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The logistic risks of Finnish companies operating in China

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Contents

1. Introduction

When China began its transition towards market economy in 1978, the rest of the world could not have believed how significantly it would change the world. Such miracles as 10 percent growth annually or the membership of the WTO in 2001 were only utopist dreams before. This membership could benefit both China and its trading partners. Nowadays, China is the third largest economy in the world measured in GDP. This rapid turn from planned economy to a market economy brought along various sectors related to business, which were new to China. One of the biggest impacts happened on the field of logistics. "*Wuliu*", the Chinese word for logistics had totally new meaning and started to be commonly used, unlike during planned economy. (Waters 2010, 443; Adhikari & Yang 2002, 1)

Today, after almost four decades from the start of China's turning into a market economy, there are still many issues in the functionality of its market economy. Some of the reasons have their roots in traditional Chinese culture; some of them are traces from the planned economy and its slow economic development. But still many of the issues are actually a result of today's China with its quite bureaucratic and stiff regulations and practices and also the strong effect of corruption within the country, with a clear proof by its positioning 27/28 in the world wide bribery index (Transparency International 2014).

Before the economic reform of China, the logistics markets were dominated by few companies that were state-owned. But since the 1990s the logistics industry has boomed rapidly and amounted 240 billion RMB in 2003 (Hong & Chin 2007, 426). Now, even though there are more than 18,000 registered logistics companies available, not a single one can provide nationwide distribution. The market share is very fragmented, because none of the providers have a market share more than 2 percent. (Bolton & Wei 2003, 10)

This research tries to point out the issues in China's logistics chains on general level and to find the reason for their existence and if they could be somehow mitigated. The topic has been quite widely researched, but most of the studies have been made to impinge on the companies from the US, other Asian countries or China. In this way the research creates a Scandinavian point of view to the logistic problems of China.

1.1 Research problems, objectives and limitations

Problems of the logistics in China are well known amongst the companies which either operate in China or have previously attempted to operate there. The infrastructure has been lacking behind a lot and the fast economic growth has only worsened the situation as it has increased the demand for transport capacity crucially. Many studies have been made regarding to this topic and generally the problems in logistics have been largely identified, but yet no working cure has been found to them. As China's industry is largely based on tangible products, logistics play a big part in its competitive advantage and China's extremely high logistics costs and its unreliability are a big disadvantage in the long run.

The main research question in this study is

"How to manage logistic risks in Finnish companies operating in the Chinese markets?"

as the aim of the study is to find possible solutions to existing problems in the logistics chains and reduce the uncertainty and the cost structure related to it. Assistive research questions are

"*What are the biggest risks in logistics for companies operating in China?"*

"How the existing risks in logistics could be managed or improved?"

to specify the problems and see the alternatives to improve the situation either by the decisions made by the Chinese government or improving own actions.

Because of the limited length of this study, some limitations ought to be made. First, this study concerns of China and the business done within its borders. Secondly, the thesis wields the situation of logistics in China and the risks related to it. From the topics, the following sections are limited out: 1. rescue logistics are excluded, as it is not so straight related to conventional supplies. Also, 2. green logistics has been omitted as the theme itself is too large to be sifted through in this study, though it has impact on total costs due to the existing regulations and redesigning of the logistic chains. Also 3. road hijacks and thefts are left out because they are mentioned only in one previously made research (Ta et al. 2000, 37), which gave them weight in evaluating logistics, but did not open up the topic. On the general level the study moots logistic issues, but does specify in Finnish firms. The studies made between China and other Asian countries are either excluded or examined

carefully to exclude the possible cultural similarities, which can act as advantages in managing the logistics and may not occur in Finnish-Chinese business relations. With this is meant the Confucian –based values and norms that appear in addition to China, also in countries such as Japan and North- and South Korea (Hall & Xu 1990, 569).

1.2 Literature review

The logistics issues and the development of logistics in China has been researched relatively widely and many studies and books can be found regarding to the topic. Nonetheless, studies from more sensitive issues like corruption are rarely made.

Statistical information about the infrastructure, logistics and their development can be found from governmental sources, such as China Statistical Yearbook 2012 (Yuan 2013). From books and studies such as “Contemporary logistics in China” by Liu et al. (2013) or a study made by Jiang and Prater (2002), which gives an interesting overview about the development of Chinese logistics, can be found general information of the infrastructure, logistics and their development.

When trying to create an overall picture of the situation of logistics in China, the research made by Zhang & Figliozzi (2010) clears out the historical stages of the logistics industry development within the economic reform and the liberalization of China’s economy. The study points out the challenges related to transportation and logistics in China and consider the future development in these sections. The same pattern follows the research of Jiang & Prater (2002) by explaining the logistics development from the points of view, both domestic and foreign companies operating in China. The study differs from the one made by Zhang & Figliozzi by concentrating on non-infrastructure problems in logistics, such as regional protectionism and Guanxi. The research also accounts the different transportation modes with their advantages and disadvantages and points out in which situations they ought to be used. Bolton & Wei (2003) add their general knowledge of the development of logistics and its situation in today’s China by reflecting the study to China’s membership of the WTO and how it has affected to the progress of deregulation. The same approach is also used in the research of Goh & Ling (2003). The study of Bolton & Wei also serves suggestions for foreign companies how to do business in China, whereas Goh & Ling defines accurately the most common risks in the field of logistics and different transportation methods.

There are plenty of studies which are concentrating more precisely on different areas of logistics risks and the reasons which are causing them. A detailed overview of the effects caused by China's entry to WTO is being treated in Adhikari & Yang's (2002) research. In the research the conditions for China's entry are considered carefully and also the benefits that China has acquired from the membership. Guanxi and its relation to business life is gone through in the research of Guan (2011), in where the historical roots of Guanxi and its function in recent business world are considered through using an interesting case example of a Chinese businessman. A quantitative study of the effects of Guanxi can be found from the research by Li & Lin (2006), in where the effects of developed Guanxi are being reflected to different areas of business. More about Guanxi and corruption, which is sometimes linked to Guanxi, especially from the western point of view, is written in the research of Speece & Kawahara (1995). The research also offers a peek to the logistics situation of China in the 1990s, where the stages and the development of transportation methods are opened up in different sections. More about the topic of corruption can be found from He's (2000) and Chanzheng's (2010) researches, in where the corruption is first presented in general level using the classification of Heidenheimer. Not of the researches also represent anti-corruption effects done by the Chinese government and how effective they have been. He's research approaches the topic of corruption from a historical point of view and also moots the positive effects of corruption in China. Chanzheng's research instead considers the effects of corruption nowadays and classifies the corruption to different levels, such as the corruption occurring in governmental level or the one occurring in public departments. Even though Chan's (2001) research is not about corruption, it moots corruption and the anti-corruption acts in China in addition to the research's key study legal environment in logistics and distribution. The research is very useful to understand more precisely how the barriers in regional protectionism are created and how the membership of the WTO has affected the legal environment. Chan also reflects the legal situations in China to similar ones that have occurred in Russia, Eastern Europe and some other places. More about regional protectionism can be found from a quantitative study of Batisse & Poncet (2004), defining the effect of regional protectionism to the strategic planning of FDI establishments.

The studies that are mostly concentrated on the historical development of China's logistics are such as Naughton's (1993), Luk's (1998) and Fan's & Chan-Kang's (2008) researches. The first two mentioned explain the development during the economic reform and

Naughton especially concentrates on Deng Xiaoping's achievements in the reform. Luk's research compares the situation of China's logistics during the reform to the situation at present. Fan's & Chan-Kang's research studies the logistics development during the economic reform from the point of view of building road infrastructure and the research helps to understand the income differences between the regions and that way partly clarifies the background of regional protectionism.

Research made by Ta et al. (2000) considers preferable transportation modes for different purposes in business with a quantitative approach to the topic. The research explains the differences between the modes, their ownerships and which the advantages of the modes in various situations are. Jiang (2002) processes the same topic, but from a point of view of a foreign company and what are the pros and cons of different transportations modes.

