Empirical studies on consumer store choice in China: Shopping habits, multiple store patronage, and liability of foreignness

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Wu Lihui

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Chapter 1

Introduction

1.1 Research Purpose

China’s retailing sector has witnessed significant transformation over the past decades. One of the remarkable retail changes is supermarkets revolution and modern distribution businesses in the food marketing systems. For decades, Chinese food retail sector is generally served by traditional retail formats such as wet or fresh markets, street stalls, and independent, small-scale outlets, which are considered cost-ineffective and inefficient. The transfer of the supermarket technology was expected to exert a substantial improvement in economic efficiency and the general living standards of people. Since its first appearance in the early 1980s (Ho and Lau, 1988), the number of supermarkets stores (including hypermarkets) has expanded to about 41,000 in year 2011 (National Bureau of Statistics of China, 2011), squeezing the market share of traditional retail formats (e.g., traditional grocery stores and wet markets). Despite increasing popularity among Chinese consumers, modern retail formats in China is not without its challenges.

For one hand, many Chinese consumers continue to purchase food, particularly, fresh product at traditional retail markets, which was regarded as one barrier that impeding market share growth of modern retail formats (Goldman et al., 2002). This is particularly recognizable in medium- and small- sized Chinese cities. According to a report released by CTR (a large research company in China), modern retail formats occupied a market share of more than 85% in first-tier cities such as Shanghai and Shenzhen but only 45% in Jinan, a second-tier city (China Business Times, 2006).

On the other hand, with the dramatic increase of supermarkets, the competition among the supermarket sector is already intense in some areas (Chang and Luan, 2010). Additionally, due to similar product offerings with competitors which cause presumed low switching cost, store loyalty is particularly a challenge for food retailers. Previous studies found that many supermarket consumers do not shop exclusively at one store but patronize several stores while maintaining affinity with a primary store (Popkowski Leszczyc and Timmermans, 1997; Rhee and Bell, 2002; Mägi, 2003; Baltas et al., 2010). In a stage of low-profit era, supermarkets' survival and success would become more reliant on improving same-store profits rather than opening new outlets. Retaining loyal customers and capturing larger portion of customer spending, now more than ever before, become a critical long-term success factor for food retailers. At the core of this issue is the need to have a better understanding of the characteristics of potentially loyal consumers. Empirical evidence for this is available in the West, but is only beginning to emerge for China (Uncles and Kwok, 2009).

At the other extreme, the rapid economy development as well as the opening up of the retail market of China has lured most of the world's leading food retailers such as Walmart, Carrefour, and Tesco, who have strived their best to expand their distribution network in the past decades. Until 2012, these three retail giants respectively own 395 stores (Wal-Mart), 218 stores (Carrefour), and 111 stores (Tesco) in China (CCFA, 2012). Despite rapid growth in the past few years, foreign retailers in China are not without its challenges. Recently, many foreign retail giants are suffering from setback in China: Wal-Mart has announced that it is having a China rethink, admitting it had made mistakes in its haste to expand in China (Forbes, 2012); Rumors are circulating that the French hypermarket operator Carrefour is in discussions with China Resources Enterprise about selling its China operations (The Economic Observer, 2011); Tesco, the large U.K. retailer, has closed four stores in 2012 (Forbes, 2012). All evidence indicates that there is no longer easy money for retailers operating in China. Simultaneously, Chinese domestic retailers are becoming more sophisticated, increasing the competition among foreign and domestic retailers (Hingley et al., 2012).

The international business literature suggested that foreign firms usually suffer from the “liability of foreignness” (LOF) which refers to additional costs when a firm conducting business abroad incurs that a local firm would not incur (Hymer, 1976; Zaheer, 1995). One source of LOF is discrimination hazards, caused by nationalistic tendencies (Eden and Miller, 2001; Denk et al., 2012). For example, in 2012, 50 million Indian people protested against the Indian government’s decision to allow foreign retailers such as Wal-Mart to operate in the domestic retail market (CNN, 2012). Likewise in Australia, research indicates that the opening of the first Aldi store was preceded by an attack (Zarkada-Fraser and Fraser, 2002). For international retailers in China, they must not overlook possible consumer bias because Chinese consumers have strong national pride and they tend to be more supportive towards their local rather than foreign products and services (Hsu and Nien, 2008).

In the period of rapid social transformation, especially as a business to consumer business, deep knowledge of consumers and tailor offerings to their needs will remain the key to success for retailers in Chinese changing markets. Despite its significance, there is remarkably little systematic, empirical investigation of Chinese consumers’ patronage behavior towards modern and traditional retail formats, their usage of multiple supermarkets, and their choice of foreign and domestic retailers. In response, the purpose of this study is to provide some recommendations about future developments required by modern food retailers and foreign retailers in China. To achieve this object, this dissertation focuses on three separate but related issues concerning Chinese consumers' store patronage behavior.

The first issue is to investigate what are the factors that influence consumers' choice of modern and traditional retail formats in Chinese market. In particular, it examines the role of shopping habits in the diffusion of supermarkets. *The second issue* is concerning the use of multiple stores by supermarket customers. It identifies the profiles of high loyal consumers in terms of multiple store patronage behavior, and also compare with the profile of consumers with high share-of-wallet at the primary store. *The third issue* centers on consumers' choice of foreign and domestic retailers. Particularly, it focuses on the possible consumer bias that threat international retailers in China. This study propose a new construct, namely, consumers' perceived importance of supporting domestic retailers (PISD), and examine whether PISD represents an LOF for foreign retailers. If yes, then we investigate whether or what advantages of foreign retailers can overcome this LOF.

More specifically, this study focuses on consumers in Chinese second-tier cities, where are with large developing consumer and industrial markets and are becoming thriving places of commerce (Nan Fang Daily, 2011; National Business Daily, 2012). Under the pressure of increasing operation cost and saturated competence in the first-tier cities, modern retailers including the many international retailers have shifted their attention to second- and third-tier cities in China. As businesses with modern retail formats continue trying to reach consumers in these emerging markets, understanding the local markets will improve understanding of opportunities and challenges facing modern retailers.

With the background of supermarket revolution in developing countries, the three issues in this study reflects three main competitive relations in Chinese food retailing markets, respectively, competitions between modern and traditional retail formats;

among supermarkets; and between foreign and domestic retailers. In addition, from business to consumer (B to C) perspective, the three issues are also associated with consumers' shopping decision process that inter-related with the performance of retail operation, namely, attracting consumers to the store, increasing store loyalty, and to cope with possible consumer bias that foreign retailers have to deal with. The three studies in this dissertation contribute to a growing literature on supermarket diffusion and consumers' store patronage behavior, providing insights into China's food retailing market development and potential opportunities for foreign retailers.

1.2 Research Methodology

This study is based on a consumer survey (N=500) which use a self-administered questionnaire designed basing on the review of previous studies. The survey of consumer choice behavior is carried out in Dalian, one of the second-tier cities of China. The respondents who are most often responsible for shopping in their family were chosen. The questionnaire includes questions concerning both of the three research issues. Factor analysis, probit model and Poisson regression model are used to analyze the data.

1.3 Contents of This Dissertation

This dissertation consists of five chapters. Chapter 2 analyzes the factors that influence consumers' choice of traditional or modern retail formats. Basing on previous studies, we build a framework that incorporate shopping habit factors beyond the factors that included in previous studies such as consumers' socioeconomic factors and store output factors. Especially, it evaluated and compared the relative importances of different variable sets. Our results show that socioeconomic factors have minimal impact on consumer choice. Shopping habit factors have as great or even larger impact as market-relevant and product-relevant attributes, especially for fresh-food and cooked-food shopping.

Chapter 3 profiles the characteristics of consumers in terms of multiple store patronage behavior. Consumers' perceived importances of store characteristics are incorporated into a framework for predicting multiple store patronage basing on a cost-benefit approach. The relationship between, and influencing factors of multiple store patronage and consumers' share of wallet at the primary store were also compared. The results show that multiple store patronage behavior is influenced by consumers' preference for promotion, household income, employment status, shopping frequency, and transportation means, while consumers' share of wallet at the primary store is influenced by consumers' preference for convenience, household income, age, family size, and total expenditure. The results indicate that multiple store patronage and share of wallet are not interdependent and the profiles of consumers in terms of them do not share many common characteristics.

Chapter 4 focuses on consumers' choice of foreign and domestic retailers. Basing on institutionary theory and international business literature, this study defines a new construct, namely "consumers' perceived importance of supporting of domestic retailers" (PISD). The study firstly examine whether PISD represents an LOF (Liability of Foreignness) for foreign retailers in China. Subsequently, it identifies firm-specific advantages of foreign retailers and investigates whether these advantages can overcome this LOF. The results show that PISD has a significant negative effect on consumers' choice of foreign retail stores. To overcome this LOF, the results indicate that foreign retailers should emphasize value-for-money store attributes by increasing product quality and running effective promotional campaigns, rather than increase their investment in hedonic attributes such as services (e.g., salespeople's service and fast check out) or social responsibility.

Finally, Chapter 5 summarizes the main findings of this study and discusses the contributions, implications, and directions for future research.

Fig.1.1 shows the framework of this dissertation.

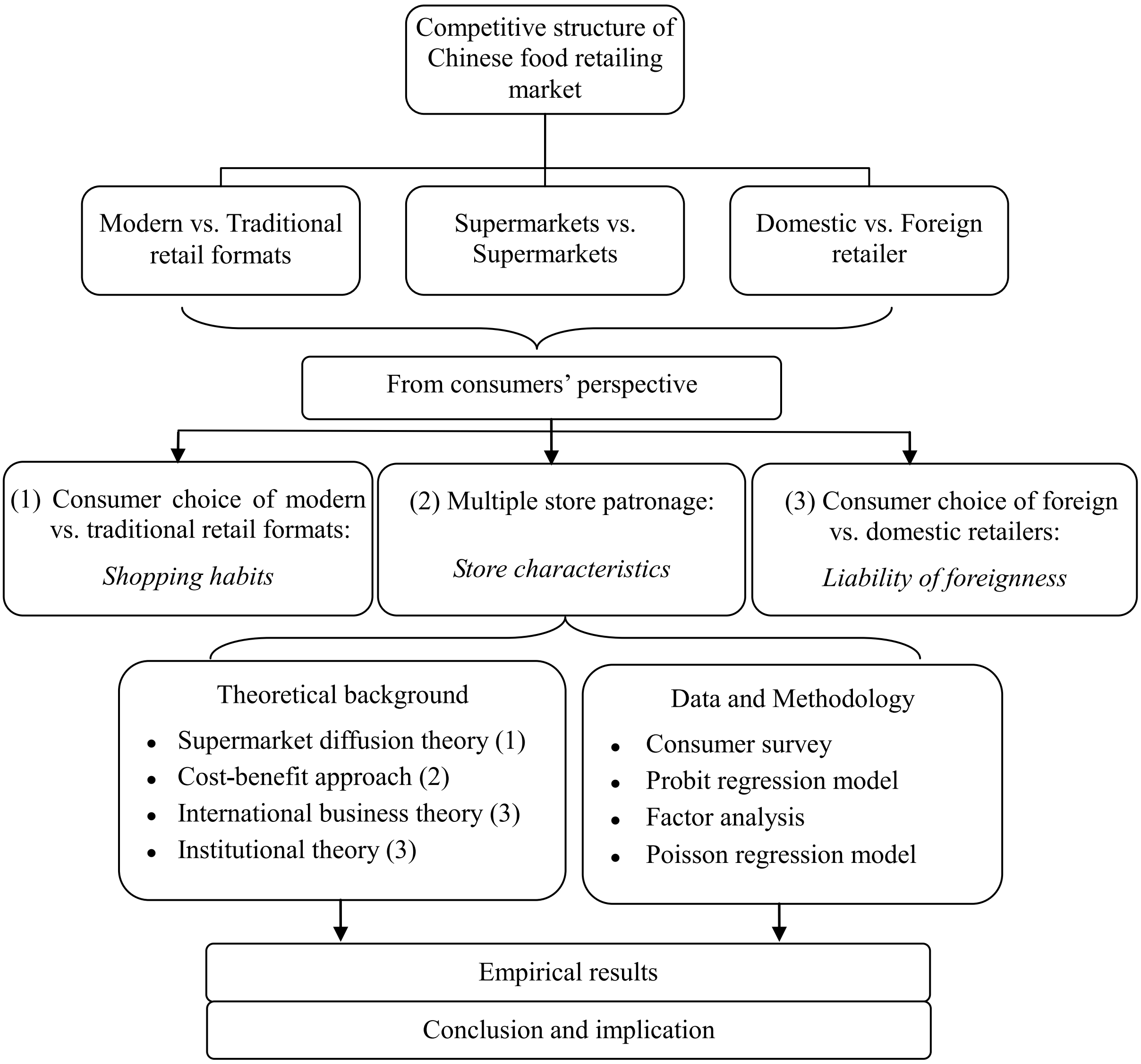

Figure 1.1 Research framework

Chapter 2

Quantifying Barriers Impeding the Diffusion of Supermarkets in China: The Role of Shopping Habits

Abstract

This chapter aims to investigate the factors that impact the diffusion of supermarket in Chinese second-tier cities by focusing on consumers' choice of modern and traditional retail formats for the purchase of three food categories (fresh food, processed food, and cooked food). It contributes to the literature on supermarket diffusion by incorporating shopping habit factors, beyond socioeconomic factors and store characteristic factors, into a framework for predicting consumers' choice to shop in traditional versus modern retail formats. Further, this study estimates the relative importance of these variables compared to other factors. Our results show that socioeconomic factors have minimal impact on consumer choice. Shopping habit factors have as great or even larger impact as market-relevant and product-relevant attributes, especially for fresh-food and cooked-food shopping.

2.1 Introduction

Many developing countries are experiencing a retail modernization process that manifests as modern retail formats (e.g., supermarkets) diffusing and squeezing out the market share of traditional stores and food markets (Goldman et al., 2002; Reardon et al., 2007). The first wave of supermarket diffusion started in much of South America, east Asia (outside china) and south Africa in early 1990s, followed by the second wave which started mainly in Mexico, central America, and much of southeast Asia in the middle and late 1990, the third wave, started in late 1990s and early 2000s, is now mainly going on in China, India and Vietnam (Reardon and Gulati, 2008).

The diffusion of supermarkets in developing countries has attracted great attention of many researchers. In previous literature, some studies have attempted to explain the determinants of supermarket diffusion from a macroscopic perspective, stressing the role of economic variables such as gross domestic product (GDP) per capita, income distribution, urbanization, openness to foreign direct investment, and economic reform (e.g., Dries et al., 2004; Hu et al., 2004; Traill, 2006). Others have adopted a microscopic perspective by considering supply-side factors such as procurement systems, supply chain development, and policy environment (e.g., Goldman, 1974; Goldman, 2000; Reardon et al., 2007), or by exploring demand-side factors, that is, the role of consumers in supermarket diffusion (e.g., D'Haese et al., 2008; Amine and Lazzaoui, 2011; Amine and Tanfous, 2012; Sehib et al., 2012). Among these studies, Goldman et al. (2002), Goldman and Hino (2005), and Hino (2010) have investigated the role of consumers in supermarket diffusion by empirically investigating the components driving supermarket diffusion. They argue that there are three general diffusion components in supermarket market-share changes: diffusion across geography, diffusion across socioeconomic segments, and diffusion by product category. Based on these three segments, the authors have identified factors such as distance or travel time, socioeconomic factors (e.g., income and car ownership), and format outputs (quality, variety, and store cleanliness) as the main factors that impact consumers' adoption of supermarkets.

The present study aims to extend existing research by incorporating several factors related to consumers' shopping habits (or patterns), including cooking frequency, preference for one-stop shopping, habits of bargaining, usual shopping time in a day, and transportation means, into a framework for predicting consumers' choice to use traditional retail formats (wet markets, traditional grocery stores, and specialty food stores) or modern retail formats (hypermarkets, supermarkets, and convenience chains).

Of even more interest here is how much impact these factors exert on consumers' decision to shop at traditional or modern retail markets, especially compared to factors examined in previous studies (e.g., socioeconomic factors, format output factors). Determining the impact of various factors on consumer choice is achieved by estimating the relative importance of different variable sets. For comparison, we followed a method adopted by previous studies (see Goldman et al., 2002; Goldman and Hino, 2005; and Hino, 2010 for details). Additionally, in consideration of the possible bias caused by the order of variables entered into the model, we also tested the robustness of the results by adopting the method introduced by Soofi (1992), who suggests a method of computing the relative importance of variables by averaging them over all orderings of the results. This is an important contribution of our study in terms of quantifying barriers (or facilitators) of supermarket diffusion.

This study focuses on consumers' adoption of supermarkets in second- and third-tier cities of Chinese market[1]. In recent years, many international retailers including Wal-Mart, Carrefour, Tesco, and Metro, have shifted their attention to second- and third-tier cities in China (Nan Fang Daily, 2011; National Business Daily, 2012), which are becoming the "second engine" of the Chinese economy due to increasing consumption power and high economic growth rate. As businesses with modern retail formats continue trying to reach consumers in these emerging markets, understanding the local markets, especially in regards to consumers' shopping behaviors towards traditional and modern retail formats, will improve understanding of opportunities and challenges facing modern retailers.

[1] Chinese market can be divided into different tiers basing on key characteristics of the city, such as its economic development, provincial GDP, advanced transportation systems and infrastructure. It's commonly agreed that China's first-tier cities include Beijing, Shanghai, Shenzhen, and Guangzhou as they have the high levels of economic development and a well-established infrastructure. The second-tier cities mainly refer to the provincial capitals and relatively developed cities that have major development potential such as Shenyang, Dalian, Tianjin, Harbin, Chengdu and Wuhan. The third-tier cities are characterized by major underdevelopment of the economy and infrastructure but are catching up rapidly (CNBC, 2011).

2.2 Literature Review and Hypothesis Development

Previous studies investigating the role of consumers in supermarket diffusion have usually involved an interest in exploring consumers' perception, attitudes, or shopping behavior towards traditional and modern retail formats. Usually, in the studies concerning the diffusion of supermarkets, modern retail formats include hypermarkets, supermarkets, and convenience chains, while traditional retail formats consist mainly of wet or fresh markets[2], street stalls, and independent, small-scale outlets, including specialists (e.g., butchers, staple food stores) and general stores (Goldman, 2000; Ho, 2005; Reardon et al., 2007; Maruyama and Trung, 2007; Sehib et al., 2012). In this study, we follow these classifications of modern and traditional retail formats.

In prior works, both qualitative and quantitative approaches have been adopted in investigating factors that influence consumers' shopping behavior towards traditional and modern retail formats. As mentioned above, Goldman et al. (2002), Goldman and Hino (2005), and Hino (2010) have empirically investigated the components driving the supermarket diffusion process and have distinguished between diffusion across consumer segments (geographic and economic) and product categories, which describe the trends that supermarkets penetrate new geographic segments by increasing the number of store outlets; they spread from middle/upper-income consumers to low-income consumers; and making inroads into processed and packaged products, followed by fresh produces. Based on these segments, the authors have identified factors such as travel time (geographic diffusion), socioeconomic factors (economic diffusion), and store characteristics/format outputs (category-dependent diffusion) as the main factors that impact consumers' adoption of supermarkets.

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[2] A wet market in China usually refers to place that sell fresh produce in the open space or in some cases in a building (Ho, 2005). It mainly consists of a number of individual stalls that offer fresh fruit and vegetables, poultry, live fish, and fresh meat. Other food such as dried, preserved food and cooked food are also available (Ho, 2005). The term 'wet' means that the floor of the wet market is always wet due to the fact that wet market retailers frequently spray fresh produce and clean meat and fish stalls (Goldman et al., 1999).

