

## LOGISTICS MANAGEMENT AND ITS LEGAL ENVIRONMENT IN CHINA



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*After almost 15 years of lobbying and negotiation, China has finally cleared all the hurdles to gain World Trade Organisation (WTO) membership, joining in November 2001. However, foreign investors in China are increasingly embroiled in disputes with Chinese companies due to logistics barriers. This article is a literature review which examines the idea that China's entry into the WTO and its legal reforms in response to globalisation will have a significant impact on the entire system of logistics management. The existing literature reveals very little systematic research in this area from the legal perspective. With continual legal reforms, there are tremendous opportunities to fundamentally improve logistics theory and practice. This article critically investigates the constraints of logistics management in China in the context of its WTO entry, and puts forward ideas that may help to create a blueprint for China's future legal reforms.*

### Introduction and Background

Over the past two decades, the Chinese economy has undergone considerable growth, with gross national product increasing annually by nearly nine per cent.<sup>1</sup> On 20 January 1997, Mr Chen Zhongbiao, the president of the China Ocean Shipping Company (COSCO), made the following prediction at a luncheon organised by the Hong Kong Shipowners Association, of which he was then Chairman:

“The development of China's foreign trade has been very rapid, since the beginning of reform and the open door policy. During the eighth ‘Five Years’ Plan’ between 1991 and 1995, the total volume of imports and exports was over 1 trillion US dollars, that is four times the volume during the sixth ‘Five Years’ Plan’ period. The average annual growth rate is as high as

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<sup>1</sup> Economic Intelligence Unit (EIU), “China, Mongolia” *Country Report 1998–99* (London: EIU, 1999).

19.5%, in which the total volume of China's foreign import and export was the 11<sup>th</sup> largest in the world. In 1996, the total volume of China's foreign import and export reached 289.9 billion US dollars, 32% higher than that in 1995. If a continuous growth tendency will be maintained in the following years till the year 2000, the target of 400 billion US dollars for China's foreign trade total volume will be realised. Owing to the huge potential in China's foreign trade, there will be a large demand for ocean shipping".<sup>2</sup>

More recently, Jiang Enzhu, director of the Liaison Office of the Central People's Government in the Hong Kong Special Administrative Region, predicted that further opening of markets after China's entry into the World Trade Organization (WTO) will help to boost imports and exports.<sup>3</sup> Indeed, the latest trade statistics promulgated by the China Statistics Bureau show that China's total import and export volume hit a record US\$474.3 billion in 2000.

**Table 1**  
**China's Import and Export Volume**

| Major Economic Indicators   | 1999  | 2000  | 2001 (Jan-Nov) |
|-----------------------------|-------|-------|----------------|
| Exports (\$US billion)      | 194.9 | 249.2 | 241.6          |
| Imports (\$US billion)      | 165.8 | 225.1 | 221.2          |
| Total Volume (\$US billion) | 360.7 | 473.3 | 462.8          |

Source: China Statistics Bureau

For 2000–2001, fiscal and monetary policy stayed loose, and healthy world trade growth resulted in expanding external demand.<sup>4</sup> Domestic GDP growth of more than seven per cent per year over the next three years will be driven by an expansion in gross fixed investment and a rebound in industrial output growth as economic reform continues. Within the overall growth of 7.1 per cent in 1999, consumer demand responded more positively than expected to measures to boost spending. There have been some signs of an upturn in growth in early 2001. Industry is dominated by state-owned enterprises which are improving their performance. Spending on infrastructure in the western and central regions is on the rise. In addition, moves were made to develop the stock market, insurance market, and the banking sector in preparation for WTO entry.

<sup>2</sup> Felix W.H. Chan, "Recent Reforms and Developments of Mainland Chinese and Hong Kong Maritime Law" in Wacks (ed), *The New Legal Order in Hong Kong* (Hong Kong: Hong Kong University Press, 1999), p 405.

<sup>3</sup> "China's Western Development, WTO Entry Important to HK", *Xinhua News Agency*, 14 Dec 2000.

<sup>4</sup> See n 1 above.

In response to the intensification of global competition, many firms have developed operational strategies to establish worldwide production, distribution, and marketing networks.<sup>5</sup> Investments in manufacturing in China are frequently made due to the strategic benefits that they can bring. Rapid economic growth, low labour costs, and the potential of a huge domestic market have all led to significant increases in foreign investment in the People's Republic of China. Engholm observed that "China has one of the world's largest untapped reservoirs of inexpensive labour. The importance of China's labour force is not just in its sheer size, but in its quality, which is improving steadily as a result of the training and educational reforms being introduced throughout the country."<sup>6</sup> Over 14 million Chinese are employed in enterprises created by foreign investment, and more than one hundred Fortune 500 companies have operations in China.<sup>7</sup> Dynamic technological advances and rapid economic globalisation have changed China's international business climate to a significant extent. In the future, China may influence the world's economy as a source of raw materials, as an international manufacturing centre, and as a major importer and exporter of consumer products, capital goods, and technology. A new economic order in China – the globalisation of business – has both shaped and been shaped by the advancements in transportation and communications that have shortened the distance between markets, manufacturing, and resources. Rhinesmith describes the phenomenon of globalisation in these terms:

"When an *export* company establishes its manufacturing or distribution facilities abroad it becomes *international*. It achieves costs advantages and all significant decisions will continue to be made at home. When a company creates miniatures of itself in other countries, staffed largely by nationals and gives it a wide degree of autonomy, it can be called *multinational*. The *truly global* organization goes further. It relocates some functions on a global scale to places other than headquarters. A multcentred organization emerges that can serve all parts of the firm anywhere in the world ... Thus in the global organization, the strategy and structure is without national boundaries. The heart of the global organization is its culture, its vision, mission, policies, procedures, systems and practices."<sup>8</sup>

<sup>5</sup> P. Li, "Logistics Barriers to International Operations: the Case of the People's Republic of China" (1995) 26 (3) *Journal of International Business Studies*, 680 (Dissertation abstract).

<sup>6</sup> C. Engholm, *The China Venture: America's Corporate Encounter with the People's Republic of China* (London: Scott, Foresman and Company, 1989), p xv.

<sup>7</sup> Y. Lu and X. Wang, "Strategy and Practice of International Companies in China" (in Chinese), (1996) 2 *Management World* 139.

<sup>8</sup> S.H. Rhinesmith, "An agenda for globalization" (1991) 45 (2) *Training and Development Journal* 22, 23. Emphasis added.

China's unprecedented economic growth and the influence of globalisation have strained its logistics infrastructure to the limit. Logistics – the movement of materials, people, and information – has a significant impact on a society's standard of living. Every sphere of human activity and business strategy is affected by logistics processes. A typical supply chain may include a variety of stages that involve raw material suppliers, manufacturers, wholesalers, distributors, retailers and customers. Logistics refers to the movement, and the management of the movement, of goods and information from one place to another as they make their way from the beginning of the supply chain to the customers' hands. As products are rarely produced and consumed in the same location, logistics is a significant component of the cost most enterprises incur. Day defines logistics in this way:

“Logistics is all-encompassing throughout the organisation. It includes everything from the moment a product or service needs to be made, through to incoming raw materials management, production, finished goods storage, delivery to the customer and after-sales service ... [it is] a time-based activity concerned with the profitable movement of information and materials into / through the organisation and out to the customer. Logistics spans everyone's territory, although the accountabilities and responsibilities are not so clear. It is best considered as an activity rather than a function.”<sup>9</sup>

Efficient logistics management involves the successful integration of product flows and information flows to facilitate the distribution of products to consumers at the right time and place in accordance with consumer instructions. As an increasing number of foreign manufacturers are establishing joint ventures in China, the demand for higher quality logistics services is growing tremendously. The reason for this growth in demand is simple: if foreign companies encounter too many transport problems and logistics barriers in China, to the extent that the total cost of using China as a manufacturing base becomes too high when compared with other nations, then China will be excluded from a foreign firm's global manufacturing network. In other words, despite the attractive low cost environment, foreign companies and investors may still find it unprofitable to operate in China should there be serious problems in getting raw materials to the factories and products to the customer on time and in good condition. Evidence from the literature reveals that foreign manufacturers in China do not find the logistics services provided by Chinese enterprises satisfactory.

This article reviews two apparently disparate bodies of literature, ie legal and logistics management literature, and develops the ideas and concepts

<sup>9</sup> A. Day, “Viewpoint” (1998) 28 (3) *Journal of Physical Distribution and Logistics Management* 168, 168.

therein into a framework for analysis. The issues highlighted affect researchers and logistics practitioners who want to function effectively in China. The methods and findings of these two bodies of literature point to areas for further investigation into logistics management in China from a legal perspective, with particular emphasis on legal reforms in line with the country's entry into the WTO. The research provides a theoretical framework from which the significance of China's legal environment to its local and international logistics operations can be explored.

