services in Chain Stores***

Service is the ultimate product of SUNING, and the satisfaction of the clients is the ultimate goal of the service by SUNING. SUNING Appliance is determined to create a time-honored brand and provide customers with sunny services covering the whole process of pre-sales, during-sales and after-sales. Taking consumers as the core, SUNING Appliance keeps expanding the types of commodities we deal with, make innovations in the environmental layout and services at stores, takes the lead to propose “5S Service”, provides customers with quality and abundant commodity selections, fast and satisfactory shopping experience, one-stop comprehensive solution and care-free service guarantees.

#### ***3.5.2 Faster and More Accurate Logistics and Distribution***

Logistics is the core competitiveness of chain operation. SUNING Appliance has

established a logistics network system with three levels of regional distribution centres, city distribution centres, and transferring points. With such advance information systems as WMS, DPS, TMS and GPS, SUNING has realized an operation integrating long-distance distribution, short-distance allocation and transfer, as well as retail home delivery. The average distribution radius is 200 kilometres and the maximum daily distribution capacity is more than 200,000 sets. We provide home delivery service within 24 hours, and take the lead to carry out punctual good delivery service so as to reduce the customers' waiting time to the largest extent.

### ***3.5.3 Construction of Modern Logistics Networks***

With an objective of “network integration, operation mechanization and management informationization” in mind, SUNING Appliance has energetically established the third generation logistics base featured by mechanized operation and informationization management. The third generation logistics base integrates the logistics and distribution centre, calling centre, training centre and the logistics centre, supports retail delivery services within a radius of 80 to 150 kilometres and a circular flow volume of 5 to 20 billion yuan of commodities per year, thus having become a large platform of service and logistics support for SUNING Appliance. At present, SUNING Appliance is developing and constructing logistics bases simultaneously in Beijing, Guangzhou, Tianjin, Chongqing, Shenyang, Chengdu and Fuzhou. It is estimated that it can finish network layouts for 60 logistics bases in China by 2015.

### ***3.5.4 More Profession and Reliable Installation and Maintenance Services***

In conformity with “professionally self-operated” after-sales service, SUNING Appliance keeps expanding its service types and segmented services. With thousands of after-sales service networks covering households in the urban and rural areas, more and 20,000 service engineers can respond to the clients' need at any time. We promise that they can get to your door within 24 hours and provide customers with professional service guarantee. SUNING Appliance is the largest electrical appliance



service supplier in China.

### ***3.5.5 Closer and More Satisfactory Care for Customers***

With an objective of “improving the satisfaction of the clients” in mind, SUNING Appliance has fulfilled the promise of providing consumers with all-year-round self-help and proficient services of telephones, internet, text messages, and videos. It uses the largest platform of calling centre in the industry to provide customers with 24-hour consultation, preservation, complaints and customer feedback records. At the same time, we provide an all-round fast service channel of expect consultation, VIP service, telephone payment, claim-settlement service and exchanging old appliances for new ones, thus having greatly benefited the consumers.

Taking caring for the clients as its own duty and with the first Customer Relationship Management System in the industry, SUNING Appliance is devoted to explore the customers’ consumption and service needs, putting forward a series of targeted value-added services, telephone sales and online customer service to provide customers with more friendly choices.

## **4 RESEARCH MODEL AND HYPOTHESES**

### **4.1 RESEARCH MODEL**

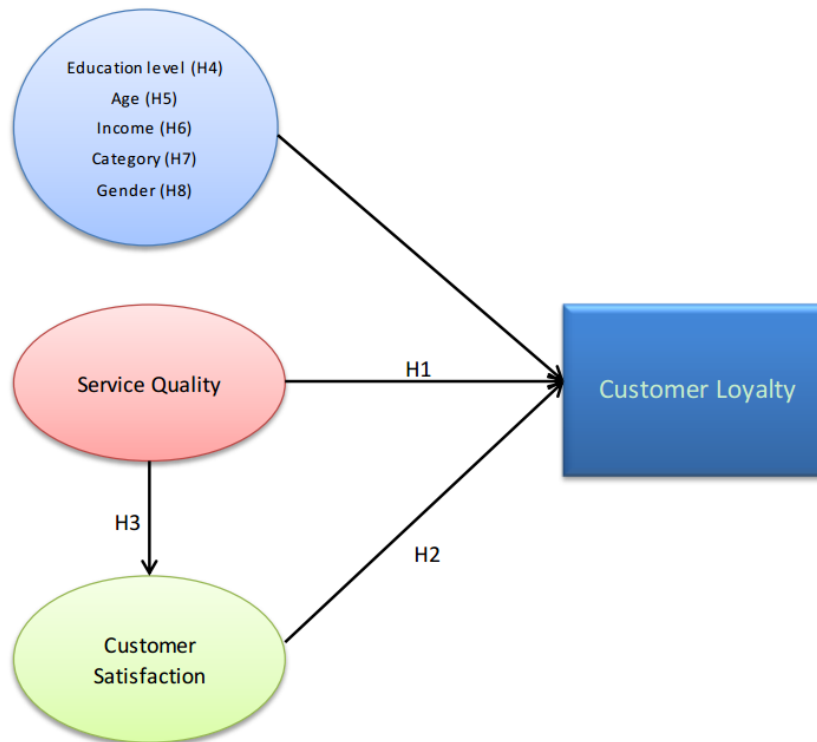
This section describes the conceptual model on which the research hypotheses were developed. The main issue in this research focuses on the interrelationship between service quality, customer satisfaction, customer loyalty, and several demographic factors which may have differences on the evaluation to loyalty.

Since there have some arguments among academics on whether service quality can be treated as a factor that influences customer loyalty significantly, and there also have some researchers studied on the relationship between customer satisfaction and customer loyalty, they claimed different results for the relationship among these three factors---Service Quality, Customer Satisfaction, and Customer Loyalty.

Different research consequences may be caused by the different characteristics on different industries, different test sample, different analysis methods, and different authors who focus on different perspectives, in this paper, the research model and all the hypotheses were based on the combination of case company's real situation and some previous literature.

The research model contains four parts: service quality, customer satisfaction customer loyalty, and some demographic factors. And these four parts were linked by eight hypotheses which will be tested by integrating previous literature researches, focal firm investigation, focal firm surveys, and customer surveys. The model was shown as follow:

**Figure 4.1: Research Model**



## **4.2 RESEARCH HYPOTHESES**

### **4.2.1 Three Main General Hypotheses**

As mentioned above, to find the relationship between service quality, customer satisfaction and customer loyalty about the organizations, most researchers have claimed some hypotheses and have done the test. And the results of different hypotheses may be caused by different analysis method, different sample, and different kind of firms. However, almost every researcher who studies on marketing or other researches related to customer intends to test the relationship between service, satisfaction and loyalty. And no matter what industries they study on, there are three main hypotheses they would propose similarly. Therefore, the first three hypotheses in this study will be claimed in similar way as other researchers.