Even though the research of Peng et al. (2001) is not used in this thesis, for getting familiar with the whole area of logistics and business of China in general, the research is very useful. It is a compilation of previously made researches on these topics and offers also information itself, but is even more useful to find researches according to these topics.

1.3 Research methodology

The whole research is based on the studies, which have been made previously on the known issues in logistics and the research is being replenished with focusing questions aimed to Finnish companies operating in China at the moment to find out more specifically how they experience the existing issues in their own logistics and which kind of risks they find to be the most crucial ones. Therefore the used research method for the study is case study, which helps to create knowledge of this specific phenomenon without generalizing the knowledge to be valid in every similar case. (Saaranen-Kauppinen & Puusniekka 2006)

This study uses data triangulation to increase the reliability of the study. It exploits previously made researches, statistics and interviews in order to achieve more reliable results. (Saaranen-Kauppinen & Puusniekka 2006) The aim of the study is to verify the existing theory and broaden it and the study technique is a critical single case (Koskinen et al. 2005, 161-162).

1.4 Theoretical framework

The theoretical framework below demonstrates the internal and external factors in the risk management of Finnish companies operating in China and how the existing risks can be diminished or removed in practice and what kind of theoretical solutions are found for the risk management (Figure 1). The factors causing risks do not necessarily affect to each other directly, but simultaneously can make logistics very difficult to manage.

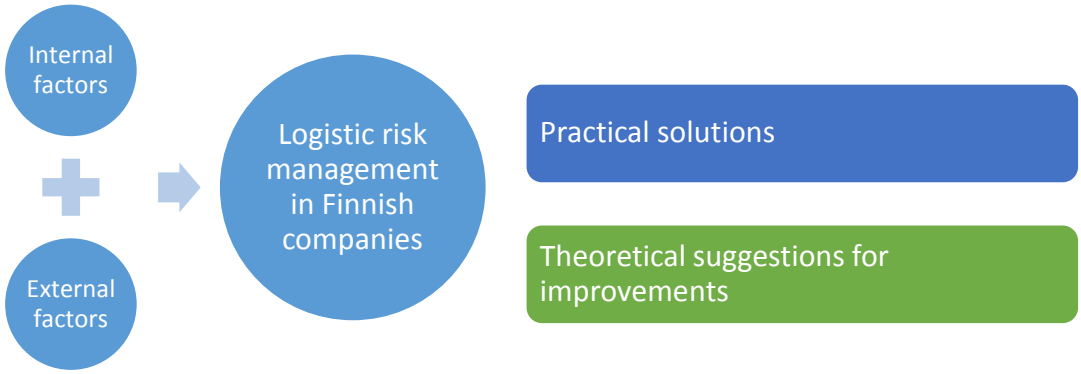

Figure 1. The theoretical framework

1.5 Key concepts of the study

In this study the following key concepts ought to be explicated in order to fully understand what the terms represent in this specific context. Third party logistics (3PL), bureaucracy and legislation apply as generally understood.

Logistics

Logistics, in this concept refers to the flow of goods to customers and the means of transportation within logistics. In other words, the whole process of planning, implementing and controlling efficiently the flow of goods and information, the storage of goods and the services related to fulfill the requirements of a customer. The definition concerns both, inbound and outbound flow of goods. (Lummus et al. 2001, 426)

Infrastructure

The term refers to China's transportation infrastructure which includes roads, railways, airports and sea lanes. It also involves the needed infrastructure built around logistics, such as logistic centers, Free Trade Zones and warehouses.

Guanxi

Guanxi is a cultural characteristic which has been tied strongly to Chinese culture for more than 5000 years. It has its roots in a clan-like network in ancient China since Confucius had defined the hierarchical structures of authority and the same kind of networking can be seen even today in Chinese culture. Nowadays it has got strong implications between organizations' dynamics. It encourages to long-term relationships by creating mutual trust between partners and is sometimes hard to understand in western style of doing business, which does not always require long term relationships. In the business context this "favor for a favor" can create competitive advantage and higher firm performance by helping to overcome issues which may occur for example in situations with unclear legislation. (Park & Luo 2001, 455-456; Li & Lin 2006, 333)

Regional protectionism

Even though China has moved towards free market economy for a long period already and has been a member of the WTO for more than 10 years already, there are still restrictions towards distribution and logistics, both national and regional level. (Bello et al. 2004, 62; Bolton & Wei 2003, 9) This situation springs back to the reform that started in 1978's, when it was decided that all the regions are responsible for their own economies, employment and social stability on the first hand. Due to fact that the regions had to support themselves with their own resources, resulted in that the regions have useless capacity in terms of logistics parks and hubs. These parks and hubs can be located very close to each other, but in different regions. Sometimes, the attempts to block the flow of goods across different regions or to ensure local production with different regulations went so far, that they were called "wars" between different regions. (Poncet 2003, 1-3; Zhang & Figliozzi 2010, 184)

As it is being examined, trading leads to specialization, which results in gaining more from trading. It is a result of economies of scale and the consequence of free markets. This equilibrium can be disturbed by creating barriers for trade, which prevents from taking full benefits from the specialization by restricting equally strong companies producing the same product or a subsidiary to it entering the markets freely. Protectionism occurs increasingly in areas with companies being state owned even wholly or partially. (Bai et al. 2003, 2-3) These barriers can be either tariff or nontariff and are created by the local governments to secure local employment, tax revenues, economic growth and social

stability (Jiang & Prater 2002, 9). The effects caused by these barriers are enormous; the average distance of freight being transported via highway is only 58 kilometers, 8 percent of the average distance in the US. In addition, the cost effect to supply chains is double as much compared to the US, reaching up to 40 percent of the wholesale price in China. (Bello et al. 2004, 62)

Often, these barriers are created to protect state-owned companies, but they serve also privately owned companies, if they bring tax revenues and ensure employment in the certain region. (Adhikari & Yang 2002, 7; Samiee & Walters 2003, 104) In fact, this is not necessarily a problem to all the companies. The ones that are being protected with the set up barriers, do often relish financing from banks and local institutions, which do not require loan repayment in the economic downturns. (Samiee & Walters 2003, 103)

2. Logistics in China

The chapter opens up the historical development of logistics in China and explains the current situation of logistics.

2.1 Background of the logistics situation

The reforms that started after the Chinese Communist Party lost its strong position in 1978, due to death of Mao Zedong in 1976, pushed China towards market-oriented economy (Speece & Kawahara 1995, 53; Perkins 1988, 601). The economical reformation that took place in China can be divided into different sections, depending on when the reformations have been made. The whole reformation began in 1978, due to the fact that the national economy had been growing fast and the capacity of traditional marketing commodities could not cope with the exceeding demand of goods. These “four modernizations” were based on a visionary program by Zhou Enlai, which Deng Xiaoping then implemented. (Naughton 1993, 499) This lead to phase one distribution reformations, in where new distribution channels were created and the resumption of warehouse stocking and general trust in business were strengthened. In 1980, four SEZs were established, which were a Chinese equivalent to FTZs, in where the Chinese companies were allowed to practice export and even retain a part or all the earning from foreign trade. (Luk 1998, 48-49; Jian et al. 1996, 16)

During the phase two China aimed at improving the horizontal links between different industries and provinces, as the lack of existing horizontal linkages resulted in high costs and inefficiency in moving goods across different regions. This engendered a dual distribution system, in where the manufacturers produced the quantity of products to the government as the central economic plan demanded, but in addition the companies were also given a possibility to manufacture for the market needs and to sell the extra production straight to wholesalers or sales agents and sold for the price determined by demand in the markets. (Luk 1998, 50; Perkins 1988, 614)

