

# The Comparative Study on Logistics Services Industry (LSI) between China and Korea

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**Abstract** — The study comparatively analyses four aspects (Logistics Market Demand, Logistics services Infrastructure, Logistics Services Providers, Government Logistics Policies) of logistics services industry between China and Korea. According to the comparison, the analysis results focus mainly on the drivers, the development characteristics, the constraints and problems, development strategies. Finally, this study identifies the strengths and weaknesses faced by two nations and offer managerial implications for two nations' logistics services industries in an increasingly competitive environment.

**Keywords**-logistics services industry; the comparative study; China; Korea

## I. INTRODUCTION

As leading countries in North East Asia, China and Korea have great influence both in the region and in the global market in terms of output and international trade volume. The more important is that the bilateral economic and cooperation between China and Korea has been improved and tightened in recent year. In this regarding, increasing in efficiency and effectiveness of logistics service in China and Korea would be benefit for the bilateral trade and cooperation, and strengthen the competitions of the two countries in the global market. Therefore, it is necessary to comparatively study on LSI between China and Korea[1].

This paper is further organized as follows: the next two sections present the current situation of LIS in Korea and China respectively. Then, it analyses the comparison of survey results. Finally, this study identifies the strengths and weaknesses faced by two nations and offer managerial implications for two nations' logistics services industries in an increasingly competitive environment.

## II. SURVEY ANALYSIS IN CHINA

### A. Logistics Market Demand [2]

With the fast development of the national economy, the demand for logistics services is growing significantly in China and boosts the sustainable and rapid development of the logistics industry. The total logistics value<sup>1</sup> reached 198 trillion yuan in 2013, grew by 19% year-on year (yoy). This was the highest growth rate recorded in the past 10 years, and was significantly higher than the GDP growth rate of 9.5% in the same period. The coefficient of logistics demand was 3.35 in 2014, which was significantly higher than the average coefficient of 1.7 and 3.2 in 1996-2000 and 2008-2012 respectively. In 2013, the total logistics cost accounted for 18.1% of GDP. It is estimated that a 1% reduction of the total

logistics cost of GDP will result in a cost saving of 130 billion yuan.

### B. Logistics Services Infrastructure

One of the key challenges facing the Chinese logistics industry is the state of the country's transport infrastructure. According to the CFLP, the total fixed asset investments in the logistics industry<sup>3</sup> in 2013 reached 4.96 trillion yuan, grew by 24.3% yoy. Of which, total investments in transportation amounted to 4.76 trillion yuan, accounting for 96% of the total investments. From 2006 to 2013, the highway mileage newly increased 26%; the railway mileage newly increased 10.3%; the mileage of civil aviation newly increased 94.3%; the mileage of inland waterways newly increased 2%. Meanwhile, during the 11<sup>th</sup> five-Year Plan period, the construction of logistics parks are Speeding up very rapidly. The statistics show there are 754 logistics parks in 2012, increasing 264% compared with 2006 and 58.7% compared with 2008. Furthermore, the Communications Minister has unveiled that China will invest 2 trillion yuan in building 34 highways with a total length of 85,000 kilometers in 20 years. IDC shows that the size of Chinese Internet of things (IOT) is 7.52 trillion dollars in 2014 and will reach 20.49 trillion dollars in 2017. According to "Twelfth Five Year Plan", Chinese IOT will focus on the development of intelligent logistics and other nine applications for establishment of key application demonstration projects to promote the large scale development.

### C. Logistics Services Providers [3]

In Chinese LSI, four main distinct groups of different origins are entering where their competition is intensifying with each other. They are traditional central or state-owned transport and warehouse enterprises, private logistics enterprises, Sinoforeign or foreign-capital logistics enterprises.

The value of Chinese logistics and related markets has exceeded 2 trillion RMB and there are 730,000 logistics enterprises in operation up to 2006. According to statistics in 2006, 36.9% of these logistics enterprises are private logistics enterprises. This amount is higher than state-owned logistics enterprises (4.9%) and Sino-foreign or foreign-capital logistics enterprises (10.7%). However, concerning business volume, 33.6% of these private logistics enterprises' annual revenue is less than CNY10 million. According to statistics in 2013, 60% of these logistics enterprises are central or state-owned logistics enterprises which covered 83% in total annual revenue on top50. This amount is much higher that private logistics enterprises (24%) which covered 13% and Sino-foreign or foreign-capital logistics enterprises (16%) which covered 4% on top 50. From the 50list of logistics

enterprises, it is still dominant for the central or state-owned logistics enterprises.

