LOGISTICS BARRIERS FOR MULTINATIONAL CORPORATIONS DOING BUSINESS IN CHINA

By

MANQIN LUO

M.S., Operations Research
George Mason University, 2002

B.E., Aeronautical Technology and Foreign Trade in Industry
Beijing University of Aeronautics and Astronautics, 1998

Submitted to the Engineering Systems Division
In Partial Fulfillment of the Requirement for the Degrees of

Master of Engineering in Logistics
at the
Massachusetts Institute of Technology
December, 2003

© 2003 Manqin Luo, All rights reserved.

The author hereby grants to M.I.T permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part.

Signature of Author

Engineering Systems Division
January 14, 2004

Certified by

Christopher Caplice
Executive Director of MLOG Program
Thesis Supervisor

Accepted by

ROSSI SHEFFI
Professor of Civil & Environmental Engineering
Professor of Engineering Systems
Co-Director, Center for Transportation and Logistics
Logistics Barriers for Multinational Corporations Doing Business in China

By

Manqin Luo

Submitted to MIT Engineering Systems Division

On December 5, 2003

In Partial Fulfillment of the Requirement for the Degrees of

Master of Engineering in Logistics

Abstract

With rapid economic growth, China attracts many multinational corporations (MNCs) as a manufacturing center with both its cheap labor cost and a huge consumer market. While doing business in China, most MNCs have faced logistical problems in connection with the transportation of their materials and the flow of information. The research objective of this paper is to describe the current state of Chinese logistics service and identify the logistics barriers that foreign firms have encountered in China. Dell and Wal-Mart are selected as case studies. The thesis analyzes their operating strategies and solutions to various problems they encountered in China and makes some recommendations.

Thesis Supervisor: Christopher Caplice

Title: Executive Director of MLOG Program
Acknowledgement

I would like to thank my thesis advisors, Chris Caplice for precious time and effort he
has devoted to assisting me in the completion of this thesis. I could not have asked for
better guidance than what he has given to me in the development of this thesis.

Beyond the completion of this piece of research, the more precious things that I
appreciate are the generous help from many faulty members in MLOG program
including Jim Masters, Yossi Sheffi in the past one and a half year, especially during
the difficult time.

I also want to express my appreciation to Ming Li, Edward Fan for sharing useful
information which is helpful to my thesis project, to Xiaoping Chen, Yi Cai,
Benjamin Zheng and Daguang Zhang for warm help during the time together.

Finally, thank you to my dear husband, Peng, for so much love and encouragement
and consistent support.
Table of Content

1. Introduction and Literature Review................................................................. 6
   1.1. Current State of Logistics Service in China ........................................ 6
   1.2. Transportation Infrastructure ................................................................ 7
       1.2.1. Road .............................................................................................. 8
       1.2.2. Water ............................................................................................ 8
       1.2.3. Rail System ................................................................................... 9
       1.2.4. Air Express and Air Cargo ......................................................... 10
       1.2.5. Multi-Modal Transportation ....................................................... 11
   1.3. Warehousing ........................................................................................... 12
   1.4. Summary ............................................................................................... 12
2. Logistics Barriers of Multinational Corporations in China ......................... 14
   2.1. Profit Potential for Different Industries ................................................. 14
   2.2. Logistics Barriers .................................................................................. 17
   2.3. Summary ............................................................................................... 19
3. Supply Chain Practice of Dell in China .......................................................... 21
   3.1. Introduction ........................................................................................... 21
   3.2. Direct-Sales Model ............................................................................... 21
   3.3. Dell’s Adventure in China ..................................................................... 22
   3.4. Summary ............................................................................................... 28
4. Supply Chain Practice of Wal-Mart in China ................................................. 30
   4.1. Introduction ........................................................................................... 30
   4.2. Wal-Mart in China ............................................................................... 30
   4.3. Summary ............................................................................................... 35
5. Conclusion and Key Points ............................................................................ 36
REFERENCES .................................................................................................... 41
1. Introduction and Literature Review

This Chapter describes the current state of Chinese logistics service management, reviews literature covering some aspects of China’s supply chain infrastructure and analyzes the impact of its supply chain inefficiency.

1.1. Current State of Logistics Service in China

China’s economy has been enjoying rapid growth over the last two decades. China officially became a member of World Trade Organization (WTO) in November 2001. In recent years, China has become an increasingly important arena for multinational corporations because of China’s vast market potential and low labor cost. Foreign direct investment and multinational corporations have brought new manufacturing capacity to China and helped China become one of the world’s major workshops. According to Dr. Fu Yuning, President of China Merchants Group, in a speech to the American Chamber of Commerce on July 9 2003, foreign direct investment reached a record of US$52.7 billion in 2002 [1], making China the largest recipient of foreign direct investment in the world, surpassing the Unite States. Within its first year in the WTO, the Chinese GDP grew by 8% [2].