It has been argued that due to the idiosyncratic nature of sociocultural elements in different countries, the transfer and acceptance of supermarket technology will be significantly influenced by the sociocultural environments in different marketing systems (Ho and Lau, 1988). Some studies have examined the influence of cultural factors on consumers' adoption of supermarkets in different areas, such as the influence of consumers' preference for fresh ingredients in Hong Kong (Goldman et al., 2002) and the influence of religious and ethnic-cultural factors in Israel and Jordan (Hino, 2010). More recently, Sehib et al. (2012) have qualitatively studied the effect of social acceptability and the role of gender on supermarket adoption in Libya; they have found that a traditional culture can act as a facilitator of supermarket diffusion. Amine and Tanfous (2012) have identified some cultural, religious, and ideological motivations for the rejection of the modern retail format in Tunisia.

In this study, we incorporate variables associated with consumers' shopping habits into our framework for predicting consumers' choice to use traditional or modern retail formats. For example, cooking broadly refers to food preparation and provides an opportunity for personal involvement in the food system. As cooking requires the selection, measurement, and combination of ingredients to achieve a desired result, food preparation is usually associated with food choice (Chen et al., 2012), which might further influence consumers' choice of shopping location. Studies have found that Chinese consumers more often intend to bargain and bargain more competitively than consumers in countries such as the United States (Lee, 2000). For those who prefer bargaining, a much heavier focus is placed on the benefits of bargaining; these benefits are not only economic, such as discounts in the form of lower prices, gifts, or free services (Lee, 2000), but also provide psychological satisfaction. Thus, those consumers who prefer bargaining are more likely to shop at places where bargaining is possible. In

China, consumers often purchase fresh products at traditional retail markets in the early morning. In response, some supermarkets have attempted to open morning markets inside the stores (Jilin Daily, 2009; Shenzhen Economic Daily, 2009). The reasons consumers choose early-morning shopping are manifold; being able to obtain much fresher food is one explanation. Other reasons might include convenience of schedules or time constraints. For example, elders often have a habit of exercising during the morning, and buying some fresh food on the way home after exercising may be very convenient; for young, employed consumers, buying fresh food before going to work saves the time it would take to shop after work. In this study, the impact of these factors will be examined.

Based on the above arguments, this study incorporates the following groups of factors: socioeconomic status of consumers, store characteristics (which are divided into product-relevant and market-relevant attributes), and shopping habits. These factors are assessed for their effects on consumers' choice to use traditional or modern retail formats in emerging Chinese markets. Following Hino (2010), the geographic factor, which is measured by travel time or travel distance in previous studies (Goldman et al., 2002; Goldman and Hino, 2005), was included as one aspect of store characteristics in our framework.

2.2.1 Socioeconomic factors

Consumers' adoption of supermarkets is impacted by their socioeconomic status (e.g., Anand, 2009; Hino, 2010). Previous studies in developing countries have shown a more rapid adoption of supermarkets by wealthier consumers (Anand, 2009; Tessier et al., 2010; Amine and Lazzaoui, 2011). Consumers with higher socioeconomic status are more likely to switch to one-stop shopping at modern supermarkets, because multi-stop shopping in many small stores is time consuming and leads to higher opportunity costs for high-income consumers (Goldman et al., 2002; Goldman and Hino, 2005; D'Haese et al., 2008) and also because these consumers are able to transfer to modern formats through their car ownership and their large storage capacity (Goldman and Hino, 2005). Moreover, Amine and Lazzaoui (2011) suggested that modern retail also acts as a means of social distinction for the upper and middle classes, who seek to differentiate themselves from the lower classes and to express a sense of belonging and a unique social identity. Thus, we hypothesize the following:

H1. Higher-income consumers are more likely to shop at modern retail formats.

H2. Households that have large storage facilities are more likely to shop at modern retail formats.

2.2.2 Store characteristics

Consumers' selective adoption of supermarkets is very common in many countries (Goldman and Hino, 2005; Maruyama and Trung, 2007; D'Haese et al., 2008; Anand, 2009; Gorton et al., 2011; Dholakia et al., 2012). It has been found that consumers prefer to make purchases, especially of fresh produce, at traditional markets because traditional retailers perform better in terms of price, freshness, and variety, factors to which consumers attach great importance (Goldman et al., 1999). In fact, store choice literature has identified several store characteristics that affect consumers' store choice behavior, including convenience, service, assortment, and store environment (Arnold et al., 1983; Carpenter and Balija, 2010; Tessier et al., 2010; Carpenter and Brosdahl, 2011).

A review by Pan and Zinkhan (2006) identified ten key store attributes that impact store choice, divided into two categories: (1) product-relevant attributes, which pertain to product features and attributes, including product quality, price, and selection, and (2) market-relevant attributes, which pertain to retailers, including convenience of location, parking facilities, store atmosphere, and friendliness of salespeople. These store characteristics are also important factors for consumers who are deciding whether to use traditional or modern retail formats since the two are distinct on these store characteristics (Goldman et al., 1999; Gorton et al., 2011). Previous study suggested that retail innovation such as format innovation (e.g., the creation of supermarkets) influences expectations that consumers have regarding store characteristics, which impacts consumers' format choice (Dawson, 2013). For example, consumers have different expectations regarding store characteristics of supermarkets or convenience stores (Dawson, 2013). Similarly, consumers' expectations and perceptions towards modern retail formats (e.g., supermarkets) and traditional retail formats (e.g., traditional grocery stores) also tend to be different (Goldman et al., 1999).

It is worthwhile to note that both supply and demand sides can influence consumers' choice of where to buy food, since the retailer side decides what are possible and available within the food-retail market and the consumer side decides what are desirable and preferable (Ho and Tang, 2006). Related literature regarding store choice highlights the importance of identifying consumers according to the importance they place on the various store-choice criteria (Chamhuri and Batt, 2013). In this study, therefore, we focus on consumers' perceived importance of various store-choice criteria to investigate consumer choice of traditional or modern retail format for food shopping.

Product-relevant attributes

Traditional markets such as wet markets are perceived as having more fresh food operation advantages than modern formats. Traditional markets tend to be perceived as offering superior freshness, prices, and product variety (Goldman et al., 1999) because they are usually composed of groups of individual stalls, allowing them to offer a wide selection of fresh produce. Moreover, vegetables in traditional markets are usually delivered directly from the wholesale markets, reducing transit time and resulting in fresher products. Meanwhile, meat and poultry are provided from recently killed animals, and fish are sold alive, which satisfies Chinese culture's definition of 'fresh' (Goldman et al., 1999).

Regarding price, however, there exist different points of view on which retail formats offers lower price for fresh food (Chamhuri and Batt, 2013). Some research found that consumers perceive the price of food much lower in supermarkets (McEachern and Seaman, 2005; Chamhuri and Batt, 2009), while others suggested that price is much cheaper in traditional retail formats (Hsu and Chang, 2002; Berdegue et al., 2005). In most cases, it is more likely that the simple stall facilities, the quick product turnover, and consumers' knowledge that some vegetables are grown by the stall owners endow traditional markets with a reputation for lower prices. In spite of these advantages, however, traditional markets in China are usually dirty and unorganized, with weak regulations (Goldman et al., 1999); thus, food safety is often a major concern for consumers. In contrast, modern format stores are often well managed and under government regulation; thus, product safety is more likely to be guaranteed. Moreover, modern format stores markedly outperform traditional markets in providing a large assortment of processed and packaged food (Goldman et al., 1999). We thus hypothesize the following:

H3a. The higher the consumers rate freshness as an important factor, the more likely they are to shop at traditional retail formats.

H3b. The higher the consumers rate safety as an important factor, the more likely they are to shop at modern retail formats.

H4. The higher the consumers rate price as an important factor, the more likely they are to shop at traditional retail formats.

H5a. Consumers who rate assortment as an important factor are more likely to shop at traditional retail formats for fresh food.

H5b. Consumers who rate assortment as an important factor are more likely to shop at modern retail formats for non-fresh food.

Market-relevant attributes

Market-relevant attributes including convenient store location, store atmosphere, and the friendliness of the salespeople are also salient attributes influencing consumers' format choice behavior (see review by Pan and Zinkhan, 2006).

First, it is largely known that location is an important variable for consumers selecting a store (Arnold et al., 1983; Hsu et al., 2010; Prasad and Aryasri, 2011). As the greater the travel time to a store, the less convenient they are; hence, the possibility of shopping there will be decreased (Goldman and Hino, 2005; Hino, 2010). Store atmosphere, expressed through phenomena such as music, lighting, and layout, is an important component of store image (Hsu et al., 2010). Good store atmosphere can enhance the consumer shopping experience, hence adding shopping value and influencing store patronage intentions (Grewal et al., 2003; Pan and Zinkhan, 2006; Hsu et al., 2010). Especially, cleanness is an important element of store atmosphere. Food shoppers have a natural concern for cleanness of a store (Birtwistle et al., 1996), as quality and safety of food products from a clean store is more trustworthy. In addition, retail stores are also places for human interaction (Pan and Zinkhan, 2006). Some consumers might enjoy talking and seeking a social experience during a shopping visit, while others may try to alleviate loneliness (Tauber, 1972). Thus, consumers who desire social interaction may prefer to shop at stores where they can communicate with salespeople (Pan and Zinkhan, 2006).

Modern retail formats such as hypermarkets and supermarkets are often located outside consumers' immediate residential areas (Wang, 2011). Shopping there requires more travel time than shopping at traditional markets. Even though in some areas where geographic diffusion of supermarket is complete, and distance/accessibility becomes less important for consumers' format choice (Goldman and Hino, 2005), in many developing countries, distance or accessibility of supermarkets are still matter (Anand, 2009). In such cases, consumers might continue shopping at neighborhood groceries due to their close proximity (Hino, 2010; Tessier et al., 2010; Dholakia et al., 2012). Moreover, the close proximity of traditional markets may promote a higher shopping frequency (Dholakia et al., 2012), which is conducive to a feeling of community or personal relationships with shopkeepers (Hino, 2010). The personal nature of the relationship between shopkeeper and their customers is one of the important attributes of traditional retail format (Maruyama and Trung, 2010). In traditional markets of China, consumers are able to directly contact with sellers. When consumers want to get the exact amounts, sizes, parts, and quality levels they needed, it is convenient for consumers to communicate with the retailer (Goldman et al., 1999). By contrast, modern retail formats such as supermarket are operated on a self-service basis which results in relatively less personal contact between consumer and employees. Therefore, for those who prefer personal communication with salespeople, traditional retail formats would be more attractive. In contrast, the competitive advantage of modern supermarkets came from providing a clean environment and superior comfort atmosphere for shoppers (Suryadarma et al., 2010), whereas traditional formats in China are usually viewed as dirty, slippery, smelly, unorganized, and noisy (Goldman et al., 1999). We thus hypothesize the following:

H6. The closer traditional markets are for shopping, the greater the probability of shopping at traditional markets.

H7. The higher the importance attached to store atmosphere, the more likely consumers shop at modern retail formats.

H8. The higher the importance attached to communication with salespeople, the more likely consumers shop at traditional retail formats.

2.2.3 Shopping habit factors

Before the emergence of large-scale retail formats, consumers used to do multi-stop shopping in various small-scale stores in order to buy all products they needed. The emergence of modern large-scale retail formats such as supermarkets and hypermarkets has made one-stop shopping possible. In the rapid development of modern society, with the acceleration of the pace of life, people are more and more suffering from time pressure, and this make traditional multi-stop shopping in many small stores more costly than one-stop shopping (Messinger and Narasimhan, 1997; Goldman et al., 2002). Therefore, undoubtedly, for those who prefer one-stop shopping pattern, modern large-scale formats would be more favorable. We thus hypothesize the following:

H9. The higher the importance attached to one-stop shopping, the more likely consumers shop at modern retail formats.

Whether it is able to bargain or not is also influential on consumers' choice of place of shopping. Chamhuri and Batt (2013) use consumers' perception on 'the ability to bargain' as one criteria in segmenting consumers from modern retail shoppers and traditional market shoppers. Bargaining is a characteristic feature of consumer behavior in many Asian countries (Lee, 2000). Consumers prefer to bargain because they believe it may lead to an economic benefit, like a discount in the form of a lower price, gift, or free service (Lee, 2000). Moreover, on a psychological level, consumers believe that those who do not bargain are likely to suffer a loss, as they are more likely to end up paying higher prices for the same products (Lee, 2000; Lui, 2008). Bargaining is a cultural value that occurs in most traditional food markets, where sales transaction is flexible. In contrast, as the prices of products in modern retail stores are fixed, consumers usually are not possible to make a bargain. We thus hypothesize the following:

H10. The higher the importance attached to bargaining, the more likely consumers shop at traditional retail formats.

As aforementioned, food preparation provides an opportunity for personal involvement in the food system. As cooking requires the selection, measurement and combining of ingredients to achieve the desired result, there is a relationship between food preparation and food choice (Chen et al., 2012) which might further influence consumers' choice of shopping places. Higher frequency of food preparation in the home is usually combined with the use of more fresh products; by contrast, lower frequency of food preparation would be combined with the use of frozen and preserved components (Hino, 2010). Therefore, the families that cook more frequently are more likely to shop at traditional retailers, as traditional retailers are much better able than supermarkets to cater to consumers' specialized needs, which reflect cultural habits (Goldman and Hino, 2005). This was also echoed in Ho and Tang (2006), which found that users of traditional food formats exhibited more of a commitment to and enjoyment of cooking than did users of modern retail formats. We thus hypothesize the following:

H11. Consumers who cook more frequently are more likely to shop at traditional retail formats.

Furthermore, there are some additional hypotheses: consumers who rate product brands as important factor might be more likely to shop at modern retail stores. Parking convenience (Pan and Zinkhan, 2006), transportation means, and shopping time (East et al., 1994) may also affect consumers' shopping behavior.

2.3 Data and Methodology

Data in this study were collected by means of a self-administrated survey with the people who are responsible for the majority of food shopping for their households. The area selected for the study is Dalian, a second-tier city in China with a population of 6.6 million. It was chosen because it accurately represents the rapid changes that have occurred in the food retailing sector in China's second-tier cities.

The survey was conducted in four urban districts of Dalian during a three-week period from 9 November, 2011 to 30 November, 2011. Before the formal survey, we ran a pilot test on ten residents to refine the questionnaire and ensure that respondents would have no difficulty in answering the questions and would not misunderstand any of them. Interviewers were graduate students of Dalian university of technology who have survey experience and also were trained before conducting the survey. In the process of data collection, sub-district units (residential streets) in each district were identified, out of which five to ten streets were selected. From these, we selected three to five communities, and households were selected from each community by simple random sampling. A total of 590 respondents participated in the survey, 90 samples were eliminated because some participant response was not complete or true, and so 500 complete surveys were obtained with an efficient rate of 84.7%. An analysis of the data revealed that the frequency distribution of the sample in the four Dalian districts closely matched the population distribution (see Table 2.1).

Table 2.1. Distribution of respondents and population of the study area

Urban district	Final Sample		Households [a]	
	No.	%	No.	%
Xi Gang	65	13.2	307850	15.1
Zhong Shan	93	18.9	357091	17.5
Sha He Kou	183	37.1	653762	32.0
Gan Jing Zi	152	30.8	722559	35.4
Total	493	100.0	2041262	100.0

Source: [a] Dalian Statistics Yearbook (2009).

Previous studies have shown that consumers display different shopping behaviors across different product types such as fresh food and processed food (Goldman et al., 2002; Goldman and Hino, 2005; Hino, 2010; Gorton et al., 2011). This study collected information about the retail format at which consumers do most of their shopping for three major food categories in the Chinese diet: fresh food (e.g. meat and poultry, fish, fruit, and vegetables), processed food (e.g. packaged food, canned food, frozen food, and dry provisions), and cooked food (e.g. steamed bread, steamed stuffed buns, ready-to-eat foods). This paper classifies the main food retail formats into six types representing a mix of modern and traditional retail formats: hypermarkets, supermarkets, and convenience stores (modern formats) and specialty food stores, traditional grocery stores, and wet markets (traditional formats).

In the questionnaire, we ask respondents where they did most of their shopping for the three kinds of food products (fresh food, processed food, and cooked food), and ask them to rate the importance of various reasons for choosing the retail format using a five-point Likert scale, from 1 = 'not important at all' to 5 = 'very important'. We also asked respondents questions about their shopping patterns and consumption habits, such as their preference for one-stop shopping and bargaining, cooking frequency, travel distance and time to the store, shopping times, and preferred means of transportation. Consumers' socioeconomic and demographic information was also collected.

2.3.1 Descriptive statistics

The data show that 29.8% of the shoppers are between 20 and 29 years old, 31.4% are between 30 and 39, 17.0% are between 40 and 49, and 21.8% are over 50, with an average age of 38.3. As the survey was conducted towards people who are in charge of household shopping, the sample is biased towards females (70 percent females and 30 percent males). This is reasonable because in China, the proportion of female shoppers who are responsible for family purchase is higher. This was also in line with the finding in the AC Nielsen study in seven cities of China which showed that family purchase was made mainly by female shoppers (ACNielsen, 2001). Sixty-two per cent of the households have a monthly income of between 2000 and 8000 yuan, 15% have a monthly income of between 8000 and 10000, and 11.8% have a monthly income of more than 10000. The average family size is 2.9, which is in good agreement with the 2010 census of Dalian (which is 2.63). 31.2% of the household own a car, and 24.6% of households have a refrigerator larger than 300 L.

Table 2.2 describes the retail formats at which shoppers do most of their shopping for the three kinds of product. A total of 49.2% of respondents indicated that they most shop for fresh food at wet markets, 35.1% mostly shopped at hypermarket, and only 6.5% purchased most of their fresh food at supermarkets. These data suggest that traditional markets (special stores, traditional grocery stores, and wet market) still account for nearly half of fresh-food retailing, but hypermarkets also seem attractive to a considerable number of consumers. Concerning processed food, 79.2% of respondents indicated that they regularly shop at modern format stores (hypermarkets, supermarkets, and convenience stores), whereas only 20.9% of respondents regularly purchase at traditional format locations. Concerning cooked food, 72.2% of respondents said that they regularly purchase at modern format stores, and 27.9% regularly purchase at traditional format locations. Obviously, modern retail formats dominate processed and cooked food retailing.

Table 2.2. Places where retail formats consumers do most of their shopping

Retail format	Fresh food		Processed food		Cooked food	
	Freq.	%	Freq.	%	Freq.	%
Hypermarket	174	35.1	267	53.9	249	50.3
Supermarket	32	6.5	89	18.0	77	15.6
Convenience store	12	2.4	36	7.3	31	6.3
Specialty store	24	4.8	51	10.3	72	14.6
Traditional grocery store	10	2.0	23	4.7	16	3.2
Wet market	244	49.2	29	5.9	50	10.1
Total	496	100.0	495	101.0[b]	495	101.0[a]

Notes: [a,b] Total adds to more than 100% due to rounding.

In order to identify the factors affecting consumers' choice of either traditional or modern formats, the study compared hypermarkets and wet markets[3] in terms of fresh food and hypermarkets and supermarkets and three traditional formats (specialty store, traditional grocery store and wet markets) in terms of processed and cooked food. We did not combine supermarket and hypermarket data because the two formats might address different shopping needs.

2.3.2 Hypothesis test

As this study focuses on consumer choice of traditional and modern retail formats, a binary outcome, it adopts the probit model, one of the most frequently used models, to

[3] Considering that hypermarkets and wet markets are two representative formats for fresh food shopping in China, we are more interested in the factors that impact consumers' choice of hypermarkets and wet markets. We have also done the analysis using all the format samples, results and main findings are almost the same.

analyze the effects of the variables. Format choice for each household is treated as an individual observation, y_i, taking the value 1 if most of the household shopping is done at modern retail stores, and 0, if it is done mainly at traditional locations. This can be depicted mathematically as follows:

$$y_i^* = \alpha + \beta X_i + \varepsilon_i$$

$$y_i = \begin{cases} 1 & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases} \quad i = 1, 2, \ldots, N$$

where y_i^* represents the net benefit to the i^{th} shopper from shopping at modern retail stores, and matrix X_i includes the full set of explanatory variables. When ε_i is assumed to be distributed normally, it leads to the probit model, and β is the set of parameters to be estimated by maximum likelihood estimation (Long and Freese, 2005).