**H1:** generally speaking, Service Quality has a positive effect on Customer Loyalty.

**H2:** generally speaking, Customer Satisfaction has a positive effect on Customer Loyalty.

**H3:** generally speaking, Service Quality has a positive effect on Customer Satisfaction.

#### ***4.2.2 Does customers with higher education level have higher loyalty than others?***

There was a debatable discussion among different researchers about whether higher educational customers have higher loyalty than other customers. Since when researchers study on customers with the segmentation of education level, some of the researchers always treat the customers with high education level as the main part of customers which have expertise. In general speaking, when customers have higher education level, they may have more ability on expertise and know more about the products that they intend to purchase. Some researches showed that this kind of customers pay more attention on the price of products, since they have knowledge about the products, and they do not need to much sales service and introduction service, they have their own judgement when the consuming. Some salesmen also mentioned that they do not have passion to communicate with this kind of customers, because they know everything about the commodities, sometimes even professional than the salesmen themselves. And this kind of customers has lower loyalty to brand, but price and product quality. However, some researchers and company managers hold the opposite view that they always treat the middle-aged customer as higher loyalty customer. Because they regard high educational people as the customers who pay more attention on added value service, brand reputation and stable purchasing habit (when they decide to purchase products in a brand or store, they rarely switch to another). And SUNING is a supporter that agrees with this view. Hence, in this paper, we propose the following hypothesis:

**H4:** As to the customer segmentation by education level, the customers with higher education level have higher loyalty than others.

#### ***4.2.3 Does Middle-Aged Customers have More Loyalty to SUNING?***

In modern study on management or marketing, more and more researches started to focus on customer segmentation. With the development of scientific analysis

methods, academics began to add different customer segmentations into their analysis instead of using customers as general concept. Moreover, companies also found the importance of segmenting customers into different logical groups, and analyse whether there will have some difference within those customer groups. For appliance retailers, the factor of customer's age is a popular element when they want to analyse customer with different segmentation. In normal conditions, most appliance products were purchased by customers who are in middle-aged. SUNING also did several surveys to check which age scale of customers are the main customer of their stores, and the results shows that more than 53% of customers are with the age from 35 year old to 55 year old. If see the situation of China, the people from 35 year old to 55 year old are the group with highest power of consumption. Because those people have stable jobs, incomes, and almost have family. And these conditions made them intend to purchase electric appliance more than young customers and old customers. See the historical surveys and analysis results of SUNING's different offline stores. The respondents that belong to middle-aged customer were over 40%, and their evaluation on SUNING's performance is most important to the customer analysis. We therefore propose the following hypothesis:

**H5:** As to the customer segmentation by age, the middle-aged customers of SUNING have much higher loyalty than others.

#### ***4.2.4 Does the customers with higher disposal income have higher loyalty than other?***

Because of the unique tradition in China, almost Chinese people who have higher disposal income may intend to purchase products with lower focus on price but higher focus on quality and experience. And many Chinese researchers and firm managers found that Chinese customers with high income will purchase products from famous brands (such as SUNING) and high quality products, since those customers think brand reputation and perfect services are much important than price. However, without scientific analysis method, we cannot make conclusion indiscreetly. Therefore, the following hypothesis was claimed and must be tested

seriously:

**H6:** As to the customer segmentation by disposal income, customers with higher income have higher loyalty to SUNING.

***4.2.5 Does customers who buy different categories of products have different evaluation on loyalty?***

Different from other retail industries such like supermarket, apparel industry, an electronic appliance retail store has its own particularity, especially in the category of products. For instance, customer can buy some small electric appliance such as blower, electric kettle, flashlight, etc. And for those small products, customers do not need home delivery service and because of the low price, most customers do not care about where they can purchase. However, as to some large traditional appliance such as TV, air conditioner, refrigerator, and some office equipment, customers do care about the logistic service and aftersales maintain service, even some companies and government departments have contract with SUNING for the supplying of office equipment. Hence, from the perspective of logic, customers who purchase large appliance and office equipment may have higher loyalty than customers who buy small appliance. We therefore propose the following hypothesis:

**H7:** As to customer segmentation by product category, customers who purchase large appliance and office equipment may have higher loyalty than others.

***4.2.6 Does customers with different gender have difference about the evaluation on loyalty?***

This is an old discussion about customer segmentation, and many researchers have done many researches to elaborate that there is no significant difference between male and female on loyalty evaluation. However, there were also some academics claimed that since male and female have different purchasing behaviour, in general, male customers are much easier to show their satisfaction and loyalty than female because of female's complicate character. Moreover, there are significant difference between male customers and female customers when they purchase different kind

of goods, i.e. Chinese male shows more loyalty when buying house, car, and machine, while female shows loyalty easier when they buying apparel, food, bags and so on. But as to Chinese appliance retail industry, there were few researches refer to the different evaluations on customer loyalty between male and female. And the managers of those two case stores of SUNING offered their view which indicates that they think there may have no different evaluation on loyalty between male customer and female customer when they purchase appliance in SUNING. We therefore propose the following hypothesis:

**H8:** As to the customer segmentation by gender, there is no significant difference about the evaluation on customer loyalty between male and female.

## **5 RESEARCH METHODOLOGY**

### **5.1 RESEARCH SETTING**

The main purpose of this research is to test whether customer service and customer satisfaction effect customer loyalty on the basis of the case company----SUNING, and to test whether customers have different evaluation on loyalty with different customer segmentations. To make some scientific and logical hypotheses, a comprehensive literature review was carried out at first. Then an explorative study was done together with the management layers of two SUNING's offline retail stores and several experienced customers. With the help of them, the initial questions in the survey were designed on the basis of SUNING's previous survey. A pilot study was done among 20 customers aimed to obtain preliminary tests of scales. The pilot study provides valuable information that guided further improvements of ambiguous questions, inappropriate vocabulary, and scaling methods (Hunt, Sparkman, & Wilcox, 1982). Finally, a pretest of the final questionnaire was carried out. And the pretest revealed no significant problems with any of the remaining measures or scaling formats (Buvik and Haugland, 2005).

### **5.2 QUESTIONNAIRE DEVELOPMENT**

Since the different population, purchase behaviour, and some other conditions, SUNING has different own questionnaires for each chain store in different regions, and each SUNING's store also asked for using their own survey. However, through a struggling persuasion, I came to an agreement with two SUNING's chain stores in two cities for using a unified questionnaire. But I have to accept that to follow their questionnaire design and doing research based on the analysis of this questionnaire which designed by that two store management of SUNING.

It is a little bit strange to use the questionnaire provided by the case company instead of using a more scientific and professional questionnaire such as to use



SERVQUAL approach to design survey for the research of customer service, satisfaction and loyalty. However, it is the precondition for cooperation with this case company. Each survey method has its own pros and cons. If we think the precondition from another perspective, we can find that, almost all the scientific questionnaires were designed by academics and researchers which did some investigation, but these researchers have few chances to face customers every day. Who stay with customers and who confront customers in business? The salesmen and store managers. Therefore, to use their own way of designing questionnaire maybe is a better way to find the real status and relationship between the store and consumers. Moreover, if see the questionnaire carefully, we can still find the important factors which similar with some previous questionnaire designed by using an academic way and scientific model.

The questionnaire was developed as follows:

The first part of this questionnaire is respondents' demographics which include 12 questions (eleven choice questions and one subjective question). See Table 5: The questions related to respondents' demographics.