However, logistics services have become one of the most important bottlenecks to the rapid economic developments in China. There is a big gap between their international supply chain requirements and current services provided by local logistics companies. Due to the rapid localization of production, multinational
corporations have a higher level requirement of logistics services. Facing the country’s external environment and the trend of increasing competition from international competitors, logistics service in China is still very weak and inefficient. China’s logistics costs – including both corporate outsourcing and in-house logistics expenditures – were approximately US$245 billion, 20% of its GDP in 2002. The logistics costs in China is about 40~50% higher than that in developed countries [1].

The logistics market in China is also very fragmented. No logistics company has more than 2% share of the China market as of 2002 [3]. Many of the logistics companies are only traditional transportation and warehousing companies. They just provide simple service such as transportation and warehousing and are not able to offer value-added services like information technology and inventory management. Thus problems such as lack of expertise and technologies are very serious. With WTO entry, foreign logistics giants such as United Parcel Services (UPS), Federal Express, DHL Worldwide Express and American President Lines Co. Ltd. all came to find a niche in China’s logistics market. They constitute a big challenge to those local logistics companies who have not yet become powerful.

1.2. Transportation Infrastructure

There are four transportation modes for multinational corporations in China: road, water, railway and air. Since pipeline transportation is used mainly by state owned companies, it is neglected here.
1.2.1. Road

Owing to its flexibility, trucking is the mode of choice for finished goods producers in most mature economies. It is also the one of the most commonly used transportation modes in China. Currently, highway transportation constitutes about 25%-30% of the market volume (ton-miles). China has been rapidly developing its highway system in the past few years. It added 36,000km of highways and 3,152km of expressways in 2001 alone. Investment in highways for 2001 was $37.66 billion. In adherence to the government’s “go west” policy on western expansion, Sichuan province plans to have 4,600 km of expressways built by 2020 [4].

In China, the types of carriers available vary in different locations. In big cities such as Beijing, Shanghai and Guangzhou, there are more private and foreign carriers available to serve the larger population of foreign firms investing there. While in the other less developed inland cites such as Qinghai and Lanzhou, the problem of a shortage of carriers is very serious.

1.2.2. Water

Ocean Shipping

Ocean shipping has been one of the most open sectors in China for years. By the end of June 2000, there were already nearly 80 wholly owned foreign shipping companies and branches, plus 120 joint-venture shipping companies operating [5]. China has sixteen major shipping ports with a capacity of over 5 million tons per year, combined for total country shipping capacity in excess of 1400 million tons. Many
ports are going through a significant upgrade [4]. With the development of the modern logistics industry, the ports will increase the number of goods transition centers, improve transportation and warehousing facilities to replace the traditional loading and unloading practices.

**River Shipping**

Usually MNCs don’t consider river shipping as an important transportation mode now. But we expect that it will be used much more common soon. The reason is the labor cost in the west is much cheaper than in the east coast. Thus Chinese government has applied the “Go West” policy which plans to open up and develop its western regions. More and more labor-intensive industries, such as manufacturing, may start to move to the west. Since there are no existing railways that connect the west with the east and it is time-consuming to construct new railways, we can expect that factories will settle along the rivers active in shipping such as Yangtze and Pearl. River shipping will become a prevalent transportation mode very soon.

**1.2.3. Rail System**

The rail system has been extensively used because of its relative low cost. It is mainly used for transportation of bulk and raw materials. Now rail transportation constitutes about 50% - 55% of the market volume (ton-miles) [4]. Rail transportation becomes less competitive than before. The cost of rail transportation is only one third of trucking in China. The main reason companies still prefer trucking than rail system is that in China the railway containers are not compatible with those used by shipping
companies. If rail transportation is chosen, frequent unloading and reloading cargos will cause higher handling costs and higher damage rates. The other reason is that many small companies do not have the volumes that enable them to enjoy the economy of scale of rail transportation.

1.2.4. Air Express and Air Cargo

Express Mail Service (EMS), which is under China Post, dominates 70% of the domestic express market. The large market share is because of China Post’s extensive network and legislative protection. Joint ventures between foreign companies such as UPS, DHL, TNT and FedEx and domestic companies have about 30% of the market share. While on the international express market, EMS and joint ventures have about 50% of the international market share respectively [4].
1.2.5. Multi-Modal Transportation

Currently, very few companies have the capability to offer integrated multi-modal transportation service in China. Sinotrans International Multi-modal Transportation and a couple of foreign players (SempCorp Logistics and APL Logistics) are the leaders in this field. They usually have strategic alliances with local players in addition to their strong international presence and extensive network [8].

Infrastructure that connects the west to the east (e.g. highways and river ports along the Yangtze River) will be developed or further improved in the next one to two five-year plans [1]. When the projects are completed, more and more manufacturing facilities will be moving to the west to take advantage of the lower labor cost. Demand for multi-modal transportation will increase, as more companies will choose rail and river shipping as the preferred mode for inland shipping with volume and scale. Thus, we expect that the demand for multi-modal transportation will increase.
1.3. Warehousing

Warehousing in China cannot satisfy customers due to the poor infrastructure and inadequate information systems. Most of the warehouses in China are not storied-shelf type. Currently, the dominant type of warehouse in China is still the bungalow or open storage yards [6]. Storied-shelf warehouses constitute less than 10% of the warehouses and only 20% of the companies have more than 50% of their warehouses of the storied-shelf type [6].