2.3.3 Measurements

To measure retail format choice, following previous studies (e.g., Arnold et al., 1983, Hino, 2010), respondents were asked to choose the retail format at which they do most of their shopping for fresh food, processed food, and cooked food. Regarding socioeconomic factors, in line with Hino (2010), this paper includes income, car ownership and storage capacity to measure consumers' ability to shop at modern retail stores. However, as car ownership was significantly correlated with income (r = 0.46), the variable of car ownership is excluded in our study. Regarding store characteristic factors, respondents were asked to indicate the importance of the listed influencing factors on a five-point scale, from 1 = 'not important at all' to 5 = 'very important', except for food stores' convenience to consumers, for which travel time served as a proxy. As in previous studies (e.g. Arnold et al., 1983; Carpenter and Balija, 2010), this paper applies these factors in a disaggregated manner in order to retain the information inherent in each of the individual store attribute items. Regarding consumer shopping habit factors, the study asked respondents questions about their preferences for one-stop shopping, bargaining, shopping time, cooking frequency, and transportation means. Even though age and gender were not included in previous studies on supermarket diffusion theory (e.g., Goldman et al., 2002; Goldman and Hino, 2005; Hino, 2010), age and gender were shown to be influencing factor of store format choice in some studies (Sinha and Banerjee, 2004; Prasad and Aryasri, 2011), therefore, these variables were included as control variables in our study. Table 2.3 presents the definitions and summary statistics of the explanatory variables used in the empirical model. In order to check for multicollinearity in the models, the variance inflation factors (VIF) for all variables were estimated. The VIF statistics for the models are smaller than 10 (the largest value is 1.71, 1.61, 1.67 for the three models respectively), indicating that the multicollinearity in these models is within the tolerated limit (Hair et al., 1998).

2.4 Empirical Results

The coefficients of the probit model were estimated using Stata (V11.0). The results are reported in Table 2.4. The chi-square test statistic and pseudo R-square show that the models for the three kinds of products are all significant. In Table 2.4, coefficient estimates in conformity with hypothesis (correct sign and statistically significant) are indicated by “O” and those in contradiction of hypothesis (incorrect sign and statistically significant) are indicated by “X”.

2.4.1 Results for fresh food

In the case of fresh food, for socioeconomic factors, income shows a significant but negative effect suggesting that consumers with higher income are more likely to shop at traditional retail format for fresh food. This is contrary to our prediction, thus H1 is not supported. Refrigerator is not significant, and H2 is not supported.

Table 2.3. Definition and summary statistics of the explanatory variables

Variable	definition	Fresh food		Processed food		Cooked food	
		Mean	S.D	Mean	S.D	Mean	S.D
PRICE	Importance of price [a]	3.58	1.09	3.29	1.02	3.36	1.02
FRESHNESS	Importance of freshness	4.61	0.70	4.37	0.79	4.48	0.82
SAFETY	Importance of safety	4.57	0.76	4.59	0.78	4.65	0.71
ASSORTMENT	Importance of assortment	3.83	0.99	3.47	1.10	3.76	0.99
BRAND	Importance of product brand	3.35	1.14	3.55	1.06	3.56	1.10
ACCESSIBILITY	Travel time to the store (<15m=5, 15-30m=4, 30-45m=3, 45-60m=2, > 60m=1)	1.61	0.81	1.80	0.82	1.75	0.79
ATMOSPHERE	Importance of store atmosphere	3.11	1.08	3.24	1.04	3.25	1.04
SALESPEOPLE	Importance of communication with salespeople	3.72	0.99	3.58	1.03	3.59	1.03
PARKING	Importance of parking facility	2.78	1.47	2.91	1.37	2.90	1.38
ONE-STOP	Importance of one-stop shopping	1.69	0.66	3.54	1.15	3.48	1.13
BARGAIN	Importance of bargaining	2.91	1.28	2.58	1.19	2.70	1.22
COOK FREQUENCY	From 1-2 times a week=1 to 3 times a day=5	3.06	1.18	3.05	1.17	3.05	1.15
SHOP EARLY	Do most shopping before 10 am=1, otherwise=0	0.32	0.47				
SHOP LATE	Do most shopping after 5 pm=1, otherwise=0	0.28	0.45				
ON FOOT	Mostly shopping on foot=1, otherwise=0	0.57	0.50	0.39	0.49	0.42	0.49
BY CAR	Mostly shopping by car=1, otherwise=0	0.16	0.36	0.19	0.39	0.20	0.40
INCOME	Monthly family income in China Yuan (<2 THS.=1, 2-4 THS.=2, 4-8 THS.=3, 8-10 THS.=4, >10 THS.=5)	2.88	1.15	2.94	1.15	2.95	1.18
REFRIGERATOR	Refrigerator capacity (>300L=1, other=0)	0.25	0.43	0.24	0.43	0.22	0.42
AGE	Age of respondents (continuous variable)	38.6	12.1	38.9	12.1	38.5	11.7
SEX	Gender of respondents (female=0, male=1)	0.29	0.45	0.28	0.45	0.29	0.45
Sample		373		328		332	

Note: [a] Scale range: 1= not important at all; 2 = not really important; 3 = important; 4 =quite important; 5 = very important.

In terms of product-relevant attributes, safety is positively significant suggesting that a consumer who is highly concerned about food safety would be likely to shop at modern retail format. Interestingly, freshness did not show significant effect, suggesting that freshness does not appear to be important in the choice between traditional and modern retail format. Therefore, our data support H3b but not H3a. Price shows a positive and significant effect, suggesting that consumers who are highly concerned for

Table 2.4. Results of the probit models

Variables		Fresh food model			Processed food			Cooked food		
	Expected sign	β	Marginal effect	Conformity with hypothesis	β	Marginal effect	Conformity with hypothesis	β	Marginal effect	Conformity with hypothesis
Age		0.003	0.001		−0.020***	−0.006		−0.001	−0.000	
Sex		−0.056	−0.020		0.185	0.055		0.179	0.062	
Socioeconomic factors										
Income	H1 (+)	−0.249***	−0.090	X	−0.023	−0.007		0.139*	0.050	O
Refrigerator	H2 (+)	0.280	0.104		−0.374*	−0.121	X	−0.166	−0.061	
Product-relevant attributes										
Freshness	H3a (−)	0.050	0.018		0.171	0.052		0.092	0.033	
Safety	H3b (+)	0.400***	0.145	O	0.185	0.056		0.211*	0.075	O
Price	H4 (−)	0.198**	0.072	X	0.125	0.038		0.020	0.007	
Assortment	H5a (−)	−0.211**	−0.077	O						
	H5b (+)				0.093	0.028		0.020	0.007	
Brand		0.229***	0.083		0.189**	0.057		0.106	0.038	
Market-relevant attributes										
Accessibility	H6 (−)	−0.356***	−0.130	O	−0.254**	−0.077	O	0.010	0.004	
Atmosphere	H7 (+)	0.113	0.041		0.057	0.017		0.116	0.041	
Salespeople	H8 (−)	−0.163*	−0.059	O	−0.299***	−0.091	O	−0.221***	−0.079	O
Parking		0.191***	0.069		0.084	0.026		0.054	0.019	
Shopping habits										
One-stop shopping	H9 (+)	0.236*	0.086	O	0.234***	0.071	O	0.157*	0.056	O
Bargaining	H10 (−)	−0.333***	−0.121	O	−0.091	−0.028		−0.084	−0.030	
Cooking frequency	H11 (−)	−0.128*	−0.047	O	0.128	0.039		−0.044	−0.016	
Shop early		−0.509**	−0.175							
Shop late		−0.567***	−0.191							
Shopping on foot		−0.808***	−0.293		−0.491**	−0.154		−0.957***	−0.342	
Shopping by car		0.541*	0.207		0.071	0.021		−0.536**	−0.202	
Cons		−1.823*			−2.002			−1.223		
Number of observation		373			328			332		
LR $chi^2(n)$		194.88***			92.50***			70.12***		
Pseudo R^2		0.39			0.24			0.16		
−2Log-likelihood		307.02			294.90			356.99		

Note: *p < 0.1; **p < 0.05; ***p < 0.01

price are more likely to shop at modern retail format. This is opposite to our prediction; therefore, H4 is not supported. The negative and significant coefficient of assortment shows that a consumer who rates assortment as an important factor is more likely to shop at traditional formats for fresh food. Thus, H5a is supported. Brand is positive and significant, indicating that increased concern regarding fresh food brands will increase the probability that a consumer will choose to shop at modern retail stores.

With respect to market-relevant attributes, accessibility and salespeople are negative and significant, meaning that consumers who prefer to shop within a close distance and attach more importance to communication with salespeople are more likely to shop at traditional retail formats. Atmosphere is not significant, implying that, store atmosphere does not appear to be important in the choice between traditional and modern retail format for fresh food. These findings support H6 and H8, but not H7. Finally, parking is positive and significant, meaning that consumers who rate parking facilities as important are more likely to shop at modern retail stores.

Regarding shopping habit factors, one-stop shopping and shopping by car are positively related to consumers' preference for modern retail formats, while bargaining, cooking frequency and shopping on foot are negatively related to shopping at modern retail format. These results imply that consumers who prefer one-stop shopping, and mostly shop by car are more likely to shop at modern retail format, whereas consumers who prefer bargain, cook more frequently and mostly shop on foot are more likely to shop at traditional retail locations. These findings support H9, H10, and H11. It is interesting to note that shop early and shop late also show significant effects, moreover, both of them are negative, suggesting that consumers who mostly shop before ten or after five are more likely to shop at traditional retail format for fresh food.

2.4.2 Results for processed food

In the case of processed food, for socioeconomic factors, income shows no significant effect. Refrigerator is negatively significant. These findings do not support H1 or H2. Among product-relevant attributes, brand shows a significant and positive effect, suggesting that consumer who is highly concerned about product brand would be more likely to shop at modern retail format. The other product-relevant attributes, namely price, freshness, safety, and assortment do not appear to be important in the choice between traditional and modern retail format for processed food. Hence, H3a, H3b, H4 and H5b are not supported. For market-relevant attributes, accessibility and salespeople are negative and significant. These results suggest that consumers who prefer to shop at a near place and attach higher value on communicating with salespeople are more likely to shop at traditional retail format. Atmosphere and parking do not appear to be important in the choice between traditional and modern retail format for processed food. Accordingly, our data support H6 and H8 but not H7.

Finally, in terms of shopping habit factors, the positive and significant coefficient of one- stop shopping means that consumer who prefers one-stop shopping are more likely to shop at modern retail stores. The negative and significant coefficient of shopping on foot means that consumers who mostly buy processed food on foot are more likely to shop at traditional markets. Bargaining is insignificant. Thus H9 is supported but H10 and H11 are not supported.

2.4.3 Results for cooked food

The empirical results for cooked food indicate that income is positively significant for modern retail formats. It means that consumers with higher income are more likely to shop at modern retail format for cooked food. This finding supports H1. Refrigerator is not significant, thus H2 is not supported. Of the product-relevant attributes, safety is positively significant, suggesting that consumers who are highly concerned about product safety would be more likely to shop at modern retail format. Similar to the case of fresh food, price, freshness, and assortment do not appear to be important in the choice between traditional and modern retail format for cooked food. Hence, H3b is supported while H3a, H4 and H5b are not supported. Among market-relevant attributes, salespeople shows negative and significant effect which means that consumers who place more importance on communication with salespeople are more likely to shop at traditional markets. Accessibility, atmosphere, and parking are not significant. These findings support H8 but not H6 or H7. In terms of shopping habit factors, one-stop shopping is positively significant, and shopping on foot and shopping by car are negatively significant. This suggests that consumers who prefer one-stop shopping are more likely to shop at modern retail formats for cooked food, while those who mostly shop on foot or by car are more likely to shop at traditional retail formats. Bargaining and cooking frequency do not appear to be important in the choice between traditional and modern retail format for cooked food. These findings support H9 but not H10 or H11.

2.4.4 Relative importance of explanatory variable sets

In order to measure the relative contribution of shopping habit factors as a whole compared with other factor groups, we assessed the relative importance of different variable sets. Following previous studies (e.g., Goldman et al., 2002; Goldman and Hino, 2005; and Hino, 2010), we estimated the effects of different variable sets in a nested fashion, in which variable sets were incrementally added; thus, changes in goodness of fit indicate the relative contribution of each variable set to the overall explanatory power of the model. In basic model, we included only control variables; in model 1, we added economic variables; and in model 2 and model 3, store characteristics were added (it is reasonable to suppose that consumers firstly care about product-relevant attributes such as price, quality, and safety and then market-relevant attributes such as store atmosphere). Finally, in model 4, we added shopping habit variables. This order is based on previous studies (e.g., Goldman and Hino, 2005; Hino, 2010), which suggest that consumers' adoption of supermarkets is firstly motivated by economic variables, then format outputs, and then cultural factors (which applies to shopping habit factors in this study). Table 2.5 provides the relative contribution of each variable set on explaining consumers' choice of traditional versus modern retail formats.

Table 2.5. Relative importance of each variable sets in explaining format choice (Fixed order)

	Fresh food		Processed food		Cooked food	
	−2LL	$\Delta\rho^2$	−2LL	$\Delta\rho^2$	−2LL	$\Delta\rho^2$
Basic model	496.33		375.66		425.30	
Model 1= Basic + Socioeconomic	492.80	0.000	373.26	0.000	418.42	0.000
Model 2 = Model 1+ Product	455.23	0.063***	340.56	0.067***	404.66	0.025***
Model 3 = Model 2+ Market	381.58	0.152***	312.74	0.079***	387.35	0.045***
Model 4 = Model 3 + Habits	307.03	0.138***	294.90	0.042***	356.99	0.067***

Notes: (1) LL: log-likelihood.
(2) ρ^2 = 1− [(LL (model) − number of additional parameters) / LL (base model)] (Goldman et al., 2002; Goldman and Hino, 2005; Hino, 2010).
(3) ***p < 0.01 (Likelihood ratio test).

The results indicate that in the case of fresh food, market-relevant attributes (15.2%) were the most important determinant of consumers' format choice, followed by shopping habit variables (13.8%) and product-relevant variables (6.3%). These results indicate that market-relevant attributes such as store accessibility and communication with salespeople had a substantial impact on consumers' format choice for fresh food. The results also suggest that the impact of shopping habits is almost as large as that of market-relevant attributes. Consumers' socioeconomic status had little impact on choice of traditional or modern retail format for fresh food. Likelihood ratio tests show that all the variable sets, except for socioeconomic factors, were statistically significant at the $p < 0.01$ level. Similar results were found for cooked food, where shopping habit variables (6.7%) were the most important determinant, followed by market-relevant attributes (4.5%) and product-relevant attributes (2.5%). Socioeconomic variables also had little impact on consumers' choice to use traditional or modern retail formats for cooked food. For processed food, importance was relatively evenly distributed across product relevant, market relevant, and shopping habit variables.

When assessing variables' relative importance, the result is usually affected by the order in which variables enter the model (Soofi, 1992; Soofi et al., 2000). In order to test the robustness of the relative importance results above, we adopt the method introduced by Soofi (1992) who suggests a method of computing the relative importance of variables by averaging them over all results orderings. Soofi (1992) evaluated the relative importance of variables in the logit model using a set of information indices. The procedure is described below.

The joint importance of a set of M explanatory variables in a logit model is calculated by the information index $I_{\pi*}(1,\ldots, M)$:

$$I_{\pi^*}\left(1,\ldots,M\right)=\frac{H(U)-H(\pi^*)}{H(U)}=1-\frac{H(\pi^*)}{H(U)}$$

where $H(\pi^*)$ is the negative of the log-likelihood function of the logit model evaluated at the estimated maximum likelihood estimates with all the variables in the model, and $H(U)$ is the same term with no covariates and no constant term in the model. This index interprets the contribution of the explanatory variables to reduce uncertainty about the prediction of the alternatives (Soofi, 1992). This corresponds to the R-square of linear regression and pseudo R-square in the probit and logit models (McFadden, 1974).

The other two information indices are the simple and partial information indices.

The simple information index of an explanatory variable $I_{\pi*}(m)$, $m = 1,...,M$, measures the contribution of each explanatory variable against the reduction of uncertainty when there is only a single explanatory variable in the model. The partial information index measures the contribution of the *m*th variable over and above the other $m-1$ variables. This can be expressed as

$$I_{\pi^*}\left(m;1,\ldots,m-1\right)=\frac{H[\pi*(1,\ldots,m-1)]-H[\pi*(1,\ldots,m)]}{H(U)}$$

The information index can be decomposed as the sum of the simple and partial information indices:

$$I_{\pi^*}\left(1,\ldots,M\right)=I_{\pi^*}(1)+I_{\pi^*}(2;1)+\ldots+I_{\pi^*}(M;1,\ldots,M-1)$$

This decomposition can be used to assess the relative importance of each explanatory variable when the order is $1,...,M$. However, since the order of the explanatory variables is usually not certain, Soofi (1992) proposes using the $M!$ decompositions. The relative importance of each variable is measured using the average of the simple and partial information indices across all possible $M!$ decompositions. This procedure can be performed for not only individual variables but also explanatory variable sets. Table 2.6 summarizes the results of the analysis of the relative importance of variables for the three food category models in this study.

Table 2.6. Relative importance of explanatory variables in three models (Average of all orders)

Variable sets	Fresh food Model			Processed food Model			Cooked food Model		
	SI	PI	IW	SI	PI	IW	SI	PI	IW
Socioeconomic	0.021	0.018	0.019	0.041	0.035	0.035	0.020	0.011	0.014
Product-relevant	0.080	0.054	0.064	0.100	0.056	0.072	0.038	0.022	0.028
Market-relevant	0.180	0.047	0.110	0.091	0.040	0.060	0.046	0.018	0.030
Habits variables	0.250	0.149	0.195	0.117	0.046	0.075	0.119	0.071	0.092

Note: SI: Simple Index; PI: Partial Index; IW: Importance Weight.

When looking at Table 2.6, we find that for shopping for fresh food, market-relevant attributes and shopping habit factors are still the main determinants, with the latter being slightly higher. Similar to Table 5, shopping habit factors are shown to be the most important determinant for cooked food, and importance is more evenly distributed across the variable sets in the case of processed food. In all cases, socioeconomic factors are the least important. Therefore, even though subtle changes were observed, the order of the relative impact of each variable set was almost consistent with the results reported in Table 2.5.

2.5 Discussion

Our empirical results show that consumers in China's second-tier city tend to shop for fresh food at stores with traditional formats and tend to shop for processed and cooked food at modern retail stores. This selective adoption of supermarkets has also been observed in many developing countries (Maruyama and Trung, 2007; Anand, 2009; Gorton et al., 2011; Dholakia et al., 2012).

Regarding the factors that impact consumers' choice of traditional or modern retail formats, first, we found that for fresh food, high-income consumers still do most of their shopping at traditional retail markets. Even though this finding is inconsistent with some previous studies, such as those done by Goldman et al. (2002) and Hino (2010), our findings are not surprising when considering that previous studies focused on consumer adoption of supermarkets based on many different product categories rather than only fresh food. Our result suggests that traditional retail formats, in some respects, are still attractive to high-income consumers for fresh food. In contrast, consumer income did not appear to be important in the choice between traditional and modern retail formats for processed food, indicating that modern retail formats have penetrated the market of low-income consumers in terms of processed food. These results are consistent with Goldman and Hino (2005).