**Table 5.1: The questions related to respondents' demographics**

|  |
|--|
| Question 1: Gender   |
| Question 2: Age  |
| Question 3: Education Background   |
| Question 4: Occupation   |
| Question 5: Current monthly disposable income  |
| Question 6: When was your first consumption in SUNING?                                       |
| Question 7: How many times have you purchased in SUNING until now?                           |
| Question 8: Total expenditure in SUNING until now  |
| Question 9: The purchase frequency in SUNING at last year                                    |
| Question 10: The money amount spent last time in SUNING                                      |
| Question 11: The purchased category of products last time in SUNING                          |
| Question 12: Which kind of electrical appliances do you want to buy or change for next year? |

The second part relate to the measurements of service quality, satisfaction and loyalty.

*(1) Service Quality.*

It contains three main dimensions:

- Pre-sale Service (three items) which includes advertisements, promotions and VIP application
- In-sale Service (five items) which includes service attitude, product introduction, shopping process and so on.
- After-sale Service (six items) which contains return visit, consumer complaint, maintenance and so on.

*(2) Customer Satisfaction.*

It contains seven single items which reflect customer overall satisfaction.

*(3) Customer Loyalty.*

It contains nine single items which include repurchase intention, the resistance to switch to a superior competitors' product, the recommendation willingness, the toleration and self-cognition. Therefore, customer loyalty in this research is also measured based on both attitudinal and behavioural approaches which same as some academic questionnaire design.

For all the second part's measurement, each item was assessed by a five-point scale. The answers were ranged from "strongly disagree"=1 to "strongly agree"=5.

### **5.3 SAMPLING PROCEDURE**

A pilot-test of the questionnaire was done by 20 random consumers in SUNING's store. All of them satisfied with this survey, and they all admitted that the questions were understandable.

As Churchill and Iacobucci (2002) mentioned that It is a difficult task to choose a sample size, because several factors are taken into account such as the type of

sample, the type of statistic to be applied, the homogeneity of the population, time, money and personnel available for the study. We followed the recommendation of Bagozzi and Yi (1990) which recommended that an ample size should be at least 100 observations for reliable theory testing.

More than 450 customers were selected from the membership database of that two SUNING's chain store in two cities. And different gender, age, occupation etc. of sample were chosen for the validity and representativeness.

#### **5.4 DATA COLLECTION PROCEDURE**

Buvik and John (2000) mention that it is important to choose an appropriate respondent as this choice determines the basis for suitable responses. Therefore Data was obtained from two SUNING's chain store in two cities, my hometown and the other neighbour city. Since the two managers and I all intended to guarantee the results with fairness and justice, the questionnaires were collect in similar amounts for the two research stores. All the respondents were chosen from the membership database of these two stores.

Under the great help of the two managers, I was admitted to go into their customer call enters and use their customer service phones to do the survey. All the questions were asked through the customer service phones for three reasons: First, it is easier for the stores to get the results what I am asked to respondents. Secondly, it is much official to use company's telephone; at last, I have to do the survey under supervision of stuff in the stores' customer centre, and there were also other stuff did the same work as me. With these three conditions, the data can be collected continuously and overtly.

The data collection took us over one month because there was Chinese New Year during the work. I got over 150 customers and the other stuff got more than 300.

However, the company only allowed me to take away around 100 customers' information and survey results. Moreover, I have to return all the customer information lists when I finish the research for protecting the confidentiality of client information.

## **5.5 ADMINISTRATION OF THE QUESTIONNAIRE**

The following procedures of the questionnaire administration were used in this research. First, the final questionnaire was designed and discussed with that two stores' senior managers by combining two stores' own old questionnaire. Secondly, all the respondents have to be chosen in different level of members to ensure the customer comprehensiveness. Thirdly, all the selected respondents were informed about the purpose of this research and were promised that their information must be kept from any other purposes. As last, to make the respondents answer questions seriously and objectively, SUNING promise to give a 10% discount for their next consumption.

Although there were over 450 customers selected, only 105 typical questionnaire results can be used freely after negotiation with those two focal stores.

## **5.6 SUMMARY**

In this sector, research model, hypotheses, the procedures of questionnaire development and data collection were described. For the reason of culture, focal company's regulation and other restriction, the whole process took over one and half month. However, the data was objective and authentic.

## 6 OPERATIONALIZATION OF VARIABLES

Variables in a research model must first be put in a form that can be measured, which we call operationalization (Umar, 2009). The Service Quality Attributes consist of three components: Pre-sales service, In-sales service and After-sale service which uses multiple item scale method. These components are based on the dimensions which were tested by Chinese customers of SUNING and were applied in these two focal stores' pre-existing questionnaires. The items associated promotion, personnel attitude, shopping process, logistics service, complaint handling, and home service.

Although the famous SERVQUAL scale method which defined service quality as five dimensions was not be utilized in this operationalization by the reason of the restriction of the case company, the similar specific questions that included in the questionnaire also represents SERVQUAL's five dimensions more or less. And it may be much suitable to the real supplier-customer situation of SUNING. In total, there were 14 items, which were measured on a five-point scale that ranged from "strongly disagree to strongly agree". The items developed for the *service quality (SQ)* variable are as follow:

*SQ 1:* SUNING has attractive advertisement design.

*SQ 2:* SUNING always has different kinds of sales promotions.

*SQ 3:* SUNING has a perfect membership service.

*SQ 4:* SUNING's sales personnel have passion and friendly to customer.

*SQ 5:* SUNING's sale personnel have full knowledge of products and always offer comprehensive product introductions for customer.

*SQ 6:* The whole shopping process in SUNING's store is fast, easy and convenient.

*SQ 7:* SUNING provides efficient home delivery service.

*SQ 8:* SUNING provides free in-door installation services, and the staffs are very professional and responsible.

*SQ 9:* SUNING has telephone return visit service and the staffs always inform customers with the new promotion activities.

*SQ 10:* SUNING's customer service staffs are patient, professional and passionate.

*SQ 11:* SUNING manages all client complaints and dissatisfaction issues proactively and ensure closure.

*SQ 12:* SUNING provides unconditional returns and exchanges policy.

*SQ 13:* SUNING has good credits redeem policy and abundant gifts for members.

*SQ 14:* SUNING provides after-sales maintenance service, and the staffs are professional and passionate.

Customer satisfaction and customer loyalty are both measured by using a single scale item respectively. The single scale item also adapted from the integration of those two stores' pre-existing questionnaires (because of the company restrictions). And the main items of customer satisfaction belong to overall satisfaction; the items of loyalty were consisted by both behavioural and affective. The items developed for the *customer satisfaction (CS)* variable are as follow:

*CS 1:* Generally speaking, I am satisfied with SUNING's commercial quality and category.

*CS 2:* Generally speaking, I am satisfied with the commodity prices in SUNING.

*CS 3:* Generally speaking, I am satisfied with SUNING's in-sales service.

*CS 4:* Generally speaking, I am satisfied with SUNING's home delivery service.

*CS 5:* Generally speaking, I am satisfied with SUNING's after-sales service.

*CS 6:* Generally speaking, I am satisfied with SUNING's reputation.

*CS 7:* Generally speaking, I am satisfied with my shopping experience in SUNING.

The items developed for the *Customer Loyalty (CL)* variable are as follow:

*CL 1:* I would like to continue to shop at SUNING.

*CL 2:* I would like to choose SUNING even if there are some other similar stores.

*CL 3:* I would like to choose SUNING even if its commodity price raised.

*CL 4:* I would like to recommend SUNING to other people.