Figure-2 Storied – Shelf

High discrepancies in actual and recorded inventory data, high damage and missing rates, and general lack of real-time product and order tracking and tracing is the current situation of warehouse management in China. Manufacturers thus have no other choice but to build their own facilities.

1.4. Summary

In conclusion, the infrastructure has been greatly improved in recent years. The Chinese government have invested large sum of money to construct highways and
railroads. Quality highways, telecommunications, high-speed internet connectivity and responsive local government have attracted many multinational corporations. But compared with developed countries such as United States, China is still laggard in some aspects such as insufficient transportation system and antiquated warehousing. Due to these shortcomings, it is very difficult for companies to apply standard approaches to supply chain management. Facing various problems such as a fragmented distribution system and government bureaucracy, the Chinese logistics system is very inefficient. The Chinese government is currently investing large sums of money to upgrade China's logistics and transport infrastructure. The government has listed a project named “establishing modern logistics service models and sample companies” in its tenth five-year plan. The goal of the project is to set up 30 modern logistics/distribution centers, while cultivating and developing about 10 larger-scale logistics enterprises with a nationwide network [1].

After broadly introducing Chinese logistics service, we will discuss specific logistics problems MNCs have met and their subsequent solutions.
2. Logistics Barriers of Multinational Corporations in China

This chapter identifies the logistics barriers that multinational corporations have encountered in China and analyzes their impact on the development of those companies.

2.1. Profit Potential for Different Industries

China’s rich market potential and rapid economic development have attracted more and more MNCs entering China to take advantage of the open door policy and low labor cost. Almost all major MNCs have joined the competition in various industries in China. With the trend of increasingly more severe competition, there are higher operational risks and customers have higher expectation to logistics services than ever before. The MNCs are facing both fantastic opportunities and tough challenges. Some companies have taken up an advantageous position in China market and made huge profits in China, while others have not created the success they expected yet and even lost millions. For instance, the chain restaurant industry seems the most lucrative in China. The CEO of Pizza Hut described the Chinese market as a gold mine. A new Pizza Hut restaurant is being opened every two days. But, in comparison, Wal-Mart has hardly made any profit after struggling for many years [10]. It proves multinational corporations in different industries have met barriers of different levels in China.
Investment analysts such as Merrill Lynch say only a few of the foreign companies in the Chinese market are making money. China’s top 25 companies had an average return of just over 3% last year. Even market leaders such as Coke and Motorola have a return of about 5% -- far below what they make anywhere else in Asia [10].

According to Merrill Lynch’s monthly report on the profits of MNCs who are manufacturing and selling in China, MNCs in different business sectors have different potential to make profits. The result shows that industries in which at least some multinationals are profitable are fast-moving consumer goods, heavy machinery and equipment, automobiles, mobile-phone and computer hardware. Sectors marked by widespread losses include retail and home appliances.

Merrill Lynch regards consumer goods as the most promising sector for multinationals. Companies such as Colgate & Palmolive, Procter & Gamble and Unilever all claimed profitability there.

Some heavy mechanical equipment companies are also enjoying quick growth because almost all of the local governments and enterprises are upgrading the infrastructure. For example, many Chinese airports plan to upgrade their airport facilities in the next 5 years. The companies earning profits include General Electric, Siemens and Caterpillar.

China’s car market is booming. The sales volume of automobile companies is increasing very quickly. However, the higher sale volume doesn’t mean subsequent higher profits because of the imminent pressure to lower the price. For instance, the
sales volume of Volkswagen in China increased by 42.8% in 2002 but the operations profits only increased by 5.6% [10].

The competition of mobile phone market is more severe than in the 1990s. The local manufacturers become more and more competitive with outstanding design, savvy marketing and attractable pricing. Foreign giants such as Motorola and Nokia used to dominate the market. The situation now has totally changed. The market share of Motorola in China reduced from 40% in 1999 to 26% in 2002. The market share of Nokia reduced from 32% to 18% in 2002 [10]. Domestic companies such as Kejian and Panda become very competitive in the mobile phone market.

Competition in the computer-hardware industry is also very furious. Of foreign PC companies, only Dell Computer ranks in the top 10. The company has claimed profitability in China since 1999.

Almost all of the retail sales companies, including Wal-Mart, are losing money in China due to furious competition and tight government control. Carrefour, the largest entrant with 39 mega stores, is the only one which claims to be profitable, and saw net sales of $1.2 billion in China last year. Intense competition is driving down profit margins in China's booming retail market [10].