With respect to product-relevant attributes, it is interesting to note that freshness was less important in determining consumers' choice of traditional versus modern retail format for fresh produce. In addition, price had a positive impact on consumers' choice of modern retail formats, which is contrary to our hypothesis but is consistent with Chamhuri and Batt (2009), and McEachern and Seaman (2005). These findings can be compared to the conclusion of an earlier study done in Hong Kong by Goldman et al. (1999), which suggested that there are no indications of possible future changes in the superiority of wet markets' prices and freshness. From our study, it appears that modern retail formats in China have made progress in regards to the freshness and price of produce. These subtle changes might be a result of businesses with modern retail formats making an effort to improve freshness and price of produce in order to increase consumer traffic. In particular, with the support of the Chinese government's "Farm-to-Supermarket Linking" policy, many large retailers have begun to procure fresh produce directly from farmers, which have reduced the number of intermediaries. Additionally, safety appears to be an important determinant when consumers shopping for both fresh and cooked food.

As hypothesized, in regards to market-relevant attributes, communication with salespeople was positively related to consumers' choice of traditional retail formats for all three product categories. This finding is consistent with previous studies such as those done by Anand (2009) and Hino (2010), which suggest that the familiarity and close relationship between consumers and small, traditional stores is an advantage for these stores. For modern supermarkets, a clean environment and superior comfort for shoppers were regarded as competitive advantages (Suryadarma et al., 2010); however, store atmosphere did not appear to be an important determinant for any of the three product categories in our study.

Regarding shopping habit factors, for fresh produce, all variables (i.e., one-stop shopping, bargaining, cooking frequency, shop early, shop late, shopping on foot, and shopping by car) showed significant effects. Interestingly, both consumers who usually shop before ten a.m. and those who usually shop after five p.m. chose to shop at traditional markets. For processed and cooked food, the variables of one-stop shopping and shopping on foot were significant. The results in relation to the variables of one-stop shopping and shopping on foot or shopping by car indicated the existence of two consumer groups basing on shopping patterns: one segment preferred one-stop shopping by car at modern-format stores, while the other preferred shopping on foot at traditional stores. Moreover, it is worthwhile to note that those consumers who preferred shopping at traditional stores on foot did not have this preference simply due to lack of car ownership. Further analysis reveals that among consumers who owned cars, about 41.7% chose to buy fresh produce on foot, the proportions being 26.7% and 28.5% for processed and cooked food, respectively. This finding indicates that future increases in the rate of car ownership will not necessarily drive consumers to switch to modern retail formats.

Analysis of relative importance shows that socioeconomic factors had a relatively small impact on consumers' choice to use traditional or modern retail formats, indicating that modern retail formats have penetrated the low-income segment in China's second-tier cities. This finding is in line with studies done in Hong Kong (Goldman et al., 2002) and with studies done on Israeli Arabs (Goldman and Hino, 2005). The cumulative impact of market-relevant and product-relevant attributes was relatively high in determining consumers' choice of traditional or modern retail formats, which is consistent with Hino (2010). However, the relative importance of market-relevant and product-relevant attributes was different, with the former exerting an impact twice as great as the latter for fresh food. The impact of shopping habit factors was relatively high, especially for fresh food and cooked food. Two different analysis methods on the relative importance of each variable set support the robustness of the results.

2.6 Summary and Conclusions

The phenomenon of supermarket diffusion in developing countries has generated considerable research attention in the past decades. Previous studies focused on this issue from many different perspectives. Researchers have examined the role of consumers in the retail modernization process and have emphasized the effects of some important factors, including geographic factors, socioeconomic factors, format-output factors, and cultural factors. The present study contributes to the literature by examining the role consumers' shopping habits have on choice of traditional or modern retail formats, with a particular interest in investigating the relative importance of shopping habits' impacts. The analysis is based on data collected through a consumer survey in one of the second-tier cities of China, which has been a focus area for international retailers in recent years.

The results show that consumers' food shopping habits do play an important role in their choice of traditional or modern retail formats. They have as great or even larger impact as market-relevant and product-relevant attributes do. The most significant implication of this finding is that understanding shopping habits that limit or enhance the adoption of supermarket formats will help modern retailers remove barriers or reinforce their strength. For consumers with shopping habits that might change with economic development and social transformation, modern retailers could possibly take measures to guide peoples' lifestyles. For example, regarding the preference of Chinese consumers to shop for fresh food in the early morning, some supermarkets open "morning markets," which has drawn many consumers. However, for other habits, such as cooking preparation or preference for bargaining (habits that are often shaped over a long period of time and are not easily changed in the short term), it is suggested that modern retailers take measures that follow rather than try to change these habits. The recent emergence of "community" or "neighborhood" supermarkets owned by Wal-Mart in China is a good example of market strategy that caters to consumers who prefer to shop mostly in nearby neighborhoods.

Chapter 3

Multiple store patronage: The effects of store characteristics

Abstract

This chapter aims to analysis the factors that influence consumers' multiple store patronage behavior in Chinese second-tier cities. It contributes to the literature on multiple store patronage in two important directions. First, it incorporates consumers' perceived importance of store characteristics into a framework for predicting multiple store patronage. Second, it examines the relationship between multiple store patronage and consumers' share of wallet at the primary store. The results show that multiple store patronage behavior is influenced by consumers' preference for promotion, household income, employment status, shopping frequency, and transportation means, while consumers' share of wallet at the primary store is influenced by consumers' preference for convenience, household income, age, family size, and total expenditure. The results indicate that multiple store patronage and share of wallet are not interdependent and the profiles of consumers in terms of them do not share many common characteristics.

3.1 Introduction

Multiple store patronage (which refers to the number of stores that consumers patronize) is an important aspect of consumer patronage behavior, which describes consumers' overall patronage pattern, and is closely associated with the potential for customer loyalty (Baltas et al., 2010; Luceri and Latusi, 2012; Mägi, 2003). While multiple store patronage has always been noticed, it has not received significant attention until recently. Baltas et al. (2010) first attempted to empirically address the structure of multiple store patronage by relating the number of stores that supermarket customers patronized to a set of customer characteristics. Luceri and Latusi (2012) extended the research by considering market structure factors such as the number of stores operating in the market and the variety of retail formats, in addition to consumer characteristics.

The present study aims to extend existing research by incorporating consumers' perceived importance of store characteristics in addition to customer characteristics, into a framework for predicting multiple store patronage. Consumers' perceived importance of store characteristics, such as price, promotion, and variety, are among the core motivational drivers of store choice and consumer loyalty (Prasad and Aryasri, 2011; Shukla and Babin, 2013). Little empirical evidence is available regarding whether these factors might help explain multiple store patronage, as Baltas et al. (2010, p. 47) suggested: "Of equal interest are the effects of a store's retail mix on the use of secondary supermarkets by its primary customers." This study attempts to fill in this gap by providing empirical evidence on the effect of these factors on multiple store patronage, by using data from a consumer survey.

Moreover, the number of stores patronized is only one facet of supermarket patronage. For example, two consumers may use the same number of stores but allocate shopping activity among them in a very different manner (Baltas et al., 2010; Luceri and Latusi, 2012). Therefore, this study also considers another important facet of store patronage, namely, the share of wallet at the primary store (refers to the share of customers' total category expenditure at their primary store) and conducted a preliminary analysis on whether multiple store patronage and the share of wallet at the primary store have common consumer characteristics.

Despite the importance of understanding consumers' store patronage for such an important market as China, researchers have only recently started to examine general patterns of store patronage (e.g., Uncles and Kwok, 2008, 2009), and investigation into the influencing factors of store patronage patterns of Chinese consumers is noticeably lacking. Consequently, our studies on the factors influencing consumers' multiple store patronage in China are both theoretically and practically significant.

3.2 Theoretical Framework and Hypotheses

The household production theory developed by Gary Becker (Becker, 1965) holds that households allocate resources to achieve maximum utility or satisfaction for the entire family. As time and money are the two most critical resources that households manage, a household's outputs are constrained by both income and available time (Urbany et al., 1996). This theory provides the theoretical basis for our study of multiple store patronage, as such behavior is part of the overall household production process, during which the benefits of shopping activity (e.g., better deals) are balanced against its costs (e.g., money and time) (Reardon and McCorkle, 2002).

The cost-benefit analysis is an appropriate framework within which to study multiple store patronage (Baltas et al., 2010; Luceri and Latusi, 2012), as visiting more stores not only produces benefits—such as better deals and variety—but also incurs costs (e.g., an increase in the effort needed to search for store-specific knowledge and also an increase of switching costs) (Rhee and Bell, 2002; Stigler, 1961). Thus, store patronage decisions are usually made after consumers make trade-offs between searching benefits and searching costs based on individual preferences. In principle, as suggested by Baltas et al. (2010), factors that increase consumers' searching benefits and reduce searching costs will motivate consumers to make more search efforts, while factors that increase consumers' searching costs and reduce search benefits will reduce consumers' incentives to make more search efforts. Following this logic, our framework has incorporated factors that might impact consumers' searching benefits and costs which further influence their patronage set size. Beyond the factors that included in previous studies (Baltas et al., 2010; Luceri and Latusi, 2012) such as consumers' characteristics and shopping pattern factors, we also incorporate consumers' perceived importance of store characteristics in to our framework. Consumers' perceived importance of store characteristics reflects consumer's preference, which might influence the tradeoff between benefits and costs of multiple store shopping and thus affect consumers' patronage set size.

3.2.1 Consumers' perceived importance of store characteristics

Numerous past studies have shown the importance of store characteristics in store choice behavior (Pan and Zinkhan, 2006). It is reasonable to postulate that consumers' perceived importance of store characteristics such as price, promotion, and assortment might also affect multiple store patronage. For example, previous studies found that loyal buyer were persons who were not interested in discounts or advertising (Carman, 1970). It seems intuitive that consumers who attach high value on price and promotion are likely to visit several stores in search of the lowest price, promotions or discounts (Popkowski Leszczyc and Timmermans, 1997; Urbany et al., 1996). Cost–benefit analysis implies that attaching high importance to price and promotion will enhances potential anticipated benefits of extra search in more stores. Evidences can be drawn from previous studies such as Mägi (2003) and Martos-Partal and Gonzalez-Benito (2013) which found that consumers' price and promotion sensitivity has a negative effect on store loyalty. We thus propose the following:

H1. Patronage set size will be positively associated with the importance that consumers attach to price and promotion.

Studies suggest that convenience (e.g., distance, convenience of parking, choice of products) might be a determinant of store loyalty (McGoldrick and Andre, 1997). It could be argued that convenience-oriented consumers are more likely to visit fewer stores because they are likely to value their time highly and will thus tend to reduce their shopping time by visiting fewer stores. In support of this assumption, East et al. (2000) found that store retention (i.e., maintaining a primary store for a long time) was strongly related to store accessibility and that approximately half of the reasons given for store retention related to store accessibility. We thus propose the following:

H2. Patronage set size will be negatively associated with the importance that consumers attach to convenience.

Consumers who highly value variety seem to visit more stores. The product choice literature suggests that variety-seeking behavior has negative effects on customer retention (Berne et al., 2001) and is an important moderator of the satisfaction-loyalty relationship (Homburg and Giering, 2001). The explanation lies in that variety seekers seem to have wants and needs that cannot be satisfied by a single brand and thus constantly switches among brands (Feinberg et al., 1992). In a similar vein with product choice behavior, this variety seeking behavior can also explain store switching behavior (Popkowski Leszczyc and Timmermans, 1997). Consumers who value product variety highly might not be easily satisfied by a single store and are thus more likely to visit more stores in order to meet their needs for variety. We thus propose the following:

H3. Patronage set size will be positively associated with the importance that consumers attach to product variety.

Besides the abovementioned store characteristics, other store characteristics such as merchandise quality, store environment, and good service which influence store patronage (Pan and Zinkhan, 2006) and store loyalty (Bloemer and de Ruyter, 1998), might also play an important role in multiple store patronage (Baltas et al., 2010). Thus, those factors are therefore included in our study.

3.2.2 Consumer sociodemographic factors

Several consumer sociodemographic factors have been examined by studies on store loyalty and multiple store patronage (Baltas et al., 2010; Luceri and Latusi, 2012; Popkowski Leszczyc and Timmermans, 1997; Popkowski Leszczyc et al., 2004). It may be assumed that consumers with higher time costs or little free time may focus on fewer stores, whereas consumers with more time or little money may visit more stores to find better deals. It would be worthwhile to note that the effect of subjective importance of store characteristics and socio-demographic variables might be independent, thus, incorporating both of two group factors in our framework means to examine their effects after controlling each other. Bear this in mind, the hypotheses are carefully formulated.

Consumers with higher income would be unlikely to shop around because higher income implies higher opportunity costs, and shopping around will incur greater costs for higher income consumers (Ratchford, 1982). As mentioned above, it should be note that, the effect of income on multiple store patronage might partially through an influence on perceptions of importance of store characteristics in the sense that high income leads to low importance attached to price or promotion (Fox and Hoch, 2005). Even so, for consumers with same level of importance of price or promotion sensitivity (controlling for the perceived-importance factors), the one with higher income are still more likely to reduce their patronage set size, since higher income usually indicates higher opportunity cost, and thus the time spent on shopping is a greater sacrifice for high income consumers. We thus propose the following:

H4. Patronage set size will be negatively associated with income.

Similar reasoning can be applied to the effect of employment status. As employed consumers usually face time constraints, which make them attach more value to their time, thus, tend to shop at fewer store to reduce their search efforts and save shopping time (Popkowski Leszczyc and Timmermans, 1997). We thus propose the following:

H5. Patronage set size will be negatively associated with employment.

Gender plays an important role in consumers' shopping behavior. Men and women shoppers have been found to differ in their perceptions towards shopping activities. Women are found to enjoy shopping activities more than men and are more willing to spend their time shopping around (Campbell, 1997). Thus, shopping around will bring greater benefits (or reduce perceived efforts) for women. Moreover, studies on gender differences find that men and women perceive time differently. Men face a higher order of time-related stress and usually are more time-conscious (Kellaris and Mantel, 1994). For example, Grewal et al. (2003) have found that men have less tolerance for waiting than do women. Accordingly, men are supposed to be more likely to focus on their primary store than women, evidence of which can be found in Luceri and Latusi (2012). We thus propose the following:

H6. Women have a wider patronage set size than men.

Age, another important factor in shopping behavior, has a two-sided effect on multiple store patronage. On one hand, physical limitations such as biological aging and cognitive decline will reduce the patronage set size of elderly consumers (Baltas et al., 2010; Lambert-Pandraud et al., 2005; Luceri and Latusi, 2012). On the other hand, elderly consumers have more free time to shop and tend to view shopping as a recreational activity (Westbrook and Black, 1985), thus increasing the possibility that they will visit more stores (Cooil et al., 2007; East et al., 2000; Fox and Hoch, 2005). Empirical studies have also provided mixed results. For instance, Carlson and Gieseke (1983) find that age is positively related with the number of stores visited; however, recent studies have shown evidence of a negative relationship between age and store patronage set size (Baltas et al., 2010; Luceri and Latusi, 2012). In consistent with previous study of Baltas et al. (2010), we take the former view—that physical limitations will reduce the patronage set size of elderly consumers—we propose the following:

H7. Patronage set size will be negatively associated with age.

Family size also influences consumers' patronage set size. However, it may exert opposite effects on the number of stores patronized. For one hand, it is argued that larger households may concentrate purchases on their main store to save time due to time-related pressure (e.g., East et al. 1997). For the other hand, it is also suggested that larger families also have more diverse product needs and a large basket of goods, and thus may not easily be satisfied by their primary store (Baltas et al., 2010). Moreover, it is suggested that usually large families face financial pressures that make them shop around to save money. We side with the latter views and expect a positive relationship between family size and multiple store patronage. We thus propose the following:

H8. Patronage set size will be positively associated with family size.

3.2.3 Shopping pattern factors

Consumer shopping pattern factors such as shopping frequency, expenditure, and transportation means might impact multiple store patronage.

Shopping frequency might also influence consumer' patronage set size. This is because consumers who shop relatively frequently are likely to come into contact with more stores which may increase the opportunity to switch stores, and thus enlarge number of store that consumers might patronize (East et al., 2000). In addition, shopping frequency is considered to have a negative association with opportunity cost of time because time-constrained consumers are more likely to control their shopping frequency (Galata et al., 1999). Thus, for those frequent shoppers who are less likely to control their shopping frequency might be with low opportunity costs and are likely to visit more stores. However, it worth noting that one could also reason the relationship between shopping frequency and patronage set size the other way round, that is to say, multiple store patronage leads to higher shopping frequency. As our hypothesis is based on the cost-benefit theory, and the latter point of view does not derive from this approach, we thus propose the following:

H9. Patronage set size will be positively associated with shopping frequency.

Consumers who spend more on grocery are expected to use more stores. It is intuitive that large expenditures make it more worthwhile to visit multiple stores in search of better prices and deals (Popkowski Leszczyc and Timmermans, 1997), because for large expenditures, the extra search costs incurred by visiting more stores may be offset by the larger benefits provided by better prices and deals (It worth noting that this doesn't necessarily mean that consumers with large grocery expenditure will attach higher importance on price or promotion). We thus propose the following:

H10. Patronage set size will be positively associated with grocery expenditure.

The recent study by Luceri and Latusi (2012) has emphasized the positive effect of number of stores in the market on multiple store patronage behavior, because the number of stores operating in the market determines the extent of store-switching opportunities which may influence the tradeoff between benefits and costs of multiple store patronage (Luceri and Latusi, 2012). In fact, earlier study by Enis and Paul (1970) has already figured out that high store loyalty by some consumers was due to the fact that they face constraints in transport time and access to alternative stores. East et al. (2000) suggested that such constraints may be expected to have lessened with wider ownership of cars (East et al., 2000). As ownership of cars will expand consumers' shopping scope and enables them to access to more alternative stores, therefore, it is reasonable to suppose that consumers who own a car, more precisely, those who usually shopping by car might have larger patronage set size than those who have travel restrictions. We thus propose the following:

H11. Patronage set size will increase if consumers shop mostly by car.

3.3 Data and Methodology

3.3.1 Data collection

The data in this study were collected using a self-administrated survey of individuals responsible for the majority of household grocery shopping in a second-tier city in China (second-tier cities are provincial capital cities or developed cities that are smaller than key cities such as Shanghai, Beijing, and Shenzhen). Although survey methods provide less accurate measures of purchase behavior than panel data, they have the advantage of incorporating information on other important aspects that are not available in panel data, such as attitudes, intentions, or explanations about past behavior (East et al., 1995). We selected Dalian, a second-tier city in China, for our study because second- and third-tier cities in the country are becoming a new battleground for retailers given their higher economic growth rates and increasing consumption power. International retailers such as Wal-Mart, Carrefour, Tesco, and Metro are shifting their attention to these emerging cities in China. Thus, studying consumers' store patronage in these markets will be of great practical value.

The survey was conducted in four urban districts of Dalian from November 9 to 30, 2011. We interviewed the person responsible for shopping in each household. Selection of the households to be interviewed was conducted using a system of stratification by residential areas. During the process of data collection, sub-district units (residential streets) in each district were identified, out of which five to ten streets were selected. From these, we selected three to five communities, and then selected households from each of these communities through simple random sampling. A total of 590 respondents participated in the survey, out of which 90 samples were excluded because some participant responses were not complete. Therefore, we were left with a final sample of 500. Additionally, samples that with missing values of importance variables as well as consumers who seldom patronage a supermarket in the past four weeks are not our research object, therefore, those samples are not included in the final analysis, we use 448 samples for analysis.

