2
Background to the Research

Introduction

This chapter describes the background of the research, based on the research questions that have been set up. The chapter introduces both the macro and micro environment of China's retail business. The macro environment analysed here involves the important economic changes in China during the transitional period between 1995 and 2005, the influence of China's transitional economy and the WTO entry on its retail sector, and foreign direct investment (FDI) trends in China. The micro environment analysed involves the changes in China's retail sector, retail structure, and environment during the same time period, emphasizing the changes associated with China's entry into the WTO, and foreign retailer expansion.

The growth and changes in China's retail sector are influenced by both China's macro and micro environments. The economic growth and business environment changes that took place during the transitional period between 1995 and 2005 form the backdrop of this study. This period is covered by both China's Ninth Five Year Plan (1996–2000) and Tenth Five Year Plan (2001–2005). This time frame has been chosen because it is the period when China's retail market began to be more open and Western retail giants started to enter and then expand in the country. China joined the WTO in November 2001. By the end of 2004, all the formal restrictions on foreign retail firms in China were removed (Chaturvedi, 2006). The data for this research were collected at the end of 2005 to capture the experience of foreign retailers that had been operating in the newly open Chinese market.

2.1 China as a new emerging market

China is the world's most populous country with 1.32 billion people, making up about 20 per cent of world population (United Nations, 2007), and is therefore potentially the world's largest retail market. Table 2.1 shows the top 11 countries ranked by population size.

By 2005, China was responsible for 9 per cent of world production, using purchasing power parity (PPP), after the USA and followed by Japan, Germany, and India (China Daily, 2007b). By 2007, China remained the world's second largest economy after the US (World Bank, 2008). Table 2.2 shows the countries ranked by size of economy in 2007.

Table 2.1 Countries ranked by population size (2007)

Rank	Countries with population over 100 million	Population (thousands)	Share of world population (%)
1	China	1,328,630	20
2	India	1,169,016	18
3	USA	305,926	5
4	Indonesia	231,627	3
5	Brazil	191,791	3
6	Pakistan	163,902	2
7	Bangladesh	158,665	2
8	Nigeria	148,093	2
9	Russia	142,499	2
10	Japan	127,967	2
11	Mexico	106,535	2
	World	6,671,226	

Source: United Nations (2007).

Table 2.2 Countries ranked by size of economy (2008)

Rank	Country	GDP/PPP Millions of international dollars*
1	USA	$13,811,200
2	China	$7,055,079
3	Japan	$4,283,529
4	India	$3,092,126
5	Germany	$2,727,514

*An international dollar has the same purchasing power over GDP as a US dollar has in the USA.
Source: World Bank (2008).

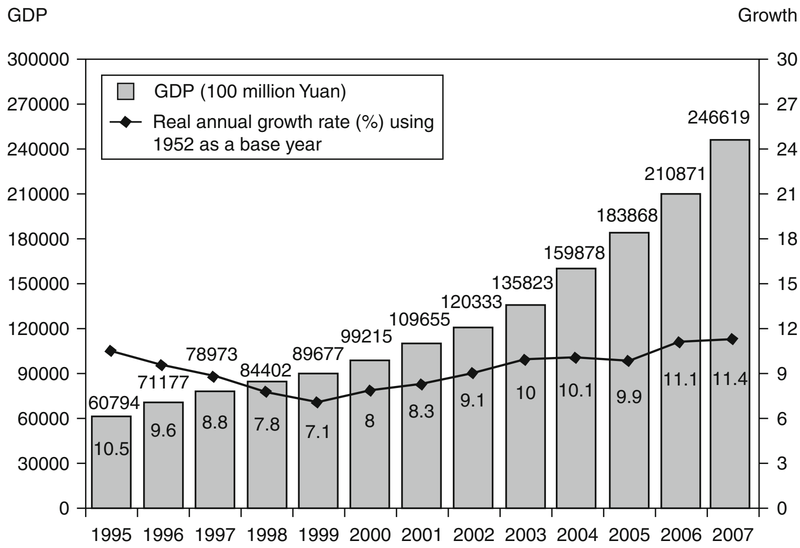

Figure 2.1 China's GDP growth from 1995 to 2007
Sources: China Statistical Yearbook (2007); Chinaview.cn (2008); Chinability.com (2008).

