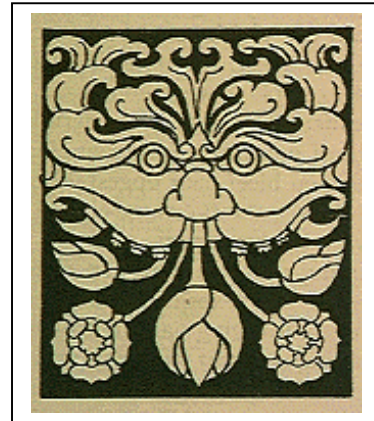


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# **Logistics Management in China: Barrier-hurdling and the Outlook for Legal Solutions\***

**Felix W.H. Chan**

Faculty of Law  
University of Hong Kong  
Pokfulam Road  
Hong Kong  
Email: fwhchan@hku.hk

## **Abstract**

China is an important investment destination for multinational corporations. Foreign investors have flocked to China to take advantage of the open door policy. It is anticipated that a more extensive market opening after China's entry into the World Trade Organisation (WTO) will further boost its foreign trade and investment.

Unfortunately, most foreign firms have faced logistical problems in connection with the flow of information and materials in China. A review of the literature concerning logistics and transport research indicates that although the major barriers to logistics management have been identified, a vital aspect – the legal environment in China – has largely been ignored. The present study attempts to fill this void of empirical evidence by identifying the magnitude of linkages between China's legal environment and its logistical capabilities

## **Introduction**

China is an important investment destination for multinational corporations. Over the past two decades, the Chinese economy has undergone considerable growth. Despite Asian and global financial crises, China's economy is still growing. By the end of 2000, China approved 365,974 foreign investment projects, with contracted and actual utilised overseas foreign direct investment amounting to US\$676.7 billion and US\$348.6 billion. The leading sources of investment were Hong Kong, Taiwan, Singapore, Japan, the US, and South Korea. Following the establishment in 1980 of the Beijing Aviation Food Company, the country saw the registration of more than 150,000 Sino-foreign joint ventures to March 2001 (People's Daily 2001). Five mainland Chinese firms are currently in the "Fortune Top 500" list: the Industrial and Commercial Bank of China, China Petrochemical Corporation, the Bank of China, the China National Chemical Import and Export Corporation, and the China National Cereals, Oils and Foodstuff Import and Export Corporation. It is forecasted that "economic policy in 2001-02 will be dominated by two trends: expansionary monetary and fiscal

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policies aimed at bolstering overall GDP growth, and official efforts to push through vital structural reforms” (Economist Intelligence Unit, May 2001). China’s gross domestic product (GDP) increased in real terms by an average of 8.3% from 1996 to 2000:

**Table 1: China’s GDP**

	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Real GDP Growth	9.6%	8.8%	7.8%	7.2%	8.0%
Exports of goods (US\$ billion)	151.1	182.7	183.5	194.7	249
Imports of goods (US\$ billion)	131.5	136.4	136.9	158.5	216.1

Source: Economist Intelligence Unit, May 2001

Foreign investors have flocked to China to take advantage of the open door policy, low labour costs, and the potentially huge market. Most of the global companies are located in the Shanghai, Beijing, and Guangdong regions. It is anticipated that a more extensive market opening after China’s entry into World Trade Organisation (WTO) will further boost its foreign trade and investment.

Unfortunately, most foreign firms have faced logistical problems in connection with the flow of information and the transportation of their materials in China. A review of the literature concerning logistics and transport indicates that although major barriers to logistics management have been identified, a vital aspect – the legal environment in China – has largely been ignored. It is acknowledged that an array of research has been conducted to analyse how the different economic, political, operational, and cultural environments in a country can create various logistical barriers to a firm’s global operation. Nevertheless, there has been little qualitative evidence that relates the characteristics of China’s logistics management to its legal environment. This study attempts to fill that void by identifying the magnitude of linkages between China’s legal environment and its logistical capabilities. The theory to be established through research is that further legal reform in China, in line with WTO entry and globalisation, is necessary and can play a significant role in improving the logistical environment. The objectives of this study are achieved through exploratory interviews with expatriate logistics managers stationed in China, logistics consultants, and transport lawyers. All of the respondents possessed first hand experience and original information about China’s transportation concerns. In light of the fact that China has officially become a member of WTO in November 2001, China is now actively amending its existing laws and promulgating new legislation in compliance with WTO goals. Therefore, this empirical study is timely and appropriate to test the cause and affect relationships as suggested in the aforementioned framework.