As the survey was conducted towards people who are in charge of household shopping, the sample is biased towards females (70 percent females and 30 percent males). This is reasonable because in China, the proportion of female shoppers who are responsible for family purchase is higher. This was also in line with the finding in the AC Nielsen survey conducted in seven cities of China (ACNielsen, 2001). Among the 448 samples, ages were evenly distributed across all groups between 20 and 65 years of age: 29.9 percent of the shoppers were between 20 and 29, 32.1 percent were between 30 and 39, 16.7 percent were between 40 and 49, and 21.2 percent were over 50. Respondents' average age was 38.1 years. Employed respondents account for about 66 percent of the sample. About 10.7 percent of the households had a monthly income of below 2000 RMB; nearly 62.4 percent of the households had a monthly income of between 2000 and 8000RMB; 15.0 percent had an income of between 8000 and 10 000 RMB; and 11.9 percent had an income of more than 10 000RMB. The average family size is 2.9, which is in good agreement with the 2010 census of Dalian (which is 2.63). Of the households, 31.2 percent owned a car. The above data is approximately according with the general population characteristics of Dalian city.

3.3.2 Measures

As different types of store may draw different types of loyal shoppers (Dunn and Wrigley, 1984), to exclude the effect of retail format, our study only focuses on supermarkets format. For measuring multiple store patronage, we ask respondents how many supermarket stores they visited in the last four weeks.

Regarding the measures of consumers' perceived importance of store characteristics, consumers were asked to report the importance they attached to a list of store characteristic factors when make store patronage decision. The survey included a list of store attributes that have been considered salient in store image and choice studies (see Lindquist, 1974–1975; Arnold et al., 1983; Pan and Zinkhan, 2006; Chang and Luan, 2010). They were measured with a 5-point Likert-type scale ranging from 1 ("not important at all") to 5 ("very important").

Given the strong correlation among consumers' perceived importance of store characteristics, this study began with a factorial analysis (basing on all the 500 samples). To determine its appropriateness, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were performed; the KMO score was .87, and the Bartlett's test of sphericity was significant ($p<.000$), supporting the appropriateness of the factor analysis. In using principal components with a varimax rotation, only attributes with factor loadings of 0.5 or greater were retained. The six factor solution was adopted and the result is shown in Table 3.1.

These six factors, which explain about 74 percent of the variability in the original data, are defined as follows: the first factor accounts for 35.2 percent of the variance, appears to be associated with “salespeople’s service,” “salespeople’s communication,” “fast check out,” and “return policy,” and is labeled SERVICE (SER). The second factor, MERCHANDISE QUALITY (QUA), is related to “freshness,” “quality,” and “safety.” The third factor, labeled STORE ENVIRONMENT (ENV), is associated with “store interior,” “store atmosphere,” and “store display.” “Accessibility,” “store familiarity,” and “goods searching,” comprising the fourth factor, related to time-saving

Table 3.1. Factor analysis of store characteristic items

	F1	F2	F3	F4	F5	F 6
SERVICE						
Salespeople’s service	0.78					
Salespeople’s communication	0.63					
Fast check out	0.53					
Return policy	0.71					
MERCHANDISE QUALITY						
Freshness		0.77				
Quality		0.90				
Safety		0.88				
STORE ENVIRONMENT						
Store interior			0.83			
Store atmosphere			0.84			
Store display			0.62			
CONVENIENCE						
Accessibility				0.66		
Store familiarity				0.73		
Goods searching				0.58		
ASSORTMENT						
Product width					0.71	
Product depth					0.71	
PROMOTION						
Promote often						0.60
Provide free bus						0.57
Member card						0.56
Eigenvalues	6.33	1.72	1.60	1.45	1.29	0.9[a]
Variance explained	35.2	9.5	8.8	8.1	7.2	5.0
Cronbach’s alpha	0.80	0.91	0.85	0.74	0.79	0.65

Note: [a] Although the eigenvalue of the promotion factor is slightly below 1, this study retained this factor because sales promotion is an important component of the retail marketing mix.

and is labeled CONVENIENCE (CON). The fifth factor is labeled ASSORTMENT (ASS), as it is primarily associated with "product width" and "product depth." Finally, the sixth factor, PROMOTION (PRO), is associated with "promote often," "provide free bus," and "member card." The internal consistency of each factor was measured by Cronbach's alpha, which fell within acceptable ranges for all factors (see Table 3.1). It is worth noting that price has a loading that below 0.5 in factor analyses. As it is an important factor in marketing and consumer behavior, however, PRICE (PRI) was taken forward to the next stage of analysis. During the analysis stage, the actual measure used for each multiple-item factor was the average of scores across items (Yavas and Babakus, 2009).

Among consumers' sociodemographic and shopping pattern factors, family size and age are numeric variables based on the values reported by the respondents; shopping frequency was a six-category polytomous variable; expenditure and income were five-category polytomous variable; gender (1 = male, 0 = female), employment status (1 = employed, 0 = others), and transportation means (1 = shopping by car, 0 = otherwise) was coded as dummy variables. The definitions of the explanatory variables corresponding to our hypotheses are described in Table 3.2. It is worth noting that multiple store patronage would be affected by how many stores are actually available for consumers within a certain distance (Baltas et al., 2010; East et al., 2000; Luceri and Latusi, 2012). Thus, to control for this effect, this study uses consumers' residential area as a proxy for number of stores that available to consumers. Descriptive statistics (means and standard deviations) and the correlations between the main variables are reported in Table 3.3. The variance inflation factors (VIF) for all the variables were estimated. The VIF statistics for the models are smaller than ten, indicating that the multicollinearity in the model is within the tolerated limit (Hair et al., 2010).

Table 3.2. Measures of explanatory variables

Variable	Description	Structure
PRI	Importance attached to price	5-point rating scale
QUA	Average of factor items	5-point rating scale
ENV	Average of factor items	5-point rating scale
CON	Average of factor items	5-point rating scale
PRO	Average of factor items	5-point rating scale
ASS	Average of factor items	5-point rating scale
SER	Average of factor items	5-point rating scale
GEN	Respondent' s gender	Dichotomous variable
AGE	Respondent's age	Metric variable
INC	Monthly household income	Five-category polytomous variable
EMP	Employment status	Dichotomous variable
FAM	Family size	Metric variable
FRE	Shopping frequency	Six-category polytomous variable
EXP	Proportion of monthly expenditure on groceries	Five-category polytomous variable
CAR	Shopping by car	Dichotomous variable
ARE1~4	Respondent's residential area	Dummy variables, with AREA4 the reference group

Table 3.3. Descriptive statistics and correlation matrix of main variables

	PRI	QUA	ENV	CON	PRO	ASS	SER	AGE	INC	FAM	EXP	FRE	CAR
PRI	1												
QUA	0.34**	1											
ENV	0.03	0.35**	1										
CON	0.22**	0.35**	0.40**	1									
PRO	0.35**	0.35**	0.26**	0.33**	1								
ASS	0.15**	0.43**	0.44**	0.36**	0.25**	1							
SER	0.30**	0.48**	0.46**	0.43**	0.39**	0.29**	1						
AGE	0.03	0.01	−0.04	−0.06	0.11	−0.14**	0.01	1					
INC	−0.14**	0.03	0.07	0.02	−0.19**	0.13**	0.01	−0.01	1				
FAM	0.04	−0.01	−0.01	−0.03	0.02	−0.12*	0.07	0.30**	0.20**				
EXP	0.06	0.06	0.02	−0.05	0.16**	−0.08	0.06	0.15**	−0.10*	0.16**	1		
FRE	0.08	−0.01	0.06	0.12*	0.08	0.11**	0.06	−0.03	0.17**	−0.05	0.01	1	
CAR	−0.15**	0.05	0.09	−0.02	−0.18**	0.08	0.00	−0.03	0.45**	0.10*	−0.08	0.08	1
Mean	3.53	4.41	3.30	3.67	3.41	3.70	3.61	38.13	2.85	2.90	2.49	2.28	0.21
S.D.	1.01	0.71	0.78	0.78	0.88	0.86	0.78	11.96	1.16	1.03	1.14	0.90	0.41

Note: ***p*<0.01, **p*<0.05

3.4 Empirical Results: Factors that Influence Multiple Store Patronage

It shows that 21 percent of the respondents usually visit one store; 43.5 percent of the respondents usually visit two stores; 25.9 percent of the respondents indicated that they usually visit three stores; and around 9.7 percent of the respondents usually visit more than three stores. To explore the factors that influence multiple store patronage behaviour, following Baltas et al. (2010) and Luceri and Latusi (2012), this study adopted a count-data model–the Poisson regression model because the dependent patronage set size variable is discrete and nonnegative. The dependent patronage store size variable takes a value of “0” if consumers patronize only one store, “1” if consumers patronize two stores, “2” for three stores, and so on. The variable follows a skewed distribution with the maximum value 6, and mainly concentrates in 0, 1 and 2. The mean and variance is approximately equal (Mean = 1.29; Variance = 1.06), which meets the requirement of adopting Poisson regression model. The results are reported in Table 3.4. The models is statistically significant (likelihood ratio chi-square = 44.01, degree of freedom = 18, $p < 0.01$).

The empirical results of the Poisson regression model show that, among consumers’ perceived importance of store characteristics, PRO (promotion) shows a positive and significant effect on patronage set size, indicating that consumers who value promotion highly are more likely to have a larger patronage set size. PRI (price), CON (convenience), and ASS (assortment) show no significant effects. Therefore, H1 is partially supported, and H2 and H3 are not supported. The importance attached to other store characteristics, such as merchandise quality, store environment, and service, all show no effects on patronage set size. Of the consumer demographic factors, INC (income) shows a negative and significant effect on patronage set size, supporting H4.

Table 3.4. Poisson regression coefficients predicting patronage set size

Variables	Expected sign	Coefficient.	Std. Error
Perceived importance of store characteristics			
PRI	H1 (+)	−0.045	0.052
QUA		0.002	0.082
ENV		−0.053	0.073
PRO	H1 (+)	0.122*	0.064
CON	H2 (−)	−0.024	0.070
ASS	H3 (−)	−0.022	0.066
SER		−0.072	0.076
Sociodemographic factors			
INC	H4 (−)	−0.100**	0.047
EMP	H5 (−)	0.196*	0.116
GEN	H6 (−)	0.014	0.104
AGE	H7 (−)	−0.005	0.005
FAM	H8 (+)	0.069	0.046
Shopping pattern factors			
FRE	H9 (+)	0.212***	0.051
EXP	H10 (+)	0.035	0.043
CAR	H11 (+)	0.336***	0.122
Control variables			
ARE1		−0.235	0.165
ARE2		−0.038	0.141
ARE3		0.113	0.115
CONS		0.060	0.436
Log likelihood		−513.77	
LR chi2(18)		44.01***	

Note: *, **, *** Significance at the 10%, 5% and 1% level, respectively

EMP (employment status) also shows a significant effect; however, the sign of the coefficient is contradicted with our expectation, therefore, H5 is not supported. The other variables, GEN (gender), AGE (age), and FAM (family size), are not significant, thus, H6, H7, and H8 are not supported. Looking at consumer shopping pattern variables, FRE (shopping frequency) shows a positive and significant effect on patronage set size, and CAR (shopping by car) shows a positive and significant effect on patronage set size, supporting H9 and H11; EXP (expenditure) is not significant, hence, H10 is not supported.

3.5 Share of Wallet at the Primary Store and Multiple Store Patronage

Despite the importance of identifying consumers with different patronage set sizes, previous studies found that the number of stores patronized is only one facet of supermarket patronage; for example, two consumers may use the same number of stores but may allocate shopping activity among them in a very different manner (Baltas et al., 2010; Luceri and Latusi, 2012). This study considers another important facet of store patronage, namely, the share of wallet at the primary store. The share of wallet at the primary store refers to the share of customers' total category expenditure at their primary store and is regarded as a critical link to the long-term profitability of retailers (East et al., 1995, 2000; Mägi, 2003). Although earlier studies provide evidence that the share of wallet at the primary store and patronage set size are negatively correlated (Dunn and Wrigley, 1984; East et al., 2000), it remains unknown as to whether the two forms of store patronage share common consumer characteristics. A consumer who spends a large share at the primary store might not necessarily shop at fewer stores (Cunningham, 1961). Therefore, this study preliminarily attempted to examine whether the two crucial aspects of store patronage share the same basis. Such information will help retailers capture a full and accurate picture of loyal consumers.

In our study, measurement of the share of wallet at the primary store is based on previous studies such as East et al. (1995, 2000). Consumers were asked to report the proportion of their total supermarket spending at the store they use most often. Respondents were asked to assign themselves to one of four levels of expenditure share (i.e., less than 50 percent, 50–80 percent, 81–95 percent, or more than 95 percent). The results show that 31.7 percent of respondents indicated that they spend less than 50 percent at their primary store; 46.4 percent of respondents indicated that they spend between 50 percent and 80 percent at their primary store; and 21.9 percent of respondents spent more than 80 percent of their expenditures at the primary store. To examine the factors that influence the share of wallet at the primary store, an ordered probit model was adopted. Consumers' expenditure share at the primary store was treated as individual observations, with $Y_{i,\ share}$ taking the value of "1" if consumers' expenditure at their primary store is less than 50 percent; "2" if consumers' expenditure at their primary store is between 50 percent and 81 percent; "3" if consumers' expenditure is between 81 percent and 95 percent; and "4" if consumers spend more than 95 percent of their total expenditure at their primary store.

In comparing the factors that influence the share of wallet at the primary store and multiple store patronage, an important aspect that requires consideration is the interdependence of these two behavior decisions. From an economic perspective, consumers always aim to maximize their benefits when making a series of decisions. Whether, and to what degree, these two variables correlate with each other, might be country/culture specific given the heterogeneity of consumer behavior. Thus, as a first step, the present study investigates whether the two variables are interdependent in the Chinese context.

In a discrete choice context, the analysis of correlated decisions is commonly addressed by extending the probit model to the estimation of more than one equation, leading to bivariate (i.e., two equations) or multivariate (i.e., three or more equations) probit models (Greene, 2003). An extension of a standard bivariate probit model when the number of categories of the dependent variables is greater than two is the bivariate ordered probit model (Sajaia, 2008). In our study, the interdependence of the share of wallet at the primary store and the choice of patronage set size is investigated by estimating a bivariate ordered probit model. The bivariate ordered probit model involves the estimation of two equations, specified as follows:

$$y^*_{i,\,share} = x'_i\beta + \varepsilon_i,$$
$$y_{i,\,share} = 0 \text{ if } -\infty < y^*_{i,\,share} \le 0$$
$$=1 \text{ if } 0 < y^*_{i,\,share} \le \mu_1$$
$$\cdots$$
$$=4 \text{ if } \mu_3 < y^*_{i,\,share} < +\infty$$

and

$$y^*_{i,\,set\ size} = z'_i\delta + u_i,$$
$$y_{i,\,share} = 0 \text{ if } -\infty < y^*_{i,\,set\ size} \le 0$$
$$=1 \text{ if } 0 < y^*_{i,\,set\ size} \le \alpha_1$$
$$\cdots$$
$$=4 \text{ if } \alpha_3 < y^*_{i,\,set\ size} < +\infty$$

where

$$(\varepsilon_i, u_i \mid x_i, z_i) \sim \quad 0), (1,\ \sigma_u^2),\ \rho\sigma_u]$$

and where $y^*_{i,\ share}$ and $y^*_{i,\ set\ size}$ are the ordered categorical variables representing individual observations that, in our context, refer to consumers' choice decisions relating to the share of wallet at the primary store and patronage set size defined above. β and δ are the vectors of coefficients associated with the x'_i and z'_i sets of explanatory covariates, and $[\varepsilon_i,\ u_i]$ are the random parts that have a bivariate standard normal distribution with correlation ρ. Therefore, the identification of a correlation coefficient ρ significantly different from zero indicates the existence of correlation between the two choices because the unobserved parts associated with $y^*_{i,\ share}$ and $y^*_{i,\ set\ size}$ are not independent (Greene, 2003). Interestingly, the result showed that ρ was insignificant in our context ($p = 0.64$), indicating that a degree of independence exists between the two variables.

Consequently, this study examined the factors that influenced the share of wallet at the primary store with an ordered probit model using Stata (version 11.0). To check the robustness of the results of the Poisson model for multiple store patronage, we also investigated the influencing factors of multiple store patronage using an ordered probit model. The results, which are almost the same, are reported in Table 3.5.

Table 3.5. Results of ordered probit models of multiple store patronage and share of wallet

Variables	Ordered probit model DV: patronage set size		Ordered probit model DV: share of wallet	
	Coefficient	S. E.	Coefficient	S. E.
Perceived importance of store characteristics				
PRI	–0.044	0.064	–0.087	0.065
QUA	0.036	0.101	0.161	0.104
ENV	–0.059	0.088	0.027	0.092
PRO	0.172**	0.076	–0.090	0.079
CON	–0.073	0.087	0.183**	0.090
ASS	–0.036	0.080	0.000	0.082
SER	–0.124	0.093	0.038	0.095
Sociodemographic factors				
INC	–0.135**	0.057	0.110*	0.058
EMP	0.248*	0.136	0.042	0.140
GEN	–0.004	0.128	–0.152	0.133
AGE	–0.009	0.006	–0.012**	0.006
FAM	0.119**	0.058	0.142**	0.059
Shopping pattern factors				
FRE	0.321***	0.067	0.080	0.068
EXP	0.039	0.052	0.237***	0.054
CAR	0.439***	0.156	0.074	0.158
Control variables				
ARE1	–0.294	0.189	0.257	0.191
ARE2	–0.030	0.170	–0.062	0.174
ARE3	0.179	0.140	–0.336**	0.146
/CUT1	–0.612	0.541	1.368	0.568
/CUT2	0.688	0.542	2.748	0.576
/CUT3	1.660	0.546	3.714	0.586
/CUT4	2.185	0.552		
/CUT5	2.789	0.575		
/CUT6	2.907	0.585		
Log likelihood	–493.04		–420.93	
LR chi2(18)	56.79***		62.25***	

Note: *, **, *** Significance at the 10%, 5% and 1% level, respectively

The results of the ordered probit model show that the share of wallet at the primary store is related to consumers' perceived importance of convenience, income, age, family size, and grocery expenditure. A comparison of the factors that influence the share of wallet at the primary store and patronage set size shows that only one factor, namely, income, is correlated with the two forms of patronage with an inverse correlation. Several factors are correlated with only one form of patronage. These results suggest that those consumers who spend a high share of wallet at the primary store and those consumers who patronize few stores do not share many common characteristics. In other words, a consumer who spends a high share of wallet at the primary store may not necessarily patronize fewer stores. For example, when holding all other variables constant, consumers who attach higher importance to convenience are more likely to spend a large share at the primary store than those who do not, but no significant difference may exist between their patronage set sizes. In a similar vein, elder consumers tend to spend less at their primary store than young consumers, but they are unlikely to visit more stores than young consumers.

3.6 Discussion and Conclusion

Although multiple store patronage is an important aspect of store patronage, it has not received significant attention until recently. The present study contributes to the literature on multiple store patronage by incorporating consumers' perceived importance of store characteristics into a framework for predicting multiple store patronage. The present study also examines the relationship between, and compares the factors influencing, multiple store patronage and another important facet of store patronage, namely, share of wallet at the primary store.

In agreement with our expectations, consumers who attach higher importance to promotion are more likely to patronize more stores than other consumers. However, price and product variety did not show significant effects on consumer' patronage set size. The reasons might be twofold. One reason is that possible objective constraints, such as transport time and distance to secondary supermarkets, reduce the possibility for consumers to visit more stores even if they perceive price and product variety as important factors. The more likely reason, though, is that seriously homogeneous product assortment and price strategy among Chinese supermarkets diminish consumers' incentives to look for lower prices and heterogeneous products.

As hypothesized in H4, income is negatively associated with patronage set size. This result is consistent with the result of Baltas et al. (2010). Shopping frequency exerts a positive effect on patronage set size, as expected in H9. The effect of shopping frequency on patronage set size was not significant in Baltas et al. (2010); in contrast, this paper provides empirical results consistent with the cost-benefit approach. In addition, consistent with H11, shopping by car exerts a positive effect on patronage set size, suggesting that high-outreach consumers had a greater tendency to shop at stores outside their immediate area. However, contrary to our expectation in H5, being employed exerts a positive effect on patronage set size. This result is different from that of Baltas et al. (2010). The opposite effect of employment status on patronage set size might be due to the reason that employed consumers have access to a larger number of stores during their journey from work, thus increasing the probability that they visit different stores (Dunn and Wrigley, 1984).

