

IT Cooperation between R.O.Korea and P.R.China

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Abstract: *Since 2003, the biggest trade partner of South Korea has not been America but China. China appears to be a strong competitor of South Korea in every field of international market and even in IT industry, which has been one of the most competitive field of Korean Economy. IT Industry is now becoming a driving locomotive of economy in South Korea and China. It is reported that the IT gap between South Korea and China is shorten to be 1.7 years in 2006, from 2.6 years in 2003 and will be within one year in 2010. China has been aware of the urgent need of developing electronic and information industry in order to improve its productivity. In the results of the efforts to develop its IT industry, China has achieved average 25% yearly growth rate of IT manufacturing industry since 1991. Since 2004, South Korea has pursued IT 839 strategy. How South Korea and China can sustain the continuous development of IT industry. South Korea IT is expected to utilize China's through the mutual cooperation, which results in mutual benefit. To achieve the mutually benefited cooperation and specially to result in Small & Medium sized Korean companies' cooperation with China's, China is expected to improve the market system and create an environment of admitting intellectual property.*

Key Words: *competitiveness of IT; outsourcing; intellectual property*

1. Introduction

Since 2003, the biggest trade partner of South Korea has not been America but China. Since the various kinds of IC application from 1970's, the IT industry has been one of the main factors to influence the world economic growth. IT Industry is now becoming a driving locomotive of economy in South Korea and China. China appears to be a strong competitor of South Korea in every field of international market and even in IT industry, which has been one of the most competitive field of Korean Economy. It is reported that the IT gap between South Korea and China is shorten to be 1.7 years in 2006, from 2.6 years in 2003 and will be within one year in 2010¹.

China has been aware of the urgent need of developing electronic and information industry in order to improve its productivity. In the results of the efforts to develop its IT industry, China has achieved average 25% yearly growth rate of IT manufacturing industry since 1991. Since 2004, South Korea has pursued IT 839 strategy. How South Korea and China can sustain the continuous development of IT industry. South Korea IT is expected to utilize China's through the mutual cooperation, which results in mutual benefit. This paper is going to describe IT cooperation between Korea and China.

¹ Jang Seng Won,, "韓國 IT 技術을 威脅하는 中國",SERI 經濟 Fcus,109 号,P.2,三星經濟研究所, 2006

2. The IT industry of South Korea

Since 2004, MIC (Ministry of Information and Communication) of South Korea has proceeded IT831 project². Based on this project, the IT industry share of Korea GDP is estimated to increase 13.3% in 2006, 17.2% in 2007 and 21.8% in 2010. It is estimated that the growth rate of IT contributed about 47% to the 2006's GDP growth rate. South Korea is attempting to create an environment of combining Cord-Cordless Telecommunication, Telecom and broadcasting. Korea is now ranked, in the world, as the first in the high speed information telecom industry, the first in the digital opportunity index, and the fifth for the preparation of the electronic government. Presently, the Broadband Internet network is utilized by 76% of Korean household, comparing with 30% of American household and the Korean spread rate of Cell Phones is about 75%, comparing with 60% of Americans'. Some IT companies in Silicon Valley of America such as Micro Soft's MSN Mobile are first trying to sell their products, as a test bed, to Korean customers.

Samsung, LG, SK: Notebook, Digital TV, Mobile Phones, IC chips, LCD etc.,,,,,,,

Specially, Korea's semi conductor of D RAM is the strongest in the world Market.

Nexon, CJ Internet of Games(Free Style, Kart rider,,,,),

SK communication, NHN, Daum Communication, Mega Study; Internet Prtal, contents- music animation, E -Learning.

Recently, the Korea National Information Society Agency (韓國情報社會振興院) proposed the plan (2006-2010) for Ubiquitous Korea, which is going to transform Korea as an advanced country in the five IT field of government, SOC, economy & industry, society, and personal life. Through this, Korea is scheduled to be the 15th country of national competitiveness and the 25th of the people's life quality in the world by 2010.

3. The IT Industry of China

China exported IT related products of 18 million US\$ in 2004 and became the biggest IT export country in the world surpassing America's. Since 1990, China has been the biggest manufacturing country to produce TV sets in the world. In 2005, China produced 82830 thousands color TV sets, which occupied 45% of World color TV sets production. There are several outstanding electronic companies in China such as Haier, Lianxiang, TCL, Konka, etc.. The China's IT policy resulted in the about 320 million subscribers of local telephones and about 350 million subscribers of mobile telephones in 2004. In China, subscribers of mobile telephones was about 393 million people in 2005 and will be about 530 million people in 2008 with average 10 % growth rate. China produced 279 million mobile phones in 2005 with 21% growth rate comparing with 2004 and will produce 340 million mobile phones in 2008. Nokia, the leading mobile phone company in China is occupying 30 % of mobile phone market in 2005. Samsung occupying 32.9% of the 2004 China's CDMA market is leading the CDMA market of China. The main players of China's semi conductor industry are still overseas multinational companies. In 2005, China semi conductor industry produced total 26.577 billion units, exported 21.69 billion units, which was worth 13.75 billion US\$ and imported 75.37 billion units, which was worth 81 billion US \$. China's semi conductor market is occupying 25.7% of World's in 2005. The