China's gross domestic product (GDP) in 2007 reached 24.66 trillion Yuan (US$3.5 trillion), an increase of 65.5 per cent since 2002. This is an average annual increase of over 10 per cent, which helped to keep China's up-ranking in the GDP table (Wen, 2008). Over the last two decades, China has been the world's fastest growing economy based on GDP growth and continues to show a strong performance (China Statistical Yearbook, 2007). Figure 2.1 shows GDP and its growth in China from 1995 to 2007.

China's GDP has been growing significantly since the country started to open in 1978 (Chinability.com, 2008). The country performed even more strongly in this research period, which can be seen from Figure 2.1. This growth has been attributed to its political stability, opening-up policies, social stability, and development of foreign investments (Euromonitor, 2008b). Fixed investment, consumption, and net exports all contributed to GDP growth. The country is expected to continue to sustain strong growth in the next few years (Asia Monitor, 2006).

The growth of primary, secondary, and tertiary industry accounted for 12.5 per cent, 47.5 per cent, and 40 per cent respectively in total GDP in 2005. The contribution to GDP by tertiary industry increased nearly

13 per cent from RMB (Renminbi, the formal name for the Chinese Yuan) 6501.82 billion (US$929 billion) in 2004 and to RMB 7343.29 billion (US$1049 billion) in 2005 (stats.gov.cn, 2004, 2005). These figures indicate the opportunities for growth in retailing as one part of the tertiary industry.

2.2 The transition from centrally planned to market-based economy

Since 1978, China has been going through a gradual transition process moving from a centrally planned economy, in which the central government substantially managed domestic goods and monopolized international trade, to an economy which has its resources allocated mainly through the market mechanism (Mina and Perkins, 1997). Developing a liberal, market-led economy for the past 30 years has led to rapid growth and rising income and living standards in China (MINTEL, 2008b).

The transition of the Chinese economy has had a significant influence on retail and trade. Economic reforms have had an impact on the activities of state-owned enterprises (SOEs), which helped to generate the rapid growth of new foreign-owned and joint venture (JV) enterprises and lower tariff barriers. Competition for producer and consumer products in China has become intense: Over 90 per cent of retail goods prices are determined by the market (Euromonitor, 2008b). China's 'open door' policy has reversed the autarkical position prior to 1978. Further, China's trade regime has been dramatically liberalized, and foreign investment and trade based on market decisions are more welcome. China's international trade is now dominated by the non-state sectors (Mina and Perkins, 1997). The role of government in the economy has changed significantly over the reform period from direct control of developments to 'out of plan' developments being gradually allowed, as the country has shifted towards a more market-based economy (Naughton, 1995). Competition in the domestic economy has increased greatly since 1978 because of considerable relaxation of government restrictions on the non-state sector (Mina and Perkins, 1997).

However, market orientation varies in China across industries, regions, and ownership forms. The main reason for these variations is the considerable decentralization of authorities to local governments. This political decentralization, together with differences in regional cultures, means that China should be viewed as a collection of markets, not a single market. This also has consequences for the retail sector.

China is an economy that embraces both pure capitalism and some aspects of socialism (Lavigne, 1995). That is what the Chinese government calls a 'socialist market economy with Chinese characteristics' (Yeung, 2003). China is still a one-party state, nominally Communist, which is coloured by Western attitudes towards the market. The increasingly market-led Chinese economy has contributed to the improvement of living standards (MINTEL, 2008a). In particular, significant changes have occurred in China's retail sector since China joined the WTO in 2001.

2.3 The influence of WTO agreement

Of all the developing countries, China has attracted the most foreign capital and therefore has played a significant role in the process of economic globalization and integrating the Chinese economy with the global economy, particularly after China joined the WTO in 2001. Much attention has been paid to China since the Chinese government promised to reduce substantially its restrictions on imports and foreign capital inflows in many industries (Zhang, 2005).

In the first three years after China joined the WTO, some new service industries opened, including finance, insurance, tourism, and retail (Zhang, 2005). China's WTO accession has reinforced broader financial, state sector, corporate, and legal reforms, which began in the late 1990s. These reforms are expected in an ongoing way to accelerate China's 'move to the market' which began in 1978 and to strengthen the business environment for both local and foreign enterprises (dfat.gov.au/eau, 2002).