*CL 5:* I would rather wait than choose other store even if when SUNING stockout.

*CL 6:* In some situations, I can tolerate SUNING's small mistake.

*CL 7:* I would like to concern SUNING's news and I often go to SUNING's chain store.

*CL:* I think I have built a good demands relationship with SUNING.

*CL:* I think I am a loyal customer of SUNING.

## **7 VALIDATION AND RELIABILITY**

### **7.1 CONSTRUCT VALIDATION**

The reliability and validity of the scales of latent variables in a research model is a precondition to analyse causal relationship between latent variables (Jarvis et al., 2003). Rigdon (1998) mentioned that all the items should load on one construct and have a high degree of correlation between the indicators. By using SPSS 19, internal consistency, reliability, and exploratory factor analysis approaches are applied in this study for measuring internal consistency, reliability and unidimensionality.

Internal consistency considers the homogeneity of the items within a scale. Internal consistency is referred to as both the reliability and the unidimensionality of an operationalized construct where reliability indicates the extent to which measurements are repeatable and stable (Nunnally, 1978).

Cronbach's alpha is a traditional method used to assess the reliability of a measurement instrument. In this study, to check for internal consistency of the measures and to make the questionnaire be integrity, Cronbach's alpha was calculated for all the items of service quality, customer satisfaction and customer loyalty together. The Nunnally and Bernstein (1994) pointed out that the Cronbach's alpha with acceptable cut off point 0.70 demonstrates that all attributes are internally consistent.

### **7.2 FACTOR ANALYSIS PROCEDURES**

#### ***7.2.1 Preliminary Factor Analysis***

The test of exploratory factor analysis examines if there is a sufficient number of significant correlations between the items to undertaken a factor analysis (Pett et al., 2003).

Since there are three dimensions of service quality of the raw data, to examine



whether all the items will load on the previous dimensions and which items are correlated, the first step of exploratory was applied with all the items of service quality. There are many extraction methods and rotation methods can be used in factor analysis. In this study, the principle components method and varimax method were applied for extraction and rotation respectively.

From the output of SPSS, two components were generated by computer when extraction was based on principle components method and eigenvalues greater than 1, and the result are shown as follows:

**Table 7.1: Factor Analysis of Service Quality with Eigenvalues Greater Than 1**

| Items               | Component |      |
|---------------------|-----------|------|
|                     | 1         | 2    |
| servicequality13(a) | .827      | .019 |
| servicequality13(b) | .779      | .286 |
| servicequality14(c) | .778      | .393 |
| servicequality13(c) | .777      | .402 |
| servicequality14(a) | .773      | .440 |
| servicequality15(e) | .726      | .415 |
| servicequality14(b) | .657      | .495 |
| servicequality15(b) | .636      | .596 |
| servicequality15(d) | .616      | .554 |
| servicequality14(d) | .217      | .922 |
| servicequality14(e) | .198      | .919 |
| servicequality15(f) | .383      | .867 |
| servicequality15(a) | .494      | .695 |
| servicequality15(c) | .585      | .640 |

However, before the test, three dimensions were assumed for service quality, therefore, the test of extraction that was based on principle components method and fixed number of factors is 3 was also examined, and the result are shown as follows:

**Table 7.2: Factor Analysis of Service Quality with Fixed Number of Factors**

| Items               | Component |      |      |
|---------------------|-----------|------|------|
|                     | 1         | 2    | 3    |
| servicequality13(a) | .842      | .030 | .171 |
| servicequality14(a) | .738      | .416 | .322 |
| servicequality13(c) | .726      | .368 | .348 |
| servicequality13(b) | .688      | .224 | .407 |
| servicequality14(c) | .687      | .332 | .423 |
| servicequality14(b) | .649      | .490 | .252 |
| servicequality14(e) | .185      | .911 | .221 |
| servicequality14(d) | .194      | .906 | .245 |
| servicequality15(f) | .310      | .817 | .372 |
| servicequality15(a) | .376      | .615 | .459 |
| servicequality15(d) | .323      | .355 | .801 |
| servicequality15(e) | .485      | .251 | .705 |
| servicequality15(c) | .367      | .491 | .663 |
| servicequality15(b) | .481      | .491 | .545 |

From the result above, it is easy to see if all the items which has high cross loading and low loading were deleted, there will be only two items (13a/13c) represents component 1, and only one item (15d) represents component 3. It is not suitable to use items which have less than three amounts for representing a dimension of service quality. Therefore, the result of which based on principle components method and eigenvalues greater than 1 (table 6) was adopted. And the items that had high cross loading (14a, 14b, 15a, 15b, 15c, 15d, 15e) were deleted. The rest items can be divided into two dimensions by different factors loading (13a/13b/13c/14c with high loading on component 1 and 14d/14e/15f with high loading on component 2). By using the function of compute variables to transform into two new variables, items 13a/13b/13c/14c and 14d/14e/15f were renamed instore-service and home-service respectively and logically for facilitating the following analysis.

By utilizing the same method, factor analysis of customer satisfaction and customer loyalty also were tested, and computer generated one component for customer

satisfaction and customer loyalty respectively. Moreover, all the items loadings of customer satisfaction and customer loyalty were greater than 0.7 which means they are validated for those two variables.

### 7.2.2 Further factor analysis

1. In this step, all the items except which were deleted at the step of preliminary factor analysis were gathered and were re-examined by factor analysis together. The value of  $KMO=0.951$ ,  $p=0.000$  (see Appendix- I a) which indicates that the items can be factorable or inclined to form a subscale. And because of high cross loading (16b/16c/17a/17b/17d) and low loading (13b/16e/17g) were also deleted for the following analysis (see Appendix- I b).

2. In this step, item 13a was deleted in order to satisfy the logical need (the other items which belong to component 1 can be treated as different perspectives of customer overall satisfaction except 13a). And by the end of this step, the rest items were finally located on appropriate components. See the table below:

**Table 7.3: final result of factor analysis**

| Items               | Factor |      |      |
|---------------------|--------|------|------|
|                     | 1      | 2    | 3    |
| satisfaction16(a)   | .856   | .276 | .272 |
| satisfaction16(g)   | .818   | .355 | .331 |
| servicequality14(c) | .812   | .346 | .230 |
| satisfaction16(f)   | .810   | .280 | .289 |
| servicequality13(c) | .780   | .348 | .291 |
| loyalty17(c)        | .244   | .845 | .302 |
| loyalty17(e)        | .379   | .830 | .256 |
| loyalty17(i)        | .361   | .785 | .358 |
| loyalty17(h)        | .398   | .758 | .377 |
| loyalty17(f)        | .372   | .707 | .346 |
| servicequality14(e) | .215   | .347 | .872 |
| servicequality14(d) | .290   | .299 | .871 |
| satisfaction16(d)   | .358   | .334 | .818 |
| servicequality15(f) | .414   | .331 | .782 |

The explanation of this final result of factor analysis can be understood as follows:

Items 16a/16f/16g/13c/14c can be treated as the measurements of overall

satisfaction which represent satisfaction of products quality, company reputation satisfaction, satisfaction of shopping experience, membership satisfaction, and shopping process satisfaction respectively. Items 17c/17e/17f/17h/17i can be treated as the loyalty measurements, while items 14d/14e/15f/16d can be treated as the service quality measurements.