Phase three concentrated on consolidation and rectification of the distribution system. This happened because of the regulations in dual distribution were undeveloped and also China was lacking the relevant experience for handling its reformed distribution system. Therefore many enterprises, even the state-owned, were engaged into illegal resale of traded goods. The changes made in the phase three impelled local governments to regulate and monitor the market prices and enterprises to seek approval from authorities before they were granted to raise the selling price of their products. Also, the central government paid effort to forestall the exploitation of the middlemen in order to rise up the prices. (Luk 1998, 51)

The last phase was based on Deng Xiao Ping's, the chief designer of the economic reform, statement that the Chinese economy ought to be a market economy with public ownership as its basis. The last phase consisted of several changes playing important role in China's economic reform, which were tightly related to the existing issues in the distribution of goods. One of the crucial changes was that the rights to handle import and export trade were also granted to commercial enterprises, which accelerated the economic growth. Also trading abroad and foreign investments were partly allowed. (Luk 1998, 51-53; Jian et al. 1996, 15; Yuan 2013, 151) In addition, the administration of deliveries was improved by re-organizing the governmental structure to avoid the excessive usage of the governmental functions and resources. The PRC saw the most important reforms of the last phase as improvements of the distribution business; strengthen the regulations according to distribution and also to lower the barriers for distributions across different regions. (Luk 1998, 51-53)

Finally, in November 2001 China had been able to clear all the obstacles for its membership to the WTO, after resigning from GATT, the predecessor of WTO, in 1950 (Chan 2001, 497; Adhikari & Yang 2002, 1). In return for its membership China had to

eliminate the set export subsidies and tariff-rate quotas on most part of the imports. Also it had to remove the tariffs set for telecommunications equipment after signing in the Information and Technology Agreement. (Adhikari & Yang 2002, 2) The membership of WTO also released the logistics markets to global competition and some of the big logistics companies such as UPS, Fedex and DHL, which had already been to the Chinese markets via joint ventures, were able to operate themselves. This created competition on the field of logistics, as local companies were not able to compete against service-oriented, specialized logistics giants with low cost strategy, but had to improve their overall quality to survive. (Wang et al. 2006, 812; Jiang 2002, 185)

As the result from the economic reform, dispersions appeared between different regions, which is partly the reason for regional protectionism (Jian et al. 1996, 11). This is partly because of Deng's reformation plans did not concern rural areas in the same scale as the more crowded ones (Naughton 1993, 507). But the reform brought also many contributory factors to foreign business: the centralized control of prices disappeared; enterprises were allowed to be set up that were not parts of the central planning (Jian et al. 1996, 15). Some foreign logistics companies were also allowed to operate on their own, without being part of joint ventures with Chinese partners (Wang et al 2006, 812).

2.2 Current situation of the logistics in China

In 2010 the PRC launched a transformation of its economic development mode, which included several optimizations and upgrades to its industrial structure. The transformation was mainly launched against the international financial crisis and in order to rapidly grow the total logistics amount. As can be seen from Figure 2, the growth has been very rapid, resulting the amount of the GDP in China to be the second largest in the world in year 2010. (Liu et al. 2013, 2) The growth has even accelerated more after China's entry to the WTO (Waters 2007, 443; Goh & Ling 2003, 886). Nowadays China has reached the status of being the second most attractive country in terms of FDI investments (2013) after the US. China had been on the first place since 2002, which gives a clear sign of its attractiveness for foreign invests. (AtKearney 2014)

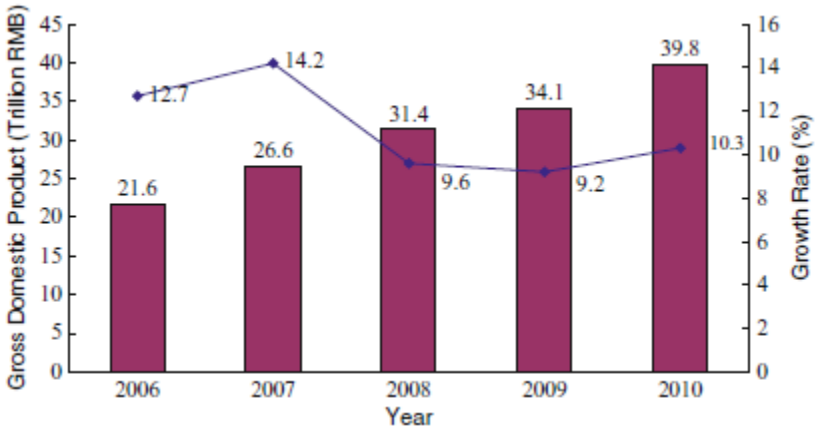

Figure 2 (Liu et al. 2013, 2)

The increase in the domestic social consumption has resulted in rapid growth of logistics within the PRC. The amount of logistics' value of industrial products was as high as 113.1 trillion RMB, with a growth of 14.6 percent from the previous year. The PRC has obviously realized the need of development in transportation and warehousing, which can be noticed from the amount of investments to this area, which has grown from 1.11 trillion RMB to 2.78 trillion within five years (Liu et al. 2013, 6-7). At this moment, over 14 million Chinese are being employed in companies established by foreign investment and even more than 100 of the Fortune 500 –companies are operating in China (Chan 2001, 499)

As researched, the most popular cargo transportation methods in the PRC are highway, rail and water transportation. Water transportation is seen as the most secure and reliable way of transporting goods which explains its popularity in domestic transportations (Bookbinder et al. 2013, 17). Still, the growth of the aviation transport has grown even more rapidly, 25.1 percent in year 2010. The reason for this could be partly due to the fact that an increasing part of the goods need to be delivered quickly. Straight after the aviation transports comes highway and water transportations with increases of 14 percent each respectively. (Liu et al. 2013, 8) This indicates the growing trend of manufacturing and sourcing in China. Many of the established foreign 3PL companies are located in the cities with already existing concentrations of logistics companies. In addition, these cities with already existing infrastructure for transportation are seen to be more tempting amongst foreign companies (Hong & Chin 2004, 433-436).This indicates the consolidation on logistics field, which can result in rural areas to be left behind in the selection of logistics companies and therefore resulting in the concentration of the FDIs to big cities.

3. Logistics problems and operation methods in China

A survey made by the US-China Business Council revealed that the US companies claimed logistics issues to be the major problem when operating in China. One of the heaviest reasons for this is the prohibition of foreign logistics companies, which states that foreign firms are not allowed to import products but instead officially sanctioned companies must be used. (Jiang 2002, 184) After China's entry to the WTO, the problems still exist. The whole sector of logistics is highly fragmented, consists of almost 20,000 registered companies varying from their quality and suffers of strong protectionism. (Bolton & Wei 2003, 9-10) In this chapter the most common risks in the field of logistics in China are being listed and explained through and also a view is made to the possible operation methods available.

The level of expenses in logistics is untenable in a long run. Unlike in developed countries, the share of logistics' expenses is approximately 18 percent of the GDP. This may appear as big obstacle for China's economic development. (Bookbinder et al. 2013, 16-17) The costs in road transportations, which are the most popular way of transporting goods in China with its stake of 75.79 percent of the overall logistics, are a result from gasoline and road tolls expenses. These two cost drivers can be up to 90 percent of the overall expenses in single road transportation. (Bookbinder et al. 2013, 17, 23)

One of the things slowing down the development of the logistics in the PRC is the fact that most part of the deliveries are handled by the supplying companies themselves, instead of outsourcing the transportations to third parties. Third party logistics account only 2 percent of the overall logistics in China. This is incredibly small amount if compared to the 30 percent amount in developed countries. This seems to be rather long-term situation than temporary, as in the current situation different reasons such as garbled legislation and regional protectionism result in lack of logistics firms and insecurity in delivery times. Still outsourcing to 3PL partners is growing slowly, so the situation might change, but slowly. (Bookbinder 2013, 31-36) Creating multimodal logistics system lacks way beyond developed countries, as all the transportation modes are managed by different Chinese divisions, which makes the decision making much more complicated when deciding on infrastructure construction (Bookbinder et al. 2013, 31)

3.1 Logistics problems

The risks and problems mentioned below are the most common ones in China's logistics that are researched in previous studies.