According to the WTO agreement, China had to reduce and harmonize import tariffs. In 2001, China began to reduce average import tariffs on all products from 15.3 per cent to 10 per cent by 2010. China also agreed to reduce a range of non-tariff barriers on imports, and to introduce trade reform for a broad range of services (dfat.gov.au/eau, 2002). By May 2008, China had implemented nearly all of its WTO commitments and made important progress in many areas of trade reform. Foreign companies have benefited from reduced tariffs and restrictions on business operations, the elimination of import licences and quotas, and the opening of more activities to foreign participation, particularly in the service sector (China Annual Economic Report, 2008).

China's WTO membership provides foreign firms with the legal right to set up wholesale, retail, distribution, and after-sale networks in the country. Foreign companies are no longer required to comply with local content requirements, accept high tariffs on imports, or submit investment proposals that involve technology transfers to China's Ministry of Commerce (Daniels *et al.*, 2007). China has been inclined towards advocating free trade within the WTO, demonstrating a strong engagement with the issues affecting emerging markets (China Annual Economic Report, 2008).

2.4 Foreign direct investment in China

In the early 1980s, the barriers to FDI had already begun to be reduced in China and the investment environment was further improved following China's WTO entry. With the progressive marketization and internationalization of the Chinese economy during these two decades, there was a massive expansion of inward FDI into China from multinational enterprises (Buckley *et al.*, 2007). In 2003, China overtook the USA to become the largest recipient of FDI (UNCTAD, 2004).

Key controls on foreign investment are also gradually being reduced or removed. For example, China has eliminated foreign exchange and trade balancing requirements, and local content and export performance requirements, which previously had been applied to many foreign firms investing in the country. These changes have reduced the influence of the Chinese authorities on foreign business operations in China and stimulated greater inward foreign investment. Figure 2.2 shows the utilization of FDI from 1995 to 2005.

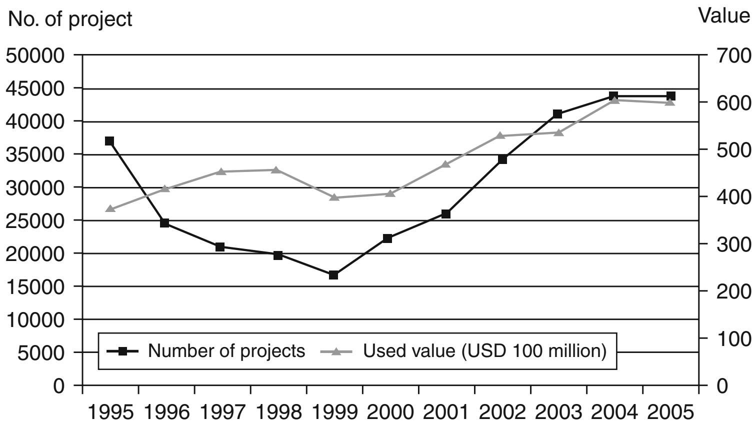

Figure 2.2 Number of projects of FDI and used value from 1995 to 2005
Sources: China Statistical Yearbook (2007); stats.gov.cn (2005).

According to Figure 2.2, the overall trend in the number of FDI projects in the research period is upwards. The value of direct foreign investment also mainly increased with only a slight dip during the chosen research period. During this period the used value of FDI flows into China increased from about US$40 billion in 1995 to nearly US$60 billion in 2005.

FDI in wholesaling and retailing increased by 19.20 per cent over the whole period from 1979 to 2000. After WTO accession, FDI flows into the Chinese service sector increased on average by 2 per cent per year from US$13.9 billion in 2001 to US$15.1 billion in 2005, when wholesale and retail activity occupied 6 per cent of the total inward FDI flows (Chen, 2007). The 'push' for much of this investment came from the saturation of foreign retailers' home markets. Retailing industries in the USA and Europe are facing maturing markets, and many of the major retailers in these nations have shown a growing interest in China, in their search for new markets (Gielens and Dekimpe, 2001). East Asia has become a promising and important market for international retailers. The lifting of trade restrictions is a vital element for developing these markets. In summary, the 'pull' attracting FDI to China has come from China's WTO entry, its economic and policy reforms, and its improving economic environment. With these developments, China's retail sector started its transition.