#### D. Government Logistics Policies

The logistics industry itself is subject to policy guidance. Modern logistics has been earmarked as a priority development sector in China during the Tenth Five-year Plan period. At present, Chinese LSI is in a critical stage of transformation and upgrading. It is an important means for the introduction and implementation of logistics policies to guide the development of LSI. 2011 is called as the year of logistics industry policy. Both "The Twelfth Five Year Plan" and "the opinion of the state council on promoting the healthy development of the logistic industry policy measures" were introduced. They highlights LSI should be developed as a priority sector. In 2012, Chinese government successive released "opinions on deepening the reform of circulation system and accelerating the development of circulation industry" and "10 policies and measures to reduce circulation cost" for improving the policy environment continually. In 2013, Chinese government made a series of adjustments and reform in the management system, investment and financing system, fiscal and taxation system, administrative management system, open economy and other aspects of new system. LIS is showing the development prospect steadily and healthily. In 2014, Chinese government continued to grasp the basic direction of reform of LIS. It released a series of supporting and guiding the development of LIS in the long-term planning and policy.

### III. SURVEY ANALYSIS IN KOREA

#### A. Logistics Market Demand

1) *Changes in the environment of global logistics:* Globalization, development in information and communications technology, and trade liberalization has contributed to the integration of commodity markets, and the movement of international capital has increased at high speed. Based on the current situations such as ever increasing trade across the world and globalization of companies, it is predicted that there will be notable increase in the world traffic of transportation and the demand for logistics globalization. Korea, which is highly dependent on exportation, is likely to be under the influence of those situations.

2) *Rapid growth of the logistics market in northeast asia and rise of chinese economy:* Since the 1970s, Japan, Korean, Taiwan, Singapore, and China have realized remarkable development reorganizing the Asian region as a new center of the world economy. Asia is emerging as the hub of the container shipping market accounting for 45% of the total traffic across the world (The container traffic in Northeast Asia is 34% of the total). The Northeast Asian countries have extended their logistics infrastructures competing seriously to hold the predominant position in logistics.

The Chinese economy has attracted capital for investment and plant production of global making it a production base of the world. China is rising at a notable speed as a manufacturing hub in the global supply chain. The economic position of China in the world has contributed to creating domestic and

international demands of logistics, which is expected to be a new source of profits for global logistics companies.

3) *Proliferation of electronic commerce:* Electronic commerce such as the internet and mobile networks has increased in almost every sector of the economy. The volume of electronic commerce across the world was estimated to be approximately 1,324 billion dollars in 2003.

The rapid growth of electronic commerce creates demands for shipping and the need for new logistics services differentiated from existing ones, such as same-day delivery, and frequent and less-than-carload deliveries. Logistics has shown great development across the world responding to these demands, and is expected to grow more than ever before [4].

#### B. Logistics Services Infrastructure [5]

1) *Increasing investment in railroads:* Korean government moved away from road-oriented infrastructure investments to increase investment in railroads. About 9~10 trillion won was collected in transportation taxes every year and 65.6% was invested in roads and less than 20% in railroads. An adjustment will be made increase railroad investment to 20~30% and lower road investments to 54~60%.

##### 2) *Enhancing efficiency of railroads:*

- Implemented railroad upgrading (multi-tracking and electrification) projects, such as Multi-trackage rate: from 32.3% (2003) 51.4% (2009) until 80.0(2019); Electrification rate: from 21.7% (2003) to 61.9% (2009) until 82.0 (2019).
- Established a network linking ports, industrial complexes and logistics nodes with the railroads.

##### 3) *Hubbing incheon international airport:*

- Execute Stage 2 of Incheon Int'l Airport Project: Total of 5.9 trillion won will be invested by 2008 to add one more runway (from 2 to 3 runways), enlarge parking area from 365,000 to 560,000pyung, and to construct cargo terminal measuring 30,000 pyung.
- Build a second connecting bridge and airport railway for better access.
- Develop a 300,000-pyung free trade zone and 150,000-pyung international business district.

##### 4) *Hubbing of busan and gwangyang ports (from 2010-2015):*

- Build 29 more berths at New Busan Port and 21 berths at Gwangyang Port by 2011
- Complete development of adjacent complex (930,000 pyung in Stage 1) at New Busan Port by 2013 and 590,000 pyung at Gwangyang Port by 2011 to enable them to serve as integrated logistics nodal port
- Attract internationally prominent logistics companies to do business in order to build advanced logistics network

##### 5) *Expansion and linking of logistics nodes*

- Build logistics nodes in 5 major regions (Jungbu

regions, Youngnam regions, Honam regions, Seoul regions and Busan regions) and equip freight terminals with processing/assembly facilities so that they can function as integrated logistics terminals

- Link logistics nodes with arterial transportation networks and improve transport structure that currently depends heavily on road transports
- 6) *Improving information of logistics:*
- Integrating information technologies into the logistics industry
  - Network with connections to other related networks

### C. Logistics Services Providers

In Korean logistics industry, domestic logistics companies offer third party logistics services which include international express delivery, domestic courier service, SCM and IT, such as Korea Express, Hanjin Transportation, Hyundai Logistics, CJ GLS. Domestic logistics companies are focused on function based logistics service. The general features of the domestic third party logistics providers[6] are as follows:

TABLE I. KOREAN LOGISTICS COMPANY IN 2010

Domestic Logistics Company in 2010				
Name	Korea Express	Hanjin	Hyundai Logistics	CJ GLS
No. of Employees	4,363	2,117	1,846	1,250
Sales	\$1,300 billion	\$750 billion	\$560 billion	\$200 billion

Source: Korea Logistics Times: <http://www.kmi.re.kr>

### D. Government Logistics Policies

#### 1) The Related Logistics Policy:

- 2001.1 “Goods Distribution Promotion Act” officially issued by the minister of MOCT.