## **Objectives**

The specific research objectives are:

- (1) To identify the logistics barriers that foreign firms have encountered in China, and how the firms evaluate the relative severity of these barriers.

- (2) To assess the extent to which logistics barriers in China are related to its legal environment.
- (3) To understand how the imminent legal reforms in line with China's entry into the WTO are expected to facilitate the reduction of logistics barriers in China and to help improve the performance of logistical functions.

The results have implications not only for researchers, in that they reveal interesting insights that point to areas in which more research is needed, but also for the Western managers of foreign investments in China, by indicating the areas in which those managers are most likely to encounter problems. These issues are critical for the successful formulation of innovative and responsive logistical strategies.

### **Review of Background Literature**

The concepts of supply chains and logistics are closely connected. A supply chain encompasses all activities and functions involved in fulfilling a customer request. It includes the suppliers of raw materials, manufacturers, transporters, warehouses, retailers, and the customers themselves. The functions include the flow of information, and the transformation and delivery of goods from raw material stage through to the end user (Handfield and Nichols 1999 p. 2; Chopra and Meindl 2001, p. 3). Significant factors that determine the success of a supply chain include process integration among the suppliers and buyers, networks that connect the partners, and market sensitivity on the basis of information instead of inventory (Christopher 2000, p.38-9). Effective logistics is a key to the success of any supply chain. Novack, Rinehart and Langley (1994, p. 114) define logistics as follows:

Logistics is the process of planning, implementing, and controlling the efficient, effective flow and storage of raw materials, in-process inventory, finished goods, services, and related information from point of origin to point of consumption (including inbound, outbound, internal, and external movements) for the purpose of conforming to customer requirements.

For instance, the number of Internet users in China increased by 4 million in the first half of 2001. A report by the government-funded China Internet Network Information Centre revealed that 26.5 million people are now using the Internet in China (China Daily 2001a). With the rapid penetration of the Internet and the advent of e-commerce over the Internet, customers in even the most remote regions of China can now place orders for goods online. As home deliveries of all goods grow with e-commerce, efficient logistics will play a major role in the success of these supply chains. In China, the major players in supply chain logistics include the following (HK Trade Development Council 2000, p.2):

- Airlines;
- Consignees;
- Consolidators;
- Free Trade Zones;
- Freight Forwarders;
- Logistics Centres;
- Manufacturers;

- Retailers and Wholesalers;
- Shippers;
- Shipping Lines;
- Trucking Companies; and
- Warehousing and Distribution Companies.

A Free Trade Zone (FTZ) is a zone normally located in a port area. The Chinese government has approved 15 such zones in China. The Zhuhai FTZ in Southern China, established under the “Regulation of Zhuhai Free Trade Zone” approved at the 30<sup>th</sup> Session of the Standing Committee of the Fourth Zhuhai People’s Congress, is one of the good examples illustrating the flexible logistical environment in a FTZ. According to Zhuhai FTZ (2001), in-zone enterprises and the customs office are connected by a computer system, and Electronic Data Interchange is in use. No quotas or licenses for import and export are required in the FTZ. Many warehouses and showrooms are present. The warehousing enterprises in the FTZ can store goods demanded in the domestic and international markets, with the exception of those prohibited by law. There is no time limit for the storage of goods for transit, and the transit goods may undergo processing, grading, and repackaging in the FTZ. Foreign investors’ supply chain activities in the FTZ, such as imports, exports, warehousing, and transportation, can take place freely. The FTZ policy shows that the Chinese government is determined to liberalise and encourage free trade and commerce.