Since the items 14d/14e/15f/16d all belong to the measurements of home service quality, in the end, all the validated items were formed into three new named variables: *HOMESERVICE*, *OVERALL SATISFACTION AND LOYALTY*.

### **7.3 RELIABILITY**

By examined the reliability of those three new variables, all items which belong to those three new variables must be gathered and tested. Pallant (2001) pointed out that Alpha value is very important for reliability test. This is Cronbach's Alpha, which, in this case is 0.966 (see Appendix- II a). Pallant (2001) also mentioned that if any of the values in the Cronbach's Alpha If Item Deleted column are greater than the final alpha value then this item should be removed from the scale. In this study, all the values are less than the final Alpha value 0.966. Hence, all the values are reliable. Finally, it can be concluded that all the rest items are internally consistent since all the values exceeded Nunnally and Bernstein (1994) recommended criterion of 0.70 for scale reliability (see Appendix- II b).

### **7.4 SUMMARY**

This chapter outlines the research model's validation and reliability. And since there were some limitations of the questionnaire and the data collection, the model structure changed a bit, only one dimension of service quality was retained because of factor analysis.

## **8 DATA ANALYSIS AND HYPOTHESES TEST**

At the beginning of this chapter, a general sample description and descriptive statistics of each study constructs were outlined to examine incorrect data, means, maximum and minimum values and standard deviation.

Then, hypotheses test have been proceeded to examine the interrelationship between each of the variables of the research model, and all the hypotheses that mentioned in Chapter 4 were tested to make correspondence with the research objectives. After that, a brief analysis related to the results of hypotheses was stated.

### **8.1 DESCRIPTIVE STATISTICS**

#### ***8.1.1 Sample Profile***

In this section, some important characteristics of sample's demography were outlined. The following statistics are based on the collected data for this study, the total amount of sample is 105, which includes 52 male respondents and 53 female respondents, and this may means that the customer proportions of SUNING between male and female are nearly half and half. The major consumer group is located at the age range of 18~45 years old which takes 79% of the sample, while the age range of less than 18 years old and over 55 years old accounted 21%. The major consumer group is also located in the education level of undergraduate people, which takes over 69% amount of the sample. While the customers which have the monthly income from 1000rmb to 5000rmb are accounted for over 51% of sample. All the details of statistics above are in Appendix -IIIa. As to the information related to consumption, see Appendix -IIIb.

#### ***8.1.2 Descriptive Statistics for each study constructs***

By using SPSS 19, the descriptive statistics for the three final variables: Home Service, Overall Satisfaction and Loyalty were shown as below (see Appendix-IV):

The Home Service ranges from 1 to 5 with the mean of 3.6286 and the Std. deviation of 1.0748 respectively; while the Overall Satisfaction ranges from 1.8 to 5with the

mean of 4.1657 and the Std. deviation of 0.80882 respectively. The Loyalty ranges from 1 to 5 with the mean of 3.2514 and the Std. deviation of 1.07597 respectively.

## 8.2 HYPOTHESES TEST

### 8.2.1 Regression Model

In order to examine the hypotheses claimed in Chapter 4, multiple regression analysis with the ordinary least square (OLS) was estimated. Since the hypothesis 4 to hypothesis 8 were related to some specific customer segmentations, several dummy variables were incorporated in the model. The model was estimated as follows:

$$CL = b_0 + b_1 SQ + b_2 CS + b_3 EDU + b_4 AGE + b_5 INCOME + b_6 CATEGORY + b_7 GENDER + \acute{\epsilon}$$

#### Dependent Variable:

CL = Customer Loyalty

#### Independent Variables:

SQ = Service Quality

CS = Customer Satisfaction

EDU = Education Level of customer

AGE = customer's age

INCOME = customer monthly disposal income

CATEGORY = the product category purchased by customer

GENDER = customer gender

$\acute{\epsilon}$  = Error term

**Notice:** The all following dummy variables were transformed by using SPSS.

For  $EDU^{a1}$ , "1" = high education level (Master & PHD); "0" = others

For  $AGE^{a2}$ , "1" = middle-aged customer (36~55 year old); "0" = others

For INCOME<sup>a3</sup>, “1” = high income customer (5001~more than 8000 rmb); “0” = others

For CATEGORY<sup>a4</sup>, “1” = large traditional appliance and office equipment; “0” = others

For GENDER<sup>a5</sup>, “1” = male; “0” = female

H1, H2, H3 can be analysed by checking whether the correlation is significant. While other hypotheses in this paper should be analysed by checking the coefficients of those dummy variables in the regression model:

H4 predicts that customers with high education level should have higher loyalty than other education level customers. In line with H4, the value of EDU<sup>a1</sup> should be positive (i.e.,  $b_3 > 0$ ). Similar to above, in line with H5, middle-aged customers of SUNING should have higher loyalty than others. This corresponds to a positive value of AGE<sup>a2</sup> (i.e.,  $b_4 > 0$ ); In line with H6, customers with higher disposal income should have higher loyalty than others. This corresponds to a positive value of INCOME<sup>a3</sup> (i.e.,  $b_5 > 0$ ); As to H7, customers who purchased large appliance and office equipment should have higher loyalty than customers who bought other appliance, in line with H7, this should be positive too (i.e.,  $b_6 > 0$ ). Finally, H8 will be tested whether customers with different gender have significant differences on loyalty evaluation.

### **8.2.2 Results of the Regression Model**

Table 8.1 shows the correlations and descriptive statistics. Table 8.2 presents the estimated coefficients and levels of significance. The overall goodness of fit is acceptable ( $F(7,97) = 32.39$ ,  $p < 0.01$ ,  $R^2_{Adj} = 0.679$ ), and indicates that the model offers an adequate description of the data.

**Table 8.1 Correlation matrix and descriptive statistics (customer loyalty is the dependent variable)**

| Variables                 | (1)   | (2)    | (3)    | (4)   | (5)    | (6)    | (7)    | (8)   |
|---------------------------|-------|--------|--------|-------|--------|--------|--------|-------|
| 1. Customer Loyalty       | 1.0   | .730** | .741** | .131  | .690** | .370** | .504** | -.055 |
| 2. Service Quality        |       | 1.0    | .686** | .078  | .603** | .254** | .512** | .001  |
| 3. Customer Satisfaction  |       |        | 1.0    | -.022 | .635** | .377** | .368** | -.152 |
| 4. Education Level        |       |        |        | 1.0   | .080   | .271** | -.104  | .005  |
| 5. Age                    |       |        |        |       | 1.0    | .497** | .570** | -.058 |
| 6. Income                 |       |        |        |       |        | 1.0    | .236*  | .074  |
| 7. Category               |       |        |        |       |        |        | 1.0    | -.013 |
| 8. Gender                 |       |        |        |       |        |        |        | 1.0   |
| <b>Mean values</b>        | 3.251 | 3.629  | 4.167  | .19   | .276   | .22    | .35    | .50   |
| <b>Standard deviation</b> | 1.076 | 1.075  | .809   | .395  | .449   | .416   | .480   | .502  |

The correlation matrix includes only the dependent, independent and five control variables of the model. The dummy variables are not included. \*\*Correlation is significant at the 0.01 level (2-tailed), \*Correlation is significant at the 0.05 level (2-tailed)

From the table above, it is obvious that service quality has high correlation with customer loyalty ( $r=0.730$ ,  $p<0.01$ ), customer satisfaction has high correlation with customer loyalty ( $r=0.741$ ,  $p<0.01$ ), and service quality also has high correlation with customer satisfaction ( $r=0.686$ ,  $p<0.01$ ). Therefore, H1, H2 and H3 were all supported, which means our prediction of the relationship between service quality, customer satisfaction and customer loyalty was fulfilled.