This article includes a comparative review of the literature on logistics in countries entering the global economy. The emphasis is on China and other economies emerging from a long period of economic stagnation under communist rule. The logistics barriers identified in the literature include high logistics costs, lack of transportation infrastructure, the monopolistic nature of logistics services, and the poor quality of transportation services. These obstacles have been recognised as the most common barriers that foreign and local firms have encountered in China. The literature review suggests that little research has focused on identifying logistics barriers and the solutions to those barriers from a legal perspective. Although a fascinating array of logistics research has analysed operational issues and economic factors, the legal issues should be examined to create a more comprehensive picture of the propositions.

### **Logistics Barriers in China and the Emerging Market Economies in Eastern Europe**

#### *China*

Chan, Li and Sculli<sup>10</sup> have explained that due to shortage of information, foreign investors are often ill-prepared to deal with the many difficulties created by China's developing infrastructure. Although senior government officials are constantly emphasising the country's open door policy to its foreign investors, it is unfortunately a slow process to persuade Chinese workers to serve foreign capitalists. Arranging necessary paperwork such as government approvals, licences, etc with its associated fees, taxes, and permits is very difficult. Countless departments and committees are involved, but it is never clear whether any particular individual or committee will bear responsibility for decision making. These logistics barriers may severely disrupt the flow of materials in the distribution channel. The authors averred:

<sup>10</sup> J.C.M. Chan, N.Y. Li and D. Sculli, "Labour Relations and the Foreign Investor in the Shenzhen Special Economic Zone in China" (1989) 14 (4) *Journal of General Management* 53.

“Most potential investors tend to focus on the main costs of production, and overlook latent problems and other intangible costs. This in turn leads to initial losses, and several years may be needed before break-even ... While China appears to have made considerable progress with its open door policy and willingness to learn from the capitalist countries, there are still doubts, and ideological factors are ever present, even though the campaign against bourgeois liberalism appears to have subsided”.<sup>11</sup>

Speece and Kawahara<sup>12</sup> have analysed transportation in China during the 1990s. They conclude that China’s economy has simply outgrown the capacity of its transport system. Moving goods by any transport system is difficult even in the most advanced parts of China, such as Shanghai. The situation is worse in the inland regions beyond the Beijing-Tianjin and Guangzhou areas. Most of the roads and highways in China have poor width and alignment for modern traffic, and few of them are properly surfaced. As for water transport, cargo may sit for weeks and even months in ports waiting for carriage. A limited choice of carriers, complicated documentation, and bureaucratic red tape all contribute to the delay. While only 45 per cent of China’s production is in the hands of state entities, 90 per cent of transport and warehousing are still controlled by state enterprises.<sup>13</sup> The freight forwarding industry is almost exclusively dominated by the state-owned Sinotrans and COSCO. It is often difficult to obtain reliable information about the status of shipments when dealing with these companies. Lack of integration is another major distribution problem. Arranging transportation from the north of China to the south can be tremendously difficult, as the country is made up of a multitude of regional governments rather than a single administration. Completing and submitting papers such as export documents, contracts, and customs and excise forms can be incredibly time-consuming and complicated, as different local governments have different regulations.

Ta, Choo and Sum<sup>14</sup> conducted a survey of Singapore-based manufacturing firms with operations in China, and their results indicate that some transportation problems are more serious than others. Table 2 is based on the data from the questionnaires collected by this research team. It provides a comprehensive summary of the transportation problems faced.

<sup>11</sup> *Ibid.*, 61.

<sup>12</sup> M.W. Speece and Y. Kawahara, “Transportation in China in the 1990s” (1995) 25 (8) *International Journal of Physical Distribution and Logistics Management* 53.

<sup>13</sup> Mercer Management Company (MMC), “China Logistics: Obstacles and Opportunity” (Spring 1997) Views at <http://www.mmc.com/views/97spr.alberts.shtml>.

<sup>14</sup> H.P. Ta, H.L. Choo, and C.C. Sum, “Transportation Concerns of Foreign Firms in China” (2000) 30 (1) *International Journal of Physical Distribution & Logistics Management* 35.

**Table 2**  
**Transportation Problems Faced by Singapore-based**  
**Manufacturing Firms with Operations in China**

|    | <b>Problem</b>  | <b>Rating*</b> |
|----|---|----------------|
| 1  | Lack of cargo tracing services                            | 5.41           |
| 2  | Local carrier's lack of delivery reliability              | 5.28           |
| 3  | Complicated customs procedures                            | 5.26           |
| 4  | Excessive customs clearing times                          | 5.12           |
| 5  | Non-procedural practices at customs                       | 5.07           |
| 6  | High charges from local carriers                          | 4.82           |
| 7  | Geographical fragmentation of transportation networks     | 4.76           |
| 8  | Damage to goods during movement                           | 4.76           |
| 9  | Lack of carrier selection                                 | 4.71           |
| 10 | Lack of transportation management skills of local staff   | 4.69           |
| 11 | Excessive loading and unloading time at terminals         | 4.67           |
| 12 | Lack of inter-modal service                               | 4.65           |
| 13 | Unavailability / limited range of transportation services | 4.62           |
| 14 | Unpredictability of additional infrastructure charges     | 4.50           |
| 15 | Inadequate transportation infrastructure                  | 4.48           |
| 16 | Lack of necessary transportation equipment                | 4.48           |
| 17 | Robbery / theft / pilferage of goods                      | 4.43           |
| 18 | Frequent changes in transportation regulations            | 4.31           |

\*Note: 1 = not a serious problem; 7 = extremely serious problem.

The most serious logistics problem concerns the lack of cargo tracing services. The major cause of this problem is the lack of telephones and advanced means of communication with which carriage operators can communicate with their headquarters. As a result it is very difficult, if not impossible, for the carriage operators to notify their headquarters about the whereabouts of cargo and unexpected delays. Other problems are complicated customs procedures and excessive customs clearing times, which are only remedied by social connections and networking. The frequent damage to goods during movement and the theft of cargo greatly reduces the faith foreign traders have in Chinese transportation systems. The limited choice of carriers is another major problem encountered by foreign investors. Most of the surveyed companies suggested that encouraging foreign firms to provide transportation services and encouraging foreign investment in transportation infrastructure construction would bring improvements to China's logistics operations.

Yet even when these suggestions are considered, the management literature does not provide a sufficiently clear picture of what is known about the logistics environment in China. A focus on legal issues in future research would provide useful information. Conventional analysis of China's logistics problems typically focuses on operational practices, business strategies, social factors, cultural customs, and economic development. However, the question of how to best take advantage of legal reforms occurring in line with China's entry to the WTO has, until now, received little attention. China's rapidly changing legal environment will have a substantial impact on all areas of reform, including logistics reform.

A framework developed as a result of research in this area could be used, in the legal policy context, as a vehicle to explain how the correct direction in legal reform is fundamental to the removal of China's logistics barriers. A handful of examples can illustrate this point. The lack of cargo tracing services can be attributed to the lack of telecommunication and information technologies needed to track cargo during transit and delivery. The opening of China's telecommunication market will change this situation completely. The Chinese government is now hastening the formulation of rules on foreign capital entry into the communications market in line with its entry into the WTO. Poor reliability in the delivery services of local carriers is largely attributed to the lack of carrier selection. The Chinese government should now make the best use of the opportunity, in line with the spirit of the WTO, to deregulate the transport sector and encourage more foreign enterprises to provide logistics services. Moreover, damage to cargo during carriage will inevitably lead to claims that need to be resolved through a dispute resolution mechanism. Impartial judicial and arbitration systems operating on the principle of the rule of law will be very important to maintaining investor confidence.

These examples show that there is great potential for change in China. Many regulations and rules remain unwritten. Although calls for massive change in a short period of time are unrealistic, an accelerated and more sophisticated progress of legal reforms will improve China's logistics capability. Research and analysis in this area will be the catalyst to transform the relevant legal and economic issues.

#### *Poland and Russia*

The situations in Poland and Russia are worth examining in the context of the situation in China. Logistics channels in a national economy are very much like blood vessels in a living organism: their dysfunction can lead to serious consequences. The Russian and Polish experiences, together with China's problems, have been the focus of much research on the theory and practice of why centrally-planned economies perform poorly in comparison



with market economies. The motivation for improved logistics in Russia and Poland, as in many of the emerging economies in Eastern Europe, is recent. It is a result of the increasingly important role that consumers and the market play in once centrally-planned economies. Competitive forces are emerging in these economies, as local and / or international manufacturing operations are facing competition and pressure to strive for low cost and efficient production.