Since the Chinese government has been actively formulating policies to encourage a stronger linkage between the national economy and the global economy, more and more international firms have been involved in foreign direct investment in China. A new economic order has both shaped and been shaped by the extraordinary pace of globalisation that makes China vastly more competitive than ever before. Globalisation has been considered as the most significant phenomenon influencing societies since the 1990s. Waters (1995, p. 3) observed that globalisation is “a social process in which the constraints of geography on social and cultural arrangements recede and in which people become increasingly aware that they are receding”. Geographic distance is no longer referred to as a difficult barrier to conducting manufacturing and commercial activities across territorial boundaries due to the benefits of technology in transport and communication. China’s continuing globalisation and substantial growth of foreign investment creates a unique opportunity for foreign providers of logistics services. After all, among the many things that are needed for a highly competitive China is an efficient logistical network through which materials, products, and information can flow freely with reliability and responsiveness. There appears to be ample evidence showing how international investors are making use of this opportunity. Maersk Logistics, a global enterprise in logistics and supply chain management, has opened offices in 13 cities throughout China, with the corporate office located in Shanghai. Maersk Logistics China provides non-stop shopping for activities such as warehouse and distribution, airfreight, sea-freight forwarding, and trucking services (Maersk 2001). Mercantile (China) Logistics Services is also at the forefront of China logistics with the granting of a full logistics license for six branch offices as wholly owned foreign enterprises since July 1999. The license permits the company to perform services in China, such as warehousing storage and inventory control, booking space, the signing and issuance of cargo receipts, and collecting freight and other charges. (Shippers Today 2001)

Despite these novel developments, international investors and foreign managers have told researchers of severe logistical barriers in China. Speece and Kawahara (1995) investigated the important aspects of transportation in China. Although one-quarter of cargo travels on roads and highway, little has been done to expand road capacity. Rail transport is inefficient and expensive. Water transport also has problems, mainly because most inland ports and waterways are not equipped with modern handling facilities. Moving goods between coastal ports and the hinterland is very slow due to inadequate transport links. Although the Chinese government is stressing the country's open door policy, it is a rather slow process to persuade Chinese officials to serve the foreign capitalists. Cargo can wait for weeks or even months for carriage because of bureaucratic red tape. Export documents and customs and excise can take a long time before completion, especially when the Chinese authorities fail to issue shipping documents in a timely manner. Yam and Tang (1996) observed that the development of China's logistics infrastructure and transportation systems has lagged behind the speed of its unprecedented economic development. China's transport development is growing, but it still has a long way to go before it can completely catch on. The authors averred that "many problems in China's domestic distribution system are the results of China's regional self-sufficiency economic policy in the past. Until the 1980s, most products were manufactured locally for local markets. As a result, few transportation or distribution channels existed to move products between regions and provinces". Ta, Choo and Sum (2000) conducted a survey to identify logistics barriers to international operations in China. Their findings showed that Singaporean firms in China encountered severe barriers in all logistics functional areas. The more severe problems faced were the lack of cargo tracing services, the lack of delivery reliability for local carriers, complicated customs procedures, geographical fragmentation of transportation networks, and a lack of carrier selection. The authors suggested that the Chinese government should look into physical infrastructure development, the provision of better transportation services, and the development of logistics support programs. The government should also consider deregulating the transport sector to encourage foreign firms to provide logistics services.

The studies reviewed have identified the major social, economic, and cultural factors associated with logistics barriers in China and called attention to effective solutions. The literature indicates, for instance, various communication blockages between the Chinese government and the foreign investors. The lack of information channels means that foreign investors are often unprepared to overcome many problems caused by China's developing infrastructure. Cultural differences between China and the West, and bureaucratic red tape, are often cited as potential sources of communication problems.

## **Research Design**

One step toward a more accurate perception of China's logistics services is to understand the Chinese legal and regulatory environment. The literature review indicated that although some barriers to logistics management in China are identified and explored, there is a gap in the knowledge. Although economic and social factors are increasingly discussed, the legal environment and the outlook for legal solutions have received little attention. Innovative legal changes are expected to take place before and after China's WTO entry. To explore these issues through empirical study, an interpretative and qualitative methodology was used