2.5 China's retail sector in transition

With the Chinese economy reforming, Chinese retailing is also in transition. Chinese retailing is not only benefiting from the country's economic growth, but also from international trade agreements. International trade agreements seem remote from daily sales activities of retail operations. However, the influence of trade agreements on retailers can be immediate and dramatic. US retailers, for example, were directly affected by a series of trade agreements including the North America Free Trade Agreement (NAFTA), the General Agreement on Tariffs and Trade (GATT), the WTO, and the establishment of China's trading status as Most Favoured Nation (Liebeck, 1994). Free trade agreements are expected to have important social benefits, such as improving employment and standards of living. Retail sales and the profitability of retail firms can in turn benefit from these improvements. In addition, free trade agreements can facilitate infrastructural developments which can help to improve retailers' operations (Alexander, 1997). Western foreign retail giants, such as Wal-Mart, started to enter China in 1995. Although Chinese department stores dominated the market at that time, international retailers started to play a more important role (Wang, 2003).

Retailers in China are facing a number of important issues. Modern retail formats face significant challenges because the development of modern retailing is affected by the legacy of the command economy. Sourcing is an important example. In a market economy, sourcing is focused on allocative and technical efficiency. In a centrally planned economy, equity is a primary concern. In China's planned economy, production preference was given to those products considered essential or basic to the health and well-being of the majority of the population, and luxury goods were only to be produced by surplus capacity. The distribution system aimed to ensure that products were allocated based on need and made available to all who needed them. As a result, the investment in product and innovation was very minimal, product ranges were limited, and their life cycles were longer than in a market economy (Yeung, 2003). In addition, systematic market research was almost unknown and was virtually precluded by the state organization of industries. The concept of customer service hardly existed (Mun, 1988). Furthermore, there is still a lack of adequate supporting infrastructure for modern retailing to develop. The road and transportation infrastructure, for example, is still not well established, and a constant electricity supply is not guaranteed in all regions. All these factors are still challenges for foreign retailers to develop in China (Yeung, 2003).

2.5.1 Retail structure and environment

Every retail format is based on a certain amount of GDP per capita. Supermarket requires a per capita GDP of US$800, and a convenience store format requires a GDP per capita of US$3000 to induce consumers to shop there (Euromonitor, 2006a). China's consistently high growth of GDP in recent years as discussed earlier has stimulated the growth of the retail sector. Retail sales made up more than 37 per cent of GDP every year from 1999 to 2003 in China. Retail sales as a percentage of consumer expenditure hovered between 79 per cent and 85 per cent during this period, as can be seen from Table 2.3.

According to Table 2.3, retail sales remained stable as a percentage of GDP and grew firmly as a percentage of consumer expenditure between 1999 and 2003. Figure 2.3 shows the growth of the total sales of the top 100 retailers as a percentage of total sales of consumer expenditure between 1999 and 2007.

Table 2.3 Retail sales as percentage of GDP and consumer expenditure (1999–2003)

	1999	2000	2001	2002	2003
Retail sales as % of GDP	37.9	38.2	38.1	39.0	37.7
Retail sales as % of consumer expenditure	79.1	79.1	81.4	84.7	85.5

Source: Euromonitor (2003).

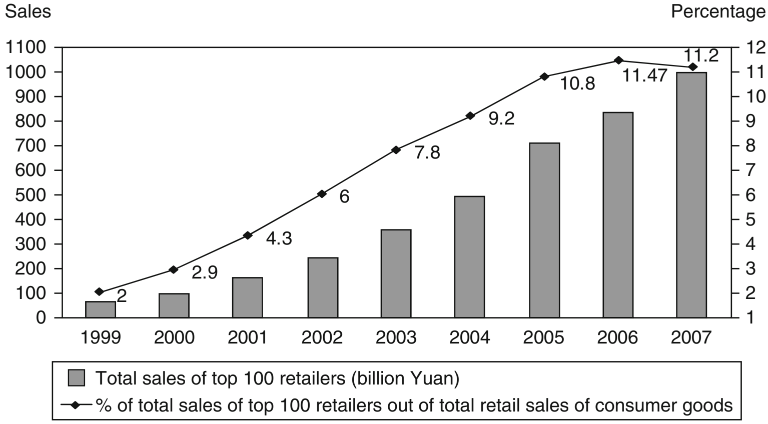

Figure 2.3 The growth in percentage of sales of the top 100 retailers occupying total retail sales of consumer goods
Sources: China Chain Store Almanac (2005, 2007); China Chain Store and Franchise Association (2008).