Whether earning profit or not, almost all of the foreign firms have faced logistical problems. For most MNCs in China, it is desirable to source and manufacture products locally, usually through a joint venture with a local firm. Most of the MNCs are located in the more developed regions and special economic zones such as
Shanghai, Beijing, Shenzhen and Guangzhou. The five Special Economic Zones China established in Shenzhen, Zhuhai, Shantou, Xiamen and Hainan provinces as it began its economic reforms remain some of the best manufacturing bases in the world.

Typically, each multinational company's factory would have to establish its own distribution system and set up in-plant warehousing. Their need for efficient and high-quality logistics providers with national scope becomes more and more imminent.

![Figure-3 China map](image)

2.2. Logistics Barriers

Carter, Pearson and Peng (1997) conducted a survey of 203 US firms doing business in China to identify the most critical logistic barriers which tend to offset a firm’s efforts and lead to longer transit time, higher inventory levels, higher logistics
costs, decreased flexibility and greater customer dissatisfaction. They found that logistics barriers were present in all aspects including purchasing, transportation services, order processing, warehousing services, inventory control and import/export services [7].

| Purchasing                        | Unavailability and unresponsiveness of local vendors |
|                                  | Poor quality of locally sourced products and high prices |
|                                  | Undependable delivery and low order filling rates. |
| Transportation                   | Poor infrastructure                                  |
|                                  | Lack of mode/carrier selections                      |
|                                  | Lack of cargo tracing services                       |
|                                  | Long loading/unloading times                         |
|                                  | High tariffs                                         |
|                                  | Lack of inter-modal services                         |
| Documentation/Order Processing   | Unavailability of needed information                |
|                                  | Inadequate communication infrastructure              |
|                                  | Lacking of electronic data interchange capabilities  |
|                                  | Slow order processing                                 |
|                                  | Manual documentation operations                      |
|                                  | Lack of documentation/order processing skills        |
| Warehousing                      | Poor location                                        |
|                                  | Inadequate facilities                                 |
|                                  | Insufficient services                                 |
|                                  | Poor computer systems                                 |
| Inventory Control                | Differing control methods                            |
|                                  | Lack of computer technology                           |
|                                  | High inventory level due to government control        |
|                                  | High inventory tax.                                   |
| Logistics Services               | Unavailability of third party providers               |
|                                  | Complicated customs procedures                       |
|                                  | Unavailability of logistics consulting services       |

Table-1. Logistics Barriers of MNCs (source: [7])

Many barriers have been greatly lowered in the past few years. For purchasing, the local vendors understand international trade well and adapt to the intense market
competition much better than before. The qualities of local products are comparable to those in the advanced countries and the prices are also reasonable. For transportation, China has been making efforts to improve the logistics infrastructure and related services recently. Many modern highways and railways have been built. Management in transportation has become more efficient. Logistics barriers in transportation infrastructure and computer technology and have been greatly lowered. For order processing, advancement in information technology makes order processing easy and efficient than several years ago. As mentioned, warehouse facilities in China are still not modern and adequate. But it is improving. Barriers on hard side such as infrastructure and information technology have been greatly improved while it is difficult to lower the barriers on soft side such as logistics services and management method. Another large barrier is the various restrictions imposed by the Chinese government on logistics services which mainly limit entry and type and price of service foreign companies are able to provide. Local protectionism are still very serious. For example, trucks of other cities have to pay higher fees when they enter a city.

2.3. Summary

China is one of the most competitive markets in the world now. Though the current logistics infrastructure situation is not perfect, the logistics barriers in transportation and warehousing services are not as high as before due to upgrading recent years. However, some other problems still exist such as lacking of effective
management skills and government protectionism. Domestic brands are more aggressive and savvy, particularly in industries such as mobile phones and car manufacturing where foreign firms used to dominate. Even where there is profitability, margins are eroding in many sectors.

Some of the companies are doing business in China with superior performance but some others have met problems which is difficult to solve. The following chapters will introduce the strategies of some big MNCs to overcome the logistics barriers they encountered in China.
3. Supply Chain Practice of Dell in China

3.1. Introduction

Dell was established by Michael Dell in 1984. It has been growing quickly and been involved in virtually all computer industry segments, from desktop and notebook PCs, network servers & workstations and other peripherals to operating systems. Dell generates about 80% of its sales from desktop and notebook PCs [14]. Instead of a technology leader, Dell became famous due to their outstanding marketing strategy and sales methods.