in the present research (Keats 2000, Minichiello *et al.*, 1997). Six in-depth interviews were conducted with two expatriate logistics managers working in China, two cargo-claim lawyers, and two logistics consultants in Hong Kong. The respondents all possessed original information and first hand experience regarding the logistical environment in China. A semi-structured questionnaire with a fixed set of open ended questions was devised and used throughout. The questions were developed to check whether the problems and issues mentioned in the literature were actually encountered. Although the interviewee's perceptions of the logistics practices provided a rich source of qualitative insights, the small size of the sample mean that the data may present an incomplete picture. However, wherever possible, the interviewees' responses were carefully analysed to see if they were supported by other empirical studies, the relevant legislation, WTO agreements, case law, and newspaper reports. Besides, it is hoped that the findings of the present study may form the initial stage of a larger quantitative survey. Each interview lasted about one hour, and the interviewees were encouraged to talk openly by the assurance of confidentiality. In general, there was a remarkable readiness in those interviewed to discuss the logistical problems that they encountered in China and the possible legal solutions. A variety of logistical hurdles were identified by respondents as being closely related to the legal environment, and this environment is influenced by ongoing changes to the regulatory climate motivated by WTO membership. An analysis of interviewee responses produced the following classification of main areas of concern:

- Availability of logistical services and transportation infrastructure;
- Customs procedures and customs clearing time;
- Cargo tracing services and telecommunication facilities.

### **Availability of logistical services and transportation infrastructure**

After 15 years of lobbying and negotiation, China has eventually cleared all the hurdles to gaining WTO membership. China signed a bilateral agreement on accession to the WTO with the US on the 15<sup>th</sup> of November 1999, and with the EU on the 19<sup>th</sup> of May 2000. China has completed bilateral negotiations with all 37 WTO members that requested trade negotiations on China's accession with WTO. Finally, China officially became a WTO member in November 2001. WTO agreements cover goods, services, and intellectual property. Logistical and freight forwarding services are within the realm of the agreements, which spell out the spirit of liberalisation and commitments to keep open service markets. The General Agreement on Trade in Services (GATS) is a multilateral agreement legally enforceable against the individual countries. GATS, under the 'favour one, favour all' principle, requires that each WTO member treat its trading partners equally. If a WTO member allows foreign competition in a sector, then equal opportunities in that sector should be given to service providers from all WTO members. The domestic regulations of WTO members that regulate services should be objective and impartial.

All six interviews showed that a lack of carrier selection and inefficient logistical services are the most serious logistics barriers in China. A transport lawyer said, "the inefficient transport operators, poor infrastructure and weak co-ordination of different segments of the inter-modal transport have increased the production costs of our clients in China. Cargo damage,

short delivery and delay are still very common”. A logistics manager averred that “world-class logistics services are lacking, despite a continuing growth of import of raw materials and export of manufactured products from our factories in China. For instance, I know that in 1997 the Chinese government granted a license to American Consolidated Services Logistics (China) Limited allowing them to handle distribution of cargo in China. However, the speed of attracting foreign investment is still slow. One would wish to see more foreign participation in the logistics sector”. A consultant said that “our clients are demanding secure delivery of their raw materials and finished products. There are a lot of state-owned trucking companies in China, but you have to be selective about who you work with”. From the discussion with the interviewees, three major concerns were identified. First, the quality of the logistics services provided by domestic carriers is seriously affected by the lack of educated and trained staff. The inadequacy of logistics management skills on the part of the local staff is exacerbated by the fact that only very few people in China know what logistics is. Vocational training opportunities are limited because most colleges and universities in China do not offer enough courses on logistics or integrated supply-chain management. Second, transport needs significantly exceed the capacity of the transport available. Specialised logistics facilities, such as distribution centres or inter-modal services that make use of the latest information technology, are underdeveloped in most areas. Consequently, the production costs of most of the international operations in China have increased due to inefficient transport networks. Third, freight forwarding and logistical services are too heavily regulated by the MOFTEC (Ministry of Foreign Trade and Economic Co-operation). Indeed, the respondents’ concerns echoed the issues discussed in the literature. The complicated joint venture approval procedure for freight forwarding and domestic logistics services with foreign participation is summarised in Figure 1 below.