For instance, under new social policies and legal and economic orders, the Polish and Russian economies are being changed from centralised command-and-distribution economic systems to market systems. Privatisation in Poland and the de-monopolisation process within the fledging Russian mixed economy are important elements of this transformation. Transport enterprises and logistics managers are working very hard to adjust to new sets of rules generated from market economic principles. Bielasiak has described the post-communist transition of Poland in this way:

“Poland entered a new political phase, dedicated to the establishment of a democracy. But after forty-five years of communist rule, the country had to reinvent democratic forms of governance, introduce market relations in the economy, and develop new social and cultural attitudes among its people ... The task of transition was thus much more extensive and burdensome, involving considerable dislocations and uncertainties in all aspects of the people’s lives.”<sup>15</sup>

#### **A New Library of Foreign Investment Laws in Poland: The Impetus for Logistics Management Reform**

As succinctly analysed by Rydzkowski,<sup>16</sup> logistics is one of the many challenges faced by former communist countries as they develop market economies. The disintegration of the socialist system in Poland from 1989 to 1990 generated a number of problems. Since 1990, legal reforms allowing privatisation and deregulation of the Polish logistics industry have given rise to numerous opportunities to establish joint venture transportation companies with foreign investors. As observed in the case study in Rydzkowski’s article, under the socialist system practically all transportation enterprises were state owned and under the governance of the Ministry of Transport and Maritime Economy. Privatisation, of course, did not occur overnight. At the outset, the Polish government passed a set of new laws that formed the foundation for creating

<sup>15</sup> J. Bielasiak, “Poland” in S.P. Ramet (ed) *Eastern Europe: Politics, Culture, and Society since 1939* (Indiana University Press, 2000), p 144.

<sup>16</sup> W. Rydzkowski, “Logistics practice and the need for logistics studies – Poland” (1993) 29 (4) *Logistics & Transportation Review* 329.

preferential conditions for ownership changes. A vast majority of transport enterprises did not take immediate action to prepare for privatisation, although there were signs that decentralisation had already begun.

According to Rydzkowski's observation and evaluation, many factors accounted for the privatisation deadlock. One of them was the poor financial condition of most transportation companies. The heavy debts and financial liabilities of those companies deterred many foreign investors from acquiring ownership. Also, the existing staff of the logistics companies, under the prolonged influence of a planned economic policy, did not have any experience and skills in operating in a competitive environment. The ambiguous property law legislated by the communist party failed to provide clear direction on whether the property rights and interests of transportation companies' assets were vested in the nation or in the enterprise. These legal loopholes and financial setbacks were not conducive to privatisation and foreign investment. Naturally, before the legal reforms were carried out in 1992, the logistics market was monopolised by state-owned carriers.

The opposition of Polish carriers to regulation and the tax regime led to revisions of the relevant legislation on 25 April 1992. Consequently, deregulation and radical restructuring took place. The state-owned monopoly of transportation services was subject to a major assault. Under the new investment law and logistics regulations, foreign companies were granted licenses to form joint ventures with the existing state-owned logistics operators. According to the case study, the joint venture between PSK (a former state-owned Warsaw forwarding company) and the Swedish Bilspedition was very successful in many aspects. An influx of cash, marketing skills, technology of carriage, and management talent in terminal operation and freight forwarding led to an explosive and effective logistics revolution in Poland. For example, eleven months after the reform, the profitability ratio was 1.4 percent, while in the same period of 1991, it was minus 1.5 percent. Moreover, logistics education is prospering in Poland. Many universities and other educational institutions have developed programmes on transport policy and logistics management to cope with the booming logistics development. Economist Jeffrey Sachs observed:

"In the Polish context, rapid privatization of large industrial enterprises has become ever more urgent now that a basic degree of stabilization and liberalization has been achieved. There is a race against time in taking the final step of transforming the state's property into private property. If this step is too long delayed, Poland's macroeconomic successes to date could still be reversed. The incessant financial pressures from the state-enterprise sector could still thrust Poland (and much of the rest of Eastern Europe) back into a situation of sustained

macroeconomic instability. As we know from the experiences of Latin America, renewed macroeconomic instability could translate into political instability".<sup>17</sup>

#### The De-monopolisation in Russia Through Legal Reforms

Rodnikov<sup>18</sup> explored the Russian experience in logistics. During the Brezhnev-Kosygin reforms, a centralised goods distribution system was created in October 1965. The core of the system was the USSR State Committee for Material and Technical Supplies (the State Committee), which distributed producer goods (eg oil, wood, coal, metals) among the distribution divisions of ministries and committees such as the USSR Agri-Industrial Committee. The State Committee centrally planned and organised vendor-customer relationships completely. The industrial enterprises operated in a monopolistic system, and adopted a single-sourcing policy. The vendor-customer relationships and the single-sourcing policy in mass production were, as a rule, centrally controlled under various five-year plans.

The centralised control and distribution of goods created chaos. The economy of the former USSR was reputed to have a poor delivery performance record. Many industrial enterprises consistently failed to achieve the promised delivery dates. Short deliveries, late deliveries, and delivery failures caused numerous work stoppages and plant shutdowns in the early 1990s and forced Russian purchasing managers to control inventories in an *ad hoc* fashion rather than according to a specified system. In his interviews with reporters, the purchasing manager of the Kamaz automotive factory expressed his dissatisfaction openly and in strong terms: "Radical reform of logistical function has long been overdue; ... piecemeal measures aimed at improving delivery performance have failed."<sup>19</sup>

To cope with the worsening situation, legal reforms were carried out to restructure the logistics channels and introduce market forces. The Federal Purchasing System Act<sup>20</sup> and the related Decree<sup>21</sup> were enacted and promulgated by the parliament. Both pieces of legislation dealt with measures for improving the performance of logistical systems in Russia and provided for the dissolution of the Ministry of Trade and Material Resources by 1 October 1992. Two joint-stock purchasing companies, Roskontrakt and Roskhleboprodukt, were established under the new legal regime. The companies inherited most of the property of the Ministry of Trade and Material

<sup>17</sup> J. Sachs, *Poland's Jump to the Market Economy* (Cambridge, Mass.: MIT Press, 2000), p 80.

<sup>18</sup> A.N. Rodnikov, "Logistics in command and mixed economies: the Russian experience" (1994) 24 (2) *International Journal of Physical Distribution & Logistics Management* 4.

<sup>19</sup> *Ibid.*, 11.

<sup>20</sup> No 826, 7 Aug 1992.

<sup>21</sup> No 565, 10 Aug 1992.

Resources, including more than 800 trucking companies, warehouses, and other logistics facilities. Initially, the joint-stock companies were 100 per cent state owned. However, up to 49 per cent of the shares were sold off to employees and other legally designated people over five years.

The creation of the joint-stock logistics companies is regarded as one of the most successful decisions by then President Yeltsin. To a significant extent, it put an end to the usual chaos in the distribution of producer and consumer goods. Under the old centralised system, competition was entirely prohibited due to the state monopoly over distribution and the compulsory single-sourcing principle. Central planning of logistical functions generated numerous distortions, and prolonged shortages of basic producer goods in logistical channels and overstocking in all sectors of the economy was common. Following the de-monopolisation process, the new market-type system was expected to eliminate over-purchasing of inventory and to improve logistics parameters and delivery performance. Furthermore, political liberalisation stimulated research and development and gave impetus to logistics research. In 1993, the Foundation of Logistics Research was established to actively encourage, and engage in, the study of electronic data interchange, paperless buying and delivery, traffic analysis of shipments from vendors to customers, and the development of vendor-carrier-intermediary evaluation techniques.

#### *Bulgaria and Hungary*

According to Bloomen and Petrov,<sup>22</sup> Bulgaria's move from a planned to a market economy improved logistics and allowed new firms to enter the marketplace. Commercial laws that were enacted in 1991 re-established the right to private ownership in a competitive environment. Before the reforms, extremely outmoded logistics management techniques that were developed in the United States during the 1960s were implemented under communist rule. Contemporary logistics tools such as communications systems for electronic data interchange (EDI), inventory management and forecasting, materials handling, timely order processing, and storage or warehousing planning were almost unknown. Consequently, large stocks of unneeded goods piled up in warehouses, while other goods in great demand by consumers remained in short supply. This phenomenon displayed a salient feature of the lack of responsiveness to citizen needs, and the reliance on commands.

Dynamic economic and legal reforms during the transition period have brought changes. Although most warehouses are still owned by the state, road haulage in Bulgaria is developing rapidly. The Bulgarian international

<sup>22</sup> D.R. Bloomen and I.P. Petrov, "Logistics in Bulgaria: concepts for new market expansion" (1994) 24 (2) *International Journal of Physical Distribution and Logistics Management* 30.

carrier SOMAT is one of the leading haulage companies in Europe. There are more than 1,000 medium and small haulage companies, both state and privately owned. Many of these companies are now capable of handling the international carriage of cargo. Foreign shipping firms have become interested in investing in, or forming joint ventures with, these Bulgarian firms to introduce new knowledge, capital, and technology. The Bulgarian government has amended its regulations to allow carriers to use International Road Transport carnets when they forward goods to other European countries or countries in the Middle East. Carnets are customs documents that allow lorries to travel through countries outside of the European Union without being inspected. The lorry is sealed in its country of origin, and as long as that seal remains intact the vehicle can travel unimpeded. Another innovation that has helped to improve logistics is the establishment of free trade zones in Ruse and Vidin on the Danube, with more to follow. Logistics is playing a vital role in Bulgaria's economic recovery, as more efficient practices are reducing the costs of exports, which have become more competitive in the world market. The new commercial laws in Bulgaria have played a significant role in the establishment of a new regime with less state control and more decisions left to economic forces. The legal reforms have emerged as the powerful moving force behind the government's efforts at economic transition.