Gender had no significant effect, which is consistent with the result of Baltas et al. (2010). The reason is that women's shopping times have shrunk as they have increased their presence in the workforce, and they now work as long as men (this phenomenon is particularly true in the current Chinese context). Thus, women are beginning to concentrate on fewer stores to save time, instead of shopping at several different stores for more bargains.

Age and family size did not have a significant effect on patronage set size in our study. These results are consistent with Luceri and Latusi (2012), but are not in line with Baltas et al. (2010), who found that patronage set size decreases with age but increases with family size. In fact, the effects of age and family size on patronage set size have been controversial in previous studies. Regarding age, Baltas et al. (2010) suggested that increased physical and mental effort restrains senior consumers from shopping at several different stores, whereas some researchers suggested that older people may have more time to shop at several different stores (e.g., East et al., 2000; Fox and Hoch, 2005; Mägi, 1999). The insignificance of family size is not surprising because two opposite views exist concerning its effect, in previous studies. One view suggests that financial pressure facing larger households, and more diverse product needs, induces large households to visit more stores (Baltas et al., 2010). The other suggests that large households suffer from time constraints, making them more loyal (e.g., East et al., 1997; McGoldrick and Andre, 1997). Thus, as Luceri and Latusi (2012) pointed out, the insignificance of age and family size might be due to the reason that possible compensatory effects offset each other.

The same logic can be applied to explain the insignificance of expenditure. On the one hand, more grocery spending tends to enlarge the patronage set size because heavy spenders tend to search for better prices and deals (Mägi, 2003; Popkowski Leszczyc and Timmermans, 1997). On the other hand, higher expenditure is indicative of greater family commitments that result in store loyalty (Baltas et al., 2010; McGoldrick and Andre, 1997).

In the second stage of analysis, the adoption of a bivariate ordered probit model and comparison of the factors influencing multiple store patronage and the share of wallet at the primary store show a degree of independence between the two constructs. To be specific, consumers' multiple store patronage behavior is influenced by perceived importance of promotion, income, employment status, family size, shopping frequency, and transportation means, while consumers' share of wallet at the primary store is influenced by perceived importance of convenience, income, age, family size, and total expenditure. In general, in terms of these constructs, consumer profiles do not share many common characteristics, which is a very interesting and revealing observation.

Chapter 4

Overcoming the Liability of Foreignness in International Retailing: Evidence from China

Abstract

Foreign firms usually suffer the "liability of foreignness" (LOF), which refers to additional costs incurred by a firm when conducting business overseas whereas local firms do not incur. In this chapter, the study proposes a new construct, namely, consumers' perceived importance of supporting domestic retailers (PISD), and examines whether PISD represents an LOF for foreign retailers in the international retailing context. Subsequently, this study identifies firm-specific advantages of foreign retailers and investigates whether these advantages can overcome the LOF. The results show that PISD has a significant negative effect on consumers' choice of foreign retail stores. To overcome this LOF, the results indicate that foreign retailers should emphasize value-for-money store attributes by increasing product quality and running effective promotional campaigns, rather than increase their investment in hedonic attributes such as services (e.g., salespeople's service and fast check out) or social responsibility.

4.1 Introduction

Foreign firms often bear additional costs when conducting business abroad (Hymer, 1976), which was later referred to the liability of foreignness (LOF), described as "all additional costs a firm operating in a market overseas incurs that a local firm would not incur" (Zaheer, 1995, pp. 342–343). The LOF can arise from various sources such as spatial distance, unfamiliarity with the local environment, or the discriminatory behavior of local stakeholders (Zaheer, 1995). Eden and Miller (2001) categorize the LOF into three kinds of hazards: unfamiliarity hazards, caused by lack of international experience and unfamiliarity with local business; relational hazards, caused by lack of trust; and discrimination hazards, caused by nationalistic tendencies and the host government's, suppliers', or consumers' perception that a firm lacks local legitimacy (Eden and Miller, 2001; Denk et al., 2012).

Studies have suggested that the additional costs of foreign firms can be overcome by the advantages they possess (Zaheer, 1995; Nachum, 2003). Several studies have examined how foreign firms respond to the challenge of the LOF and have suggested ways of overcoming it, such as entry mode choices (Eden and Miller, 2001; Chen, 2006; Chen et al., 2006), incorporating local executives in decision making (Mezias, 2002a), learning about and adapting to the local environment (Petersen and Pedersen, 2002), providing greater product variety and being affiliated with a business group (Elango, 2009), and acquiring market-based resources in the host location such as skilled employees and a better supplier base (Barnard, 2010). In general, these studies are mainly concerned with the unfamiliar and relational hazards that appear to decline over time as a foreign firm acquires local market knowledge and gains experience in a particular location (Miller and Parkhe, 2002). However, social costs accrued as a result of discriminatory behavior by local stakeholders are argued to sustain over time and become a major concern for multinational corporations (Hymer, 1976; Miller and Parkhe, 2002). In this study, we focus on discrimination hazards that foreign firms would suffer from and examine possible ways to overcome this kind of LOF.

Valuable reference for studying discrimination hazards of LOF was provided by some prior studies. Newburry et al. (2006) examine the impact of firms' foreignness on attracting local employees. Yildiz and Fey (2012) reconsider the relationships among legitimacy, local isomorphism, and overcoming the LOF, suggesting that there are alternative ways other than local isomorphism for multinational corporations (MNCs) to gain legitimacy from local institutional actors. More recently, Moeller et al. (2013) offered a framework to examine the impact of country-of-origin on the acceptance into a host's country environment by constituents such as vendors, suppliers, and distributors.

The present study differs from previous studies by focusing on the discrimination hazard of LOF on consumers' level (compare to employees, suppliers, and vendors in previous studies), while considering how individual consumer-perception influences their shopping behavior towards foreign firms. We define a new concept as perceived importance of supporting domestic firms (PISD), which expresses consumers' willingness or desire to support domestic firms. We first examine whether PISD has a significant effect on consumers' actual shopping behavior; if yes, we investigate what kind, if any, firm-specific advantages of foreign firms (often manifested as retail mix variables such as price, quality, assortment, and so on) can overcome discrimination by consumers.

In particular, we report the empirical results concerning the effect of PISD in international retailing, which, as far as we know, has not attracted enough attention in the extant literature of LOF. Internationalization of retail firms has received an increasing attention from researchers in recent years, not only retail firms from developed countries (e.g., Elg et al., 2008), but also those of the emerging market firms (e.g., Bianchi, 2009; Eren-Erdogmus et al., 2010). The power of choosing the international retailing setting for studying LOF comes from the fact that the assessment of the legitimacy of the firm is made by individuals, and therefore provides the opportunity to get a fine-grained (and perhaps psychological) perspective of the functioning of LOF. We focus on the Chinese retailing industry, specifically, grocery and food retailing, because China's rapid economic growth and increasing consumption power has made it one of the most attractive markets for international grocery and food retailers. Retailers, such as Wal-Mart, Carrefour, and Tesco are increasingly seeking international expansion and competing in Chinese retailing market. Foreign retailers in China must account for the high level of national pride among Chinese consumers as they are more supportive towards local rather than foreign products and services (Hsu and Nien, 2008). Hence, foreign retailers should conduct detailed market and consumer research, if they aim to enter the Chinese market and promote their products and services. Thus, investigating whether consumers' PISD is reflective in actual store patronage behavior will be both theoretically and practically significant.

This study adds to the literature of LOF in three ways. First, to the best of our knowledge, this is the first study that attempts to examine LOF within an international retailing context. Second, we provide empirical evidence regarding the effect of PISD on consumers' actual store patronage behavior. In comparison to many previous studies that adopted firm-level data (Mezias, 2002; Miller and Parkhe, 2002), focusing on consumers' behavior will provide a fine-grained perspective of the functioning of the LOF, and help open the 'black box' of it. Third, based on empirical evidence, our study proposes a possible way of overcoming the discrimination hazard of LOF in Chinese market.

4.2 Institutional Theory and Construct Development

4.2.1 Institutional Theory

Institutional theory is increasingly common in LOF studies (Yildiz and Fey, 2012). A key proposition of the theory is that within a given socially constructed value or belief system, a firm will seek 'legitimacy' in order to gain the support of social actors such as suppliers, consumers, citizens, and charities (Suchman, 1995). Based on its resources and profit generating activities, the firm achieves pragmatic legitimacy, which emphasizes the firm's skill in manufacturing and delivering the product or service. In the retailing context, supermarkets need to improve retail mix elements such as a wide product range, good quality, and lower price in order to gain pragmatic legitimacy (Zarkada-Fraser and Fraser, 2002).

Moreover, an organization must also aspire to moral legitimacy, which rests not on judgments about whether the evaluator can benefit from a given activity but rather whether the activity is 'the right thing to do' (Suchman, 1995). Moral legitimacy is usually associated with societal norms such as family, community, religion, and nation. The achievement of moral legitimacy involves firms' giving back to society, which is usually indicative of corporate social responsibility (CSR) (Handelman and Arnold, 1999). CSR refers to firms' responsibility to be concerned about the welfare of society. Luo et al. (2002) suggested that legitimacy can be improved through a firm's responsibility and contribution to the social needs or concern. For example, Wal-Mart engages in a number of symbolic organizational practices and devotes considerable effort to get more publicity for their charitable, environmental, and community projects (Handelman and Arnold, 1999).

4.2.2 Discrimination hazard of LOF

The process of legitimation is complex especially in the case of foreign firms as they often face the challenge of establishing and maintaining legitimacy in the host environments (Kostova and Zaheer, 1999). An important reason is associated with their country-of-origin, which is one of the critical dimensions of moral legitimacy (Zarkada-Fraser and Fraser, 2002). Social actors such as consumers in the host countries tend to perceive foreign firms lack of legitimacy due to their 'foreign' identity, which result in consumers' bias. In relation to this, Shimp and Sharma (1987) developed the concept of consumer ethnocentrism (CE), referring to 'consumers' beliefs about the appropriateness and morality of purchasing foreign products', which is generated by a perceived or actual threat of foreign firms to the physical, social, or economic health of the domestic economy. Ethnocentric consumers tend to avoid buying foreign products because they believe that 'buy foreign' behavior damage the domestic economy (Shimp and Sharma, 1987). Sharma et al. (1995) developed a consumer ethnocentric tendencies scale (CETSCALE), which was widely reexamined and used by researchers later on (e.g. Ruyter et al. 1998; Huddleston et al. 2001; Hsu and Nien, 2008; Josiassen et al. 2011; Bi et al. 2012). This consumer bias, even though product and country specific, is generally proved to have negative effect on consumers' perception, attitude or purchase intention towards foreign products or services (see review of Shankarmahesh, 2006), and thus can be regarded as a kind of discrimination hazard that foreign firms have to face.

4.2.3 PISD: Consumers' perceived importance of supporting domestic retailers

In this study, we suggest an extension of Shimp and Sharma's (1987) idea and an empirical test of the effect of a similar construct on consumer behavior. The construct is defined as the perceived importance of supporting domestic retailers (PISD). PISD, much like CE, is a reflection of consumers' bias towards foreign firms, which originates from consumers' perceptions that foreign firms lack moral legitimacy. The definition of PISD differs from CE in that CETSCALE has been weighted heavily toward consumers' beliefs about buying foreign products for national people, whereas PISD is an individual-specific construct. For example, many items of the scale that measures CE (see Shimp and Sharma, 1987 for detail,) are designed as 'American people should always…'; 'We should purchase…'; "American consumers who…" In contrast, PISD leans more heavily on individual desire or willingness to support domestic retailers. To put it simply, even if an individual strongly agrees that it is not right for locals to purchase foreign products or visit foreign retail stores, it may not influence his or her actual store choice behavior, when no desire or willingness to support domestic retailers exists. The desire or willingness to support domestic retailers is a perception construct related to the importance that the individual attaches to the conduct of supporting domestic retailers. Therefore, PISD, indicative of a desire or willingness to support domestic retailers, is an individual-level construct that is believed to be closer to the behavioral intention and behavior decisions than the CE, and hence, is likely to be a better predictor of those decisions.

It is worth noting that PISD is similar to the concept of 'involvement,' which has been found to be an important issue in social psychology and the ways consumers purchase a product (e.g., Celsi and Olson, 1988; Greenwald and Keavitt, 1984). In previous studies, involvement is defined as the individual's perceived importance of the product or the act, just as PISD is defined as the perceived importance of supporting domestic retailers in this study. Studies on involvement have found that perceived importance of an object, situation, or action influences the individual's behavioral decisions towards that object, situation, or action (Robin et al., 1996). The similarity of the PISD with the concept of involvement provides support for the necessity of examining the effect of PISD on consumers' shopping behavior.

4.2.4 PISD and LOF

As aforementioned, LOF can arise from various sources which can be categorized into three kinds of hazards: unfamiliarity hazards, caused by lack of international experience and unfamiliarity with local business; relational hazards, caused by lack of trust; and discrimination hazards, caused by nationalistic tendencies and the host government's, suppliers', or consumers' perception that a firm lacks local legitimacy (Eden and Miller, 2001; Denk et al., 2012). PISD, introduced in this study, is indicative of the desire or willingness of consumers to support domestic retailers, and it reflects degree of consumer involvement in supporting domestic retailers. In nature, it shares the same root with CE, that originating from consumers' perception that foreign firms are lack of legitimacy. Thus, like CE, PISD is also one kind of discrimination hazards that might lead to LOF for foreign retailers.

In this study, we examine whether PISD represents a LOF and how foreign retailers operating in the Chinese market can cope with it. Previous studies, concerning the determinants of LOF effects, used performance measures (Zaheer, 1995; Sethi and Guisinger, 2002; Elango, 2009), the survival and exit rates of multinational corporations (Zaheer, 1995; Zaheer and Mosakowski, 1997), or the probability of lawsuits (Mezias, 2002a) as dependent variables. In contrast, our study uses consumers' patronage behavior to measure outcomes. Moreover, store-patronage literature has focused on the role of perceived performance of stores in the choice set on various store choice criteria (e.g., Arnold et al., 1983; Arnold et al., 1996; Handelman and Arnold, 1999). A few related studies highlight the importance of identifying consumers according to the importance they place on the various store-choice-criteria (Maruyama and Trung, 2007). The importance rating of store-choice-criteria reflects consumers' preference that helps retailers segment consumers. Thus, this study focuses on the effects of consumers' importance rating of store-choice-criteria and PISD on their decision to select retail stores.

4.3 Framework and Hypotheses Development

The theories of the multinational enterprises (MNEs) or foreign direct investments (FDI) deal with the questions, why MNEs or FDI exist and why they invest abroad. One of the theories is the specific-advantage hypothesis (Caves, 1974, 1996; Koutsoyiannis, 1982; Markusen, 1995; Dunning, 2000), which argued that the existence of MNEs hinges on the nature of the specific advantage of the firm, which would compensate for the disadvantages faced by foreign firms (Koutsoyiannis,1982). In the international retailing context, the advantages of foreign retailers in transitional economy are usually related to the firm's internal managerial and organizational capabilities (Alexander and Myers, 2000). The former refers to the experience, attitude and leadership qualities of managers that participate in internationalization process, while the latter corresponds to retail mix elements such as the uniqueness of products, merchandise assortment, retail concept, and competitive pricing (Bianchi, 2009). The retail mix elements deliver various kinds of benefits to consumers and are important factors that influence consumers' store patronage behavior (Pan and Zinkhan, 2006).

Furthermore, recent studies found that firm's CSR performance is also influential in consumers' purchasing behavior. Consumers tend to show positive attitudes towards the more CSR-motivated companies (Gupta and Pirsch, 2008; Megicks et al., 2008; Reimann, et al., 2012). Luo et al. (2002) suggest that foreign firms might be able to improve their moral legitimacy by 'doing good' through CSR activities (Luo et al., 2002). Thus, it would be reasonable to expect that doing or improving CSR activities will have positive impact on consumers' perception or facilitate consumers' choice of foreign retailers. Here, what we are more concerned about is that, whether these factors will moderate the relationship between PISD and consumers' choice of foreign and domestic retailers.

Basing on the above arguments, we build our framework, which is shown in Fig.1. The retail mix factors in Fig.4.1 are related to the achievement of pragmatic legitimacy of retailers, and CSR is a factor closely related to the improvement of moral legitimacy. These are two important dimensions of legitimacy in the institutionary theory. In this study, we hypothesize and test about whether it is possible for foreign retailers to overcome the LOF of PISD by achieving pragmatic legitimacy and improving moral legitimacy, which, in empirical analysis, is manifested as the moderating effect of retrial mix and CSR factors on the relationship between PISD and consumers' choice of foreign and domestic retailers.

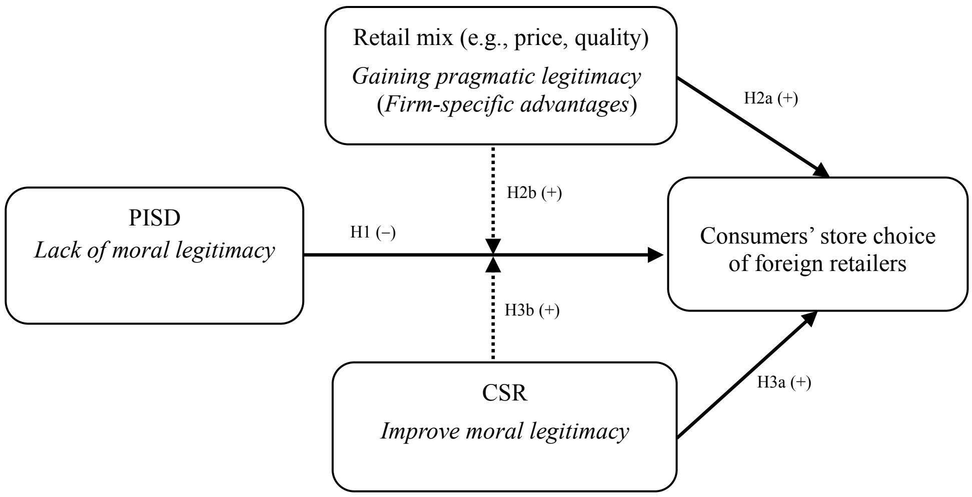

Fig.4.1 The effect of the firm-specific advantage in minimizing LOF in the international retailing context

4.3.1 The effect of PISD

The relationships postulated in CE (consumer ethnocentrism) models are mainly between ethnocentric tendency and consumers' product evaluation, attitude, and general impression towards foreign products, or purchase intention to buy domestic products and services (see review of Shankarmahesh, 2006). Prior evidence suggests that these kinds of linkages are significant and substantial in a variety of settings (e.g., Han, 1988;

Herche, 1992; Huddleston et al., 2001; Klein et al., 1998). While these studies are certainly valuable, there are few studies investigating the impact of CE on *actual* purchase decisions, despite the fact that the firms planning to internationalize are willing to consider more actual consumer behavior rather than attitudinal responses in developing marketing strategies and promotional activities (Bi et al., 2012). With that in mind, this paper investigates the impact of PISD, which is indicative of a desire or willingness to support domestic retailers, on consumers' *actual* store choice behavior. Since there are several factors determining consumers' store choice, even if consumers have higher level of PISD, it is not evident that they will be regular customers at domestic retail stores. Thus, empirical analysis is necessary to test the hypothesis that PISD would have an effect on consumers' *actual* choice between foreign retail stores and domestic retail stores.

H1. Consumers with higher PISD are more likely to shop at domestic retail stores.

4.3.2 The moderating effects of retail mix

Previous studies on store patronage revealed that retail mix elements (e.g., price, quality, service, and so on) are critical factors that influence consumers' store patronage decision (see review of Pan and Zinkhan, 2006).

