

20 Years of the Korea-China Economic Relationship: Retrospect and Prospect

PilSoo Choi Associate Research Fellow (pschoi@kiep.go.kr, Tel: 3460-1022)

China Team, Center for Regional Economic Studies

Suyeon No Associate Research Fellow (syno@kiep.go.kr, Tel: 3460-1284)

China's Regional and Provincial Research Group

Min Suk Park Senior Researcher (mspark@kiep.go.kr, Tel: 3460-1145)

China Team, Center for Regional Economic Studies

Contents ●●●

1. Background: Importance of China, Changes in the Korea-China Cooperative Environment
2. Current Issues: Trade, Investment, Finance and Monetary Issues, Emerging Industries
3. Future Issues: Trade, Investment, Korea-China FTA, New Cooperative Fields

Summary ●●●

- ▶ Korea-China trade passing through the initial growth period (1992–1997), adjustment period (1998–2001), and second growth period (2002–2005), is now passing through its fourth phase, the stabilization period (2006–present). Although the scale of trade has increased, there is limited accessibility of Korean exports into the Chinese domestic market while processing trade still takes large share.
 - In the case of Korea's trade with China, there is a strong connection with investment in China as an investment dependent export structure. However, following from the recent strengthening of local procurement by Korean business subsidiaries in China, there has been a decrease in the export inducement effect through investments.
 - Despite Korean shares in the Chinese import market holding second place after Japan at 9.6% as of 2011, shares in the domestic market are lower at 6.3% following Japan (11.3%), the US (9.1%), and Germany (7.5% in 2010).
- ▶ Korea's investment in China, passing through the exploratory period (1989–1991), entrance period (1992–1997), adjustment period (1998–2001), growth period (2002–2008), and transition period (2009–present), has been diversified both in industry and region. However, there has been a recent decline.
 - After China's admission to the WTO, the goals of Korea's investment in China has changed from low-wage toll processing to the domestic market. In regards to industries, there has been a gradual transition from early light industries to heavy chemical industries, as well as a recent increasing focus on service industries.
 - In order to energize recent inactive investment, there is a need for policies that work to (a) cooperate to expand pioneering investments into the domestic market and (b) move the existing bases of production to the inland mid-western regions that are still needed by toll processing businesses, (c) establish and utilize new Korean industrial complexes, or (d) support the small and medium-sized enterprises which have business items to invest in China.
- ▶ There is an emerging need by both Korea and China to create a paradigm of mutually beneficial cooperation by concluding the FTA and uncovering new cooperative fields.
 - The reduction of tariffs and overcoming of barriers to entrance into the service industry, through the Korea-China FTA, can provide significant momentum for advancement into China's domestic market.
 - In the finance and monetary area, Korea-China cooperation has not yet reached a level of real economy, however, in the future, if there is an increase in the international use of the RMB and a lowering of the barriers to the Chinese financial market, there will be a great increase in the possibility of actual cooperative endeavors.
 - In Korea's 17 future growth engine industries and China's 7 strategic industries, because of the abundance of overlap, there is a need to make a specific cooperative strategy according to areas where the two countries have its own strength and where the two countries experience comparative disadvantage in the world market.

1. Background

A. Importance of China

■ [Market] China is Korea's most important export market.

- Since 2004, China has been Korea's largest trade partner, claiming about 30% of Korea's total exports (including Hong Kong).
- Due to the large, increasingly affluent Chinese population and the vast potential consumers in different social classes and regions, in the future, China will continue to be Korea's most important market.
- Enormous potential market can be seen in the high probability that China will systematically and substantially open its service market.

■ [Production Network] Korea largely depends on an East Asian production network built up around China.

- More than half of Korea's exports to and imports from China are components and materials. This means that the two countries are industrial partners connected by a technical network which it is difficult to substitute.
- It can be said that Korea's trade with China does not occur in the exclusively mutual relation but in the inclusive worldwide production network.

■ [Effects of Macroeconomics] As the dependency of the Korean economy on China increases, there is a need to intensify the monitoring China's microeconomic changes.

- Even when the European and American economies experienced difficulties during the collapse of the dot-com bubble in 2000 and the financial crisis of 2009, Korea was relatively easily able to overcome these crises as a consequence of China's economic stimulation.
- Today, Korea's greatest external risk is not from Europe or US but from China. Accordingly Korea needs to intensify the monitoring on China's macro-economic trends and risk factors.