The Hungarian economy has not been immune to such political and legal transformation.<sup>23</sup> An ongoing privatisation process is fundamentally changing the ownership structure and encouraging new business behaviour. Skilful logistics managers are increasingly employed at senior levels in management hierarchies. Most higher education institutions now offer majors in logistics, and the Hungarian Association of Logistics, Purchasing and Inventory Management was founded in 1991. The resultant improvements in logistics practice are enhancing business prospects in this country, which is poised to reap benefits from its position at the crossroads of Europe.

*The East European Experiences: What are the Implications for China?*

China, Russia, Poland, Hungary, and Bulgaria share common characteristics: as they attempt to become important parts of the global economy after very long periods of economic stagnation the high logistics costs, lack of transportation co-ordination and infrastructure, the monopolistic nature of logistical services, and the poor quality of transportation performance are all symptomatic of the communist outlook. Local and foreign operators in China have told researchers that they have experienced severe logistical barriers. The East European experiences demonstrate that the

<sup>23</sup> A. Chikan, "Consequences of economic transition on logistics: the case of Hungary" (1995) 26 (1) *International Journal of Physical Distribution & Logistics Management* 40.

transportation concerns of a nation are closely related to the nation's legal environment. The enactment of the Federal Purchasing System Act in 1992 that prompted the formation of joint-stock purchasing companies in Russia, and the promulgation of a new investment law in Poland in 1992 that allowed the formation of a joint venture between a formerly state-owned Warsaw forwarding company and a Swedish logistical company, were very successful in many respects. In terms of the choice of models for a market economy, the "big bang" economic reforms of Poland and Russia display features that are different from China's gradual approach to economic liberalisation. However, as Sachs observed:

"What about China? Hasn't China maintained state ownership and yet succeeded in growing rapidly?" The answer is yes, but the Chinese policymakers themselves know that state-ownership has been a hindrance, not a help, to economic growth since the start of reforms. An estimated two-thirds or more of all state-owned enterprises are losing money in China. This has been a chronic and serious threat to macroeconomic stability. Moreover, the great dynamism of the country has come in the non-state sector, including township and village enterprises and joint ventures. For this reason, Chinese policymakers have begun to acknowledge the need for widespread corporatization and privatisation".<sup>24</sup>

### The Legal Perspective of Logistics Management in China

#### *Lack of Cargo Tracing Services: The Need for Communication Infrastructures*

The literature demonstrates that a gap between the need for and the capacity of the transport system has created serious problems and transportation bottlenecks. As discussed earlier, the lack of cargo tracing services has been identified as one of the most serious problems in China, and it can be attributed to the lack of telecommunication and information technologies needed to track cargo during delivery and transit. The lack of telephones and advanced modes of communication make it very difficult for truck drivers and vessel pilots to inform their headquarters about their whereabouts and unexpected delays.

With the advent of advanced technology, Internet-based global transportation logistics systems are already in popular use in most developed countries. They help to optimise freight while driving down network costs. Web-based information also provides innovative solutions that increase the accuracy and

<sup>24</sup> See n 17 above, pp 81–82.

efficiency of data, such as geographic position, dispatch capability, vessel engine hour and usage reporting, time of arrival and departure, time of completion of loading and unloading, reports of load damage and delay, and real-time service fleet data. Powerful electronic logistics devices now enable drivers and vessel pilots to simply connect their portable terminal to an infrared dock at the central office in the morning and download their entire

**Table 3**  
**Availability of Telecom Infrastructure in China (1998)**

|                | Telephones<br>(per 1,000<br>persons) | Mobile Phones<br>(per 1,000<br>persons) | Pagers<br>(per 1,000<br>persons) | Internet<br>(per 1,000<br>persons) | Population<br>Density<br>(per km <sup>2</sup> ) | GDP per<br>capita<br>(yuan) |
|----------------|--------------------------------------|---|----------------------------------|------------------------------------|---|-----------------------------|
| Beijing        | 251                                  | 80                                      | 19                               | 3                                  | 733   | 16,142                      |
| Tianjing       | 173                                  | 50                                      | 46                               | 1.5                                | 870   | 13,964                      |
| Hebei          | 61                                   | 14                                      | 33                               | 0.3                                | 349   | 6,479                       |
| Shanxi         | 49                                   | 13                                      | 22                               | 0.1                                | 203   | 5,048                       |
| Inner Mongolia | 53                                   | 11                                      | 18                               | 0.06                               | 20  | 5,084                       |
| Liaoning       | 115                                  | 83                                      | 82                               | 0.6                                | 285   | 9,338                       |
| Jilin          | 91                                   | 23                                      | 43                               | 0.2                                | 141   | 5,892                       |
| Heilongjiang   | 90                                   | 28                                      | 39                               | 0.3                                | 83  | 7,508                       |
| Shanghai       | 294                                  | 86                                      | 53                               | 7                                  | 2440  | 25,193                      |
| Jiangsu        | 104                                  | 20                                      | 42                               | 1                                  | 697   | 10,024                      |
| Zhejiang       | 113                                  | 34                                      | 42                               | 0.8                                | 437   | 11,192                      |
| Anhui          | 44                                   | 9                                       | 24                               | 0.1                                | 442   | 4,537                       |
| Fujian         | 105                                  | 44                                      | 0.04                             | 0.9                                | 273   | 10,094                      |
| Jiangxi        | 46                                   | 10                                      | 28                               | 0.2                                | 251   | 4,419                       |
| Shandong       | 60                                   | 17                                      | 27                               | 0.5                                | 563   | 8,104                       |
| Henan          | 48                                   | 13                                      | 21                               | 0.5                                | 558   | 4,677                       |
| Hubei          | 69                                   | 14                                      | 34                               | 0.6                                | 318   | 6,271                       |
| Hunan          | 49                                   | 12                                      | 31                               | 0.2                                | 306   | 4,939                       |
| Guangdong      | 134                                  | 51                                      | 52                               | 0.1                                | 401   | 11,086                      |
| Guangxi        | 36                                   | 11                                      | 35                               | 0.2                                | 198   | 4,071                       |
| Hainan         | 58                                   | 26                                      | 74                               | 1.2                                | 221   | 5,829                       |
| Chongqing      | 50                                   | 12                                      | 23                               | 0.2                                | 373   | 4,671                       |
| Sichuan        | 33                                   | 10                                      | 23                               | 0.03                               | 174   | 4,216                       |
| Guizhou        | 22                                   | 5                                       | 17                               | 0.03                               | 208   | 2,301                       |
| Yunnan         | 45                                   | 11                                      | 32                               | 0.1                                | 105   | 4,329                       |
| Tibet          | 23                                   | 5                                       | 6                                | 0.06                               | 2   | 3,618                       |
| Shaanxi        | 51                                   | 10                                      | 21                               | 0.4                                | 175   | 3,842                       |
| Gansu          | 38                                   | 6                                       | 18                               | 0.1                                | 55  | 3,453                       |
| Qinghai        | 44                                   | 7                                       | 12                               | 0.08                               | 7   | 4,377                       |
| Ningxia        | 70                                   | 9                                       | 35                               | 0.1                                | 103   | 4,228                       |
| Xinjiang       | 68                                   | 10                                      | 25                               | 0.08                               | 11  | 6,392                       |

Sources: Latest figures shown in *China Statistical Yearbook 2000* and author's calculations.

delivery schedule.<sup>25</sup> A graphic touch screen provides a simple user interface that enables drivers and vessel pilots to enter data and send messages without using a keyboard. The handheld, battery-powered terminal can also be removed from its cradle and used outside the vehicle or vessel. Should it be necessary, the logistics centre can send additional jobs directly to the mobile device on any carrier throughout the day. Is China ready for this revolution in electronic logistics? Or is China lagging behind in this area? Table 3 shows the regional differences in the availability of communication infrastructure in China.

The figures show that the inland regions are severely lagging behind the rest of China. The opening of China's telecommunications market is expected to change this situation substantially. After 14 years of negotiation, China signed a bilateral agreement on accession to the WTO with the United States on 15 November 1999, and with the EU on 19 May 2000. China has completed bilateral negotiations with all 37 WTO members that requested trade negotiations on China's accession to the WTO. Finally, China officially became a WTO member in November 2001. Under the Sino-US bilateral agreement, China has made substantial market access commitments covering the agricultural, industrial, and services sectors. US phone companies are able to own up to 49 per cent of all telecommunications service ventures in China since China's entry to the WTO, and will be able to own up to 50 per cent 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 per cent of ventures upon accession, 35 per cent one year after, and 49 per cent after three years.

Many international enterprises have expressed their interest in expanding their co-operation with China in the information and communications sectors. Wu Jichuan, minister of the Information Industry Ministry, indicated at the Asia Telecommunication Exhibition in 2000 that the Chinese government is now speeding up the formulation of rules about the investment of foreign capital into China's telecommunications sector to greet the entry to WTO.<sup>26</sup> Beijing's compliance with WTO rules is fundamental to foreign investors in telecommunications, as China's telecommunications sector is among its most heavily protected. Internal protectionist barriers to entering China's telecommunications market set up by the state-run telecommunications enterprise must be removed in compliance with WTO rules. For instance, telecommunications regulations in China include "buy local" rules that shut out foreign competitors. The "Provisional Regulations for the Administration of the Deregulated Telecommunications Business Market" that were promulgated

<sup>25</sup> "Nexterna Acquires Cummins' FreightQuest to Bolster Fleet Management Product Portfolio", *Business Wire*, 1 May 2001.