3.1.1 Coverage of the infrastructure

The coverage of the infrastructure is one of the biggest bottle necks of the logistics in China. Problems occur especially in road and railway logistics, as they are way too undeveloped at the moment. To open up the issue even more by comparing the infrastructure of China to other continents, China's rail density in 2010 was only 0.95 kilometers per 100 square kilometers whereas in Europe it mostly varies between 5 to 20 kilometers in the same area. At the same time, China's traffic density of its railroads is seven time higher than in EU and it points out well, how undeveloped the railway infrastructure is in China. Also, many of the existing stations are not designed for moving the freight in containers, but rather represent traditional transportation, in where the cargo has to be unloaded and stowed into containers. (Bookbinder et al. 2013, 28; Eurostat regional yearbook 2010, 168) There are different reasons why the priority of building a working infrastructure has been low. As example, the coverage of railway routes has increased only 9.9 percent between years 1978-1990. The reason for this was partly due to fact that the railways were used rather for passengers traveling short trips than commercial use and even raising the ticket prices did not serve as a solution for freeing up space for commercial transportations. (Speece & Kawahara 1995, 56-57)

In the case of road logistics the situation is improving constantly and it seems that the Chinese government has really paid attention in improving its road connections. By starting the improvements near 1990's, China increased its total length of highways over 100 times within 14 years. Obviously, the biggest improvements have been made in the coastal regions and in the big industrial cities, especially in terms of high grade roads. The government has paid attention to western part of China in its road development plan, but the share of the high grade roads is significantly less in these rural regions. (Fan & Chan-Kang 2008, 307-308) Often, the truck fleet used for transportation consists of tarpaulin – covered, open-backed trucks. These kinds of trucks have to be loaded and unloaded manually and are much more inefficient than the ones designed for transporting containers or the ones with fixed closed trailers. In addition, illegal modifications are common to

increase the capacity of the trucks. The Chinese government has established numerous road checks to prevent trucks carrying overload, but the effect is quite non-existent and slows down the transportations even more. Due to the outdated truck fleet the cargo also get damaged easier than by using modern trucks. (Goh & Ling 2003, 891) Nevertheless, the improvement has been rapid and the problems in road logistics in the future cannot probably be found in the infrastructure, but rather occur in China's relatively old truck fleet in capable of transporting containers, as well as in regulations, tolls and regional protectionism.

Air logistics have been improved significantly during 21st century, but yet China has smaller density of airports compared to the developed countries. Like Xie (2002) mentioned in Goh & Ling's research (2003, 903), this issue has been already recognized by the Chinese authorities, which know the Chinese airports lags in terms of scale, amount, service and management, compared to developed countries The biggest issue appears to be the fact that the existing airports are located in eastern regions, such as Yangtze River Valley, Pearl River Valley and Bohai Bay, which have developed rail and road infrastructure. This leaves the other parts of China to undeveloped stage in terms of infrastructure, which makes the infrastructure inefficient as entirety. (Bookbinder et al. 2013, 29 & Liu et al. 2013, 166)

Rail transports are also avoided quite often as they are relatively unreliable. The national railways are already operating at their maximum capacity and the privilege has been given to industrial resources, such as coal and steel. Therefore booking a transport via railways has to be done well in advance, which rarely does meet the demands of foreign firms. As a consequence, full loading of the trains causes inaccuracy in departure and arrival times. (Goh & Ling 2003, 895-896)

One conspicuous factor in Chinese logistics has been the unreliable deliveries. Compared to developed countries, the deliveries have often delays or the cargo does not reach its destination without taking damage. According to research (Ta et al. 2000, 45) 'Transportation concerns of foreign firms in China', the interviewed foreign firms experience road transportation to be the most problematic. In the results of the research they mention foreign firms to see the most problematic area to be the lack of tracking services, which even increases the uncertainty towards the deliveries. In their research they assume that the poor delivery reliability could be caused by the lack of customer orientation of the local carriers.

3.1.2 Undeveloped IT

Despite the fact that China has the biggest number of mobile and fixed telephone line users and the second largest country in terms of internet users, its varied terrain areas are still lacking IT facilities (Zhang & Figliozzi 2010, 184). The infrastructure lacks more in the western parts of China, just like in case of logistics –related infrastructure. The situation has roots in the monopoly of China Telecom, which slowed down the development noticeably. Still, the situation looks rather desperate and the reach of fixed telephone lines is only about 25 percent, the mobile network coverage reaches about 10 percent and only 5.5 percent of the total population has access to internet, even though China has the second biggest amount of internet users. Nowadays the situation looks a bit brighter; since 2001, China has liberalized the telecommunication services in three phases and after the last phase foreign companies have had a possibility to own up to 49 percent of telecommunication companies. (Goh & Ling 2003, 907) Hopefully the foreign capital will speed up the penetration of communication facilities. Also China has cut down the quantitative restrictions for IT –products, diminished the average tariff to 9.4 percent from previous 24.6 percent and by singing the Information Technology Agreement, which will eliminate all the tariffs related to telecommunications equipment and other IT –related products (Adhikari & Yang 2002, 2).

One of the slowing factors to be mentioned which affects the companies to adopt IT systems is the frequency of blackouts and power outages in China. Also the employees' lack of know-how and cloud-based tools prevent the rapid adoption of IT systems. (Zhang & Figliozzi 2010, 184-185) It has been proven that the evolution of IT has contributed the efficiency of logistics by increasing the response time and linking logistics providers and customers together (Waters 2010, 34). This is the reason why IT should be heavily invested in China. At this moment it is seen as one of the top logistics challenges in China (Zhang & Figliozzi 2010, 184-185). More complicated is that the new IT –related innovations will not be easily adopted by the Chinese without properly established Guanxi (Bello et al. 2004, 63; Bolton & Wei 2003, 17). If this issue can be resolved, it is only a question of investments in IT –systems and training the staff, which improves the business performance (Li & Lin 2006, 337)

3.1.3 Regional protectionism

In the situations where local companies are willing to expand their business across different provinces, due to the regional protectionism, the companies are often charged with excessive supply-chain-related costs, such as high shipping and warehousing costs. In some cases the means to practice regional protectionism can be additional regulations to businesses outside the region. The decentralization process in China has even worsened the situation as the provinces are increasingly responsible for their own economic growth and employment. It is said, that political and legal barriers, like used in protectionism are actually the biggest barrier in the development of the logistics in China, straight after long distances and the weak infrastructure. (Jiang & Prater 2002, 9) Dividing China to different regions has been necessary for the Chinese policy since 1980s because of the size of the country. The authority is needed to be divided to smaller segments in order to run the policy efficiently, as exercising of power is unmanageable in a big scale. Still, the growing inequality between different regions, especially the coastal ones and the ones located inland, is one of the main concerns of the central government. (Brun et al. 2002, 161-168)

In terms of logistics, this means that for small logistics companies it is difficult to operate beyond the regions they are being located at. This results that there are no nation-wide trucking companies in China and the most part of the existing ones are small sized companies. (Zhang & Figliozzi 2010, 184) This also affects the decision-making of the logistics firms, when they are deciding their location of establishment. Because of making it almost impossible to offer logistics services to other regions, the cost for distant transportations of goods is extremely costly, up to 30 percent of the total production costs. Often, the new entrants favor those cities which already have existing logistics providers and it leads to consolidation of the logistics companies to capital cities. Yet, there are no proofs that the FTZs or the coastal cities would benefit significantly from the consolidation. (Hong & Chin 2007, 425-431; Goh & Ling 2003, 888)

This protectionism is truly challenging, especially for the logistics of foreign companies. There are no signs that the situation would improve in near future, despite China's membership in the WTO (Samiee & Walters 2003, 101). Still, the government tries to make efforts to the situation by heavily investing in the infrastructure and in its five-year-plan for years 2001-2005 the western regions were privileged in public investments. That

could help these regions to benefit more of their cheaper labor costs and that way attract foreign companies (Brun et al. 2002, 168). The future will show how these expedients will work and possibly reducing authority of the regions would prevent those raising barriers, which are against China's own laws and the conditions of the WTO.