B. Changes in the Korea-China Cooperative Environment

■ [Internal Changes in China] As China is demonstrating a reform to the domestic consumption driven economy and likely to enter into a period of medium-speed growth at a rate of 7% versus a past high-speed internal/external growth rate at 10%, there is a need to adjust Korea's economic

cooperative paradigm with China.

- Limitations on entering the Chinese domestic market have arisen because of Korea-China trade being primarily focused on processing trade.
- Due to an increase in labor costs, RMB appreciation, tightening of processing trade regulations, etc., China can no longer be utilized only as a base of production focused on exports.

■ [Changes in the Business Activities of Korean Business Subsidiaries in China] Korea's trade with China is largely engaged in Korea's investment in China. But as local procurement by Korean subsidiaries expands rapidly, export induction effect of investment has been decreasing.

- A decrease in Korea's amount of investment in China itself has also recently been seen.

■ [Changes in the Competition Structure] As the economic competitiveness of Chinese businesses increases, the industrial cooperation between Korean and Chinese businesses is gradually changing into a mutual competition.

- Given that China's industrial competitiveness increases in the field of components and materials, which accounts for 70% of total Korean exports to China, it is questionable whether the current trade surplus can be maintained.
- Due to an increase in the level of competition by the Chinese government in the new growth engine industries through the nurturing of so-called strategic industries, there is a need to develop a detailed strategy to maintain and expand the comparative advantage for the similar industries in Korea.
- The level of competition between Korea and China in markets such as overseas construction and energy resource development is becoming increasingly fierce.

2. Current Issues

A. Trade

1) History and Recent Trend

■ In 1992, the trade amount between Korea and China was merely \$6.4 billion, but it increased to \$220.6 billion, by 35 times, in 2011. After 2004, China emerged as Korea's largest trading partner (Figure 1).

- Compared to those for 1992, the total amount for 2011, with export volume of \$134.2 billion and import of \$86.4 billion, increased 51 times and 23 times, respectively.
- 1992-2011, Korea's annual rate of increase of exports to China was 23%. This is two times faster than those to the world as a whole, 11%.

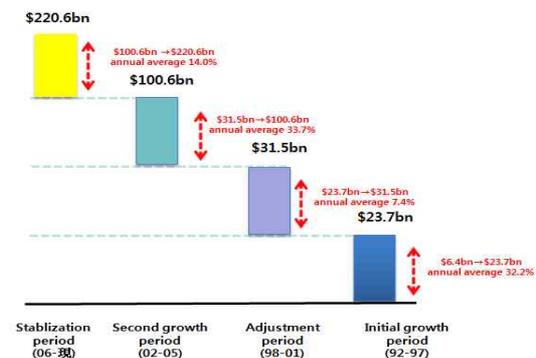
Figure 1. Korea-China Trade Development

(Unit: \$100 millions and %)



Source: KITA,

Figure 2. Four Development Phases of Korea-China Trade



Source: KITA,

■ Trade between Korea and China has experienced four periods: (a) the initial growth period (1992-1997), (b) adjustment period (1998-2001), (c) and second growth period (2002-2005) (d) to the fourth phase, the stabilization period (2006-present).

- ① Initial Growth Period (1992-1997): There was a sudden increase in trade as the Korea-China Trade Agreement took effect in September 1992.
 - The annual trade amount increased from \$6.4 billion in 1992 to \$23.7 billion in 1997.
 - In addition, Korean businesses entered and began to utilize China as a base for processing trade in order to take advantage of the low-wage workforce.
- ② Adjustment Period (1998-2001): Korea and China experienced a period of stagnation in trade due to Korea's foreign exchange crisis and China's economic recession.
 - Although trade between the two countries increased from \$23.7 billion in 1997 to \$31.5 billion in 2001, the annual increase slowed to 7.4%.
 - However, Korea's trade dependency on China had steadily increased from 8.2% in 1998 to 10.8% in 2001.
- ③ Second Growth Period (2002 - 2005): As a period of explosive increase in trade with China, the total scale of trade broke through \$100 billion in 2005.
 - In 2003, China became Korea's largest export partner, and the trade structure had evolved into the one with high-tech industries.
- ④ Stabilization Period (2006-present): The surging trend slowed down, and the export inducement effect from

Korean business subsidiaries in China diminished.

- In particular, import substitution started to be realized as domestic Chinese production in the intermediate goods industry expanded.

2) Assessment of Trade Structure

- When Korea and China established diplomatic relations, main trade items were textiles and minerals. However, after the mid-1990s, there was an increase in home appliance and electronic components.
- While Korea's primary export items to China were steel plate, synthetic resins, etc. at the beginning, by 2011, they include flat panel display, semiconductors, etc. (Table 1).