<sup>26</sup> "China will modify telecom law to greet China's entry to WTO", *Asiaport Daily News*, 11 Dec 2000.



in 1995 reiterated the ban on any form of foreign investment in China's telecom sector. Obviously, those laws that are inconsistent with the WTO trade rules will be cleared away to foster global telecommunications collaboration. Recent evidence shows that China's heavily protected but booming telecommunications industry may well be the reward for the technology companies that spent millions of dollars and months of effort lobbying the US government to secure Permanent Normal Trade Relations (PNTR) with China and clear the way for Beijing's entry into the WTO. Recent activity by foreign technology companies in China includes:

- 1 In June 2001, China Mobile, the largest wireless enterprise in China, awarded Nortel Networks new contracts estimated to be worth more the US\$105 million for major expansions of GSM (the Global System for Mobile communications, the international digital radio standard) digital cellular networks in Heibei, Anhui, and Guangzhou provinces, which further strengthened Nortel Networks' leadership position in delivering high performance wireless Internet to China. Nortel is a global Internet and communications leader that creates high performance networks with fast and reliable service. The president of Nortel Networks China said "these three network expansions will create strategic platforms for a whole new focus by China Mobile on profitable delivery of advanced mobile services".<sup>27</sup>
- 2 UTStarcom Inc. announced in May 2001 that it won contracts worth US\$26 million for its innovative IP-based PAS(TM) in various cities in the Inner Mongolia Autonomous Region and Guangxi Province of China. This announcement marked the first contract for UTStarcom in the Inner Mongolia Autonomous Region.<sup>28</sup>
- 3 In May 2001, Nokia signed an agreement with Jiangxi Mobile Communication Corporation (JMCC) for the supply of equipment and services to expand the Chinese operator's GSM 900 network. The agreement, valued at US\$70 million, represents the largest single network infrastructure contract signed by JMCC since it was founded in August 1999. Under the contract, Nokia will provide high capacity "i-series" mobile switching centres (MSCi) and home registration location registers (HLRi) in Jiangxi. Each MSCi has the capacity for 400,000 subscribers, while each HLRi has the capacity to handle 1.2 million subscribers.<sup>29</sup>

<sup>27</sup> "China Mobile Awards Nortel US\$105 Million in New Contracts" (June 2001) 6 (13) *Worldwide Telecom*.

<sup>28</sup> "UTStarcom Inc. Announces \$26 Million in IP-based PAS(TM) Contracts in Guangxi Province and Inner Mongolia autonomous Region of China", *PR Newswire*, 23 May 2001.

<sup>29</sup> "Nokia to Expand Jiangxi Mobile Communications' GSM 900 Network in China", *Business Wire*, 23 May 2001.

- 4 Motorola's Global Telecom Solutions Sector announced on 22 May 2001 that China Unicom had awarded it three contracts to the value of US\$141 million for GSM 900 and 1800 network expansion. The networks will be installed in three of China's major provinces: Jiansu, Shangdong, and Xinjiang. The expansion project will be completed by the end of 2001, and will increase the capacity in the three provinces by 2.68 million subscribers.<sup>30</sup>
- 5 In May 2001, the governor of Shaanxi province announced that the provincial government was preparing to open several sectors of business to foreign investors, including telecommunications, banking, insurance, foreign trade, tourism, and construction. Foreign investors were encouraged to set up joint ventures in the province.<sup>31</sup>

Rosen<sup>32</sup> suggested that a closer electronic linkage to global supply chains might foster export growth. However, a competitive telecommunications environment, sufficient trust in privacy and security, and an encompassing legal infrastructure must be in place in order for electronic commerce to develop and mature in China. Although accession to the WTO could boost both investment and competition, continual collusion between PRC regulators and China Telecom clearly indicates that they are determined to keep out what they see as destructive competition. Many foreign telecom service providers worry that China's telecom service sector will remain heavily protected even if China were to comply with WTO obligations. Foreign firms may succeed in developing niche markets similar to AT&T's joint venture with the Shanghai Posts and Telecommunication Administration, which will provide Internet telephony only in Pudong but not to the broader market.

Zhang Chunjiang, director of the Telecom Administration Department, has repeatedly called unauthorised provision of Internet telephony a "danger to the state", and has accused foreign firms of "colluding with domestic Internet telephone operators", thus restricting foreign participation. Janda<sup>33</sup> believes that a strong connection between telecommunications and national security has frequently been invoked in China as one reason for limiting foreign participation. Foreign control over essential infrastructure may produce a dependency on service provision that could threaten national security when the service is interrupted or even withdrawn. In addition, the government

<sup>30</sup> "China Unicom Awards Motorola GSM Contracts Worth \$141 Million", *PR Newswire*, 22 May 2001.

<sup>31</sup> "Shaanxi to open banking, other sectors to foreign investors", *China Online*, 29 May 2001.

<sup>32</sup> D. Rosen, "Hype Versus Hope for E-commerce in China" (Jul / Aug 1999) 26 (4) *China Business Review* 38.

<sup>33</sup> R. Janda, "Benchmarking a Chinese offer on telecommunications: context and comparisons" (1999) 2 *International Journal of Communications Law and Policy* 1.

often perceives that the state military and police authorities may have inadequate control over foreign-owned infrastructure. The Chinese army has addressed this issue by equipping itself with advanced communications devices. Furthermore, the 1993 National Security Law and 1979 Criminal Law allow the Chinese government to exercise control over telecommunications facilities to defend national security.<sup>34</sup> Article 4 of the National Security Law states that “an act endangers China’s national security when organizations or individuals outside China commit, request or support others in committing, or collude with organizations and individuals within China to commit acts that endanger national security”. This provision should be read in conjunction with Articles 91 to 97 of the Criminal Law, which set out a list of “counter-revolutionary offences”. Many foreign investors are concerned that vague references to “national security” and “counter-revolutionary offences” leave the door open for the government to interpret the rules in a very open-ended or even unpredictable way.

Maintaining security in cyberspace is another problematic area. Electronic identifiers, encryption (using private and public key pairs) and certification are tools for making sure that the customer, and only the customer, can legally bind himself or herself in online business-to-business or business-to-customer contracts. For example, consumers want to be certain that the Internet site to which they send a credit card number is legitimate. China has not yet settled upon an official national model for managing digital certification and identification. In Hong Kong, Taiwan, and some other Asian economies, the government plays a more significant role in these activities. As with so many areas of market reform in mainland China, Shanghai is the pioneer in electronic commerce. The city established both a Digital Certificate Authority and an Identifier-Key Entrusting Centre (KE) in January 2000. According to Shanghai’s new rules on electronic commerce digital certificates, “Provisional Methods of Shanghai Municipality on the Price Management of E-commerce”, which came into operation on 1 January 2000, the Shanghai Electronic Certificate Authority Centre Company Limited is the only institution responsible for issuing, verifying, and managing digital certificates in Shanghai. However, the cruel reality is that privacy and security of the encryption technology are only revealing their potential in China’s more sophisticated cities, widening the gap between those cities and the vast bulk of China. Furthermore, business-to-business and business-to-consumer electronic commerce requires that attention be paid to the protection of commercial interests and consumer welfare, things that have not been given serious attention in China. Internet and consumer protection laws are still in their infancy in China, and have a long way to

<sup>34</sup> H.L. Fu and R. Cullen, “National Security in China” (1996) 34 *Columbia Journal of Transnational Law* 449.

go before they are able to deal with common online frauds and commercial crimes. As discussed, Internet-based global transportation logistics systems are advancing rapidly in developed nations. The same boom may occur in China should the government support it.

Apart from maintaining Internet security, the Chinese government has recently attempted to protect cyber privacy. New Internet regulations, namely "Measures for Managing Internet Information Services", were promulgated in October 2000. Article 6 requires Internet Information Service (IIS) providers to have sound measures for Internet and information security, including measures for safeguarding web sites, information security, and rules for ensuring the safety of user information. Unfortunately, the subsequent articles, which include threats to shut down web sites that provide subversive content, demonstrate the Chinese government's struggle to balance its aims of restricting the infiltration of foreign ideas and encouraging global commerce. Article 14 not only requires IIS providers to record the content of the information on their web sites, but also requires them to record information such as the date, time and duration that subscribers accessed the Internet, subscriber account numbers, the addresses or domain names of the web sites, and the main telephone numbers they use. Article 15 stipulates that IIS providers should not disseminate information that may endanger national security, divulge state secrets, subvert the government, or undermine national unity. The stringent reporting requirements will inevitably generate concerns about free speech and privacy. They will also handicap the development of Internet-based transportation logistics systems, as the cargo owners, warehousing enterprises, and carriers using Internet logistics systems may not wish to pass through the government-controlled servers and become subject to such strict censorship. In such a regulatory climate, the zeal and confidence of foreign investors might be significantly dampened. China has undertaken, upon entrance to the WTO, to permit foreigners to own 49 per cent of web companies, increasing to 50 per cent two years after accession. Despite the almost limitless growth potential of the Chinese telecommunications market, the risks that foreign investors are facing remain high in this politically sensitive sector of the economy. Kalathil<sup>35</sup> observed that those who fail to comply with the new regulations face heavy penalties. However, it is doubtful whether the government is capable of enforcing all these rules in a country where, according to official estimates, the number of Internet users doubled in 2000 to nearly 17 million, and customers are buying personal computers faster than anywhere in the world.