² 839 IT project means to develop 8 Service industries; Wireless Broadband, Digital Multimedia Broadcasting, Home Network, Telematics, RFID, W-CDMA, DTV, Internet Phone, 3 infrastructure industries; Ubiquitous Sensor Network, Broadband Convergence Network, IPv6, and 9 Growing Industries; Next Generation mobile Telecom, Home Network, Digital TV, Digital Contents, Embedded Software, Next Generation PC, Intelligent Service Robot, Telematics, IT System on Chip.

number of users and computer hosts in the end of 2005 was respectively 110 million and 49.5 million. When comparing with South Korea, where 3/4 of the population are using computers, there are lots of potential to develop internet industry in China. There are top ten popular web sites such as sina.com.cn, sohu.com, NetEase.com, 263.net, cn.yahoo.com, 163.net, 21cn.com, china.com, chinaren.com and yesky.com. China's total domain names in 2005 are 2,592,410.

In 2005, the sales amount of the biggest 100 software companies in China was about 90.37 billion RMB, which was 21.4% increase from 2004's and was 37.6% of the total software market. But the biggest 10's revenue share of the biggest 100 software companies increased from 48.1% of 2004 to 49.9% of 2005. It seems that the top 10 software companies in China software market are going to be stable and influential players. Microsoft, Oracle, IBM, Novell, UFSOFT, Kingdee, Sybase, Informix, Computer Associates, Lotus, etc are competing in China software market. UFSOFT and Kingdee are local Chinese companies and focusing on accounting and ERP. The software industry's sales amount of 2005 was 6.61 billion RMB, which was 40.3% increase from 2004's, among which 3.59 billion U.S. \$ was exported.

4. Cooperation: Summary

The technology transfer of the joint ventures, the strong sponsorship of fund and research outputs from government, the great domestic market, etc., stimulated the fast development of IT industry in China. In the result of the IT development in China, in 2003, China's IT industry including TV, computers, telephones, semi conductors, internet, e commerce, software, etc., realized sales revenue of 1888 billion RMB, which was 9.1% of the China's GDP. In 2004, the IT industry contributed 13.9% to the China's GDP growth rate. However, in 2004, 97% of export of computers and office facilities and 87% of export of electronic & telecommunication industry was realized by overseas companies in China. Nine of the ten sets of DVD in the U.S.A. market was made in China, while, the average export price of those DVDs was 32 US \$, among which 13 US \$ is production cost, 18 US \$ loyalty expense and the profit only one US \$. 4/5 of the exports products by overseas companies in China was assembled within China by importing intermediate products from home country. 38.5 % of 1280 Korean companies in China are proceeding the same assembling trade between South Korea and China.

President Derek Lidow of iSuppli expressed that the Korea's IT industry is being shoved by competitors such as Taiwan, China, North America, Europe, etc³. South Korea's economy between China and Japan is like a walnut in the middle of Nutcracker or a sandwich.⁴ The growth rate of Korea IT industry and the market share of the cell phone, the representative product of Korea IT industry are declining. The 2004's Korea cell phone sales just increased from 40 million US\$ to 100 million US\$, while Nokia and Motorola's jumped from 200million US\$ to 500 US \$. REIGNCOM, a main Korean MP3 player maker started to show deficit since 2005. Not Korea but Taiwan became the biggest market occupier in LCD Panel World Market from 2004.⁵

Korea with Techno-nationalism and China under marketization are supposed to more widen its domestic IT industry to attract and accept the overseas companies' IT

³ Korea Digital Times 2006. 5.26

⁴ Booz Allen & Hamilton, "韓國報告書", 毎日經濟新聞社, 1997, Pp.95-96, and Lee Keun Hee, Korea Chosun Daily Newspaper, 2007.1.30

⁵ Korea Digital Times 2006. 5.26

technology. And both countries is expected to adopt global production network system by using fragmentation or vertical specialization strategy.

From this sense, South Korea can utilize China to result in mutual benefits of IT industry.

In order to result in the mutually beneficial cooperation for upgrading IT industry of South Korea and China, it will be necessary for China economy to keep on developing transparent market system and spreading the environment of admitting intellectual property. Korea and China are supposed to improve the collective competition through the competition and cooperation by globally utilizing vertical and horizontal network.