When comparing foreign retailers with domestic retailers in a transition economy such as China, we expect that the former are superior with respect to retail mix performance. This expectation can be derived from the previous literature on international business theory. There is a long tradition of work suggesting that MNCs are technologically superior to domestic firms, especially in a developing country setting. Compared with domestic retailers in transition economies, in general, the source of competitive advantage exploited by multinational retailers is related to the firm's internal organizational and managerial capabilities (Alexander and Myers, 2000). Furthermore, compared with domestic retailers, foreign retailers are more likely to have access to the required financial and human resources to leverage competitiveness. With larger economies of scale and scope, multinational firms can gain market share faster in transition economies (Samiee and Roth, 1992). Foreign retailers are more likely to succeed in winning a larger market share, through the use of the latest modes of communications and promotions. In contrast, domestic retailers in developing countries such as China mostly are individual stores, that unable to enjoy economies of scale, lack advanced management skills and rich operating experience, resulting in inferior store output. Thus, as per Corstjens and Lal (2012), consumers in developing countries usually perceive foreign retailers as premium players.

Evidence in support of the above arguments is available. For instance, researchers at the China Retail Research Center did a nationwide study on supermarket consumers' satisfaction. Based on 5028 samples from China's top-20 supermarket chain stores, they found that Chinese retailers lag behind foreign retailers in terms of all store attributes including retailer reputation, shopping convenience, shopping environment, store facilities, personnel service, merchandise, price perception, check out, store policy, and after-sales service (Wang et al., 2006). Similarly, Chang and Luan (2010) compared consumers' perceptions of a foreign retailer (Carrefour) with a Chinese domestic retailer (Beijing Hualian) and found that the former outperformed the latter in all store image attributes except "service attitude of staff" and "reputation." If this is true, then we expect to observe:

H2a. Consumers who attach more importance on retail mix are more likely to shop at foreign retailers.

It is conceivable that a consumer choose to shop at foreign retail stores because foreign retailers more closely serve their economic interests (e.g., lower price, better quality, and better service) even if they are with high level of PISD (Yildiz and Fey, 2012). Piron (2002) found that consumers engage in outshopping behavior, travelling beyond one's own urban or national market to purchase goods, primarily for the economic benefits (e.g., lower prices), even if they are ethnocentric. Further, Wang and Chen (2004) have found that the impact of consumer ethnocentrism on consumers' willingness to support domestic products will be weaker for consumers who perceive domestic products to be of low quality than those who consider domestic products to be of high quality. Then we expect to observe:

H2b. In a developing country, such as China, the impact that PISD has on consumer choice of foreign retailers versus domestic retailers is moderated by the perceived importance of retail mix.

4.3.3 The moderating effect of CSR

The effect of PISD on consumers' choice of foreign versus domestic retailers might also be moderated by the CSR factor. As Luo et al. (2002) suggested, legitimacy can be improved through a firm's responsibility and contribution to the social needs or concern. Previous studies have shown that a socially responsible organization will be rewarded in several ways (Gupta and Pirsch, 2008; Reimann et al., 2012). For example, consumers tend to show positive attitudes towards the more CSR-motivated companies (Gupta and Pirsch, 2008; Megicks et al., 2008).

When comparing CSR performance of Chinese domestic retailers and foreign retailers, we speculate that the latter would be superior. This is because there are several conditions for a firm to act in socially responsible ways (Campbell, 2007). The extant literature suggests that firms with weak financial performance are less likely to engage in CSR behavior because they have fewer resources to spare than do more profitable firms (Campbell, 2007). In addition, a company's CSR behavior is associated with institutional factors. Conventionally, it is assumed that CSR is popular in developed countries because in developing countries the institutions, standards, and appeals systems that inspire CSR are relatively weak (Kemp, 2001). These arguments allow us to speculate that global companies tend to be more likely to engage in CSR behavior because they possess stronger financial resources, which make them capable of doing CSR; and a longer history of CSR operating experience, which makes them more likely to include CSR as an inherent part of their business practice. Furthermore, in many countries, MNEs are expected to do more than local companies towards building their reputation and goodwill, supporting local communities, protecting the environment, and so on (Kostova and Zaheer, 1999).

In support of this assumption, studies on CSR communication in domestic and global companies in China have shown that the latter are more likely to institutionalize a CSR commitment through formal company policies and report CSR as a global practice (Tang and Li, 2009). In addition, foreign companies possess superior marketing skills and are more capable of promoting their CSR activities, to build a responsible corporate image. For instance, many global companies adapt to China's local environment through CSR activities tailored to the Chinese context, such as emphasizing their donations to the 'Hope Project' and other distinctively Chinese CSR themes (Tang and Li, 2009).On the other hand, the CSR concept is still in its early stages in developing countries such as China (Gao, 2009). Taking the major food retailers in China as an example, foreign retailers such as Wal-Mart and Carrefour, both list CSR as a corporate value on their websites, reporting and updating the CSR activities they have engaged in. By contrast, few Chinese domestic retailers espouse corporate values related to CSR. Thus, we expect to observe:

H3a. Consumers who attach more importance to CSR are more likely to shop at foreign retailers.

H3b. In a developing country, such as China, the impact that PISD has on consumer choice of foreign retailers versus domestic retailers is moderated by the perceived importance of CSR.

4.4 Data and Methodology

4.4.1 Data collection

Data in this study were collected by means of a self-administrated survey in Dalian city of China. Dalian is a coastal city in Northeast China, across the Yellow Sea from the Korean peninsula. According to the 2010 census, the total population of Dalian was 6.6 million. The urban citizens' per capita disposable income in 2010 was 21,293 Yuan. The city emerged as a shipbuilding industry powerhouse. In addition to shipbuilding, the main industries in Dalian include electronics, machine manufacturing, oil refining, and petrochemicals. The city has a successful IT center with many multinational corporations opening branches in the area. Intel's multi-billion investment in a chip factory has given a huge boost to Dalian's image. As one of the 14 coastal cities first opened to the foreign market in 1984, Dalian has always been an attractive market to international retailers. Over the last decade, large retailers such as Wal-Mart (USA), Carrefour (France), Metro (Germany), and recently IKEA (Sweden) have opened branches to tap into the city's ever expanding potential. Until 2011, Wal-Mart had four stores (not including the purchased Trust-mart store), Carrefour had three, Tesco had four, and Metro had one store in the urban area of Dalian. Over the last decade, international retailers have played an important role in Dalian's supermarket sector.

Therefore, Dalian is an appropriate region for studying the role of PISD and the moderating effect of retail mix and CSR factors on consumers’ choice of foreign and domestic retailers.

The survey was conducted in four urban districts of Dalian during November 9–30, 2011. To avoid potential selection bias from individual sampling, such as interviewing consumers by intercepting them when they leave the retail store, the selection of the households to be interviewed was made through a system of stratification by residential areas. In the process of data collection, sub-district units (residential streets) in each district were identified, of which 5–10 streets were selected. From these, 3–5 communities were selected, and households were selected from each community by simple random sampling. University graduate students were hired and trained to conduct this survey. The person responsible for most of the household shopping was asked to answer the questions. The respondents were asked to fill the questionnaire on their own on the spot. Each survey respondent was given a gift as a reward for participating in the survey. A total of 590 respondents participated in the survey, of which 90 samples were excluded due to incomplete responses, and so we were left with a final sample of 500.

As the survey was focused on people in charge of household shopping, the sample is biased towards females (70 percent females and 30 percent males). This is reasonable because in China, female shoppers are more likely to be responsible for the family’s grocery shopping. This was also in line with the finding in the AC Nielsen survey conducted in seven cities in China (ACNielsen, 2001). Respondents were between 20 and 65 years old; those between 20 and 29 accounted for 29.8% of the sample; 31.4% were between 30 and 39; respondents between 40 and 49 accounted for 17.0%; and 21.8% were over 50. Respondents earning a monthly income of 2,000–8,000 RMB

(Chinese yuan), 8,000–10,000RMB, and more than (>) 10,000RMB accounted for 62%, 15%, and 11.8% of the sample, respectively.

4.4.2 Measures

To measure store choice behavior, we followed Arnold et al. (1983), Arnold et al. (1996), and Maruyama and Trung (2010) by asking respondents; "Which store do you shop at most often?" Retailer options included domestic and foreign retailers. For the purpose of this paper, we define foreign retailers based on the ownership of the retailer brand, since that is how it is likely to be perceived by consumers in a host country.

The questionnaire surveyed three factors influencing consumers' store choice decisions: retail mix factors, the CSR factor, and PISD.

Measures of retail mix. The measures of retail mix variables are the same with the measures of store characteristics in Chapter 3. As aforementioned in Chapter 3, we have included a list of store attributes (see Table 3.1) based on studies such as Lindquist (1974-75), Arnold et al. (1983), Pan and Zinkhan (2006), and Chang and Luan (2010). All the items were measured on a scale from 1 to 5, anchored by "not important at all" to "very important." Respondents' demographic information was also included.

Measure of CSR. With respect to measures of CSR, despite the fact that CSR is a multidimensional construct, considering the explanatory nature of this study, we emphasize whether CSR is able to moderate the effect of PISD in a general sense, rather than studying the role of different dimensions of CSR. Moreover, in a transitional economy such as China where the concept of CSR is still at the initial stage, it would be reasonable to study the role of overall CSR in the first place. Therefore, in this study, one general item of retailers' CSR is included (for consumers who are not familiar with the concept of CSR, some detailed explanations were done). Respondents were asked to rate perceived importance of retailers' CSR when they make store choice decision on a 5-point scale ranging from not important at all (1) to very important (5).

Measure of PISD. Because measures of a construct are not fully developed in a single study, the initial selection of a scale measuring the PISD in our study was designed to fit a direct and relatively narrow meaning of "the perceived importance of supporting of domestic retailers to an individual". Item that focused solely and directly on the perceived salience of the issue to the individual were sought for the measure. In this study, a single item scale was adopted for measuring PISD, as we note that the methodological literature suggests that when the object and attributes are concrete, being easily and uniformly imagined (such as in the case of PISD), the use of a single-item measure rather than a multi-item measure is acceptable and reasonable (e.g., Fuchs and Diamantopoulos, 2009; Rossiter, 2002). For example, Bergkvist and Rossiter (2007) demonstrate that single-item measures are equally as valid as multiple-item measures and they suggest that for the many constructs in marketing that consist of a concrete singular object and attribute, single-item measures should be used. Due to practical advantages of single-item scales such as lowering refusal rates and minimizing respondent frustration, many previous studies have adopted single-item scale (see Sloot and Verhoef, 2008; Diamantopoulos et al., 2011; Fortenberry Jr and McGoldrick, 2011; Walsh et al., 2012). Even though the using of multiple- or single- item scale remains an ongoing debate within marketing research (Sloot and Verhoef, 2008), using single items is proper for our study since PISD is a concrete attribute that can be easily and uniformly imagined by consumers. Thus, in this study a single item scale was adopted for the measure of PISD. Respondents were asked to rate the importance of supporting domestic retailer when they make their store choice decision ranging from not important at all (1) to very important (5).

All three groups of variables (retail mix, CSR, and PISD) in this study represent some psychological states of the individuals, which are very likely to be impacted by the demographic and socioeconomic characteristics of the individuals and/or families. Therefore, it is necessary to control for these variables to prevent spurious impact from the above variables. In the following analyses, we have employed several control variables, including age, gender, income, and employment status. In addition, in this kind of study, generalizability is usually of concern. In order to test for differences between the different districts of the survey site, consumers' residential district are included as control variables. Moreover, it is largely known that location is one of the major variables in selecting a store. The 'law of retail gravitation', the foundational theory of store choice, suggests that the probability of choosing a retail outlet is inversely related to its distance from the consumer's home (Reilly, 1931; Huff, 1964). In addition, market structure factors such as the distribution of foreign and domestic retail stores, or car ownership, which extend consumers' shopping scope, may also influence consumers' store choice. Therefore, in our study, the distance from consumer's home to the store, car ownership, and consumers' residential district are included as control variables.

As done in Chapter 3, given the strong correlation among consumers' perceived importance of store characteristics, factor analysis was first utilized prior to regression analysis, to investigate the structure underlying the retail mix. The results of factor analysis in Chapter 3 (see Table 3. 1) are adopted in our following analysis. The detailed definitions of the variables are shown in Table 4.1

Table 4.1. Definitions of the variables used in the probit model

Variable	Definition	Structure
PRI	Importance of price	Not important at all=1,very important=5
QUA	Average of factor items	Not important at all=1,very important=5
ENV	Average of factor items	Not important at all=1,very important=5
CON	Average of factor items	Not important at all=1,very important=5
PRO	Average of factor items	Not important at all=1,very important=5
ASS	Average of factor items	Not important at all=1,very important=5
SER	Average of factor items	Not important at all=1,very important=5
CSR	Importance of retailers' social responsibility	Not important at all=1,very important=5
PISD	Importance of supporting domestic retailers	Not important at all=1,very important=5
GEN	Respondent' s gender	Male=1, female=0
AGE	Respondent's age	Metric variable
INC	Household income (China Yuan)	Less than 2 THS.=1, 2-4 THS.=2, 4-8 THS.=3, 8-10 THS.=4, Above 10 THS.=5
EDU	Respondent's education level	Bachelor or above , other=0
EMP	Employment status	Employed=1, others=0
DIS	Travel distance to the store	Less than 500m=1, 500m~1km=2, 1~3km=3, 3~5km=4, More than 5km=5
CAR	Car ownership	Yes=1, no=0
ARE	Respondent's residential area	Area1 (Xigang district=1, other=0) Area2 (Zhongshan district=1, other=0) Area3 (Ganjingzi district=1, other=0)

4.5 Results and Discussion

As our dependent variable is dichotomous, the hypotheses were tested by estimating binary probit models. The dependent variable was coded as an indicator capturing the retailers' country of origin (Domestic=0, Foreign=1). Positive coefficients can be interpreted as increasing the likelihood that an individual will choose to shop at foreign retail stores. The variables' descriptive statistics and correlation matrices are presented in Table 4.2. The detailed distribution of consumers' perception of PISD is shown in Table 4.3.

Table 4.2. Correlation matrix and descriptive statistics of main variables

	PRI	QUA	ENV	CON	PRO	ASS	SER	CSR	PISD	AGE	INC
PRI	1										
QUA	0.36**	1									
ENV	0.03	0.36**	1								
CON	0.22**	0.37**	0.38**	1							
PRO	0.34**	0.36**	0.26**	0.34**	1						
ASS	0.17**	0.44**	0.45**	0.38**	0.26**	1					
SER	0.30**	0.48**	0.47**	0.44**	0.40**	0.29**	1				
CSR	0.08	0.31**	0.36**	0.31**	0.28**	0.28**	0.48**	1			
PISD	0.09	0.25**	0.34**	0.27**	0.26**	0.22**	0.43**	0.71**	1		
AGE	0.03	0.02	-0.05	-0.05	0.09	-0.13**	0.02	-0.12*	-0.05	1	
INC	-0.14**	0.02	0.05	0.03	-0.18**	0.13**	0.00	0.01	-0.01	-0.01	1
Mean	3.52	4.40	3.30	3.69	3.40	3.70	3.61	3.19	2.95	38.39	2.87
SD	1.01	0.71	0.78	0.78	0.88	0.86	0.78	1.14	1.16	12.05	1.17

*$p < 0.05$; **$p < 0.01$

Table 4.3. Perceived importance of supporting domestic retailers by consumers

PISD	Freq.	Percent
1 = Not important at all	68	13.6
2 = Not really important	87	17.4
3 = Important	178	35.6
4 = Quite important	113	22.6
5 = Very important	54	10.8
Total	500	100.0

We conducted variance inflation factor (VIF) tests and found no serious multicollinearity problems. The analysis was undertaken by comparing the results of two regression models. Model 1 involved control variables and the main effects of retail mix variables, CSR variable, and PISD variable, while Model 2 incorporated the interaction items to determine their contribution to explained variation in store choice behavior. The results of the analysis are reported in Table 4.4.

Table 4.4. Estimation results for binary probit model

	Model 1		Model 2	
	Coefficient	Marginal effects	Coefficient	Marginal effects
Constant	–0.104		–0.428	
Control variables				
GEN	0.119	0.036	0.165	0.048
AGE	0.007	0.002	0.010	0.003
INC	0.033	0.010	0.030	0.009
EDU	0.293	0.092	0.370	0.114
EMP	0.244	0.070	0.250	0.069
DIS	0.115	0.035	0.149	0.045
CAR	–0.151	–0.047	0.474	–0.068
ARE1	0.412	0.112	–0.125	0.122
ARE2	–0.197	–0.063	0.005	–0.039
ARE3	–0.077	–0.024	–0.220	0.001
Main effects				
PRI	–0.196**	–0.060	–0.114	–0.034
QUA	0.026	0.008	0.015	0.004
ENV	–0.007	–0.002	–0.004	–0.001
CON	–0.113***	–0.035	–0.119***	–0.036
PRO	0.021	0.006	–0.009	–0.003
ASS	0.024	0.007	0.065	0.020
SER	0.068**	0.021	0.076**	0.023
CSR	0.202*	0.062	0.217*	0.065
PISD	–0.527***	–0.162	–0.589***	–0.176
Moderating effects				
PRI×PISD			–0.225**	–0.067
QUA×PISD			0.134***	0.040
ENV×PISD			0.013	0.004
CON×PISD			–0.037	–0.011
PRO×PISD			0.090**	0.027
ASS×PISD			–0.009	–0.003
SER×PISD			–0.049	–0.015
CSR×PISD			0.001	0.000
LR chi2(number of variables)	54.140***		70.780***	
Pseudo R^2	0.12		0.162	
Log likelihood	-191.02		-182.697	

Note: ***, **, and* indicate that the coefficients are significant at the 0.01, 0.05, and 0.1 level

In Model 1, PISD shows significant negative effect on consumers' choice of foreign retailers, suggesting that individuals with high PISD are more likely to shop at domestic retail stores than those who have low PISD. This result supports H1.

Among retail mix variables, PRI ($p < 0.05$) was negatively significant in Model 1, CON ($p < 0.01$) is also negatively significant, indicating that consumers who place more importance to price and convenience are more likely to shop at domestic retail stores. SER ($p < 0.1$) show positive and significant effect, suggesting that consumers who place more importance to service are more likely to shop at foreign retail stores. The other retail mix variables—QUA, ENV, PRO, and ASS—all display a positive effect on consumers' choice of foreign retail stores. However, none reaches significant level. H2a is partially supported.

The interaction effects between retail mix variables and PISD show that the interaction terms between PISD and PRI was negatively significant, implying that for consumer with lower level of PISD, the effect of price would be weaker, in other words, for consumers with high level of PISD, the more importance they attach to price, the more likely they shop at domestic retailers. The interaction terms between PISD and QUA ($p < 0.1$) and PRO ($p < 0.1$) display a significant result, and the interaction terms were positive for foreign retailers, indicating that PISD's negative impact on foreign retailers will be weaker for consumers who attach more importance to quality and promotion. Therefore, H2b is partially supported. The results of the interaction items indicate that, while consumers who perceive service as an important factor would be more likely to shop at foreign retail stores, consumers' perceive importance of service has no effect in moderating the negative effect of PISD on consumers' choice of foreign retail stores. In contrast, even though quality and promotion show no independent effect on consumers' choice of foreign and domestic retail store, they moderate the effects of PISD on consumers' choice of domestic or foreign retail stores. Therefore, we argue that it would be more effective for foreign retailers to emphasize value-for-money retail mix elements in order to mitigate or overcome the LOF of PISD.