3.2. Direct-Sales Model

Michael Dell pioneered the direct-sales model for computers. Customers purchase products directly from Dell via telephone, mail or Internet instead of the traditional retail method. Upon receiving the orders from customers, Dell assembles the parts and delivers the final products to the customers’ home address. Compared with the traditional method of producing computers based on the forecast to the market demands and keep high level of inventory, the direct-sales model communicates directly with customers and eliminates the middleman and thus lowers the inventory, sells for lower prices. The whole supply chain only includes the supplier, manufacturer and customers. It also means low inventory, Just-In-Time (JIT) manufacturing to meet consumers’ specific needs, build-to-order products, and direct customer relationship with manufacturers. It is the company’s competitive advantage,
which has helped them to reach above-average returns today. With direct-sales model, Dell provides with an inventory only about 4 days old [11]. This short inventory period releases the capital stuck to the inventory and allows the company to save time and money. Furthermore, the direct-sales method provides Dell with real-time feedback and market information which enables Dell to better understand the customer’s needs and provide the most effective computing solutions to meet those needs, respond quickly to changes in consumer demand or overall market conditions. The other strengths are that Dell offers custom configuration to all customers and provides direct, toll-free technical support and next-day, on-site service.

Most of the other companies such as Legend have some preset configurations and strongly rely on their sales agencies, for which they have to maintain a high level of inventory. Though Legend tried to copy this concept and do business in China, it does not seem to work as well as Dell does because it is very difficult to change existing sales network to a completely new sale method.

### 3.3. Dell’s Adventure in China

Dell started the business in China in 1994 by setting up a joint venture with Stone Group in Beijing. The first adventure was silent and almost neglected. It was proved to be a failure due to relying too much on the sales agency of Stone group and not enough advertisement. Stone group had limited exposure to Chinese customers at that time. Having entered the market again with more effort and penetration in 1998, Dell
is now China's No. 2 PC seller, only behind Legend [11], a local PC manufacturer. That makes Dell the leading foreign brand. What factors led to the success of Dell in China?

Dell set up a manufacturing factory in Xiamen, a quickly growing city in the South of China with modern infrastructure and prosperous economy. Xiamen lies in the halfway between Shanghai and Hong Kong on the Southeastern coast of China. This is a great location. By manufacturing domestically Dells avoids tariffs and the value-added tax and also show a commitment to the Chinese market. Dell has both direct sales and technical support in nine areas of China, including Beijing, Shanghai, Guangzhou, and Xiamen. The transportation within China is mainly by rail and truck. Both are very convenient around Xiamen. Dell usually contracts the delivery to local transportation companies.

Dell built a China Customer Service Center in Xiamen to offer technical support to Chinese customers. Since the network is not fully developed in China, Dell has set up some informal Home Offices and representative offices in Beijing, Shanghai and Guangzhou. They are mainly responsible for the public relationship with local large accounts.

According to statistics by China telecom, there were only around 2000 internet users in China in 1991. It dramatically increased to 2,100,000 by the end of 1998 [13].
More and more enterprises buy computers via Internet. The market potential is huge. Dell believes direct-sales models will become practical in China. Dell promises to their customers to receive orders in 2-5 days upon placing orders [13]. The direct-sales method also reduces the operation cost to a great extent. Usually the operations cost of foreign companies is twice that of local companies in China. The operations cost of local companies is about 8.5% of the total costs while the operation cost of foreign companies is about 20% to 22%. But Dell’s operations cost is only 9% of the total costs. Thus Dell speaks for “local price, international brand” [11].

Direct sales method has made profit for Dell in China. But in order to crack the Chinese market in depth and reach more customers, Dell had to depart from some of its traditional direct sales and emphasis on customized computer configurations. Currently the cost of a computer is still a large amount to the average Chinese consumer, about one year’s income. Price is one of the most important factors to consider when they plan to buy a computer. Dell pays attention to this point and tries to penetrate this market segment with some configuration at a low price point. In July 2000, it launched a computer named Smart PC with preset configurations. Dell didn’t reveal the sales numbers of Smart PC but the company credits the model as one reason sales have been growing [11].

Another important thing is China’s culture expects companies to sell their products face-to-face instead of on-line selling. It is not widely acceptable to placing
an order of thousands of dollars via a phone call or a click of mouse. Dell then has to invest in door-to-door or face-to-face operations, initially, to gain consumers’ faith and consumer’s trust in the company and product. To achieve this, Dell put more effort, time, and money toward it. Dell does very well in e-commerce and internet sales domestically. The firm hopes that their Internet sales will go up by gaining loyalty and respect from customers in the near future.

Dell has changed their direct sales methods by selling preconfigured PCs, and silently allowing the existence of “sales agencies” which are called system integrators. Many people questioned whether Dell sticks to the direct-sales method in China. Dell explained that some sales agents bought large volume of computers on behalf of end users so that they can enjoy the special price. Then they sold them to end users with normal price. But the real situation is Dell has to make concession to adapt to Chinese customers’ consuming habit. The direct sales model of Dell cannot achieve success immediately in China. The success of the model depends upon the coordination of supply chain, wide use of credit cards, both are lacking in China. Thus Dell has to mix direct sales method with conventional sales method.