Table 1. Top 10 Export Items to China (1992 vs. 2011)

(Unit: \$ millions)

Top 10 Export Items (1992)			Top 10 Export Items (2011)		
Code	Item Name	Amount	Code	Item Name	Amount
Total		2,654	Total		134,185
613	Steel Plate	420	836	Flat panel display and Sensors	20,292
214	Synthetic Resins	299	831	Semiconductors	15,777
612	Wire and bar steel	235	133	Petroleum Products	10,995
331	Leather	141	214	Synthetic Resins	7,382
411	Synthetic Fibers	130	213	Synthetic Petro-chemical Raw Materials	4,540
434	Synthetic Fiber Fabrics	98	742	Automobile Parts	4,401
252	Paper Products	90	812	Wireless Communication Equipment	4,277
721	Synthetic and Chemical Machinery	76	212	Intermediate Petro-chemical Raw Materials	3,806
133	Petroleum Products	74	613	Steel Plate	3,671
219	Misc. Synthetic and Chemical Products	69	211	Base Oils	3,240

Note: Based on MTI 3 codes.

Source: KITA.

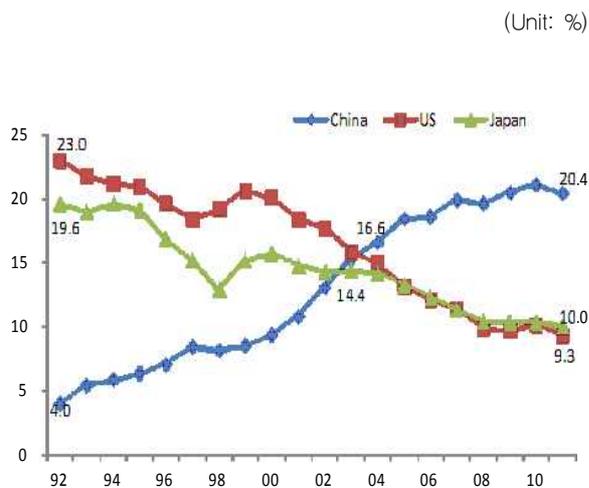
- As of today, Korea provides China with components and capital goods while China did assembly and process on them. But fixing on this structure would lead to a risk.
- The Korean parent companies provide components and capital goods, which are then assembled and processed by their subsidiaries in China. In 2011, among total Korean exports to China, processing trade accounted for 49.1%.
- However, there is a need to alter this trade system as China is tightening regulations on processing trade.

3) Challenges in trade with China

■ After the establishment of diplomatic relations with China, Korea's trade dependency on China has consistently increased, but this is not a matter for concern.

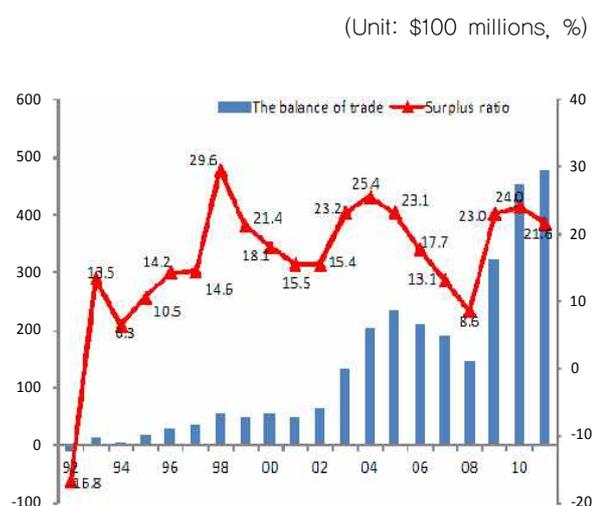
- Trade with China accounted for 4.0% in 1992 and was a lower level than Korea's primary trade partners, the US (23.0%) and Japan (19.6%). However, at 15.3% in 2003, it surpassed Japan (14.4%), and at 16.6% in 2004, surpassed the US (15.0%) (Figure 3).
- At this point, Korea's export market can be analyzed as being in a process of diversification.
 - o In the 1970s, at over 70%, Korea experienced a more severe level of dependency on the US and Japan in exports.
- The real issue is that Korean exports to China are being influenced by China's own exports, and there is a need to take a path to strengthen the exports to China's domestic market.
- o If China's exports decrease, Korea's export to China decreases also because Korea's primary export item to China is intermediate goods.