CSR was positively significant ($p < 0.05$), implying that consumers who attach more importance to CSR are more likely to shop at foreign retail stores. H3a is supported. However, the interaction effects between CSR and PISD were insignificant. This indicates that for consumers with higher level of PISD, the importance attached to CSR will not weaken the negative effect of PISD. Therefore, H3b is not supported. These results imply that, in a general sense, foreign firms' effort on CSR performance is rewarded by those consumers who attach more value on CSR. However, for those who have higher level of PISD, foreign firms do not seem to be able to gain their support just by doing 'good deeds' (CSR). One possible reason for this result may be the missing link between CSR and consumer trust. For instance, if consumers with higher level of PISD perceive foreign retailers paying lip service in CSR reports or just using CSR activities as marketing tools, consumers might question retailers' true commitment to CSR and not support them (Loussaïef et al., 2013).

In addition, the likelihood ratio test of comparing Model 1 and Model 2 is done in order to examine whether the relative contribution of interaction items is significant. The result of the likelihood ratio test provides statistically significant support for the impact of interaction effects (LR = 16.65, degree of freedom = 8, $p < 0.05$).

4.6 Conclusion

The international business literature assumes that foreign firms suffer from LOF and many previous works have focused on the ways to overcome or mitigate this LOF faced by foreign firms. However, there has been little research on overcoming the discrimination hazard that originates from consumers' perceived lack of moral legitimacy of foreign firms, and even less research has been conducted in the international retailing context and in developing countries. This study focuses on the discrimination hazard facing foreign retailers and the way to overcome it, particularly in a transition economy such as China. A construct for the perceived importance of supporting domestic retailers (PISD) was developed and tested to determine its potential influence on an individual's choice of domestic and foreign retail stores. We examined ways to overcome the negative effect of PISD (by investigating the moderating effect of retail mix variables and CSR).

The level of an individual's PISD was found to have a significant and substantial impact on consumers' choice of foreign and domestic retail stores. The negative effect of PISD is weaker for consumers who attach more importance to quality and promotion. Consumers who attach more importance to CSR are more likely to shop at foreign retail stores. However, the importance attached to CSR does not weaken the negative effect of PISD on consumer choice of foreign retailers. In other words, foreign retailers will not be able to overcome the LOF of PISD by doing CSR activities. These findings have important managerial implications for international marketers entering developing countries, such as China. First, foreign retailers in China seem to face one kind of LOF due to consumers' desire and willingness to support domestic retailers. Therefore, for those international retailers that plan to enter or have already entered the Chinese market, it would be wise to hide their foreign identity in order to decrease consumers' bias. Second, the negative effect of PISD is mitigated by consumers' preference for quality and promotion, indicating that the better quality image and foreign retailers' promotional skills would be a major selling point for international marketers and enable them to improve legitimacy perceived by consumers.

Our study makes three major contributions to the LOF literature. First, we adopted an alternative approach to the examination of the LOF within the international retailing context from the individual consumers' perspective. We employed consumers' support behavior, such as store patronage as a dependent variable, as opposed to many previous studies that rely on secondary and firm-level data sources. Second, it provides empirical evidence of the effect of consumers' perceived importance of supporting domestic retailers (PISD) on consumers' actual store-patronage behavior. As PISD has a much heavier focus on individual's desire or willingness to support domestic firms, we believe that this is a critical predictor of store patronage, which provides a fine-grained perspective of the functioning of the LOF. Third, our study provides empirical evidence of the possible manner of overcoming the discrimination hazard of LOF in the retailing industry. Value-for-money retail mix elements, quality and promotion, are shown to be, at least in Chinese markets, possible effective ways in overcoming consumers' bias. However, CSR, which is an increasingly emphasized issue, is shown to be invalid in helping foreign firms gain moral legitimacy for consumers who have higher level of PISD.

This study suggests several questions for further research. We believe that the ideas introduced in this article can serve as a basis for future theoretical developments. Though previous studies provide evidence that single-item measurement is superior and more reasonable than multi-item measurement in some cases, it would be valuable for further research to confirm our findings by using an improved measure of PISD. In addition, considering the explanatory nature of this study, we only examined the effect of CSR in a general sense. As foreign firms' CSR is an issue of increasing concern, it may give rise to further detailed research that investigates the moderating effects of different CSR dimensions. Finally, our study focused in one specific Chinese city which increases the difficulty in generalizing the findings to other countries and markets. Given the idiosyncratic nature of consumer behavior, further studies within other national contexts would be necessary.

Chapter 5

Summary and conclusion

5.1 Conclusion

The diffusion of supermarkets and the globalization of retailing are having a profound impact on food retail structures in developing countries. China has also experienced rapid retail changes in the reform era. One of the most visible changes in the urban food retail sector has been the emergence and rapid growth of modern retail formats. The other is the entry and expansion of international food retailers spurred by China's opening of the retailing industry to foreign investment. The present study focused on three separate but related issues concerning Chinese consumers' store patronage behavior, particularly in the second-tier cities where both the modern retailers and foreign retailers are shifting their attention to, with the objective of providing a better understanding of consumer in the emerging market. The analyses used consumer survey data from Dalian city, one representative second-tier city of China. Probit model, Poisson model, and factor analysis are used to respectively examine the role of shopping habits on consumers' choice of modern and traditional retail formats, the profile of consumers with respect to multiple store patronage and share of wallet at the primary store, and the effect of, as well as the way to overcome the effect of consumers' perceived importance of supporting domestic retailers (PISD) on consumer choice of domestic and foreign retailers.

The empirical evidence on consumers' choice of modern and traditional retail formats in Chapter 2 shows that socioeconomic factors have minimal impact on consumer choice of modern and traditional retail formats. Shopping habit factors such as preference for one-stop shopping, preference for bargaining, and transportation means have as great or even larger impact as market-relevant attributes (i.e., accessibility and communication with salespeople) and product-relevant attributes (i.e., safety and assortment), especially for fresh-food and cooked-food shopping.

The empirical evidence on consumers' multiple store patronage behavior in Chapter 3 shows that multiple store patronage behavior is influenced by consumers' preference for promotion, household income, employment status, shopping frequency, and transportation means, while consumers' share of wallet at the primary store is influenced by consumers' preference for convenience, household income, age, family size, and total expenditure. These results indicate that multiple store patronage and share of wallet are not interdependent and the profiles of consumers in terms of them do not share many common characteristics.

Analysis on consumers' choice of foreign and domestic retailers in Chapter 4 shows that consumers' perceive important of supporting domestic retailers has a negative effect on consumers' choice of foreign retail stores. To overcome this LOF, results indicate that foreign retailers should emphasize value-for-money attributes, such as increased product quality and effective promotional campaigns, rather than increase their investment in hedonic attributes such as services or social responsibility.

5.2 Implication

The findings of this study provide several managerial implications for food retailers in China.

The analysis on consumers' choice of modern and traditional retail formats have managerial implications for modern retailers. First, results show that consumers' socioeconomic status had little impact on consumers' format choice in our study indicating that a significant increase in a consumer's income level might not lead to significant change in that consumer's adoption of modern retail formats. Second, the important role of price and freshness in determining consumers' choice of traditional or modern retail formats is weakening, and modern retailers should continue making efforts to improve freshness and price, especially for fresh products. In addition, with consumers' increasing concern for food safety, an improvement in food safety is expected to drive more consumers to shop at modern retail formats. Third, even though market-relevant attributes exert a significant impact on consumers' choice of traditional or modern retail formats, individual factors that show significant effect are ones associated with shopping convenience, such as store accessibility and parking; store atmosphere was not significant, indicating that enhancing store atmosphere might not be effective in driving more consumers to shop at modern retail formats.

The analysis on consumers' multiple store patronage behavior have relevant implications for retail mangers in identifying and maintaing high loyal consuemrs. Our empirical evidence delineates a potentially loyal consumer profile, and retailers can use this information to segment their customers, especially those retailers who have already or plans to enter the Chinese market. Our results provide a way to identify potentially loyal consumers based on the external socio-demographic characteristics of consumers. In addition to the external characteristics of consumers that are relatively easy to identify, it should be noted that consumers are different with respect to perceived importance of various store characteristics which are related to their perceptions of costs and benefits, and these differences further exert effects on multiple store patronage. The perceived importance of store characteristics is useful to determine the marketing strategies and tactics that are more appropriate to get a better response from these customers. Furthermore, our results show that the profiles of consumers in terms of multiple store patronage and the share of wallet at the primary store do not share many common characteristics. Thus, it is suggested that in order to capture a full and accurate picture of loyal consumers, retail managers should carry out market segmentation based on different significant consumer characteristics (e.g., segmenting high- and low-share loyal consumers by age, family size, and expenditure, and segmenting consumers with small and large patronage set size by shopping frequency and the use of a car during shopping).

The analyses on the consumers' choice of foreign and domestic retailers provide some implications for foreign retailer in China. First, foreign retailers in China seem to face one kind of LOF due to consumers' desire and willingness to support domestic retailers. Therefore for those international retailers that plans to enter or already entered Chinese market, it would be wise for them to hide their foreign identity in order to decrease consumers' bias. Second, the negative effect of PISD is mitigated by consumes' preference for quality and promotion, indicating that the better quality image and foreign retailers' promotion skills would be a major selling point for international marketers and enable them to improve legitimacy that perceived by consumers.

5.3 Contributions of This Dissertation

The contributions of this study are as fallows,

First, this study contributes to the literature on supermarket diffusion by incorporating shopping habit factors beyond socioeconomic factors and store characteristic factors into a framework for predicting consumers store choice of traditional or modern retail formats. More importantly, we estimate and compare the relative effect of these factors following previous studies and also make robustness test using a different way.

Second, this study contributes to the literature on multiple store patronage in two important directions. First, it incorporates consumers' perceived importance of store characteristics into a framework for predicting multiple store patronage. Second, it examines the relationship between, and compares the factors influencing, multiple store patronage and consumers' share of wallet at the primary store. The results show that consumers who attach high value to sales promotions are more likely to visit multiple stores, and our results show a degree of independence between multiple store patronage and share of wallet. Further analysis found that the profiles of consumers in terms of them do not share many common characteristics.

Third, this study adds to the literature of LOF in three ways. First, to the best of our knowledge, this is the first study that attempts to examine LOF within an international retailing context. Second, we provide empirical evidence regarding the effect of PISD on consumers' actual store patronage behavior. In comparison to many previous studies that adopted firm-level data (Mezias, 2002; Miller and Parkhe, 2002), focusing on consumers' behavior will provide a fine-grained perspective of the functioning of the LOF, and help open the 'black box' of it. Third, based on empirical evidence, this study proposes a possible way of overcoming the discrimination hazard of LOF in Chinese market.

5.4 Limitation and Future Research

The main limitation of this research is that our study focused in one specific Chinese city which increases the difficulty in generalizing the findings to other countries and markets. Especially, because China is a diversified market with consumer tastes and preferences that vary considerably among regions, a replication of our study in other areas, such as in other second-tier cities, third-tier cities or even fourth tier cities, would be valuable. In addition, as China is undergoing comprehensive change and restructuring, social values are witnessing drastic change. Therefore, one important issue that requires attention is the persistence of these behaviors over time.

Several questions for future research arise from this paper.

Chapter 2 has tested the impact of several shopping habit factors on consumers' choice of traditional or modern retail formats for food shopping. To extend this research, one might consider testing possible interaction effects between variables. For example, it would be reasonable to postulate that consumers who prefer to purchase fresh products in the early morning and usually shopping on foot would be more likely to shop at traditional retail formats. Moreover, probit model was adopted for examination of the impact of various factors on consumers' store choice behavior. As some of the variables analyzed are latent or non-observable variables, an alternative methodology using structural equation modeling to test the hypotheses in this study would be an important direction for future research. Additionally, as store atmosphere is an abstract concept which consumers might consider differently, the effect of this factor evaluated by adopting a better measurement would be valuable in future research. Finally, in recent years, as online shopping has become more and more popular in China, customers are faced with the new choice of purchasing food products online. Even though online food shopping is still at the initial stage, it would be essential to examine consumer behavior that relates to this new tendency in the food retail sector.

The analysis on consumers' multiple store patronage behavior in Chapter 3 is basing on data obtained through a survey that may suffer from respondent distortion and memory loss. Therefore, it would be worthwhile for future research to improve the present study using other types of data, such as scanner panel data. Moreover, given the increasing popularity of online shopping, it would be valuable to include online shopping behavior, and investigate consumers' budget allocation between brick-and-mortar stores and on-line stores.

The analysis on the effect of PISD on consumers' choice of foreign and domestic retailers in Chapter 4 can serve as a basis for future theoretical developments. Considering the explanatory nature of this study, several improvements in the future research would be valuable. First, though previous studies provide evidence that single item measurement are superior and reasonable than multi-item measurement in some cases, it would be valuable for further research to confirm our findings using an improved measure of PISD. Similarly, as foreign firms' CSR is an issue of increasing concern, it may give rise to further detailed research that investigate the moderating effects of different CSR dimensions. Second, as the nationality of retailers in our research area is easy to distinguish, we have made assumptions that consumers are aware of the nationality of retailers. Nevertheless, previous literature on effect of product' country of origin has shown that consumers are frequently unaware of the origins of products. Similarly, it is unclear if survey participants understood that some retailers were domestic and other retailers were international. Thus, future research measuring participants' awareness of nationality of retailers would be necessary and valuable. Furthermore, consumers' choice of foreign and domestic retailers might be also influenced by retail brands (e.g., Wal-Mart, Carrefour, and Tesco). Their perceptions and patronage behavior towards foreign retailers would be country-specific. Thus, controlling for the effect of these variables (country-level effect and brand-level effect) and the evaluation of their effect size in future research would be important, especially given the fact that there are few researches on such topics in international retailing context.

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Appendix

Consumer Questionnaire

<u>Purpose of survey:</u> This survey is for a research at Graduate School of Business Administration, Kobe University. This research attempts to study consumers' store choice behavior as well as the main factors that affect their store choice decisions. The object being investigated is the member who is mostly responsible for shopping activity in your family. The information in the survey will only be used for the research. There is no commercial intent involved. Please answer the questions truthfully. Thank you for your great support and participation!

Section 1 Retail format choice

Q.1 On average, how often do you shop at the following places?

	<1 time/ month	1~3 times/ month	1~2 times/ week	3~4 times/ week	5~6 times/ week	>=1 time/ day
Hypermarket						
Supermarket						
Convenience store						
Special store						
Traditional grocery store						
Wet market						

Q.2 Where do you do most of your shopping for the following products? (One place only)

	Fresh food	Proceed food	Cooked food
Hypermarket			
Supermarket			
Convenience store			
Special store			
Traditional grocery store			
Wet market			

Q.3 Regarding Q.1, please rate the importance of the following reasons from 1 to 5 for this choice decision. (*1. Not important at all 2. Not really important 3. Important 4. Quite important 5. Very important*)

	Fresh food	Proceed food	Cooked food
Price			
Freshness			
Quality			
Safety			
Product width			
Product depth			
Brand			
One-stop shopping			
Accessibility			
Store atmosphere			
Salespeople service			
Parking			
Bargaining			

Q.4 How far is the store where you do your most shopping from your home?

	Fresh food	Proceed food	Cooked food
Less than 500m			
500m~1km below			
1km~3km below			
3km~5km below			
More than5km			

Q.5 How long does it take to the store where you do most shopping from your home?

	Fresh food	Proceed food	Cooked food
Less than 15m			
15~30m below			
30~45m below			
45~60m below			
More than1 hour			

Q.6 What times do you often go shopping for the following products?

	Fresh food	Proceed food	Cooked food
Before 10:00			
10:00-12:00			
12:00-17:00			
17:00-20:00			
After 20:00~			
Time is not fixed			

Q.7 How do you normally travel to the store where you do your most shopping from your home?

	Fresh food	Proceed food	Cooked food
On foot			
By bike/Motorbike			
By bus			
By car			
Supermarket free shuttle			
Other			

Q.8 How often do you cooking at home?

☐ 3 times a day ☐ 2 times a day ☐ 1 time a day ☐ 3-4 times a week
☐ 1-2 times a week ☐ Other

Section 2 Retailer choice

Q.1 How many supermarkets (or hypermarkets) you visited in the last four weeks?

☐ Not any ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ More than 7

Q.2 Among the retailers below, which one do you mostly shopping at?

☐ Wal-Mart ☐ Carrefour ☐ Trust-Mart ☐ Tesco ☐ Metro
☐ New-Mart ☐ Beijing Hualian ☐ Lehaha ☐ Others____

Q.3 How often do you shopping at the supermarket?

☐ Less than 1time a month ☐ 1-3 times a month ☐ 1-2 times a week
☐ 3-4 times a week ☐ 5-6 times a week ☐ More than 1 time a day

Q.4 How much do you usually spend at the supermarket?

☐ Less than 50 Yuan ☐ 50~100 Yuan ☐ 100~200 Yuan
☐ 200~300 Yuan ☐ More than 300 Yuan

Q.5 What proportion of your total supermarket spending is in the store that you use most often?

☐ Less than 50% ☐ 50%~80% ☐ 81%~95% ☐ More than 95%

Q.6 Please rate the importance of the following reasons from 1 to 5 for your retailer choice decision.

	(1)Not important at all	*(2)Not really important*	*(3)Important*	*(4)Quite important*	*(5)Very important*
Price					
Freshness					
Quality					
Safety					
Product width					
Product depth					
Brand/Country of origin					
Advertisement					
One-stop shopping					
Accessibility					
Store size					
Store interior					
Store atmosphere					
Store display					
Salespeople's service					
Return policy					
Parking					
Fast check out					
Open hour					
Store familiarity					
Goods searching					
Salespeople's communication					
Unique products					
Promote often					
Provide free bus					
Store reputation					
Own member card					
Other Service facility					

Q.7 Please rate the importance of corporate social responsibility for your retailer choice decision.

(1) Not important at all (2) Not really important (3) Important
(4) Quite important (5) Very important

Q.8 Please rate the importance of supporting domestic retailers for your retailer choice decision.

(1) Not important at all (2) Not really important (3) Important
(4) Quite important (5) Very important

Q.9 How far is the supermarket where you do your most shopping from your home?

☐ Less than 500m ☐ 500m~1km below ☐ 1~3km below

☐ 3~5km below ☐ More than5km

Q.10 How long does it take to the supermarket where you do most shopping from your home?

☐ Less than 15m ☐ 15~30m below ☐ 30~45m below

☐ 45~60m below ☐ More than1 hour

Q.11 How do you normally travel to the supermarket where you do your most shopping from your home?

☐ On foot ☐ By bike/Motorbike ☐ By bus

☐ By car ☐ Supermarket free shuttle ☐ Other

Section 3 Sociodemographic information

Q.1 Gender ☐ Man ☐ Woman

Q.2 Age______

Q.3 Marriage status ☐ Single ☐ Married, no child

☐ Married, have child ☐ Devoice or widow ☐ Other

Q.4 Residential area ☐ Xigang district ☐ Zhongshan district

☐ Shahekou district ☐ Ganjingzi district

Q.5 Occupation ☐ Housewife ☐ Working-class

☐ Self-employed ☐ Retired ☐ Other

Q.6 Number of family member living together__________

Q.7 Is there child below six year old in your family? ☐ Yes ☐ No

Q.8 Education ☐ Primary school or below ☐ Middle school

☐ Bachelor ☐ Master ☐ Doctor

Q.9 Household income ☐ Below 2000Yuan ☐ 2000~4000Yuan below

☐ 4000~8000Yuan below ☐ 8000~10000Yuan below

☐ Above 10000Yuan

Q.10 Facilities ☐ Large refrigerator (<300L) ☐ Small refrigerator (<300L)

☐ Number of Car___ ☐ Other

Q.11 House space ☐ Below 60m^2 ☐ 60~90m^2 below

☐ 90~150m^2 below ☐ Above 150 m^2

Q.12 Do you feel time pressure often ☐ Yes ☐ No ☐ Occasionally

Q.13 How much is the proportion of food expenditure in your total expenditure every month?

☐ Below 30% ☐ 30%~40% below ☐ 40%~50% below

☐50%~60% below ☐Above 60%

Thank you very much for your participation.