3.1.4 Guanxi

The western style of making business differs greatly from the Chinese style. Perhaps the biggest breakwater between the practices is how personal relationships affect in doing business and thus also have big influence in the logistics field. From the western point of view, Guanxi is based on mutual trust and willingness to encourage shared benefits with business partners. In China it is seen to be a chain of favors (renqing) done both ways to fulfill the greatest needs of the counterparty. The roots of Guanxi lead back to Confucianism and therefore Guanxi is tightly attached to the cultural structure of China. (Guan 2011, 3-5 and Li & Lin 2006, 335)

Without understanding the importance of Guanxi, the chances to success in business are relatively nonexistent. As Guanxi can appear as giving gifts, in some cases when giving cash or serving banquets, it can be considered to be a form of corruption. From the western point of view, it could be seen as a substitute for transaction costs. This is still a part of the Chinese culture and can be faded away only if the legal system of China is being strongly improved, as it nowadays has many features on Guanxi in itself. Therefore creating good Guanxi with business partners and authorities does have a strong effect in different areas of manufacturing, including logistics and the flexibility related to it as long as the legal situation remains the same as now with unclear regulations. (Li & Lin 2006, 344; Samiee & Walters 2003, 102)

A special feature in Guanxi is that it is individual. A company cannot have Guanxi itself, but it is created between the employees and its stakeholders (Li & Lin 2006, 335). Therefore those employees who have established Guanxi to stakeholders should be seen as valuable resources for the company. In fact, Guanxi might be the most effective way to attain competitive advantage and overcome stiff bureaucracy and regulations. Like Samiee & Walters (2003, 104) said, establishing appropriate connections on every level if necessary in order to develop business. That's why Guanxi should be largely cultivated in companies, preferably via staff with right connections.

3.1.5 Corruption

Corruption, which is seen as a serious challenge in nowadays China as it has spread all over the society and economy and modifies the whole structure of society (Chanzheng 2010, 58). Although corruption has been present in the Chinese hierarchical system since Confucian ideology was established, it has worsened since the start of the economic reformation in 1978 and reached its peak between years 1980-1995. The co-existence of dual economic systems provided opportunities for corruption by offering a chance to profiteer with the existing restrictions within free market –based economy. (He 2000, 245-248) Because of the inefficiency of the market system, local officials often play a brokering role between state agencies and free markets and this requires them to have close relationships with businessmen and provide the officials chance to ask for bribes in return for pleasing decisions made on behalf of the companies paying the briberies. (He 2000, 249)

On the other side, corruption may help to override certain outdated and inflexible regulations and that way even is beneficial for the economic reform and the internationalization of China. In some forms of corruption are even beneficial for non-state owned enterprises by assisting them to bypass regulations and by giving access to foreign currencies and acquiring licenses and further their internationalization that way. Especially in customs, like the clearing times and the nonprocedural practices, corruption often occurs. Without good Guanxi or briberies, transported goods can be held in the customs over a month. (He 2000, 256-258; Chan 2001, 523) The question is, if the economic reform and internationalization should happen with a price tag of corruption in it.

One of the most recognized researchers of corruption in Arnold Heidenheimer. He divides corruption to different classes from A to C, in where A represents the most severe form of corruption. In terms of logistics, the corruption occurs on class B, in other words “grey corruption”, or class C, “white corruption”. The class includes corruption, in where the leaders of public institutions use their institutional power they possess to increase their own or their staff’s welfare by engaging in business activities. In a logistic chain this can occur as “service” or administrative fees, fixed monopolies by setting up restrictions for competition or any beneficing certain companies by misusage of legislation in return for certain services. “White corruption” instead can be tightly linked in maintaining good

Guanxi, such as giving gifts, tributes or gratuities in return for the benefits that logistics companies are eager to have. (Changzheng 2010, 59-60)

Luckily though, some improvements have been achieved after 1995, mostly due to the anti-corruption efforts enforced by modern political leadership and China's market-oriented reform (Changzheng 2010, 62). Recently, increasing amount of officials have been convicted for being involved in corruption and the government gives a clear sign of its policy against corruption; death penalty is being suited to those accepting briberies over 100,000 RMB (Chan 2001, 524-526). Also, the five-year-plan of years 2001-2005 aims to convert most state-owned enterprises to privately owned, either wholly or partly, to get rid of the corruption related to this field. Experience shows that this only offers possibilities to new kind of corruption (He 2000, 264). The Anti-Corruption Work Bureau has done its own part also: report centers for corruption have been set up and the reporting has been made easier. Also, the power of individual officers have been reduced, so corruption would need a bigger amount of participating officials and therefore make it more challenging to exercise. Despite the efforts, the situation does not seem to improve. It has been said, that the only means to get rid of corruption is to balance the power structure and restructuring the political and legal regulations and system. (Changzheng 2010, 65-69; Chan 2001, 527)

3.1.6 Bureaucracy and legislation

The bureaucratic and legislative risks appear already when entering the Chinese markets. Getting the government approvals and licenses is very difficult, partly due the fact that Chinese employees are slow to encourage getting them to work for foreign employers. The risks will not even fade away when a company is already established to China; the administration is slow and inefficient. Partly because the autonomous regions, in where the legislation can differ a lot. These regulations also prevent the formation of nation-wide logistics companies (Chan 2001, 502; Zhang & Figliozzi 2010, 184). Therefore relationships have a big role for succession in China, as the legal system is multilayered with national, provincial and local laws (Samiee & Walters 2003, 102) As can be seen from Figure 3, customs –related problems are seen as major transportation problems in China. These customs clearances can range between two days to two months, depending on how carefully the GAC is willing to inspect the cargo. If the goods are unfamiliar to the GAC, the customs clearance time tends to be longer because of the time taken for classifying the goods. (Goh & Ling 2003, 909)

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

	Problem	Rating*
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.

Figure 3 (Chan 2001, 503)

3.2 Current operation methods

Because numerous of foreign companies want to take the advantage of cheap labor costs in China to create long-term competitive advantage, they tend to use three different methods at the moment (Jiang 2002, 1). This chapter explains the different possibilities for carrying out the logistics in China. Neither one of the different options can be seen better as the other ones, but there are situations, in where a certain operation method could be more practical than the others. The available options are establishing a logistics center to a FTZ and allure the existing OEMs to establish business in China, creating a fully functioning chain of small 3PL providers to cover the logistics network needed, outsourcing

all the logistics either to a domestic or foreign 3PL company or in some cases, creating own distribution network.