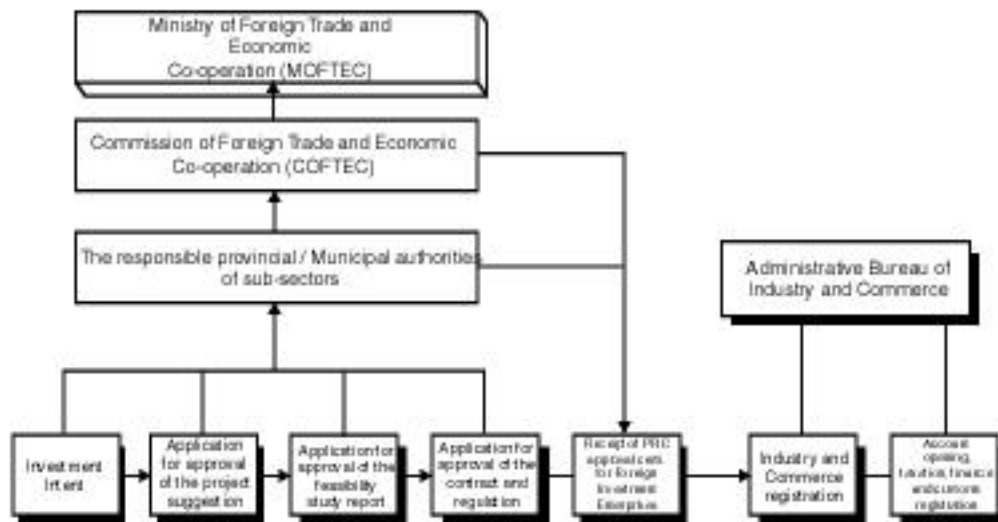


Figure 1. Joint venture approval procedure for freight forwarding and domestic logistics services with foreign participation. *Source:* Hong Kong Trade Development Council (2000, p.23)

Licensed international freight forwarders are heavily regulated by the “Regulations of the People’s Republic of China on Management of International Freight Forwarders” promulgated by Decree No. 5 of the MOFTEC on the 29<sup>th</sup> of June 1995. Licenses for domestic logistics service providers with foreign participation and licenses for international freight forwarding must be approved by MOFTEC in accordance with the prescribed procedure (Articles 9-16). The license is only valid for three years, and the application for license renewal must be submitted 30 days before the expiry date (Article 14). Moreover, the licensee must submit annual reports to the Commission of Foreign Trade and Economic Co-operation (Article 21).

These restrictions are obviously inconsistent with the policy of openness. To comply with the rules of the WTO and its commitments in bilateral agreements, the Chinese government is determined to implement more measures to further open the market for trade in goods and services. For instance:

- On the 21<sup>st</sup> of December 2000, MOFTEC issued a notice cancelling the examination and approval regulations for the establishment of branches by international freight forwarding enterprises in areas for which business operations have already been approved. The notice introduces a registration system to replace the examination and approval system.
- On the 3<sup>rd</sup> of January 2001, MOFTEC issued a notice opening up China’s railway freight market to foreign investors. Foreign companies are allowed to establish joint-venture railway freight service companies with Chinese partners. The foreign investors must be financially strong, have no less than 10 years of operational experience in the railway freight service industry, and have a good performance record. Moreover, the Chinese partner must hold greater than 50 percent of the shares in the joint venture, and the joint venture must have over US\$25 million in registered capital. (Asiainfo 2001)

China agreed to grant distribution rights to foreign exporters and manufacturers for both agricultural and industrial goods. According to the Section II of the US-China WTO Market Access Agreement on Services Commitments, the following changes will occur:

- Foreign operators will be permitted to establish joint ventures to provide warehousing services as minority equity shareholder upon accession. The foreign operators can then become majority shareholder within one year, and be free of all restrictions within three years.
- Majority ownership in freight-forwarding joint ventures will be allowed one year after accession. Wholly owned subsidiaries can be set up four years after accession.
- Currently, international maritime carriers are not allowed to offer inland distribution services. Under the new WTO regime, within a year of accession, foreign shipping companies can establish joint ventures with domestic companies to offer inland transport for international containers and establish domestic distribution networks. All restrictions to establishment will be phased out within four years.