#### Hypothesis 4

The statistical results (Table 8.2) support hypothesis H4, and the finding shows that when segment customer with education level, customers with higher education level have high loyalty than others ( $b_3 = 0.316$ ,  $t = 1.915$ ,  $p < 0.10$ ). Accordingly, H4 is supported.

#### Hypothesis 5

The statistical results (Table 8.2) support hypothesis H5, which means when segment customer by age, middle-aged customers have higher loyalty than others ( $b_4 = 0.505$ ,  $t = 2.386$ ,  $p < 0.05$ ). Therefore, H5 is supported.

#### Hypothesis 6



As predicted by hypothesis H6, from Table 8.2, we can find that there is no significant difference between different customers with different level of income, since  $p > 0.10$ . Accordingly, H6 is not supported.

#### Hypothesis 7

The statistical results (Table 8.2) also support hypothesis H7, which means when segment customer by product category they purchased, customers who purchased large traditional appliance and office equipment have high evaluation on loyalty then others ( $b_6=0.263$ ,  $t = 1.620$ ,  $p < 0.10$ ). Hence, H7 is supported.

#### Hypothesis 8

As suggested by H8, we observed the relationship is positive, but not significant ( $b_7=0.38$ ,  $t = 0.308$ ). It means there is no significant differences about the loyalty evaluation between male customer and female customer which as same as our hypothesis 8. Therefore, H8 is also supported.

**Table 8.2 Regression analysis with customer loyalty as dependent variable**

| Independent variables             | Coefficients                              | t-values           |
|-----------------------------------|---|--------------------|
| Constant ( $b_0$ )                | -.184                                     | -.456              |
| Service Quality ( $b_1$ )         | .271                                      | 3.108 <sup>a</sup> |
| Satisfaction ( $b_2$ )            | .515                                      | 4.376 <sup>a</sup> |
| Education <sup>a1</sup> ( $b_3$ ) | .316                                      | 1.915 <sup>c</sup> |
| Age <sup>a2</sup> ( $b_4$ )       | .505                                      | 2.386 <sup>b</sup> |
| Income <sup>a3</sup> ( $b_5$ )    | -.026                                     | -.144              |
| Category <sup>a4</sup> ( $b_6$ )  | .263                                      | 1.620 <sup>c</sup> |
| Gender <sup>a5</sup> ( $b_7$ )    | .038                                      | .308               |
| Model fit                         | F(7,97)=32.390, $R^2_{Adj}=0.679$ , n=105 |                    |

<sup>a</sup>Significant at  $p < 0.01$ .

<sup>b</sup>Significant at  $p < 0.05$ .

<sup>c</sup>Significant at  $p < 0.10$ .

### **8.3 SUMMARY**

In this chapter, data analysis and hypotheses were done by applying SPSS 19. H1, H2, H3, H4, H5, H7, H8 are supported by the statistical results of the regression model, but H6 is not supported.

## **9 DISCUSSION AND IMPLICATIONS**

### **9.1 DISCUSSION OF THE RESULTS**

In this section, the theoretical implications and managerial implications will be mentioned. At last, the limitations of this study and outlook for future research will be discussed.

The findings of this case study offered the interrelationship between SUNING's service quality, customer satisfaction and customer loyalty. And from the results of hypotheses test, it can be seen that customer segmentation is important for firm's customer analysis and performance measurement. The study also offered the focal firm---SUNING some analyses about some confused problems such as what kind of customers show more loyalty, what kind of service should be improved, what kind of items should be used in future survey. We cannot claim that the study will good to the whole SUNING Group, but at least for the two focal stores of SUNING, the research indicated the situation of customer-supplier relationship for the stores, and confirmed that service quality and customer satisfaction both have positive effect to customer loyalty. By considering the analysis of this study, these two stores of SUNING can improve their service quality and get close to their customers, and finally help company get a better outcome for customer retention and face competition unhurriedly.

### **9.2 THEORETICAL IMPLIACATION**

According to the research orientation of supply chain management and marketing, studying on the projects that related to customer behaviour, customer expectation, customer expectation, customer segmentation, customer relationship and customer retention are always connected with customer service, customer satisfaction and customer loyalty. With the development of supply chain management or business administration, research of customer will become more diversified and complicated. However, the basic concepts are still customer service, customer satisfaction and

customer loyalty. These three basic concepts constitute the foundation of customer research, and loyalty always is the ultimate objective for every profit-making organization no matter in upstream suppliers, downstream retailers, and even intermediary business of the supply chain. Our study was focus on the interrelationship between service, satisfaction and loyalty. And our findings demonstrated that in SUNING, customer service and customer satisfaction both have positive effects and correlation with customer loyalty. This result of analysis was in line with most academics' research, but other researchers also found the opposite conclusion when they study on different industries in different countries with different cultures. That means customer has diversity because of culture, region, business, etc. Therefore, when study on customer, many impact factors should be involved in the future research.

Furthermore, since 1950s that customer research began to be focused by academics, the research was never stopped. Some researchers only focus on the relationship between service, satisfaction and loyalty; some researchers combine these concepts with economics; some researchers combine the concepts with psychology, behaviouristic, and sociology; there are also some academics add customer retention analysis into their research, some add transaction cost analysis into research, some add buyer-supplier relationship into research. This study we combined customer segmentation with those three basic concepts, aim to examine whether different customers with different situations have different evaluation on loyalty. From the analysis results we can conclude that customer segmentation is important for the studies of customer loyalty and can contribute to the further researches related to some certain segmentations.

### **9.3 MANAGERIAL IMPLICATIONS**

In general, the research which done together with focal firm always provides effectual analysis and suggestions which can help focal firm revises strategies and do

better future plan of development. In this study, the conclusion of the interrelationship between service, satisfaction and loyalty will offer SUNING some implications on understanding customer and keeping their loyalty. And the hypotheses test of different customer segmentations also may offer SUNING some implications on developing focal customers and increasing service quality which customers pay more attention to.

In today's Chinese retail market, SUNING's competitors are not only other traditional appliance retailers, but also online electric retailers. As mentioned in Chapter 1 and Chapter 3, SUNING's first mission is to examine whether its customer service quality and customer satisfaction can effect customer loyalty, and then to test if the customer segmentation can influence loyalty. At last, to modify the future strategies for keeping customer loyalty even try to increase customer loyalty.

From this study we can conclude that for the two focal stores of SUNING, service quality and customer satisfaction effect customer loyalty significantly. That means if SUNING wants to have much competitive advantages when faces threats and challenges from competitors, it should pay more attention on providing better customer service and increasing customer satisfaction. By this way, the level of customer loyalty will be improved and contribute to the final customer retention. It is noted that in this paper, the factor analysis for the questionnaire indicated that aftersales services are much important than other services. That makes sense, since SUNING's main business field is traditional large electric home appliances. Customers may concern more about the delivery service (i.e., low breakage rate and efficient logistics), aftersales maintenance, and free in-door installation service etc. From the hypotheses test we can also find that customers who purchased large traditional appliances and office equipment have higher loyalty to SUNING than others. Therefore, to provide perfect aftersales services with high quality do help SUNING increase its customer satisfaction and customer loyalty.