Because of the imbalance of different levels of applications and infrastructure of different cities, Dell concentrated their development in big cites. Dell has built direct contact with big multinational corporations, government divisions, educational institutions, state-owned enterprises and retail users. Dell divides the Chinese
population into three consumer segments: Large Corporation Accounts, government and educational institutions, Home and Small Business. Dell concentrates on big corporations instead of retail buyers. The retail buyers account for only 10% of Dell’s China sales. Around 65% are from large corporate account. Two-thirds of Dell's corporate customers in China are state-owned enterprises while the rest of Dell's customers are multinationals like Ericsson, Motorola, and Ford. Government and educational institutions account for about 25% of sales [12]. The sales of Dell are divided into outside and inside. The outside sales concentrate on large accounts and the inside sales concentrate on mid and small enterprises. Dell has tried to capture retail users with large advertisements. After the precise market segmentation, every salesman has very clear target customers and does not need to waste efforts. The database of China Customer Service Center has recorded hundreds of thousands of information of China customers. The everyday responsibility of salesmen of Dell is to analyze the purchasing habit of these customers and persuade them to buy more Dell products.

![Figure-4 Dell's customers](image_url)
Though China's entry into the World Trade Organization has made it easier for foreign multinationals to do business in the country, many local firms like Legend still enjoy a lot of advantages in marketing and distribution. The Chinese government favors local companies over foreign companies, and has many regulations and protectionist tariffs on foreign goods, manufacturing and consumer access to its online selling system upon which Dell relies. To successfully enter and compete in this market, Dell made concessions to the Chinese government in the number of technical support centers, and tailor their direct selling method for a culturally different consumer audience. Dell faces a number of problems in government regulations.

The competition Dell faces in China is very fierce. Legend, the market leader in China, is a government backed PC company. Legend has a dominance presence in Mainland China. One out of every three PC's bought carries the Legend name Brand. Four of China's largest PC makers consist of Legend, Founder, Stone, and Great Wall. These companies are much more familiar to the Chinese customers than Dell is. International computer companies such HP and IBM are learning from Dell and implementing Dell's direct model.

Dell has been successful in the Chinese market and kept growing. In 2001, Dell shipped 9 million units to China. This increased by 22% to 11 million units in 2002. According to the statistical report of International Data Company (IDC), the sales increased 72% compared with 2001. As to the server, storage systems, the increase is
as high as over 100%. Dell has approximately 5.8% of the Chinese market. By now Dell has already overtaken China’s second-largest manufacturer, Founder, but remains well behind Legend Group Ltd., which still controls 27% of the Chinese market [11].

3.4. Summary

It is admitted the direct-sales model of Dell is very successful in other global markets. Even in China, the unique sales model brings Dell to the No. 1 foreign PC brand position. But in order to greatly increase the market share in China, Dell must officially build an effective and extensive sale-agency network. But China has a unique situation itself, especially after Legend fostered the purchasing habit of customers. Dell has to change it operation strategy and combine direct-sales model and sales-agency network together.

Furthermore, the China market is not as developed and unified as Western countries. For example, the transportation costs and selling costs vary greatly to sell an identical product in cities at Eastern and Western districts. Direct sales model does not consider this. It is more practical to apply sales-agency model because sales agents are more familiar with the local market. On the other hand, Dell has to adopt a much different strategy for the rest of China that remains unconnected to the Internet. Without the infrastructure to facilitate Dell’s direct selling model, Dell has to find a reliable partner to sell units through a different distribution channel. Their Marketing department must segment the Chinese consumer base based on technology need and
income levels, as these vary widely from rural to urban China.

All of these companies are learning from Dell and implementing Dell’s direct model. Dell must find ways to significantly improve or differentiate its direct model further if it wishes to maintain a competitive advantage in direct online sales domestically. The combination of direct-sales model and distribution channel will be a good idea.
4. Supply Chain Practice of Wal-Mart in China

4.1. Introduction

Wal-Mart is the world's No. 1 retailer, with about 4,750 stores, including about 1,500 discount stores, 1,650 combination discount and grocery stores (Wal-Mart Super centers) and 532 membership-only warehouse stores (SAM'S CLUB) [15]. Wal-Mart is famous for low prices and breadth of merchandise.

4.2. Wal-Mart in China

Foreign supermarkets such as Wal-Mart in China play a significant role in changing the traditional Chinese shopping environment and retail management. Foreign retailers were limited to certain regions of China. With the WTO entry, they are permitted in more cities and allowed to have majority ownership in joint ventures, compared with a maximum of 49 percent ownership previously, and also to operate wholly-owned subsidiaries in China. They are also permitted greater control over distribution of goods within China.

Wal-Mart focused most of its initial efforts in China's southern cities such as Shenzhen, Shanghai, and Guangzhou as well as the Yangtze River Delta. They are all economically dynamic cities. For instance, there are four Wal-Marts and one Sam's Club in Shenzhen. Average household income there is much higher than other part in China. This strategy fully accords with Wal-Mart's guideline of opening stores where the local consumers have the highest purchasing power.

In US, Wal-Mart promotes “a small-town flavor, with friendly greeters and patriotic trappings” and targets on mass market. But in China, the customers Wal-Mart targets are China’s emerging middle class people, mostly with high income and education.