According to Figure 2.3, the sales of the top 100 retailers in China increased substantially and the total sales of the top 100 retailers as a percentage of the total retail sales of consumer goods also increased dramatically between 1999 and 2007 (China Chain Store Almanac, 2005, 2007). In 2007 the sales of the top 100 retailers reached more than a thousand billion Yuan occupying 11.2 per cent of the total retail sales of consumer goods in the year in 105,191 stores and the numbers are expected to grow (China Chain Store and Franchise Association, 2008). This means that the importance of retail consumption is increasing significantly in China following the changes in the retail structure and improvement in the standard of living.

Between 1995 and 2005, China's GDP grew at an annual rate of about 10 per cent, and the number of middle-class consumers rose even faster.

Table 2.4 Total retail sales in China (2001–2007) (estimated number including whole sales, catering services, and fuel sales)

	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Total (RMB billion)	4,306	4,814	5,252	5,950	6,718	7,641	8,921
Annual growth (%)	+10.1	+11.8	+8.4	+14.1	+12.9	+9.1	+16.8

Sources: National Bureau of Statistics of China (2006); MINTEL (2006, 2008b).

Middle-class consumers now demand more hygienic and higher quality goods sold in supermarkets, convenience stores, or department stores, compared to previous purchasing behaviour in local open markets or small grocery shops (Wang, 2006). Table 2.4 shows the total retail sales in China between 2001 and 2007.

Table 2.4 illustrates the strong growth in retail sales. Although there was a slowdown in 2003 due to the effects of the SARS virus, the speed of growth bounced back in 2004. This trend is expected to continue as disposable income rises. Competition has intensified following the liberalization of the Chinese market after 11 December 2004, when foreign businesses were able to operate wholly-owned subsidiaries freely in the country (MINTEL, 2006). The growth of retail sales increased 16.8 per cent in 2007. In addition, driven by the rise of an urban middle class, foreign retail giants Wal-Mart and Carrefour started to battle to become the biggest foreign-based retailer in China (Euromonitor, 2008a). Since spending has not been financed by borrowing, there is a sound market demand which provides large potential opportunities for retail growth (MINTEL, 2008b).

The picture in 2005 contrasted enormously to 1995, when there was very little organized food retailing, many fewer middle-class consumers, and a small number of shopping malls. By 2003, retail sales in China were nearly US$554 billion and US$580 billion in 2005. China's retail sales rose 15.5 per cent year-on-year in 2009, reaching US$1.84 trillion, according to the National Bureau of Statistics. The real inflation-adjusted retail sales growth was at 16.9 per cent in the year, which was 2.1 per cent higher compared to that of 2008 (Xin and Jiang, 2010).

2.5.2 Expansion of foreign retailers in the Chinese market

Prospect for growth in overseas markets is one of the motives for retailer internationalization (Williams, 1992a). In 1999, China further liberalized rules for FDI in retailing, and foreign retailers were able to set up stores with some restrictions. In late 2001, China joined in the WTO agreements with more liberalization underway in the retail sector.

Table 2.5 Regulation changes in retail sector in China (1992–2004)

- Before 1991: The retail industry in China was protected and no foreign retailers were allowed.
- July 1992: Foreign retailers were permitted to enter China through JVs with Chinese firms and were limited to setting up stores in special areas like Beijing, Shanghai, and five special economic zones. The authority to approve JVs lay with respective provincial governments.
- Mid 1998: The Chinese central government prohibited local governments from granting approval for foreign retailers to open new stores.
- June 1999: The Chinese central government liberalized the rules controlling foreign investment in retailing and wholesaling, but restrictions remained in place; foreign retailers were allowed to set up stores, but only if a 51% stake was owned by Chinese partners; franchising was prohibited and the import of goods by retailers was limited to a maximum of 30% of their annual sales in China.
- 2004: Major shifts eliminating the requirement for central government permission for foreign retailers to open stores in China, and requirements for a minimum level of capital investment were eliminated; foreign retailers were permitted to open as many stores as they wanted and to operate their own distribution services and wholly-owned stores were permitted.