All of the interviewees were optimistic about the current legal reform. They were pleased with the more open and sophisticated legal environment, which ensures its own credibility and future development. One respondent commented that “the demand for more

sophisticated transportation fleets, warehousing, online information, supply chain management and the design of fully integrated logistics solutions will be met by more foreign companies entering the Chinese logistics market once China becomes a member of the WTO.” Another respondent said that “the opening-up is expected to bring to China a larger amount of technology, capital and talented managerial staff in logistics. Although a vast majority of people in China now have no idea what logistics management is, things should begin to click for logistics in China in the future.” The legal framework will continue to undergo significant changes. An institutional infrastructure of new legal rules suitable for a more market-oriented economy is emerging along the lines of the WTO agreements. The central government should also take a proactive approach in facilitating greater co-ordination between local governments and the departments within each local government. Under such a scenario, the flow of goods and information in China will likely be strengthened, although the changes will not occur overnight. Further research is necessary to survey the progress and impact of the legal reforms.

### **Customs Procedures and Customs Clearing Time**

Complicated customs procedures and excessive customs clearing time are often identified in the literature as significant factors creating logistical bottlenecks. Goh and Ang (2000) studied the situation in Vietnam, Laos, and Cambodia and discovered that poverty has led to bribery of customs officers at checkpoints. Most cargo owners prefer paying the ‘facilitation fees’ to the corrupt officials to avoid the almost impossible task of complying with the complicated procedure. Extensive red tape, such as inefficient commodity classification systems and the poor co-ordination of customs opening and closing times, has resulted in serious delay. Persson and Backman (1994) described the situation in Eastern Europe in this way: “crossing borders represents a real bottleneck in Eastern Europe. There are physical lines of waiting trucks, and it is difficult to predict how long the individual truck will spend at the border. The major reasons for these are inadequate border facilities, even though several new lanes have been opened recently, and complicated and rapidly changing custom formalities”. In Mexico, a tremendous increase in cross-border traffic between the US and Mexico has created numerous logistics problems. The border crossing process is often a painful experience to logistics managers because of unco-operative and corrupt customs agents (Fawcett, Taylor and Smith 1995). Singaporean firms that are involved in China operations also indicated in a recent survey that customs clearing times were excessive, and that non-procedural practices at customs were extensive (Ta, Choo and Sum 2000). It was suggested that *guanxi* (social connections involving business associates, families, and acquaintances in complex networks of social support and sentiment) might affect the customs services.

To verify this proposition, the respondents in the present study were asked to describe their experience of and opinion about the issue. The extent of the effectiveness of the anti-corruption legal reform was also explored. Under the current Customs Law in China, all import and export goods are subject to customs examination. While the examination is being carried out, the consignee for the imported goods or the consignor for the goods for export is present and responsible for moving the goods and opening and restoring the packaging. Customs officers are entitled to examine or re-examine goods or take samples from them

without the presence of the consignee or consignor whenever they considers this necessary (Article 28).

The interviewees shared the view that China had to create a better legal system and investment environment. Typical comments were: “customs officials are given wide powers to enforce administrative law and implement anti-smuggling policy. However, some corrupt officials have complicated the customs clearance process”. “Making illegal administrative orders for the purpose of inducing bribes are not uncommon at the Chinese customs. This can be attributed to the low wages of civil servants and the many opportunities for corruption at the customs”. Moreover, “in China, different provinces and regions have different administrative rules. Navigating through these customs is the major logistics barrier that our company has to overcome when delivering cargo across different provincial boundaries”.

The Chinese government has clearly demonstrated its will to fight against corruption among customs offices. One of the important steps was that on the 8<sup>th</sup> of July 2000, a new chapter under the title of “Law Enforcement Supervision” was added to the Customs Law. The government, under the amended legislation, dispatches discipline inspectors and supervisors to all customs offices. Customs offices and their staff have to accept supervision by the supervisory departments when they engage in enforcement of the Customs Law. Moreover, China’s customs authority is making substantial reforms to cope with the increase in trade flow that will be induced by WTO membership. A unified electronic customs clearance system is being built in Shanghai, Beijing, Tianjin and Guangzhou on a trial basis. It is expected that the system will be gradually introduced throughout the nation to speed up customs clearance (China Daily 2001b). Qian Guanlin, director of the General Administration of Customs, remarked that when the reforms have been completed, China’s customs system will be more efficient and transparent, and become one of the most advanced in the world (China Daily 2001c). In addition, moral education is advocated to spur the officers to improve their standards. A respondent said that “I am aware that the government organisations are actively educating the officials with morality and honesty. I believe that the corrupt officials must be punished under the anti-corruption law, and that disciplinary proceedings should be taken against them”. However, moral education alone may not entirely overcome corruption. A stronger mechanism of checks and balances coupled with a larger degree of transparency in the activities of senior officials is equally important (He 2000, Cho 2001).