Figure 3. Korea's Level of Dependency on Main Trade Partners



Source: KITA.

Figure 4. Korea's Surplus in Trade with China



Source: KITA.

■ There is a claim that the Korea's surplus is excessive. However, the surplus is from intermediate goods while Korea experience deficits in commodities and consumer goods.

- After 1993, the year after diplomatic relations were established, Korea realized a trade surplus over a time period of 19 years. The surplus ratio has been decreased since 2004. The rapid decline of imports in 2009 global financial crisis, however, led to a increase of surplus ratio again (Figure 4).
- Korea's surplus is indispensable in China's economy because China is dependent on Korean intermediate

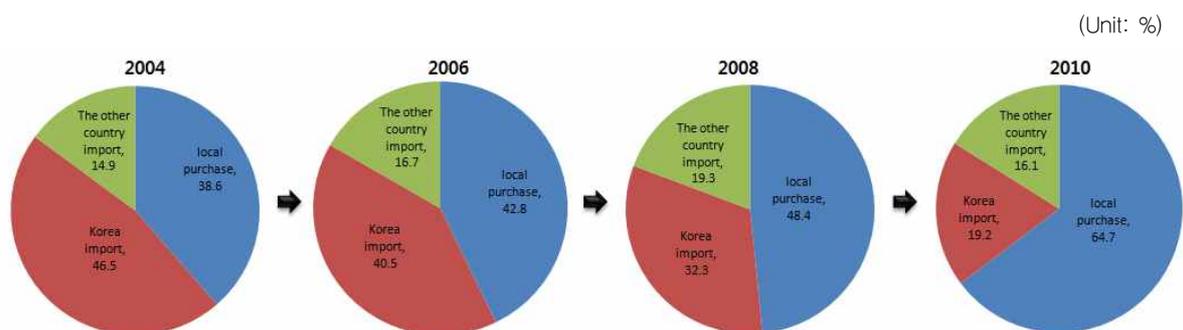
and capital goods for production activity.

- o As of 2011, among Korea's trade surplus with China of \$47.8 billion, \$42.8 billion can be attributed to intermediate goods and \$13.8 to capital goods. A deficit of \$2 billion and \$6.9 billion were recorded for primary commodities and consumer goods respectively.

■ Korea's trade with China is deeply related to Korea's investment to China. This investment-dependent trade structure became unsustainable because Korean subsidiaries in China are localizing its material procurement.

- According to data from the Korean Export-Import Bank, the share of components and semi-finished goods imported from Korea among subsidiaries in China was 46.5% in 2004. But the share had decreased to 19.2% by 2010 (Figure 5).
- On the other hand, as the volume of local procurement increased from 38.6% in 2004 to 64.7% in 2010, the export inducement effect from investments in China sharply decreased from 2.29% in 2004 to 1.29% in 2010.¹⁾

Figure 5. Purchase Sources of Korean Business Subsidiaries in China



Source: Korean Export-Import Bank, "Business Performance Analysis of Direct Overseas Investments," each year.

B. Investment

■ Investment in China had been conducted via Hong Kong and other third-party states from 1988 and had greatly increased in 1992 following the establishment of diplomatic relations.

- Korea's amount of investment in China, which was a mere \$140 million in 1992, grew to 3.5 billion or by approximately 25 times by 2011 and emerged as second in terms of scale after the US (Figure 6).

1) Korean Export-Import Bank, "Business Performance Analysis of Overseas Direct Investments," each year.

o At the end of 2011, Korea's total amount of investment in China is \$36.8 billion (22,552 cases), accounted for 19.1% of all foreign investment of Korea.

Figure 6. Progress of Korean Investments in China



Source: Korean Export-Import Bank, Overseas Investment Statistics.

1) Characteristics of Korea's Investment in China

■ Korean investment in China has been developed while passing through five phases: the exploratory period (1989-1991), entrance period (1992-1997), adjustment period (1998-2001), growth period (2002-2008), and transition period (2009-present).

① Exploratory Period (1989-1991): This is a period in which Korean businesses began indirectly entering China through Hong Kong.

- With labor-intensive industries such as agricultural processing, clothing, leather, etc. total investment amounts reach \$672.5 million (105 cases).

② Entrance Period (1992-1997): This is a period in which there was an explosive growth in the investment in China following the establishment of Korea-China diplomatic relations.

- There is an increase in processing trade related investments that utilize China's low-wage workforce and focus on small and medium-sized businesses.

- As a period when business types began to diversify, there is also increase in investments in the field of non-manufacturing industries such as real estate, restaurant.

o Diversification from the simple assembly processing of low-tech products to the field of electronics.