Source: Wang *et al.* (2007).

Before 2001, some foreign retail giants such as Wal-Mart and Carrefour had already had operation experience and completed their entry into China; these retailers started an aggressive expansion there from 2001. Table 2.5 shows the regulation changes in the retail sector.

As shown in Table 2.5, restrictions in China's retail sector started to be removed from 1992. With China opening its doors to the retail industry, a more attractive environment for foreign investments in retailing was achieved step by step. The year 2004 was the last year for Chinese retailers to bask under the government's protection as all the restrictions for foreign entry were lifted in the retail sector (Zhang, 2005). A list of major foreign-invested chained enterprises in China for 2006 is shown in Table 2.6.

Table 2.6 shows that the top ten foreign-invested retailers were in the first 40 positions of the top 100 retailers in China based on the sales in 2006. This demonstrates that foreign retailers are gradually taking over more leading positions in China's retail market and that foreign retail expansion is occurring in China (Wang, 2006). As Linder (1961) argues, international retailing is normally an extension of domestic activity. Most of the foreign retailers that entered China were influenced by both push factors, such as a mature domestic market, high operating costs,

Table 2.6 Major foreign-invested chained enterprises (2006)

Rank in top 100 retailers	**Name**	**Country/ region**	**Format**	**Sales (million RMB)**	**No. of stores**	**Growth rate (% y-o-y)**
4	China Resources Vanguard	Hong Kong	Supermarket Hypermarket Convenience store	37,853	2,250	11
6	Carrefour China	France	Hypermarket	24,800	95	53
10	Shanghai RT-Mart	Taiwan	Hypermarket	19,587	68	
13	Yum! Brands, Inc. China Division	America	Western fast food	16,900	2,095	19
14	Wal-Mart (China)	America	Supermarket Hypermarket Warehouse store	15,031	71	27
16	Trust-Mart	Taiwan	Supermarket	14,000*	101*	5
17	Lotus (China)	Thailand	Hypermarket Supermarket	13,500*	75*	23
23	Metro Cash & Carry	Germany	Warehouse store	9,367	33	22
24	Hymall (Tesco)	Britain	Hypermarket	9,300	47	21
36	B&Q China	Britain	Construction material store	6,200*	58*	21

* CCFC estimates
Source: *China Chain Store Almanac* (2007).

or a small domestic market, and pull factors, such as good economic conditions, an underdeveloped retail structure, a large market, low labour costs, and a relaxed regulatory environment (Alexander, 1997; Williams, 1992b). Obviously, China provides a favourable operating environment for the development and expansion of foreign retailers (Wang, 2006). Table 2.7 shows the top ten global retailers based on the sales of 2005. A comparison of Table 2.6 and Table 2.7 shows that among the top ten foreign-based retailers in China in 2006, four of them are also very large retail organizations worldwide, namely Wal-Mart, Carrefour, Metro, and Tesco.

From 1992 onwards, there have been four significant phases in the expansion process of foreign retailers in China, with mileposts on

Table 2.7 Top ten largest retailers in the global market ranked by sales (2005)

Rank	Companies' names	Country origin	Sales (million $) 2005
1	Wal-Mart	USA	312,427
2	Carrefour	France	92,778
3	Home Depot	USA	81,511
4	Metro AG	Germany	69,134
5	Tesco	UK	68,866
6	Kroger	USA	60,533
7	Target	USA	52,620
8	Costco	USA	51,862
9	Sears (previous Kmart)	USA	49,124
10	Schwarz	Germany	45,891E

E: estimate
Source: China Chain Store Almanac (2007).