It has already been 7 years since Wal-Mart entered China. However, the world biggest retail company has not gained expected success in China. Carrefour, the world's second-biggest chain store, is by far the largest and most successful foreign retailer in China. Wal-Mart (China) ranks the ninth behind Carrefour (third) in China’s 2002 top 10 retailers [17]. What has hindered the development of Wal-Mart?

Miss Huang from Wal-Mart China Co., Ltd. said at an interview that Wal-Mart has only 25 stores in China in 2003. The establishment of logistics centers will not help to cut the costs. Instead, this will increase the costs. Therefore, Wal-Mart China Co., Ltd. has to handle the logistics and distribution operations discretionarily [16].
Wal-Mart has only one distribution center in Shekou, Shenzhen. If the suppliers only want to sell in the local Wal-Mart stores, they must send their products directly to the stores. If they want to sell in the entire China market, they shall have to transport their products to the distribution center in Shenzhen. If they intend to export, it will be up to the Global Purchase Office Wal-Mart established in Shenzhen to handle. The distribution of Wal-Mart's stores in China is mainly undertaken by the suppliers. The function of this distribution center is not comparable with those of Wal-Mart's efficient logistics centers in US. Wal-Mart used to beat the market with superior supply chain management and reduced logistics cost. But the advantage seems not that obvious in China now.

Wal-Mart has advanced satellite-supported information system, which controls all the information of suppliers and manufacturers in time. The average time for a product from sending out of factories to ready for purchase is 5 to 7 days in United States while Wal-Mart's competitors need around 30 days. But the information system cannot be used in China. The policy control in China makes it impossible to share global logistics system. Wal-Mart has to wait for the opening of China retail sales, international trade and logistics.

Wal-Mart proposed contracting the supply and sourcing to some import/export trade companies. Though Wal-Mart prefers dealing with manufacturers directly, the company is trying to localize and adapt to the environment. Wal-Mart has friendly
relationship with the China Foreign Trade Bureau. Recently, it chose around 400 quality international trade companies, which are backed by more good manufacturers. Those manufacturers have relied on the trading companies for long years. The sourcing costs will be highly increased if Wal-Mart searches and negotiates with them one by one. Thus, Wal-Mart has partnered with trading companies, not only sourced efficiently and beat competitors. Also, the strategy satisfied the requirement of manufacturers. The biggest concern of manufacturers is the small purchase volume and low credit of buyers. Wal-Mart the company they can trust. The good coordination between the retailer and manufacturer is win-win situation which benefits development of both sides.

The cooperation of Wal-Mart and trading companies is temporary based on the short term benefit consideration. Direct relationship with manufacturers is the long-term trend. Shortly after Wal-Mart built contact with those trading companies, it inquired about the information of the manufacturers for the reason of qualification review. But now the manufacturers strongly rely on the trading companies. Usually the trading companies give the manufacturers the product design requirement. After production the trading company is responsible for export. It is difficult for Wal-Mart to neglect trading companies and build direct relationship with manufacturers.

The time to break the cooperation depends upon the company’s efficient supply chain establishment in China. The key factors include the strong third logistics
company partnership, the appliance of Wal-Mart Satellite database information system in China.

Another thing is that Wal-Mart's rigid culture is also the barrier of quick progress. For instance, Wal-Mart forbids employees from accepting gifts, meals or any other items from vendors. But forming and keeping the right connections, or guanxi, is critical in China. Managing relationships and staff in China is difficult. China has to develop a transparent, professional way of organizing its business and "everything - getting introductions, contracts, information - depends on your guanxi."

In addition to the competition from Carrefour, Wal-Mart is also facing competition from local retailers. While bringing much useful experience to their Chinese counterparts, these foreign supermarkets are also an enormous threat to their local rivals. China's thousands of local retailers are fighting for survival against the international retailers The China retail market for both groceries and dry goods is now fragmented. The mainland's 50 top retailers control less than 5% of the market. Those smaller stores are threatened by the big international giants. To help local companies compete, China's central government is setting a series of policies favorably support them. The competition between local and foreign retailing businesses is becoming more and more intense.
4.3. Summary

If Wal-Mart China Co., Ltd. wants to become as efficient as the US Wal-Mart, China's retailing industry, import & export rights and logistics industry should universally be opened up simultaneously. In other words, the opening-up degree of the retailing industry determines the business scope of Wal-Mart. The opening-up degree of import & export rights determines either the small circle of China or the large circle of the whole world; either the one-way flow or free flows.

Before the market becomes totally opened, the only strategy for Wal-Mart to win the battle is to make procurement, distribution and selling localized and adapt to Chinese business environment. In the meantime, build up a good and high-class brand to attract more customers.
5. Conclusion and Key Points

In recent years, both China's economic development and the expansion of multinational corporations (MNCs) in the country have been impressive. The Chinese government has encouraged foreign investment and opened industry after industry to foreign participation. MNCs have been able to compete at this market increasing flexibly. But China is still a difficult and uncertain operating environment for MNCs. While some MNCs have maintained continuous growth by expanding to Chinese markets with promising opportunities, a lot of others overestimated the short-term potential of China market and underestimated the severity of competition there.