Government officials in China are notoriously selective in enforcing regulations promulgated by the bureaucracy. They often use high profile shutdowns to frighten Internet providers into regulating themselves. Such an uncertain legal environment and stringent regulatory regime are unlikely to be

<sup>35</sup> S. Kalathil, "China's Dot-Communism" (Jan / Feb 2001) *Foreign Policy* 74.

conducive to the development of a strong Internet market, as foreign investors may simply turn away from China. In terms of China's telecommunication market, Chuang indicated that:

"China's accession to the WTO will help them start to strengthen the rule of law, but only if the Communist Party is truly willing to alter some of the bedrock principles of their one party system. This will require not only changes in their political system, but their ideological system and their administrative bureaucracy also. China's rule of law will not be strengthened overnight because the system is too entrenched in its old ways for changes to happen quickly. But as time goes on, China will realize that to become a true world power, China must strengthen its rule of law. In addition, they will feel pressure from their trading partners, foreign investors, and the WTO bureaucracy to change and will have no choice but to start making their regulatory environment more transparent and fair to their economic partners. When China starts doing this, the rule of law will inevitably be strengthened".<sup>36</sup>

*Poor Delivery Reliability of Local Carriers: Lack of Carrier Selection*

Another major problem is the poor delivery reliability of local carriers. The loading and unloading time at terminals is often excessive. Only a very limited range of transportation services is available. Unpredictable additional transportation charges are often imposed on the cargo owner without any advance warning. These problems are largely caused by a lack of carrier selection, the insufficient transportation management skills of local staff, and a shortage of transport infrastructure in terms of quantity and quality. As Table 4 and Figure 1 show, logistics and communication barriers are much more severe in the non-coastal inner area.

On the negative role of geographical constraints in economic growth, DeMurger commented:

"Together with the implementation of market-economy reforms, a reallocation of production factors, in particular labor, from agricultural to industrial and services activities has contributed to growing urbanization all over China. One of the most striking evolutions in the past 20 years has been the increase in disparities between rural and urban areas, and, from a spatial point of view, very important variations arose among rural areas between inland and coastal provinces. Indeed, while rural areas in coastal provinces largely benefited from the overall economic improvement, many rural areas in inland provinces remained very poor".<sup>37</sup>

<sup>36</sup> L.D. Chuang, "Investing in China's Telecommunications Market: Reflections on the Rule of Law and Foreign Investment in China" (2000) 20 *Journal of International Law and Business* 509, 537.

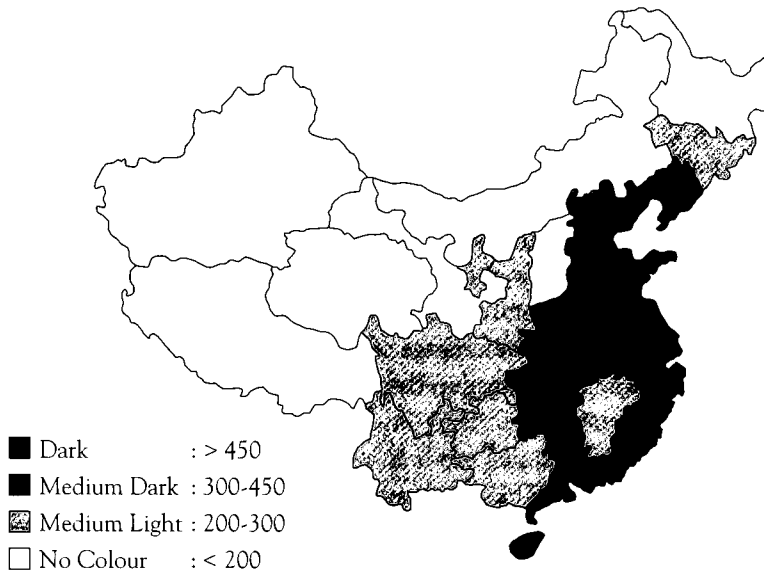
<sup>37</sup> S. Demurger, "Infrastructure Development and Economic Growth: An Explanation for Regional Disparities in China" (2001) 29 *Journal of Comparative Economics* 95, 108.

**Table 4**  
**Availability of Transportation Routes by Region (End of 1999)**

|                | Railways<br>(km / 1,000 km ) | Waterways<br>(km / 1,000 km ) | Highways<br>(km / 1,000 km ) |
|----------------|------------------------------|-------------------------------|------------------------------|
| Beijing        | 67.1                         | —                             | 754.4                        |
| Tianjing       | 48.1                         | 40.3                          | 804                          |
| Hebei          | 19.3                         | 0.4                           | 309.4                        |
| Shanxi         | 16.1                         | 0.9                           | 338.5                        |
| Inner Mongolia | 4.2                          | 0.9                           | 54                           |
| Liaoning       | 24.4                         | 5.6                           | 308.4                        |
| Jilin          | 18.6                         | 9.6                           | 184.6                        |
| Heilongjiang   | 11.1                         | —                             | 111                          |
| Shanghai       | 43.3                         | 350                           | 705.2                        |
| Jiangsu        | 7.3                          | 232.4                         | 269.4                        |
| Zhejiang       | 7.8                          | 102                           | 394.8                        |
| Anhui          | 13.1                         | 40.1                          | 291.8                        |
| Fujian         | 7.2                          | 30.6                          | 414.9                        |
| Jiangxi        | 12.9                         | 33.2                          | 221.1                        |
| Shangdong      | 15.1                         | 15.8                          | 432.1                        |
| Henan          | 14.1                         | 6.6                           | 361.3                        |
| Hubei          | 10.9                         | 39                            | 297.8                        |
| Hunan          | 10.9                         | 47.5                          | 285                          |
| Guangdong      | 4.3                          | 60.7                          | 537.1                        |
| Guangxi        | 8.5                          | 23.7                          | 217.7                        |
| Hainan         | 6.4                          | 12.2                          | 503.6                        |
| Chongqing      | 7.2                          | 28.3                          | 342.5                        |
| Sichuan        | 4.7                          | 12.7                          | 183                          |
| Guizhou        | 9.4                          | 12.1                          | 193                          |
| Yunnan         | 4.8                          | 3.9                           | 259.9                        |
| Tibet          | —                            | —                             | 18.3                         |
| Shaanxi        | 9.4                          | 4.8                           | 209.8                        |
| Gansu          | 0.5                          | 2.9                           | 79.8                         |
| Qinghai        | 1.5                          | 0.5                           | 25.3                         |
| Ningxia        | 13.7                         | 7.6                           | 192.6                        |
| Xinjiang       | 1.1                          | —                             | 20.3                         |

Sources: Latest figures shown in *China Statistical Yearbook 2000* and author's calculations.

**Figure 1**  
**Transport Network Density by Region (End of 1999)**  
**Including Railways, Highways and Inland Waterways (km / 1000 sq.km)**



Hausmann described how people living in the landlocked areas could become “prisoners of geography”:

“To understand why geography can matter so much for economic development, consider what economists regard as the main engines of growth: Access to markets (based on the work of Scottish economist Adam Smith) and technological progress (drawn from the writings of US economist Joseph Schumpeter). For Adam Smith, productivity gains achieved through specialization are the secret to the wealth of nations. But for these gains to materialize, producers must have access to markets where they can sell their specialized output and buy other goods. The larger the market, the greater the scope for specialization. In today’s global marketplace, most industrial products require inputs from various locations around the world. Therefore, if transportation costs are high, local companies will be at a disadvantage in accessing the imported inputs they need and in getting their own goods to foreign markets. Unfortunately, transportation costs are often determined by a country’s geography. A recent study found that shipping goods over 1 additional kilometer of land costs as much as shipping them over 7 extra kilometers of sea. Maritime shipping is particularly suited to the bulky, low-value-added goods that developing nations tend

to produce; therefore, countries lacking cheap access to the sea will be shut out of many potential markets. Moreover, if countries far from the sea do not enjoy the physical infrastructure (the system of roads, railways and ports) needed for access to navigable rivers or the sea, they will not develop the very industries that could help maintain such an infrastructure".<sup>38</sup>

Currently, in mainland China, domestic ships enjoy preferential treatment that is not available to foreign ships. Only ships flying Chinese flags have the right of cabotage (ie domestic carriage) in China unless special permission is given by the Ministry of Communications. Furthermore, all domestic ships are exempted from the payment of freight taxes, as levied from 10 April 1974, whether they engage in coastal trade or international trade. Foreign ships are only permitted to engage in the carriage of goods between Chinese and foreign ports. China has formally engaged in the international liner shipping business since 1978. Zhuang stated:

"1999 saw 18,059,000 TEU discharged and loaded in Chinese ports, an increase of 30% annually, which is much higher than worldwide average growth rate of 6% ... In addition, the ration of containerization in China comes up to 65%. Rapid advance on liner shipping makes great contribution to [China's] foreign trade. Nowadays, container liner service extended from ports of mainland China reach 150 routes with 2,900 sailings per month, among which nearly half of them are operated by foreign shipping companies. There are 67 foreign shipping companies who send their containerships to call at the Chinese ports."<sup>39</sup>

Unfortunately, China is only willing to open the market for foreign carriers to participate in international carriage, and cabotage remains the monopoly of domestic ships. As revealed in the statistics and logistics research presented earlier, inland China is suffering from more serious transportation problems and bottlenecks than the coastal regions. The widening transportation gap between the coastal and non-coastal areas has prompted the government to pursue development and deregulation to help bring an influx of foreign capital into domestic logistics. Knowles and Hall<sup>40</sup> argue that deregulation continues to gather momentum in the rest of the world to improve operating

<sup>38</sup> R. Hausmann, "Prisoners of Geography" (Jan / Feb 2001) *Foreign Policy* 45, 46-47.

<sup>39</sup> Y.C. Zhuang, "On Macro-administration and Legislation Concerning PRC International Liner Shipping Market at Sea", in China Maritime Law Association, *Proceedings of the Fourth International Conference on Maritime Law 2000* (Shenzhen: China Maritime Law Association, 2000), p 1005.

<sup>40</sup> R. Knowles and D. Hall, "Transport Deregulation and Privatization", in B. Hoyle and R. Knowle (eds) *Modern Transport Geography* (England: John Wiley & Sons Limited, 1998), pp 77, 81.



efficiency, reduce government debts, and help balance budgets: They offer the following evidence to support their argument:

- 1 Domestic air services have been gradually liberalised in Australia, Canada, the EU, Japan, Korea and Taiwan.
- 2 Road freight deregulation has been completed in New Zealand and the Irish Republic and has started in the US.
- 3 Interstate bus services have been deregulated in Australia followed by intrastate services in the Australian state of New South Wales. New Zealand deregulated all scheduled passenger services on 1 July 1991 including bus, taxis, and rail services.
- 4 In the European Union, the introduction of the Single European Market on 1 January 1993 accelerated a process that will result in the eventual harmonisation and liberalisation of national transport regulations.
- 5 Further privatisation in developed countries, including the privatisation of Air Canada, Air New Zealand, JAL, KLM, Qantas, British Railways, Canadian National Railways, and the Japanese National Railway.
- 6 Since privatisation, British Airways has increased its profits on airline operation from £183m in 1986/1987 to £728m in 1995/1996, which fell to £673m in 1996/1997.

To minimise the transportation problems, the Chinese government should consider reforms that will help facilitate foreign investment in physical infrastructure development, the provision of better transportation services, and the development of logistics support programmes. The Chinese government should also consider, as soon as possible, deregulating the transport sector, encouraging more foreign enterprises to provide domestic logistics services, and promoting logistics consulting services through the popular business vehicles of Sino-foreign joint ventures and wholly foreign owned enterprises. The principles of liberalisation are the fundamental roots of the WTO agreements that cover goods, services, and intellectual property. The WTO agreements include individual member countries' commitments to lower customs tariffs and other trade barriers, and to open and keep open markets for services. The suggested deregulation is expected to bring large amounts of funds and expertise into China that will help to reduce the severity of its logistics problems.

After the Cultural Revolution and many years of economic stagnation, China was completely isolated from the rest of the world until it opened its doors to foreign investment in 1979. Foreign investors, including global logistics management companies, are naturally interested in the vast potential of China's market. Chow<sup>41</sup> identified the major contributions of foreign

<sup>41</sup> D.C.K. Chow, "Reorganisation and Conversion of a Joint Venture into a Wholly Foreign-Owned Enterprise in the People's Republic of China" (1998) 73 *Tulane Law Review* 619.

partners as being the introduction of advanced technology, access to large amounts of capital investment, and the introduction of advanced managerial skills suited to China's developing market economy. Access to advanced technology is fundamental to China's modernisation, and foreign direct investment is the surest way of obtaining access to technology that may otherwise take years to develop. Research and development centres have been established by foreign investors to help them better target the local market. Indeed, foreign capital is fuelling China's remarkable economic growth, and the government is actively encouraging further investment. Those middle and senior level managers who spent most of their careers in a planned economy cannot compete with their foreign counterparts, who are introducing sophisticated systems and advanced marketing skills to China.

The privatisation of state enterprises in transport, telecommunications infrastructure projects and related fields is necessary for the development of effective logistics and for the successful transition to a market economy in China. However, privatisation alone will not provide a complete solution. The new order, involving a departure from the old communist practices and a greater reliance on market forces, needs a new legal framework and a reformed institutional infrastructure. The situation in Russia can illustrate this issue.<sup>42</sup> In the early 1990s, the Russian legal system had no way of detecting self dealing, and lawyers and accountants could not ensure accurate financial disclosure. There was little knowledge of legal concepts such as fiduciary duty and corporate governance. Russia's rules and regulations were designed to meet the needs of central planners, not investors:

"The weak legal and institutional framework was no secret to the privatizers. But writing good laws can take years and building good institution takes decades. The privatizers weren't willing to wait. They chose to privatize immediately, and hope that the laws and institutions would follow later. The laws did indeed follow. The first two parts of a new Civil Code were adopted in 1995-96. A weak law on securities (since modestly strengthened) was adopted in 1995; a fairly strong law on joint stock companies in 1996; decent laws on bankruptcy and limited liability companies in 1998. These laws have weaknesses, but no more so than the laws in many other developing countries".<sup>43</sup>

The Russian experience powerfully illustrates that China needs a good system of governance to meet the challenge of economic transition and

<sup>42</sup> B. Black, R. Kraakman, and A. Tarassova, "Russian privatization and Corporate Governance: what went wrong?" (2000) 52 *Stanford Law Review* 1731.

<sup>43</sup> *Ibid.*, at 1735.

structural reforms. The success of the transition lies with the management of a regulatory regime appropriate to a market economy, the creation of a framework of legal and public policies, and the establishment of an economic environment that provides incentives to encourage foreign direct investment and privatisation. Policy makers in China should be able to learn lessons from Russia. In addition to a skilled labour force with competitive wages and adequate infrastructure, an efficient financial system and transparent regulatory and legal mechanisms for the enforcement of contractual arrangements and property rights are all significant in stimulating foreign investment and privatisation.

*Complicated Customs Procedures and Excessive Customs Clearing Time*

According to a study on Mexico's logistics issues conducted by Fawcett,<sup>44</sup> the large number of production-sharing manufacturing operations in Mexico led to a dramatic increase in US-Mexico border traffic. In addition, US and Mexican carriers were prohibited from making cross-border deliveries into each other's territory. This border crossing restriction, coupled with corrupt customs practices, resulted in long delays in delivery time. In China, excessive customs clearance time is identified in Ta's study<sup>45</sup> as the fourth most serious transportation problem faced by the foreign companies. Anti-corruption measures are significantly undermining the logistics system in China. The non-procedural practices at customs and the poorly defined scope of administrative and discretionary powers vested in custom officials are particularly conducive to corruption. The excessive customs clearing time and non-procedural practices at customs are often associated with *guanxi* (social connections involving colleagues, friends, families, business associates, and acquaintances in complex networks of support and sentimental attachment). *Guanxi* plays a vital role in Chinese daily life, and it significantly affects business behaviour and the way markets operate. Cargo can be delayed for months due to bureaucratic red tape. Provinces also have different local regulations for the passage of goods. Huang observed:

“Arguably, one of the most prominent characteristics of contemporary China is its decentralised management of its economy. Compared with other developing and reforming centrally planned economies, Chinese regional officials not only control an enormous amount of economic resources but also make many decisions and policies quite autonomously from the central government ... Chinese regional governments, in a way,

<sup>44</sup> S.E. Fawcett, J.C. Taylor, and S.R. Smith, “The realities of operating in Mexico: an exploration of manufacturing and logistics issues” (1995) 25 *International Journal of Physical Distribution & Logistics Management* 3, 49.