government policy changes (Wang, 2003; Wang *et al.*, 2007). During the first phase, from 1992 to 1994, foreign retailers passed through what can be called an 'experimental' phase in China. The Chinese State Council opened China's retail market to stimulate the development of tertiary industry. However, only six large cities (Beijing, Shanghai, Tianjin, Guangzhou, Dalian, and Qingdao) and five Special Economic Zones (Shenzhen, Zhuhai, Shantou, Xiamen, and Hainan) were opened to foreign retailers (Lam, 1995; Shi and Yang, 1998), and each of the above cities was permitted to have only one or two foreign retail firm(s), which had to be operated in JVs, with less than 50 per cent of stakes held by foreign parties. Retailing was permitted, but wholesaling was prohibited. Importing and exporting certain types of merchandise were allowed, but total import was not allowed to make up more than 30 per cent of sales (Wang, 2003). During this time, foreign retailers started to enter China, with the majority of them coming from Southeast Asian countries such as Japan, Singapore, and Hong Kong.

The second phase, from 1995 to 1998, can be defined as the 'preliminary' phase of foreign retailers' expansion in China. In October 1995, the Chinese government took further steps to open the retail sector. Beijing authorized foreign retailers to operate retail chains instead of opening single-store only. A partnership with Chinese retailers was a must with the Chinese partner holding a majority of the shares. During this period, foreign retailers from Western Europe and the US began to enter China. As mentioned before, the period of interest for this research work started at this particular time, when Western retailers started to enter the Chinese market in 1995.

The third phase was the 'developing and adapting' phase, lasting from 1999 to 2000. In June 1999, the Chinese central government further liberalized the retail market. Retail firms with FDI were allowed to develop their businesses in all provincial capitals, capitals of autonomous regions, municipalities directly controlled by the central government, and municipalities with independent development plans as well as Special Economic Zones (East Asian Executive Report, 1998). Joint Sino-foreign retailers were also allowed to operate wholesale as well as retail. Majority foreign ownership (but no more than 65 per cent) became legal for the joint retail chains that had potential to purchase large quantities of Made-in-China products and export them to other countries although wholly foreign-owned enterprises were still prohibited.

In addition, new criteria were established for the selection of foreign retailers and Chinese partners. From this time, further overseas entrants had to be large and experienced retailers with a good reputation and performance record. To be eligible, entrants had to provide a minimum business capital of US$200 million and had to achieve annual sales of at least US$2 billion. They were expected to have well-established international distribution networks and be able to help exporting Made-in-China products. Chinese partners also had to be large retailers with a minimum capital of US$6.2 million and have achieved minimum annual sales of US$37.5 million. Moreover, favourable treatment was given to the JV firms that were willing to set up business operations in the Western region of China to encourage business developments in this underdeveloped area. Foreign retail firms could not charge more than 0.3 per cent of the annual sales of the JV for technology transfer or for using their registered trademarks (State Economic and Trade Commission and Ministry of Foreign Trade, 1999).

In the fourth phase, starting from April 2000, the Chinese central government decided to reduce or even waive land transfer fees or land usage fees according to the specific circumstance. For instance, retail operations with more than 25 per cent foreign investments in Xining and Haidong in Western China were exempted from payment for land usage (land cannot be owned by private enterprises according to laws in China, and usage fees need to be paid to governments by any land user). During this period, more foreign retailers realized the huge potential in gaining profits in China and they started their 'development and adaptation' phase based on the experiences they had had in other international markets and in China. This means that foreign retailers were not only developing and adapting in the Chinese market, but they were also starting to 'adjust and adapt' appropriate strategies to suit further expansion.

Since 2001 after China joined the WTO, foreign retailers have launched an aggressive expansion phase because of further improvements within the business environment. The Chinese government has started to adjust market entry and operation policies step by step. All the restrictions on foreign ownership and numbers of branches were lifted by the end of 2004. Foreign retailers can now benefit more from preferential treatment and face fewer obstacles when entering or operating in China.

Conclusion

This chapter provided the background to the research by analysing China as a new emerging market. With the Chinese economy in transition, China's WTO entry, and significant amounts of FDI flowing into China and its retail sector, foreign retailers have started rapid expansion activities in the Chinese market. Chapter 3 discusses theoretical frameworks and sets up propositions for this research in order to answer the research questions and achieve the research aim and objectives given in Chapter 1.