### **Cargo Tracing Services and Telecommunication Facilities**

Skjoett-Larsen (2000, p.383) described the contemporary trends of logistics in this way: “in future, the Internet will influence logistics systems in various way. First, the Internet will be applied as a fast and efficient means of communication between companies in the overall value chain. Customer orders, order confirmation, transport booking, invoicing, etc. will increasingly take place via Electronic Data Interchange or Internet”. A handful of recent examples can illustrate the prominent role of telecommunications in logistics. In May 2001, Genco Distribution System (a Pennsylvania-based logistics firm) announced an alliance with Transplace.com (an Internet-based global transportation logistics company). The partnership was formed to research and apply new Internet technology to offer customers innovative logistics solutions, reduce costs, and increase efficiency (Business Wire 2001a). Phoenix

International Freight Services Limited, an international freight forwarder, launched their new website in April 2001 to make it more convenient for clients to track international shipments, request quotes, and view sailing schedules (Business Wire 2001b). In May 2001, UPS and Omnisky Corporation entered into a partnership to provide wireless shipping solutions to their customers. The technology allows customers to access shipping information (such as package location and length of transit) anywhere at any time (Business Wire 2001c).

To acquire a better understanding of whether China is lagging behind in the arena of telecommunications and e-logistics, one needs to examine the recent figures. The International Telecommunications Union's latest statistics on main telephone lines and eTForecasts' research on Internet users produce the following relevant comparisons (Tables 2 and 3):

**Table 2: A comparison of main telephone lines in 2000**

<b>Countries</b>	<b>Per 100 inhabitants</b>
Indonesia	3.14
India	3.20
Philippines	3.92
China	11.12
Brazil	18.18
Russia	21.83
Singapore	48.45
Hong Kong SAR	57.76
Switzerland	71.99

Source: World Telecommunications Indicators 2000

**Table 3: The number of Internet users in year-end 2000**

<b>Countries</b>	<b>#Million people</b>
US	135.7
Japan	26.9
UK	17.9
China	15.8
Brazil	10.6
Russia	6.6

Source: eTForecasts (2001)

The figures show that China still lags behind. Fundamental to China's trade and economic growth is the capability of its telecommunications infrastructure to support a globally competitive network for transmitting vast volumes of information at high speed (Janda 1999). China has begun to give high priority to the development of telecommunications sector, and has been experiencing rapid growth in its telecommunications infrastructure. According to a press release on the 1<sup>st</sup> of May 2001 (eTForecast 2001), the number of Internet users in China reached 15.8 million in 2000, and the fast growth will make China second only to the US in numbers of Internet users by 2005. A commentator predicted that "a year from now China has a good chance of surpassing America as the biggest [telecom] market. That's just the start. By around 2005, when the world is expected to boast about one billion mobile phones, it is entirely plausible that a quarter of them will be in China. Its market is growing so fast

that every three months China adds enough subscribers to equal the entire Australian mobile-phone population” (Rohwer 2000).

The Chinese government has agreed to open up the ‘value-added’ telecommunications service sector to foreign investors, by up to 50 per cent eventually, when it joins the WTO. The government defined Internet services, email, voice mail, online transactions, videoconferencing, databases and fax service as ‘value-added’ services (China Daily 2000, Lawson 2000). Under the Sino-US bilateral agreement, China has made very substantial market access commitments covering the agricultural, industrial, and services sectors. US phone companies will be able to own up to 49% of all telecommunications service ventures in China upon the country’s entry into the WTO, and up to 50% two years later. Under the Sino-EU bilateral agreement, China will open up its mobile phone market two years sooner than under the Sino-US Agreement, and foreign operators will be able to own 25% of ventures upon accession, 35% one year after, and 49% after three years. International enterprises such as Motorola, Nokia, and Ericsson have expressed their keen interest in China’s fast-growing telecommunication sector. Recently, the PRC State Council approved the new Administration of Foreign-funded Telecommunications Enterprises Provisions, which took effect on 1 January 2002. Table 4 shows the phases of market opening on a gradual basis.