By checking other results of hypotheses, it is easy to see that middle-aged customer, high education level customer also have higher loyalty compare to others, even these kinds of customer may not be the largest part of all customers. Because these customers have higher loyalty and it will be easy for SUNING keeping and increasing their satisfaction and loyalty. Similarly, the study also demonstrated that there is no significant difference about loyalty evaluation between different customers who have different level of income, and there is no significant difference between male and female too. Combine with these conclusions, SUNING may modify some strategies related to customer service and customer segmentation to obtain more customers who have higher loyalty intention. All in all, the only way to understand customer is to get close to them.

Finally, we want to emphasize the importance of scientific research and analysis. Not only SUNING but also other Chinese firms, they all still has some problems, such as bureaucracy, overconfidence. And from the process of negotiation with SUNING, we found that it is really hard to conduct senior management agree with our advices. That is one reason why only 105 samples can be applied into thesis and did few modification of the questionnaire. In fact, the combination between researchers with scientific theory and firms with managerial experience is important for all Chinese researcher and organizations.

#### **9.4 LIMITATION AND FUTURE RESEARCH**

Much remain to be done to identify and analyse the relationship between service, satisfaction and loyalty in diversified situation in realistic business activities. Because of the sample size, the research model cannot contain too much independent variables and interaction variables. From the result of factor analysis it can be seen that the questionnaire was also not perfect. Moreover, since SUNING GROUP owns over 1600 offline stores in Chinese mainland, and in this study only two stores were chosen because of regional limitation and limitation on funds. That may lead the

non-universal results for all the stores of SUNING GROUP. At last, during the process of research, we cannot communicate with customers as many as possible that may not reflect and contains all the customer expectations and perceptions when doing research.

For future research, the interaction between service and satisfaction, satisfaction and loyalty can be involved into the study. And together with more specific demographic elements, and dummy variables, a more comprehensive research can be done in the future. Moreover, the analysis of customer retention and customer behaviour can be also taken into account for future research in the combination with service, satisfaction and loyalty.

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## APPENDIX

### APPENDIX- I A:

**KMO and Bartlett's Test**

|  |          |
|--|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .951     |
| Bartlett's Test of Sphericity                    | 3123.861 |
| Approx. Chi-Square                               | 253      |
| df   | .000     |
| Sig.   |          |

### APPENDIX- I B:

**Rotated Component Matrix<sup>a</sup>**

|                     | Component |      |      |
|---------------------|-----------|------|------|
|                     | 1         | 2    | 3    |
| satisfaction16(a)   | .818      | .264 | .358 |
| servicequality13(a) | .806      | .099 | .027 |
| satisfaction16(g)   | .770      | .345 | .412 |
| satisfaction16(f)   | .763      | .273 | .369 |
| servicequality14(c) | .748      | .341 | .316 |
| servicequality13(c) | .738      | .343 | .362 |
| loyalty17(a)        | .714      | .456 | .374 |
| satisfaction16(b)   | .709      | .475 | .188 |
| satisfaction16(c)   | .706      | .363 | .469 |
| servicequality13(b) | .684      | .323 | .217 |
| loyalty17(d)        | .665      | .560 | .262 |
| loyalty17(c)        | .227      | .823 | .347 |
| loyalty17(e)        | .375      | .817 | .295 |
| loyalty17(i)        | .334      | .775 | .397 |
| loyalty17(h)        | .363      | .740 | .426 |
| loyalty17(f)        | .336      | .689 | .407 |
| loyalty17(b)        | .533      | .614 | .437 |
| loyalty17(g)        | .523      | .560 | .111 |
| servicequality14(d) | .229      | .290 | .883 |
| servicequality14(e) | .173      | .321 | .882 |
| satisfaction16(d)   | .301      | .313 | .846 |
| servicequality15(f) | .364      | .320 | .797 |
| satisfaction16(e)   | .512      | .344 | .664 |

**APPENDIX- II**

**APPENDIX- II A:**

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .966             | .968   | 14         |

**APPENDIX- II B:**

**Item-Total Statistics**

|                     | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---------------------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| servicequality13(c) | 47.50                      | 136.541                        | .790                             | .773                         | .964                             |
| servicequality14(c) | 47.43                      | 137.382                        | .773                             | .802                         | .965                             |
| servicequality14(d) | 47.90                      | 131.414                        | .799                             | .890                         | .964                             |
| servicequality14(e) | 47.99                      | 132.663                        | .786                             | .884                         | .964                             |
| servicequality15(f) | 48.04                      | 129.960                        | .847                             | .857                         | .963                             |
| satisfaction16(a)   | 47.38                      | 136.950                        | .779                             | .837                         | .965                             |
| satisfaction16(d)   | 47.95                      | 131.238                        | .836                             | .876                         | .963                             |
| satisfaction16(f)   | 47.37                      | 138.005                        | .765                             | .777                         | .965                             |
| satisfaction16(g)   | 47.50                      | 134.656                        | .843                             | .877                         | .963                             |
| loyalty17(c)        | 48.61                      | 129.298                        | .781                             | .783                         | .965                             |
| loyalty17(e)        | 48.50                      | 129.079                        | .831                             | .855                         | .963                             |
| loyalty17(f)        | 48.33                      | 133.532                        | .802                             | .735                         | .964                             |
| loyalty17(h)        | 48.08                      | 129.648                        | .873                             | .894                         | .962                             |
| loyalty17(i)        | 48.23                      | 129.870                        | .855                             | .904                         | .963                             |

### APPENDIX -III

#### APPENDIX -III A:

| Measure              | Item               | Frequency | %    |
|----------------------|--------------------|-----------|------|
| Gender               | Male               | 52        | 49.5 |
|                      | Female             | 53        | 50.5 |
| Age                  | Under 18           | 7         | 6.7  |
|                      | 18~25              | 37        | 35.2 |
|                      | 26~35              | 28        | 26.7 |
|                      | 36~45              | 18        | 17.1 |
|                      | 46~55              | 11        | 10.5 |
|                      | Above 55           | 4         | 3.8  |
| Education Level      | High School        | 11        | 10.5 |
|                      | Junior College     | 21        | 20   |
|                      | Undergraduate      | 53        | 50.5 |
|                      | Master Degree      | 15        | 14.3 |
|                      | Phd                | 5         | 4.8  |
| Monthly Income (rmb) | Less than 1000 rmb | 28        | 26.7 |
|                      | 1000~3000 rmb      | 22        | 21   |
|                      | 3001~5000 rmb      | 32        | 30.5 |
|                      | 5001~8000 rmb      | 13        | 12.4 |
|                      | More than 8000 rmb | 10        | 9.5  |