③ Adjustment Period (1998-2001): As a period when Korea's overseas investments decreased due to the aftermath of the financial crisis, investments in China recorded only \$2.47 billion (2,619 cases).

- This was a period when Korean small and medium-sized enterprises which experienced domestic economic

troubles and business difficulties, moved production bases to China.

- China during this period began to implement selective investment policies for foreigners and gave preference to investments in the central-western regions through its Western Development Strategy.
- ④ Growth Period (2002-2008): This is a period when there is an increase in investment targeted at developing the Chinese domestic market with China's admission to the WTO.
 - With the implementation of new income tax laws in 2008, the tax benefits for foreign enterprises are practically abolished and there is a strengthening of policies to attract selective foreign capital.
 - Investment in China during this period reached \$21.02 billion (13,706 cases), and in 2004, Korea was the largest foreign investor in China.
- ⑤ Transition Period (2009-present): Due to the subsequent effects of the changes in China's investment environment, there has been an altering of the structure of investment in China and a decrease in the amount of investment.
 - As a result of the change in China's overall investment environment, Korea's low-wage-seeking investments have decreased. Although there was increase in investments aimed at the Chinese domestic market, there are reservations about judging whether or not these were successful.
 - o Korea's share of the China's domestic market is smaller than other countries when compared to the scale of exports.

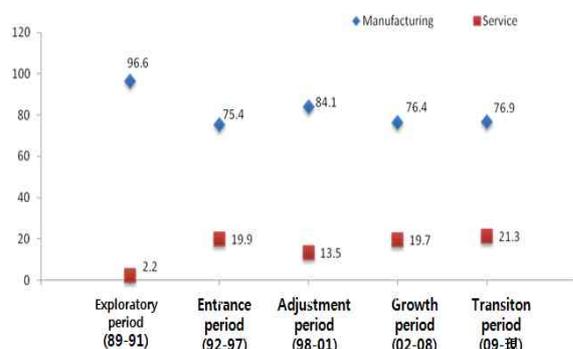
2) Change in the Investment Structure

■ After China's admission to the WTO, Korea's investment in China has experienced huge changes in purpose, industry, region and performing units.

- [Purpose] Korea's purpose of investment in China have switched from China's low-wage utilization to development in the domestic market.
- [Industry] Initially focused on labor-intensive light industries, Korea's investment has gradually transferred to heavy industries, such as IT, home appliance, petro-chemicals, vehicles, etc. Recently a greater importance placed on the service industry (Figure 7).
- [Regions] In the beginning, there was a focus on the three northeastern provinces and Shandong, however, starting from the 2000s, this has expanded to Huadong and even Huabei regions. Also, recently, investment in the central-western regions has increased.
- [Unit] In the beginning, small and medium sized enterprises took the main part. Since 2000, large enterprises took the initiative.
- [Scale] The scale of investment per case increased by 5.1 times from \$0.82 million in 1992 to \$41.6 billion in 2011.

Figure 7. Ratio of Manufacturing and Service Industries among Korea's Investment in China

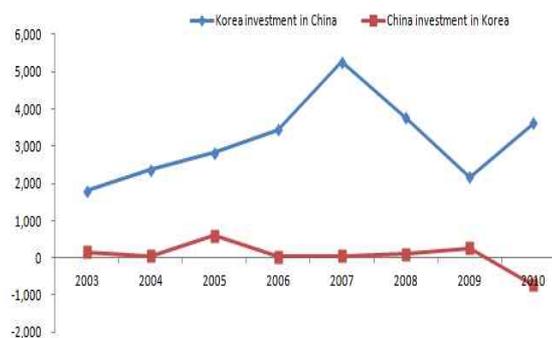
(Unit: %)



Source: Korean Export-Import Bank.

Figure 8. Mutual Direct Investment between Korea and China

(Unit: \$ millions)



Source: Korean Export-Import Bank and China's Ministry of trade.

3) Issues with Investment in China

■ Compared to Korean investment in China, the amount of Chinese investment in Korea is extremely insignificant.

- Korea's investments in China during 2003-2010 reached \$28.8 billion. During the same period, China's investment in Korea was \$500 million (Figure 8).
- Reasons could be thought as (a) Korea's lack of investment incentives and (b) negative perception of China's capital in Korea (Table 2).
 - o After 2000, China actively implemented outward investment policies for securing natural resources, introducing technology and acquiring brands. Korea's investment attraction in these field has been limited.
 - o In addition, as seen in the case of SAICs (Shanghai Motor Industry Corporation) selling of its shares of SsangYong Motor Company, there is high level of distrust of Chinese capital in Korean society.