**Table 4: % Cap on foreign investment in China’s telecom sector post-WTO (and number of cities)**

Sector	2002	2003	2004	2005	2006	2007	2008
Mobile	25% (3 cities)	35% (17 cities)		49% (17 cities)		49% (National)	
Fax-line				25% (3 cities)		35% (17 cities)	49% (National)
“Value-added” services	30% (3 cities)	49% (17 cities)	50% (National)				

Remark: The initial three cities are Beijing, Shanghai and Guangzhou. The 17 cities include the first three plus Chengdu, Chongqing, Dalian, Fuzhou, Hangzhou, Nanjing, Ningbo, Qingdao, Shenyang, Shenzhen, Xiamen, Xian, Taiyuan and Wuhan.

Source: Asian Legal Business (2002)

The respondents shared the view that the accelerating growth of China’s telecom market will boost Chinese trade and logistics. One manager said that “electronic bills of lading are being introduced in China. COSCO (China Ocean Shipping Company), the biggest shipping company in China, announced on April 2000 that it would use electronic bills of lading that utilise the private-public key certification infrastructure. Receipt, transfer and delivery of bills of lading could be conducted globally over the Internet. It is important that China should continue to create a more efficient and reliable environment for paperless international trade in the cyberspace”. However, the logistics managers interviewed do not seem to fully appreciate the legal implications. Currently, the courts in China may not be able to cope with electronic evidence. The “Law of Civil Procedure of the People’s Republic of China” was adopted by the fourth session of the seventh National People’s Congress on 9th April 1991.

Chapter VI of the legislation deals with evidence. According to Article 63 of Chapter VI, evidence falls into the following categories: (1) documentary evidence; (2) material evidence; (3) video and audio material; (4) testimony of witnesses; (5) statements by litigants; (6) conclusions of expert corroborations; and (7) records of inspection. It is not entirely clear whether an electronic bill of lading is covered by Article 63. The United Nations Commission on International Trade Law (UNCITRAL) is attempting to develop uniform international rules that would validate the use of Electronic Data Interchange (EDI). In 1995, the Commission adopted the Model Law on Legal Aspects of Electronic Data Interchange and Related Means of Communication. This law is intended to serve as a model for countries to create uniform law and practice involving the use of computerised systems in logistics and international trade. Article 4 of the UNCITRAL Model Law provides that information should not be denied effectiveness, validity, or enforceability solely on the grounds that it is in the form of a data message. Article 8 also provides that nothing in the application of the rules of evidence shall prevent the admission of a data message in evidence on the ground that it is a data message, or if it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form. China has not yet adopted the UNCITRAL model law in its civil procedure law. It is therefore strongly recommended that China should also incorporate the relevant provisions of the UNCITRAL Model Law into their Law of Civil Procedure to fill the legal vacuum.

## **Conclusion**

In common with many theoretical and empirical investigations, the present study has methodological limitations. These include the small sample of managers and experts interviewed. However, one has to bear in mind that accessing logistics managers working in China is not an easy task. Despite the limitations, the results can still benefit practitioners with insights, and lead to a clearer direction for future research. The understanding of logistics management in China depends on the analysis of an array of factors, and an interlocking web of relationships among the factors. The present paper indicates that the legal environment in China as influenced by its WTO accession is definitely one of the significant factors. It is essential that future studies of China's supply chain logistics be interdisciplinary in investigating the effects of the differing combination of variables. As demonstrated in this article, China's customs laws, foreign investment laws, and telecommunications laws will continue to play leading roles in its logistics revolution. WTO entry will be the catalyst in this process, drawing the Chinese and world economies into closer integration and interaction. By studying the dynamics and circumstances of the legal environment, the consultants of and the stakeholders in Sino-foreign investments should become more aware of context and constraints when they formulate policies and decisions. To transform the freight transport sector into an effective and efficient logistics management industry, China must start to strengthen its rule of law. Only a stronger legal framework can protect foreign investors from the political risks and bureaucratic red tape.

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