**APPENDIX -III B:**

| Measure                                   | Item   | Frequency | %    |
|---|--|-----------|------|
| <b>First Consumption</b>                  | 1 year ago   | 26        | 24.8 |
|   | 1~3 years ago  | 27        | 25.7 |
|   | 3~5 years ago  | 31        | 29.5 |
|   | 5~10 years ago   | 19        | 18.1 |
|   | Over 10 years  | 2         | 1.9  |
| <b>Total Amounts of Consumption times</b> | 1~3 times  | 57        | 54.3 |
|   | 4~6 times  | 19        | 18.1 |
|   | 7~9 times  | 10        | 9.5  |
|   | More than 10 times   | 19        | 18.1 |
| <b>Total Expenditure (rmb)</b>            | Less than 100 rmb  | 3         | 2.9  |
|   | 100~1000 rmb   | 23        | 21.9 |
|   | 1000~3000 rmb  | 15        | 14.3 |
|   | 3000~5000 rmb  | 14        | 13.3 |
|   | 5000~10000 rmb   | 11        | 10.5 |
|   | More than 10000 rmb  | 39        | 37.1 |
| <b>Consumption Frequency</b>              | 1 month  | 4         | 3.8  |
|   | 1~3 months   | 9         | 8.6  |
|   | 4~6 months   | 30        | 28.6 |
|   | 7~9 months   | 13        | 12.4 |
|   | 10~12 months   | 49        | 46.7 |
| <b>Product Category</b>                   | Small electrical appliances / Kitchen & Bathroom Electric Appliances | 34        | 32.4 |
|   | Traditional major appliances / Audio-visual equipment                | 25        | 23.8 |
|   | Office equipment / Office consumable items                           | 12        | 11.4 |
|   | Digital/ Communications equipment                                    | 23        | 21.9 |
|   | Computer / Other related accessories                                 | 11        | 10.5 |



**APPENDIX-IV :****Descriptive Statistics**

|                    | N   | Minimum | Maximum | Mean   | Std. Deviation |
|--------------------|-----|---------|---------|--------|----------------|
| FINALHomeService   | 105 | 1.00    | 5.00    | 3.6286 | 1.07480        |
| FINALSatisfaction  | 105 | 1.80    | 5.00    | 4.1657 | .80882         |
| FINALLoyalty       | 105 | 1.00    | 5.00    | 3.2514 | 1.07597        |
| Valid N (listwise) | 105 |         |         |        |                |

## APPENDIX-V : THE QUESTIONNAIRE

### Survey of SUNING's Service Quality, Customer Satisfaction and Customer Loyalty

#### PART 1 Personal Information

1. Your Gender

Male  Female

2. Your Age

Under 18  18~25  26~35  36~45  46~55  Above 55

3. Your Education Background

High School  Junior College  Undergraduate Degree  Master Degree  PHD

4. Your Occupation

Student  Office Worker  Others

5. Your current monthly disposable income (1 rmb  $\approx$  1 kr)

Less than 1000 rmb  1000~3000 rmb  3001~5000 rmb

5001~8000 rmb  More than 8000 rmb

6. When was your first time consumption in SUNING?

1 year ago  1~3 years ago  3~5 years ago  5~10 years ago

Over 10 years

7. How many times have you purchased in SUNING until now?

0  1~3  4~6  7~9  More than 10 times

8. Your total expenditure in SUNING until now (1 rmb ≈ 1 kr)

- Less than 100 rmb  100~1000 rmb  1000~3000rmb  3000~5000rmb  
 5000~10000 rmb  More than 10000 rmb

9. How often do you purchase in SUNING at last year?

- 1 month  1~3 months  4~6 months  7~9 months  10~12 months

10. How much money did you spend last time in SUNING? (1 rmb ≈ 1 kr)

- 1~100 rmb  101~500 rmb  501~1500 rmb  1501~3000 rmb  
 3001~5000 rmb  More than 5000 rmb

11. Which category of the electrical appliance that you purchased from SUNING last time belongs to?

- Small electrical appliances / Kitchen & Bathroom Electric Appliances  
 Traditional major appliances / Audio-visual equipment  
 Office equipment / Office consumable items  
 Digital / Communications equipment  
 Computer / Other related accessories

12. Which kind of electrical appliances do you want to buy or change for next year? Please write it/them down.

\_\_\_\_\_

**NB: In the following questions, the measurement is: 1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree**

## PART 2 Customer Service Quality

13. Pre-sale Service

- a. SUNING has attractive advertisement design
- |  |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

b. SUNING always has different kinds of sales promotions

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

c. SUNING has a perfect Membership service

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

#### 14. In-sale Service

a. SUNING's sales personnel have passion and friendly to customer

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

b. SUNING's sales personnel have full knowledge of products and always offer comprehensive products introduction for customer

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

c. The whole shopping process in SUNING'S store is fast, easy and convenient

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

d. SUNING provides efficient logistics service

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

e. SUNING provides free in-door installation services, and the staffs are very professional and responsible

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

#### 15. After-sale Service

a. SUNING has telephone return visit services and the staffs always inform customers about the new promotion activities

|                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1                     | 2                     | 3                     | 4                     | 5                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <i>b.</i> SUNING's customer service staffs are patient, professional and passionate                       | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>c.</i> SUNING manages all client complaints and dissatisfaction issues proactively and ensure closure  | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>d.</i> SUNING provides unconditional returns and exchanges policy                                      | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>e.</i> SUNING has good credits redeem policy and abundant gifts for members                            | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>f.</i> SUNING provides after-sales maintenance service, and the staffs are professional and passionate | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**PART 3**

**16. Customer Satisfaction**

|  |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <i>a.</i> Generally speaking, I am satisfied with SUNING's commercial quality and category | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>b.</i> Generally speaking, I am satisfied with the commodity prices in SUNING           | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|  |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| c. Generally speaking, I am satisfied with<br>SUNING's in-sales service        | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Generally speaking, I am satisfied with<br>SUNING's home delievey service   | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Generally speaking, I am satisfied with<br>SUNING's after-sale service      | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Generally speaking, I am satisfied with<br>SUNING's reputation              | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Generally speaking, I am satisfied with<br>my shopping experience in SUNING | 1                     | 2                     | 3                     | 4                     | 5                     |
|  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**PART 4**

**17. Customer Loyalty**

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. I would like to continue to shop at<br>SUNING                                | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. I would like to choose SUNING even if<br>there are some other similar stores | 1                     | 2                     | 3                     | 4                     | 5                     |
|   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. I would like to choose SUNING even if  | 1                     | 2                     | 3                     | 4                     | 5                     |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| its commodity price raised                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>d.</i> I would like to recommend SUNING      | 1                     | 2                     | 3                     | 4                     | 5                     |
| to other people                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>e.</i> I would rather wait than choose other | 1                     | 2                     | 3                     | 4                     | 5                     |
| store even if when SUNING stockout              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>f.</i> In some situations, I can tolerate    | 1                     | 2                     | 3                     | 4                     | 5                     |
| SUNING's small mistake                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>g.</i> I would like to concern SUNING's news | 1                     | 2                     | 3                     | 4                     | 5                     |
| and I often go to SUNING's chain                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| store   |                       |                       |                       |                       |                       |
| <i>h.</i> I think I have built a good demands   | 1                     | 2                     | 3                     | 4                     | 5                     |
| relationship with SUNING                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>i.</i> I think I am a loyal customer of      | 1                     | 2                     | 3                     | 4                     | 5                     |
| SUNING  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

18. Do you have advice and suggestions for SUNING? Please write it/them down.

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***Thanks for Your Cooperation***