Performance of MNCs in China is significantly influenced by the interaction between the environment, the industry structure and the firm’s organizational structure and operating strategies. In chapters above, some of the characteristics of MNCs doing business in China were described. Dell, a computer products company, manufactures extensively in China and tailors strategies to ensure that its products sell well in China. It sets up a unique distribution and sales channel in addition to the direct sales model, Wal-Mart, a leading retailer company, sources the products locally, supervises and cooperates with partners closely.

It is still early and for us to generalize a broadly applicable "best practices" of successful MNCs for others to follow. The company’s strategy depends upon different industries and company experiences. However, every MNC encounters similar
questions while entering China for business. Based on the research above, I have the following suggestions:

- Every multinational corporation needs to decide whether to regard China as either a manufacturing base to buy from or a consuming market to sell products to. Each one is a valid strategy, but calls for a very different approach. Most of the companies choose the first one because of the cheap labor cost and materials. With the modernization and globalization, demand of the huge market becomes bigger. In order to obtain long-term success, the company should combine the two strategies together for long term success.

- Even in rapidly growing and promising industries, it is essential to assess the level of competition analyze the competitors in an industry before making an investment decision. For example, global players such as Whirlpool were hesitated to enter the Chinese market due to the threat from local companies such as Haier and Kelon. With fierce competition of local producers, it becomes more and more important for an investor to create a China-specific business model and localize the product and marketing mix. Localize the company organization and adapt to the Chinese business environment is the most important thing for all of the MNCs. Considering the case of Dell and Wal-Mart, we can observe all of them are tailoring themselves to be more suitable and adapted to the China market. Flexibility and quick response is very critical during the competition.
• Multinational corporations need to decide early on whether to do business alone or find a local partner. Choose a local partner after testing its capabilities and reputation. Most of the multinational corporations are doing business in China based on establishing a joint venture with local companies. The drawback of this strategy is the joint ventures are less efficient due to the inconsistent management style and culture. Also, the local partners tend to impose a potential competition to foreign companies. It is imminent for multinational corporations to be integrated and unified in the competition. As the government eases constraints on foreign participation and allows foreign companies to acquire joint venture, many of the MNCs start to build their own sales forces and distribution networks instead of relying too much on local partners. Colgate’s acquisition of SanXiao is a good example. But the acquisition is not an easy task. There is huge difference of technology and employee salary between foreign and local companies.

• Usually the organization of multinational corporations is very complex. Compared with small and flexible local enterprises, there are more management levels when a decision has to make. Thus, multinational corporations usually are slow to react to the market change, which makes them vulnerable to the competition. The complex matrix management system should be broken. A new Chinese market oriented management system and a cross-department coordination system should be established.
There are more than six hundred cities, 80 dialects in China. The market difference at different cities is huge. So far, most of the foreign companies are all fighting for market share at some big cities such as Beijing, Shanghai. The competition at these few cities is furious and severe. I suggest foreign companies target other mid and small cities and gain the early enter advantage. Though companies will face the scattered market, laggard infrastructure, and information lack, there is still big potential. Cheap price will be the most important concern for customers there.

I also suggest foreign companies should build friendly relationship with Chinese government. The Chinese government has been actively amending its existing laws and promulgating new legislation to make a more extensively open market in order to further boost its foreign trade and attract more foreign investment. Making good relationship with the government will be very beneficial to their business development.

China has been regarded as a place with cheap labor, improving technology and a fast-growing consumer base. It is true that Chinese workers and managers may be cheap to hire, but the cost of training and the inefficiencies from a language gap will make labor costs much higher than expected.
In conclusion, the business environment in China is still complicated and supply chain infrastructure is far away from perfect. There is no secret formula for success in China. Multinational corporations should be clear about what their strength and weakness are. They also need to carefully analyze the market regarding the customer, competitor and partner. All the effort will bring returns in the long run.
REFERENCES

1. Fu Yuning (2003), speech to American Chamber of Commerce, 14th Leadership Series Luncheon, July 9, 2003


8. 2001, Yearbook of China Transportation and Communication, Morgan Stanley Research

10. Leslie Chang, “Chinese Market May Become Tough Going for Global Firms”
June 17, 2003, Wall Street Journal


Business Week Online

13. Neel Chowdhury, “Dell Cracks China” Fortune; 06/21/99, Vol. 139 Issue 12,
p120, 5p, 3c

<http://premium.hoovers.com/subscribe/co/overview.xhtml?COID=13193> (citied
Nov. 23, 2003)

(cited Nov. 24, 2003)

16. Clara, Li, “China’s Retailer eyes window of opportunity while others in retreat”,
Oct 27, 2000, The South China Morning Post

MarketResearch.com

Today