Table 2. Instances of the Failure of China's Investments in Korea

(Unit: \$100 million)

Investor	Company	Reported Amount	Remarks
BOE Technology Group	HYDIS (LCD)	1,5 (2002)	September 2006, files for court receivership.
SAIC	SsangYong Motor Co.	5,6 (2004)	January 2009, files for course receivership.
Sinochem	Inchon Oil Refinery	5,5 (2004)	Contract falls through; capital is withdrawn.
Dongtai Huanan Investment Co.	Korea-China Future Aviation City	3 (2008)	2007, \$300 million reported; \$120 million received.

Source: Jeong, Dosook (2012), "China's Overseas Investment and Plans for Inducing Chinese Investment," from KIEP-AMR Seminar.

C. Finance and Monetary

1) Banking, Insurance, and Securities

■ In the area of finance, the cooperative endeavors between Korea and China have been conducted with the overall opening of China's finance area, but these are still weak compared to the levels of real economy.

- The first entrance into China by a Korean bank was KEB (Korea Exchange Bank) and it established a representative office in Beijing 1992. Many banks established branch offices in Beijing, Tianjin, and other locations following the establishment of diplomatic relations, many were closed as a result of the foreign exchange crisis.
- In the banking industry, a full-scale entrance was realized when China fulfilled its obligations of joining the WTO and opened up RMB business to foreign banks at the end of 2006.
- In the Insurance industry, Korean firms entered as China allowed share of foreign partner's portion to reach 50% due to the WTO joining in 2001, and allowed the establishment of non-life insurance companies with 100% investment in 2003.
- In the case of securities, until the end of 2006, foreign securities companies and asset management companies were permitted to have only 49% of share. As a result, Korean firms' approach to China has been limited.
- Korean financial organizations and firms are seeing advances as the Chinese government instituting the QFII²⁾ (Qualified Foreign Institutional Investor) system.
 - o Recently, the Bank of Korea and Korean Investment Corporation, the National Pension, and other public financial organizations have obtained QFII. The total scale reached to \$600 million. Previously, over 10 private financial companies also had obtained QFII which have \$1.245 billion of scale (total 15 companies or institutions as of July 2012).

■ Currently subsidiaries in China established by Korean financial organizations are 5 banks and 4 insurance companies. Securities companies are being operated through representative offices focused on consulting (Table 3).

- Whereas, there are 5 Chinese banks and 2 Chinese securities companies in Korea.

2) The QFII is a system in which overseas organizations receive approval allowing them to invest in China's RMB denoted A stock market.

Table 3. Mutual entrance of Financial Organization in Korea and China

Korea into China	Banking	More than 30 branches including: Wooribank (Nov. 2007), Hana Bank (Dec. 2007), Shinhan Bank (May 2008), IBK (Jun. 2009), KEB (May 2010), etc.
	Insurance	Samsung Life Insurance (Jul. 2005), Samsung Fire & Marine Insurance (Jun. 2005), LIG Insurance Company (Jun. 2008), Hyundai Marine & Fire Insurance (Mar. 2007)
	Securities	More than 10 representative offices (15 QFII organizations)
China into Korea	Banking	5 banking branches: Bank of China, Industrial & Commercial Bank of China, China Construction Bank, Bank of Communications, and Agricultural Bank of China
	Securities	2 representative offices: China Merchants Securities Co. and Shenyin & Wanguo Securities Co.

Note: 1) As of August 2012, 2) Dates within parentheses represent when subsidiary was established.

Source: Authors from various reports and media.

■ These organizations have hardly been localized since their primary business customers are firms and individuals of their home countries.

- Korean banks are increasing the domain of business activities in China such as debit cards and derivatives. However, despite making subsequent profits, the balances being carried are not very large and brand awareness is still low. Insurance and securities companies have also been unable to make profits comparing to their local and foreign peers in China.

2) The RMB Internationalization, and Monetary Cooperation

■ China is actively pushing for the internationalization of the RMB and is concluding currency swap agreements with neighboring countries, including Korea.

- In December 2008, Korea and China both entered into an agreement for a mutual home currency swap of 180 billion RMB for 38 trillion Won. This was increased two times (360 billion for 76 trillion) in December 2011.
- o Prior to this, in 2002, there was a dollar swap agreement for \$2 billion, which increased to \$5 billion in 2005.