<sup>45</sup> See n 14 above.

all pursue a version of import substitution strategy analogous to the one pursued by the Latin American countries in the 1970s ... Because trade is restricted, either via implicit or explicit tariffs or quotas, market access is conditioned upon building and operating production facilities behind protective walls. In this case, the inter-regional trade restrictions act exactly the same way as trade restrictions at a country level: they both raise returns from investment relative to trade and thus induce the type of investments that are designed to get behind trade protection to access the market".<sup>46</sup>

In relation to corrupt customs practices, evidence shows that the Chinese government has been taking active legal measures to combat corruption. On 21 April 2000 the *People's Daily*, China's leading newspaper, published a special commentary on the Communist Party's decision to expel Mr K. J. Cheng, a corrupt senior official. Entitled "There is no Hiding Place for Corrupt Elements in the Party", the commentary accused Cheng, former vice-chairman of the Standing Committee of the National People's Congress and former chairman of the Guangxi Zhuang Autonomous Region, of abusing his power and accepting bribes. The article claimed that the Communist Party, under the leadership of President Jiang, always emphasises discipline and had been making greater efforts to fight corruption. In recent years, a number of senior officials have been punished for breaking the law and the relationship between the Communist Party and corruption is described in the commentary as "that between water and fire". The Central Commission for Discipline Inspection set rules requiring all leaders to perform their official duties honestly, and the government will continue to crack down on violations of the anti-corruption law by party officials, government departments, and law enforcement agencies. The *People's Daily* published another article on 12 December 2000 entitled "Campaign against corruption continues". In the annual report of the Guangzhou Municipal People's Procuratorate, Mr Wang Dingzhong, the Chief procurator, pledged to crack down on corruption, particularly in the areas of bribery and corrupt business practices, to better serve the provincial capital's economic growth. In 2000, Wang's procuratorate coped with 1,902 corruption cases, which was up by 19.3 per cent from the same period of the previous year. A total of 71 government officials and members of the Communist Party of China were prosecuted and about US\$12 million of illicit money was confiscated. The impact of China's anti-corruption law on its transport logistics is a very interesting issue, and the research of it is well worth pursuing.

<sup>46</sup> Y. Huang, "Why is there so much demand for foreign equity capital in China? An institutional and policy perspective" (1999) *Harvard Business School Working Paper* (serial no.99-055) 1, 20-21.

Cho<sup>47</sup> identified various factors that affect the implementation of anti-corruption policy: the scope of affected interests, the characteristics of implementing agencies, the level of available resources, and monitoring capacities. Cho believes that the socio-political environment – that is, the content and context of the policy – is the most important factor. New policies inevitably damage the vested interests of certain groups, and policy implementation must be carefully monitored to ensure change. The government may well be concerned that corruption will cause political instability, but local officials focus on local issues – not to mention their own interests – and tend to ignore or selectively implement official policy. While the Chinese economy is experiencing impressive growth under the economic reform programme, bribery and smuggling have unfortunately spread into every corner of society.<sup>48</sup> This can be attributed to the lack of political will in implementing anti-corruption measures against senior party officials, the low wages of civil servants, and the many opportunities for corruption during Deng Xiaoping's modernisation policy in the last two decades.

The Chinese government has encouraged privately owned businesses to compete with state-owned enterprises. However, decentralisation and removal of price controls have not limited bureaucratic power. They have merely delegated more discretion to the middle and local levels, where administrative privilege is being exploited anew. The Beijing leadership began to discover that crimes of corruption seriously hampered the reform of the political system. They also acknowledged the significance of defining the boundary between official power and the limits of markets, as well as the significance of strengthening the legal system and the implementation of the rule of law to handle corruption effectively. Legislation entitled "Crimes of Corruption and Bribery" has been enacted, to deal with, *inter alia*, embezzlement (Articles 382 and 383), accepting a bribe (Articles 385 and 386), offering a bribe (Articles 389 and 390), and the possession of unexplained property (Article 395). The mechanism that enforces the legislation is comprised of the Party Discipline Inspection Committee (which can investigate the abuse of power by officials), the Public Account Review Bureau (which has the authority to check the accounts of any public institution or state-owned enterprises when necessary), and the Centre for Reporting Economic Crime. However, Quah<sup>49</sup> believes

<sup>47</sup> Y.N. Cho, "Implementation of Anticorruption Policies in Reform Policies in Reform-Era China: The Case of the 1993-97 'Anticorruption Struggle'" (Jan / Feb 2001) 1 *Issues and Studies* 49.

<sup>48</sup> Y. Hao, "From Rule of Man to Rule of Law: an unintended consequence of corruption in China in 1990s" (1999) 8 (22) *Journal of Contemporary China* 405; J.B. Nesbit, "Transnational Bribery of Foreign Officials: A New Threat to the Future of Democracy" (1998) 31 *Vanderbilt Journal of Transnational Law* 1273.

<sup>49</sup> J.S.T. Qualv, "Corruption in Asian Countries: Can it be minimized?" (Nov / Dec 1999) 59 (6) *Public Administrative Review* 438, 485.

that the authorities appear to lack the political will to handle corruption cases among more senior party members:

“So far, only two senior party officials have been convicted of corruption in recent years. In 1994, Li Yiaoshi, former Vice-Minister of the State Science and Technology Commission, was sentenced to 20 years in jail for corruption. On July 31, 1998, the former Beijing party chief, Chen Xitong, became the highest-ranking party member to be jailed for corruption when he was sentenced to 16 years of graft of 555,000 Yuan and dereliction of duty. As corruption is a capital offence in the PRC, Chen’s sentence is lenient; more junior party cadres have been sentenced to life imprisonment or even death for corruption involving smaller sums over 100,000 Yuan. The death penalty is imposed on officials who accept bribes exceeding 100,000 Yuan, or US\$12,000. In short, party officials in the PRC can short circuit corruption investigations by appealing to their protectors in the party hierarchy.”

Moral education, as pointed out by He<sup>50</sup>, constitutes an important element of the anti-corruption campaign. The methods of moral education include:

- 1 Regularly requesting members of the communist party, especially senior leaders, to study political theory, in particular Deng Xiaoping’s theory of “Building Socialism with Chinese Characteristics”. Party organisations at various levels are required to educate their members with communist ideals, morality, and faith.
- 2 Urging the party members, especially senior leaders, to review their behaviour towards various anti-corruption rules and to criticise the misconduct of the other party members in party conferences.
- 3 Recognising government officials (most of whom are party members) who are honest as models and encouraging all public officials to follow their examples.
- 4 Punishing corrupt officials under the appropriate law or party or administrative disciplinary regulation and using public opinion for condemnation.

The ideas and concepts discussed in the literature can be incorporated into the discussion on the impact of corrupt customs practices on China’s logistics. While there is a widespread recognition that China has made

<sup>50</sup> Z. He, “Corruption and anti-corruption in reform China” (2000) 33 *Communist and Post-Communist Studies* 243.

tremendous strides in respect to anti-corruption policy, it has yet to see the emergence of a corruption-free system of relatively disciplined and responsible customs officials. Setting targets and goals for cracking down on corruption demonstrates to foreign investors that the communist party is pledging to fight corruption. However only the comprehensive implementation of China's political and legal restructuring can eradicate corrupt customs practices.

### **Conclusion: A Conceptual Framework for Legal Reforms and Further Investigation**

Logistics is a diverse inter-disciplinary area worthy of further exploration. This article is intended to fill a gap in the literature on logistics management, which has not taken adequate account of the impact of legal reforms on logistics theory and practice.

This article has reviewed a wide range of seemingly unrelated literature in the context of China's logistics management practices and its legal environment. It has analysed the methods and findings of the literature and, from a legal perspective, recommended key areas for legal reforms and further investigation. Conventional investigation of Chinese logistics focuses on economic, social, cultural, and geographical factors. The legal analysis, however, approaches the issue differently. It focuses on logistics barriers arising from the imperfect and ineffectual legal environment. In summary, the argument is that most logistics obstacles in China can be attributed to practices or characteristics of China's legal system that expose foreign investors to unpredictable and unavoidable risks. In such a weak legal environment, clearing bureaucratic and legal hurdles is a time-consuming and difficult task for the managers who are concerned with their global operations in China. Despite these barriers, China has a desperate need for high quality and efficient logistics providers operating on national and international levels.

A comparative study of China and Eastern Europe reveals that while good logistics is not the only catalyst in the growth in international trade and the inflow of foreign direct investment, there can only be a competitive transitional economy with good logistics. Unfortunately, most of the logistics literature has simply ignored the growing importance of legal reforms in China and the country's entry into the WTO. This literature review is not only important for filling the gaps in academic knowledge of legal issues; it is also relevant to managers of international joint ventures in China. The development of well-hued judicial practices and efficient legal mechanisms are needed for improvements in logistics management in China, and it is doubtful whether the present legal system can serve as a solid framework upon which China can continue to successfully attract foreign investment. The success of

logistics reform can, to a significant extent, be traced to the strength of the legal system. As Chuang stated:

“Investing in China has the potential to be a very lucrative venture. Since China opened its economy in 1979, billions of dollars worth of foreign investment have been poured into the country. But images of dollar signs have overshadowed some of the legal and political risks of investing in a country with an economy and foreign investment legal structure that is young and unpredictable.”<sup>51</sup>

Therefore, to stimulate its economic growth and increase the amount of foreign investment in logistics and transportation, China must start to strengthen its rule of law. Only a stronger legal framework can protect foreign investors from bureaucratic red tape and political risks. Policy makers and legislators in China should recognise that WTO entry and globalisation will continue to be powerful driving forces in accelerating and deepening legal reform.

<sup>51</sup> See n 36 above, p 536.