- 2006.8 1st updated Master plan (2006-2020) officially issued by the minister of MOCT.
- 2008.9 “Basic Logistics Policy Act” officially issued and planning period is changed to 10 years.
- 2009.1 the Green New Deal investment plan (2009-2012) was introduced by National Green Growth Commission [7].
- 2011.4 1st 10 years Logistics Master Plan was officially issued by the minister of MLTM after some communicating with the other ministries and reviewing by the Committee of Logistics Policy during 4 or 5 months.

#### 2) Achievements and Results:

- Deriving systems of National logistics policy is partially provided. In example establishment of Basic Logistics Policy Act foundation of the national committee of logistics policy and ministry consolidation is processed during 4 years
- Through making a supporting group for activating logistics globalization regional committees of logistics policy and regional logistics master plan Private-Public relationship in logistics is getting concrete
- Through logistics status survey statistical bases for logistics policy is partially set
- As developing the national information depository was delayed credibility of logistics policy is decreased
- But some important national logistics projects are delayed because of a different view within logistics related ministries

## IV. THE COMPARISON OF SURVEY RESULTS BETWEEN CHINA AND KOREA

TABLE II. THE COMPARISON OF SURVEY RESULTS BETWEEN CHINA AND KOREA

	China	Korea
<b>The main drivers</b>	1. Significant change in market structure: from shortage of supply to over-supply; 2. Intensified competition: from monopoly by SOEs to diversified market participants; 3. Increasing openness to the outside: from closed economy to integration into the world economy; 4. Fast development and concentration of economy and industry; 5. High growth of International trade and FDI inflow	1. Fundamental drive has been the market demand due to the intensified competition in market place; 2. Trade-oriented development strategy and high growth of international trade; 3. Emerging of Chinese economy and low level of international logistics service supply in China
<b>The main development characteristics</b>	1. Chinese logistics industry is in fast development stage and still less developed; 2. High growth of logistics value and high ration of logistics cost to GDP; 3. Most logistics services are handled in-house, while outsourcing of logistics is growing; Oversupply of single-function service providers versus fewer but fast growing 3PL, or contract logistics providers; 4. Logistics infrastructure has developed fast but not sufficient to logistics development; 5. Logistics has received unprecedented attention in China since 2000	1. Korea's Logistics industry development is behind other OECD countries; 2. logistics cost increased gradually and the ratio of it to GDP still remain high as 12%; 3. Added-value of logistics service increased continuously; 4. Rapid increase in numbers of logistics companies

Continued

TABLE II. CONTINUED		
	China	Korea
<b>The main constraints and Problems</b>	1.limited service formats and relatively backward management; 2.Low value-add logistics service; 3.Small scale logistics companies dominated logistics market; 4.low efficiency due to under-developed logistics infrastructure and IT technology applications; 5.limited regulators and the economic system; 6.limited the lag in research work and the lack of professionals	1.Political risk through dividing country 2.Not connected to continent by land 3.In-house and SME based logistics industry 4.Over-competitive logistics market: domestic focused industry 5.Lack of connectivity within logistics facilities 6.Lack of political coordination within logistics related ministries 7.Weak credit for government policy 8.Lack of human resource in logistics 9.Lack of identification of social responsibility
<b>The main development strategies</b>	1.Making-up industrial environment in logistics 2.Modernizing logistics industry 3.Ensuring reliable logistics systems	1.Constructing global logistics system 2. Expanding logistics infra 3.Strengthen based logistics system 4.Transforming into high value-added industry 5.Developing comprehensive framework of logistics policy

## V. CONCLUSIONS AND IMPLICATIONS

This study attempted to compare with four aspects (Logistics Market Demand, Logistics services Infrastructure, Logistics Services Providers, Government Logistics Policies) of logistics services industry between China and Korea. According to the survey comparison, the results focus mainly on the drivers, the development characteristics, the constraints and problems, development strategies. Therefore, implications are drawn as follows:

1) Both China and Korea have their own advantages and weakness correspondently in developing logistics industry. Global logistics corporations including China and Korea have being pushed forward with various strategies for improving their competitive edge in logistics.

2) The two countries need to further development of logistics industry while China can learn a lot from Korea. In comparison to the developed countries, Chinese logistics service industry is still an infant business. In many ways it follows a typical pattern of development. Korean logistics services industry is in the higher stage comparing with Chinese LSI. Therefore, China can learn a lot from Korea in logistics developing process.

3) Necessity of integration of logistics industry among North-East Asia (NEA) region is increasing. Integration in Northeast Asia will lead to the increase of the potential benefits to countries due to economies of scale through the expansion of the export industries, reduction of the transaction costs between the contracting parties and diminution of the importance of political negotiations.

## ACKNOWLEDGMENT

This study is supported by the scientific research project of National Committee, No. 14XZZ006.

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