3.2.1 Cluster Approach Model

In order to encourage foreign companies to manufacture their products increasingly in China, the government offers preferential to these companies in return. Domestic production concerns not only Chinese companies, but also WOS's of foreign companies that are located in China. This has caused several foreign companies to force their already existing OEMs to establish subsidiaries to China in order to get these tax benefits. There are two different methods of how Cluster Approach Model can be executed. (Jiang 2002, 1-2; Jiang & Prater 2002, 13)

In practice entering the Chinese markets has led to a maneuver in where the upstream manufacturers tend to establish their subsidiaries first to FTZs, which are located on the eastern coast of China. Often, the OEMs of these companies follow the upstream manufacturers to these FTZs. In these areas, the Chinese government has allowed the companies to trade relatively freely with some limitations. That makes the logistics relatively easy in these areas. This is so called export focused cluster approach. (Jiang 2002, 2; Bello et al. 2004, 62)

Some of the companies have needed to persuade their suppliers to operate in Chinese markets with them, especially if the delivery times are accurate and tight. In this case domestically focused approach is used. Due to the fact that some of the Chinese laws prevent foreign companies to operate nationwide in logistics, has led to a situation in where the foreign logistics companies are forced to set up a series of small distribution centers in different regions. Very often these companies also operate in a grey area of law. (Jiang 2002, 2)

3.2.2 The usage of Non-Chinese 3PL Model

Not always the downstream companies are willing to establish subsidiaries to China or that is not even being demanded by the foreign companies that are establishing their WOSs in China. Still, these non-Chinese logistics providers are not yet so common in China. (Jiang 2002, 2) Few exceptions exist, which have been operating in the Chinese markets for longer period and therefore have acquired the needed connections to operate successfully

in China. (Jiang & Prater 2002, 14) The usage of non-Chinese partners in logistics can be divided into two subsections according to company's size and structure. (Jiang 2002, 2)

Establishing a foreign, large-scale logistics provider to China, demands a lot of work. Not only the restrictions China had set for foreign companies, but also the strong effect of Guanxi and the importance of relations in general results that receiving a license to operate in logistics field have been granted only to few foreign companies in China. (Guan 2011, 9; Jiang 2002, 2) As an example, UPS has been operating in China since 1988, partnering with Sinotrans, a Chinese government-owned logistics company and gained trust and the needed Guanxi and in addition, brought huge amount of money to the government via this joint venture before receiving its own operating license as late as in 2001. (Jiang 2002, 2)

As regional protectionism is still strong in China and the regulations in logistics sector are far away from being clear, another way to run a logistics company is to create a small, and flexible company. Noticeable is that often these companies operate in a grey area of Chinese laws. Often these companies operate in one region only and can cover only relatively short routes (Batisse & Poncet 2004, 142), because some provinces or municipalities demand that the cargo must be offloaded and again reloaded into different trucks which run under the license of that certain province or municipality. Some companies though, have been able to create a combination of licenses, by setting up branch offices to different provinces and therefore can operate longer routes without offloading the cargo in between. (Jiang 2002, 3)

3.2.3 Localization model

There are plenty of reasons why many foreign companies find it relatively easy solution to localize their supply chains in China. Most often, it can help to cooperate with local authorities and regulations and brings in the local, implicit knowledge. Localization model can be carried in two different ways. (Jiang 2002, 3)

In some cases foreign companies have been able to acquire permissions from local governments to establish distribution centers around different provinces in China in order to deal with their logistics more efficiently. Most often, this requires large investments of capita, not only to establish the distribution centers, but also to get the licenses from the local authorities. For MNCs this kind of arrangement is often a requirement to success in

long-term, because it offers a possibility not only to produce locally but in addition to shorten the response times. (Jiang 2002, 3)

It can be also logical to outsource company's logistics fully to local companies. Most often, it is being outsourced to the biggest logistics companies in Chinese markets, as they have the best coverage for transportations and strong relations with the regional and central government. When the need for transportation is mostly for short routes, it may be advisable to prefer local companies, as they may have even deeper relations within the region (Goh & Ling 2003, 907). As disadvantages in this model can be found the fact, that advanced technical support may lack, as example tracking services. These local 3PL providers tend to be very bureaucratic, because they are often government owned and this obviously lengthens the response time and efficiency of supply chains. (Jiang 2002, 4)

4 Practical experiences and the risk management of the logistics in Finnish companies operating in China

For the research the questionnaire was sent to four Finnish companies via email that are operating in China. The reply came back from two of these companies. The questionnaire consisted of seven different questions and can be found from the appendix –section (Appendix 1). The reviewed companies are Finnish companies, which have operations both in Finland and China and are either medium or large enterprises. The aim of the questionnaire is to find out whether the researched problems in logistics occur in case of Finnish companies, what are the most common risks that influence the logistics of the interviewed companies and what the most common transportation methods are. Also few questions were added to specify the actions of the companies' suppliers, level of IT and also to find out if the interviewed companies take any advantages of the FTZs.

4.1. The effect of the infrastructure in selecting suppliers

In some cases the poor infrastructure of China can cause a situation, where the best available suppliers cannot be selected. This happens if companies want to ensure delivery times to be more secure. In the case of the companies that were interviewed this problem does not really occur. One influencing factor for this is the fact that some of the companies are located on the areas in where the infrastructure is well developed. Good locations near ports are significantly less affected by the transportation and logistics challenges and the

issues are rather familiar to companies located in inland (Zhang & Figliozzi 2010, 185). These problems are more likely to occur especially in the eastern coastal areas, in where the infrastructure is on advanced level and the ports located in Shanghai, Shenzen and Qingdao are ranked to be amongst the top 30 ports in the whole world according to Boyes' (2002) research, referred in Goh & Ling's (2003, 897) research. In the questionnaire there were mistakenly said that the infrastructure would be better in the western coast instead of the eastern coast, but that did not affect the answers and one respondent mentioned about it in the returned questionnaire (see Appendix, question 1). When establishing business in China, the location ought to be chosen, if possible, according to the location of the suppliers and the surrounding infrastructure. Shorter the distance to the supplier is, less problems with regional protectionism is likely to occur. Also, finding the most suitable suppliers and developing long-term business relationships with them is essential in developing good Guanxi.

4.2. The biggest occurring logistic issues

When considering the issues that occur in the companies that were interviewed, the respondents mentioned various reasons that were widely mentioned in the previous researches. Delays were relatively conventional and happened due to customs and the bureaucracy related to it. In domestic transportations the high price appeared to be a problem, especially when dangerous goods were transported. Partly the reason for the high costs can be found from the lack of needed infrastructure for storing and handling dangerous goods, as well as the lack of expertise on this field. It is said that the fourth most serious challenge in logistics by foreign companies is excessive customs clearance time (Chan 2001, 523). As in some cases even the shippers do not fully understand the materials they are shipping, this complicates the customs clearances as if the GAC does find the good unfamiliar. This can lengthen the delivery up to months and make the customs procedures even more complicated. (Goh & Ling 2003, 900-909)

Also the poor infrastructure of the roads caused damage to the cargo in some of the companies interviewed. The trucking fleet in China is old and open-backed trucks are commonly used in the transportation and these facts combined with unpaved and poor quality roads in some areas of China causes damages to the cargo often. (Goh & Ling 2003, 891) Until the trucking fleet has been renewed to trucks that are designed to carry containers and the government has done enough effort to develop the highways,

companies can only try to protect the cargo by using stronger packaging materials which prevents the cargo to break down during transportation or at ports, in where the loading and unloading are commonly done manually and causes damages to the cargo. (Goh & Ling 2003, 891; Ta et al. 2000, 47)

Unclear customs legislation and the bureaucracy according to it are issues that numerous of foreign as well as domestic companies are facing in China. This happens due to rules and regulations that are not defined clearly. Due to unclear legislation, the customs officials are making decisions arbitrarily and this increases the uncertainty in terms of delivery times and costs. The government is trying to improve the customs regulations and also change the customs declarations to electronic form. Still at this point the declarations are submitted both in paper and electronic forms, but will become paperless when the customs offices and the officials are equipped and familiar with the electronic systems. (Goh & Ling 2003, 909-911) In the study of Zhang and Figliozzi (2010, 188), 85 percent of the interviewed companies agreed that good relationships with customs officials and custom agencies is the most efficient way to reduce the insecurity, delays and damage to the cargo within the customs procedures. They also added that using logistics firms with high reputation for transports reduces the inefficiency of the customs. This sets companies operating in China in a situation, where a decision has to be made between using a foreign 3PL company with advanced IT and customer service or using a chain of small logistics providers to create an effective logistics chain which can reduce the effect of regional protectionism with their established relationships. Though the last mentioned one takes a lot of time to build up.