■ Since 2009, China has been promoting the RMB for trade settlement. However, recently, the actual use of the RMB has been at a relative standstill, and Korea's use of the RMB for trade settlement as well is still very marginal.

- Since China's RMB trade settlement recorded amount of 597.3 billion Yuan in the second quarter of 2011, it has been unable to recover to that level as of the second quarter of 2012 (452 billion Yuan). In addition, Korea's RMB trade settlements was a mere 0.24% for exports and 0.07% for imports at the end of 2011, the highest level thus far.

- China, while acquiring national bonds from neighboring countries in an effort to expand its regional influence and diversify its foreign currency holdings, is steadily increasing its holdings of Korean government bonds and, QDII³⁾ organizations are steadily entering the Korean capital market as well.
 - After 2009, China began to extensively purchase Korean government bonds, and it is known that by steadily purchasing 300-400 billion per month, China currently holds over 1 trillion.
 - The Bank of Korea also made a small-scale purchase of Chinese government bonds in April by utilizing a portion of the 20 billion Yuan, the investment limit approved by China in January 2012.
 - As of April 2012, China's QDII investment to Korea reached the amount of \$420 million which accounts 4.6% of total QDII investments. Sovereign wealth funds (China Investment Corporation) also increased in investment in the Korean financial market.
- Net inflow of Chinese capital into the Korean capital market (stocks and bonds): 397.5 billion (2008), 2.67 trillion (2009), 5.68 trillion (2010), and 4.87 trillion (2011)

D. Emerging Industries

- The Korean and Chinese governments each announced plans in 2008 and 2010 to promote emerging industries.
 - On the base of "Vision and Development Strategy for New Growth Engines" in 2008, in January 2009, Korea proposed 17 industries as its future growth engines (Table 4).
 - In order to develop the new growth engine industries, it was settled on in May 2009 at the VIP Financial Strategy Conference to provide financing on the scale of 24.5 trillion to these 17 new growth engines as the main goal of the "Comprehensive Development Plan for New Growth Engines."⁴⁾
 - In December 2010, China announced its "Decision on the Promotion and Development of Strategic Emerging Industries" and selected 7 fields for promotion (Table 5).
 - The development targets for the strategic emerging industries are set to reach levels of 8% of the GDP by 2015 and 15% of the GDP by 2020.
 - In 2011, China released the "Guidelines for Accelerating the Internationalization of Strategic Emerging Industries" and specified the detailed technologies of the 7 strategic industries that were to be developed during the 12.5 General Plan time frame (2011-2015) in May 2012.
 - In addition, China implemented following policies:- "Software-IC industry policy," "High-tech service industry guideline," "Marine plant industry innovation development strategy," "Private sector strategic promotion of emerging industry suggestion."

3) The QDII is a system in which Chinese financial organization receive permission to invest in overseas securities.

4) In detail, there are planned investments of 6.7 trillion to 79 green technology industry projects, 12.2 trillion to 62 high-tech convergent industry projects, 5.5 trillion to 59 high-value service industry projects.

Table 4. Korea's New Growth Engine Industries

Field	New Growth Engine	Sub-industries
Green Technology Industries	New and Renewable Energy	Solar, Wind, and Fuel Cells
	Reduced Carbon Energy	Carbon Capture and Storage and Nuclear Power Plants
	High-Level Water Treatment	Smart Waterworks and Eco-friendly Water Replacement
	LED Applications	TV, Vehicles, LED Lighting
	Green Transportation Systems	Green Vehicles (Electric Cars, etc.) and WISE Ship
	Cutting Edge Green Cities	U-City, ITS, GIS, etc.
High-Tech Hybrid Industry	Convergent Communications Industries	3D TV, IPTV, and Advanced Convergent Networking
	Convergent IT Systems	Smart Vehicles, System Semiconductors, Advanced Displays, etc.
	Robotic Applications	Industrial Robots, Smart Robots, and Service Robots
	Advanced Materials and Nanotech Applications	10 Core Materials and Nanotech Applications Materials
	Biopharmaceuticals (Resources) and Medical Appliances	Biopharmaceuticals, Organs, Biochemistry, and Medical Appliances
High Value Added Service Industry	High-Value Food Industries	Smart Foods, Traditional Health Foods, etc.
	Global Healthcare	U-Health, Attracting Foreign Patients, etc.
	Global Education Systems	e-Learning Infrastructures, Attracting Foreign Students, etc.
	Green Banking	Green Business Credits, Green Industry Funds, Infrastructure Funds, etc.
	Content Software	Gaming, Virtual Reality, SW, etc.
	*MICE and Tourism	Conferences, Prize Vacations, Conventions, International Events, etc.