4.3. The logistics methods used & the most preferable transportation modes

When the interviewed companies were asked how they would divide their logistics between different transportation methods, the results supported the data gathered from previously made studies. Mostly amongst the responded companies road transports was the mostly used transportation method, especially in domestic transportations. In case of one respondent, sea transportation took over the other transportation methods, presumably its location nearby a big harbor. In fact, the relevance of air and water transports has increased within last fourteen years (Bookbinder et al. 2013, 17). Also, in case of international logistics, the easiest transportation method is sea transportation. To support the popularity of sea transports, in Zhang and Figliozzi's research (2010, 188),

they mentioned that the least delays happened in long haul sea transportations. Also, the sea transportation is the most effective way to transport heavy, low value goods in terms of reliability, amount and cost (Prater & Whitehead 2013, 83). In the responses was also mentioned preoccupation towards railway transport to Europe instead of traditional water transport. This can be already handled the easiest via Trans-Siberian connection. In China's 10th Five Year Plan it is planning to build a high speed railway to Europe and within this plan it already has plans for connections to Eurasia Continental Bridge, as well as to Singapore. (Goh & Ling 2003, 896) If the rail capacity will be increasingly released to the transportation of commercial goods and modernized to carry containers, especially for inland transportations this transportation method would bring alleviation by transcending regional protectionism and the damage done to the cargo.

4.4. Suppliers' logistics

The practices in inbound logistics varied a lot, depending on the supplier. One respondent answered that only global logistics firms are being used in their inbound logistics. There are only few big, non-Chinese 3PL operating successfully in China, like UPS and MAERSK. The successful, big 3PL companies have established their functions to China as early as in the 1990's. The advantage to domestic logistics companies, these international firms have more advanced logistic fleet, developed IT –systems and skilled employees. By contrast, the small non-Chinese logistics providers are more flexible and often deal better with local provincial regulations, likely due to their local knowledge and relations to officials. In turn, these small logistics providers can face barriers in long-haul routes because of regional protectionism. In the worst scenario, the firms need to unload and transfer the cargo to another logistics provider's trucks, which are allowed to operate in that certain region. (Jiang 2002, 185-187) This differs from what is being researched, if assuming that the suppliers are Chinese. According to the studies, local companies tend to have their own logistics departments and if not, favoring domestic 3PL companies (Bolton & Wei 2003, 10). By making conclusions with this information, the long-haul routes should be handled either via big, global 3PL companies or creating a chain of small logistics providers that are able to overcome the regional protectionism. Whereas the short distance transportations can be more flexible and more secure to be handled via small domestic operators, in terms of delivery times because of the local knowledge and relations.

4.5. Delivery of tracking codes

Even though receiving delivery tracking codes is relatively rare in China, the respondents did receive them in most cases. The only exception mentioned in where receiving the tracking codes was not so common, was sea transportations. The reason to this success probably is the fact, that the respondents were widely using international 3PL companies and in some cases the shipments were sent from developed areas such as Europe, which have already existing, advanced level of IT. Favoring companies with advanced IT improves customer experience, reduces the uncertainty of the deliveries and makes the supply chain more effective (Prater & Whitehead 2013, 97-104). Favoring companies with advanced IT can also force other providers to adopt IT technology and become more customer-oriented. As Jiang and Prater (2002, 18) indicated in their research, small 3PL companies may survive in the competition in long run only by specialization. The fact is still, that providing quality service is the most requested factor by logistics users in mainland China (Wang et al. 2006, 809) and this will probably affect the selection of logistics partner increasingly in the future.

4.6. The usage of Free Trade Zones

FTZs were either not used at all or being used in some cases to ease the customs procedures amongst the interviewed companies. Naturally taking advantage of the FTZs' low cost and high quality logistics requires the company to be placed next or within these zones in many cases. Still they can be used to gain benefits by avoiding unclear customs declarations and local policy restrictions. Though, the issues regarding to regional protectionism may still exist. It is still noticeable that in 2010 the FTZs accounted already 6.2 percent of the total freight volume in China, which gives hints of their popularity (Bookbinder et al. 2013, 32). The advantage of these areas clearly is that the government offers tax deductions and other concessions for the companies operating in these areas to support local sourcing. For export-oriented production, it is also possible to establish distribution centers. (Bello et al. 2004, 62) Logically, these areas fit better for the companies practicing manufacturing or assembling in China and selling the final products abroad. For other type of business these areas help with the customs declaration, like one respondent mentioned and also help to create functioning logistics chains.

5 Conclusions

Despite the complexity of doing business in China and numerous risks related to its logistics, China accounts over 22 percent of the world manufacturing activities (Mapi 2014). This is a clear sign that despite the challenging business environment, the country is full of possibilities and many have succeeded there. China encourages logistics companies to improve their efficiency by suggesting them to invest in IT –systems and tries to increase the level of outsourcing to 3PL providers instead of the traditional style of establishing own logistics, which is common amongst the domestic companies. China also pays attention to international operators and tries to ease their entry to China, which has been rather quite challenging until today. In addition, China tries to consolidate the whole industry segment, as at the present the field is very fragmented, from which indicates the fact that none of the logistics companies have a share exceeding 2 percent of the total markets. (KPMG 2011, 3; Bolton & Wei 2003, 10; Ta et al. 2000; 43)

The biggest logistics risk in China could be considered to be the high logistics costs, which affects the decision of establishing FDIs in China. Oum & Park (2004, 103) state that the risk-adjusted profit depends on possibilities to perform better than the competitors in order to grow and that the level of infrastructure, as well as trade barriers are factors affecting the profitability and therefore the existence of these risks increase the consideration time for establishing FDIs. The situation of logistics having a stake of 18 percent of the GDP is untenable (KPMG 2011, 3) It is the sum of all the logistic risks and improvement with one of the risk factors has immediate effect to the total logistic price. The research of Oum & Park (2004, 112) determine infrastructure-related to be major risks in the field of logistics, from which especially the ones related to transport facilities, IT and the level of 3PL providers come up. The latest five-year-plan tries to consolidate the field of logistics providers (KPMG 2011, 3), which could bring relief to varied level of 3PLs, as well as tighter competition between the companies.

Despite the numerous issues Chinese logistics has got, there are still numerous signs showing that the situation could improve in the future. The Chinese government is recently doing big efforts to improve its infrastructure and has spent billions to different projects. The latest five-year-plan states that huge investments are being made to improve China's infrastructure. The amount of airport ought to be raised from 175 to 220 airports; a total

length of highway network will reach 83,000 kilometers by 2015, as well as high speed railway network 45,000 kilometers. (KPMG 2011, 19) In its 10th five-year-plan the PRC continues its National Trunk Highway System, a project supported by World Bank. When the project will be ready, which is estimated to be in 2020, a high quality highway connects 95 cities in China. (Goh & Ling 2003, 892) In the latest, 12th five-year-plan of China the situation will be improved even more: the government has promised that all the townships and 90 percent of the villages will be reached with vehicles by 2015. The focus continues to be in the western parts of China and the main reason for the large improvements to be made is to reduce the overall logistics costs, which threaten the competitiveness of China. (KPMG 2011, 3) So far, as the damage done to the cargo that was one major risk amongst the Finnish respondents, because of the bad infrastructure, the only possible solutions available are to use stronger packaging and to favor 3PL companies which have updated truck fleets.

In order to improve especially the logistics performance and cost structure between inland and coastal regions, the government is developing a nationwide railway designed for container freight, as well as the infrastructure around Yangtze River. This could decrease the logistic costs and ease the situation with regional protectionism, as the transports do not have to cross the borders of different regions unlike in road transports. The improved connections would encourage foreign firms to establish their businesses to western inland parts of China after cheaper labor costs, whereas now the benefits gained are negligible or nonexistent due to high logistics costs. (Zhang & Figliozzi 2010, 192) Within the 12th plan it has been also promised that annually a sum of 700 billion RMB will be invested to railway projects (KPMG 2011, 2)

Also the Ministry of Communications has set long-term plans to develop further the water transportation. Its aim is to develop Shanghai's International Shipping Center, as well as the major ports located in China, like Shanghai, Tianjin, Dalian, Ningbo and Shenzhen. In addition to these, also establish more deep water berths, which have been lacking in China due to excessive increase of logistics, to purchase more advanced port equipment and containerized ships and IT systems for their efficient use. The latest (Goh & Ling 2003, 901-902) The Chinese government has also promised to increase the amount of warehousing capabilities in the Chinese ports and is also paying attention to improve the inner river infrastructure, which is a key feature in China's transport industry (KPMG 2011, 2).

Though air logistics have not been the most predisposed in terms of logistics, many of the Chinese airports are modernizing their freight handling by building up cargo facilities. One of the most remarkable modernizing airports is Shenzhen International Airport, which is competing with the Hong Kong International Airport by offering low taxes, freight housing and landing fees, as well as enhanced customs clearance. (Goh & Ling 2003, 904) In the latest five-year-plan, more than 1.5 trillion RMB are planned to be invested in the development of China's aviation industry and the amount of airplanes is planned to be almost doubled, even though the focus is concentrated increasingly to domestic markets. (KPMG 2011, 4)

Hopefully is that the liberation of communications facilities would improve the coverage of mobile networks and improve the quality of the IT infrastructure in general. That way the IT systems could be adopted increasingly in Chinese companies, which would result in more reliable delivery times, as well as dispatching delivery codes.

In terms of unclear customs procedures, which is one of the biggest problems in the logistics of Finnish companies that was mentioned in the responses, the only way before official improvements is to keep up good relationships with the customs officials. Likewise in all aspects of doing business, the meaning of Guanxi is remarkable and this does not necessarily have to mean bribery. Even though sometimes from western point of view Guanxi cannot be considered to be anything else than "white corruption", it has to be remembered that this manner as its roots in ancient China and the real meaning of it is mutual trust instead of personal benefiting. It is still estimated that the meaning of Guanxi will fade away in near future as China tries to integrate its own business culture closer to western practices. Also, when the legislation is being developed further and the Chinese customs adopt electronic customs clearance systems, the situation will be improved rapidly. Until then, the only way to ease these procedures is to develop good Guanxi to customs officials. It should be considered, if it would be possible to find a 3rd party consultancy which has well established connections to the customs officials, which could ease the customs lead time and reduce the uncertainty related to the delivery times.

To solve the problem with regional protectionism, the local authorities should be given less power to control their own regions and the legislation should be made clearer. Their actions should be supervised more carefully and the abuse of bureaucratic maneuvers should be prevented (Zhang & Figliozzi 2010, 184). One possible option would be educating the benefits that the whole country can acquire from fully functioning logistics

and get local governments to understand the fact, that it is not a loss for the region, but benefits collectively. By lowering the barriers for trans-regional logistics could attract more 3PL providers to these areas with high protectionism, as the companies would know they could stand still in the competition in these areas.

Corruption is a risk that can be solved by the Chinese government only. It will be seen in the future, whether the government is able to find a working solution for this problem. Like mentioned before, decision making ought to be made more collectively and officials' individual power should be reduced significantly. As long as the situation remains the same, only the companies that are not playing by the rules can survive in the long run and it is not beneficiary for the customers either, as corruption brings in more expenses to companies.

As it is said, the meaning of Guanxi will fade away from the business life, as the Chinese are taking influences from the western business culture. Still, its meaning in normal life will not fade and therefore constant learning and understanding the meaning if Guanxi is essential, not only for making business there, but in order to adapt to the surrounding culture and its features.

As global logistics providers increasingly have been able to operate in China, their services should be used increasingly to clearly give sign to local competitors that they need to improve their operations, procedures and update their fleet. This naturally is done by hard way and even using small foreign logistics providers can lead to problems in worst scenario, as they often operate in grey areas. Favoring foreign and big domestic 3PL providers, like Sinotrans, MAERSK or UPS could create pressure in the field of logistics, which would improve the service quality and possibly bring down the excessive prices, which was one of the biggest problems amongst the Finnish companies. Also every improvement done with different issues appearing in logistics tends to affect the pricing positively. Within ten years it can be seen in which stage China's logistics are and the pressure for improving its level is huge is China wants to keep its economic growth stable and increasing.

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Appendix

Appendix 1. Questionnaire sent to the Finnish companies

1. **Pakottavatko Kiinan huono infrastruktuuri (tiet, rautatieyhteydet, lentokenttien tiheys, logistiikan varastot) ja epävarmat toimitusajat teidän yrityksen valitsemaan epäsopivia toimittajia? (Viitaten siihen, että sopivimmat toimittajat eivät aina löydy läntisestä Kiinasta, jossa on kehittyneempi infrastruktuuri)**

   Does China's bad infrastructure (roads, railway connections, density of the airports, logistic warehousing) and insecure delivery times force your company to pick up inappropriate suppliers? (Referring to the fact that the most suitable suppliers cannot be always found from western part of China where the infrastructure is more developed)

2. **Minkälaiset logistiset ongelmat näette suurimpina ongelmina yrityksenne logistiikassa? Viitaten joko teidän tavarantoimittajiin tai yrityksenne logistiikkaan (esim. Guanxi, heikko infrastruktuuri, heikko IT-järjestelmien taso tai niiden puute [ERP:t], alueellisen hallinnon harjoittama korruptio, puutteellinen lainsäädäntö & byrokratia, alueellinen protektionismi, jne.)**

   What kind of logistic issues seem to be the most challenging ones for your company's logistics? Referring either to your suppliers' or to your company's logistics (e.g. Guanxi, poor infrastructure, level of the IT –system or the lack of these systems [ERPs], regional governmental corruption, inadequate legislation & bureaucracy, regional protectionism, etc.)

3. **Miten jakaisitte oman logistiikkanne käyttämien kuljetusmetodien osuudet arvioituna seuraaville kuljetustavoille? A) merikuljetukset b) maantiekuljetukset c) rautatiekuljetukset**
   d) lentokuljetukset e) yhdistelmäkuljetukset

   How would you divide the logistics methods your company is using between the following transportation modes? A) maritime transportations B) road transportations C) rail transportations D) aviation transportations E) multimodal transportations

4. **Jos käytätte tiettyä kuljetusmetodia ylitse muiden, mitkä ovat syyt siihen?**

   If your company uses one transportation mode over the others, what are the reasons for it?

5. **Hoitavatko käyttämänne tavarantoimittajat kuljetukset itse, vai käyttävätkö he ulkopuolista logistiikkayritystä?**

Do the suppliers your company is using handle their transportations their selves or do they use a 3rd party logistics company?

6. **Toimittavatko käyttämänne tavarantoimittajat seurantakoodeja teille tilausten etenemisen seuraamiseksi?**

   Do the suppliers provide tracking codes for following the shipments for your company?

7. **Käytättekö logistiikassanne vapaakauppa-alueilla (Free Trade Zones) toimivia kuljetusyrityksiä? (viitaten siihen, että ulkomaisten logistiikkayritysten on usein helpompi toimia näillä alueilla ja niistä löytyvä logistinen infrastruktuuri on yleensä edistyksellisempää kuin muualla Kiinassa)**

   Does your company use logistic companies operating in Free Trade Zones? (Referring to the fact that it is often easier for foreign logistic companies to operate in these areas and the infrastructure for logistics are often more developed in these areas than elsewhere in China)

Abbreviations

3PL = 3rd Party Logistics

GAC = General Administration of Customs

GATT = General Agreement on Tariffs and Trade

GDP = Gross Domestic Product

FDI = Foreign Direct Investment

FTZ = Free Trade Zone

IT = Information Technology

MNC = Multinational Corporation

OEM = Original Equipment Manufacturer

PRC = the People's Republic of China

RMB = Renminbin, Chinese Yuan

SEZ = Special Economic Zone

UPS = United Parcel Service –company

US = the United States of America

WOS = Wholly Owned Subsidiary

WTO = World Trade Organization