Note: * MICE - Meetings, Incentive Tours, Conventions, and Exhibitions.

Source: Ministry of Knowledge Economy (2009), "Comprehensive Development Plan for New Growth Engines."

Table 5. China's Strategic Emerging Industries

Strategic Emerging Industries	Sub-fields
Energy Conservation and Environmental Protection Industries	High-Efficiency Energy Conservation, Advanced Environmental Protection, Natural Resource Re-usage and Related Core Technology Equipment, Products, and Services
Next Generation IT Technology	Next Generation Mobile Communications, Internet, Network Integration, Internet of Things, Cloud Computing, IC (Integrated Components), New Displays, High-tech Software, High-tech Services and Information Services
Bio-Industries	Biopharmaceuticals, Processed Biopharmaceutical Products, Bio-Agriculture, and Bio-Manufacturing
High-tech Equipment Manufacturing	Aircraft Equipment, Satellites and Applications, Orbital Communications Equipment, and Smart Manufacturing Equipment
New Energy Industries	Next Generation Nuclear Power, Solar Thermal Usage and Solar Panels, Wind Technology Equipment, Smart Grids, and Biomass Energy
Advanced Materials Industries	New Smart Materials and Advanced Construction Materials, High Performance Fibers and Complex Materials, and Common Base Materials
Green Vehicle Industries	Plug-in Hybrid Vehicles, Electric Cars, and Fuel Cell Vehicle Technology

Source: Xinhuaawang (2011, 3).

■ Both Korea and China are targeting green economic development and there is an overlap in many of these domains.

- In regards to Korea, there has been a delay in economic growth because lack of new growth engines to replace old ones. The new growth engines have been established based on market potential, its correlation with green development, and other related aspects.
- Whereas China, dependence on natural resources and environmental destruction were identified as limiting economic development, and it therefore announced the strategic growth industries that emphasized green growth.
- There is considerable overlap in the fields of green technology industries and high-tech convergent industries (Table 6), and both are aggressively working to support the fields of solar panels, wind, IT convergence, bio-pharmaceuticals, and green transportation systems (electric cars) in particular.
- On the other hand, there is a distinction in that unlike China which is concentrating on high-tech manufacturing industries, Korea's new growth engine industries also include high-value service industries such as healthcare, education, banking, contents, tourism, etc.

Table 6. Fields of Overlap between New Growth Engines in Korea and China

Korea	Overlap	China
New and Renewable Energy	Solar Thermal, Geothermal, Wind, Ocean Energy, and Bio-energy	New Energy Industries
Reduced Carbon Energy	Technology Facilities and Services for Energy Conservation and Environmental Protection	Energy Conservation and Environmental Protection Industries
	Nuclear Fusion Energy	New Energy Industries
High-Level Water Treatment	-	-
LED Applications	-	-
Green Transportation Systems	Fuel Cells, Mixed Fuels, Hydrogen, and Solar Thermal Cars	Green Vehicle Industries
Cutting Edge Green Cities	-	-
Convergent Communications Industries	IPTV and Mobile Phone/Internet/TV Tri-network Convergence	Next Generation IT Industries
Convergent IT Systems	Displays, Set-top Boxes, Semiconductors, Cloud Computing	
Robotic Applications	-	-
Advanced Materials and Nanotech Convergence	Nanotechnology	Advanced Materials Industries
Biopharmaceuticals and Medical Appliances	Biopharmaceuticals and Bio-agriculture	Bio-industries
High-Value Food Industries	-	-
Global Healthcare	-	-
Global Education Services	-	-
Green Banking	-	-
Contents and Software	Software	Next Generation IT Industries
MICE and Tourism	-	-
-	-	High-tech Equipment Manufacturing

- In 2008, Korea and China signed a joint statement and have pushed forward with diverse cooperative efforts in the emerging industry fields.
 - Through the joint statement signed in August 2008, Korea and China agreed to cooperate to establish environment-friendly and resource-saving societies. Both countries signed memorandums in relation to this.
 - o Joint technological development, information exchange and the management of an energy conservation advisory committee, etc. were agreed to in the “Memorandum on Cooperation in the Field of Energy Conservation.”
 - o In addition, by signing the “Memorandum on Cooperation in High Technology” which aimed at building a cooperative, mutually beneficial relationship in high-tech fields. The regular working group was organized and both countries committed to push forward with support and cooperation in respective fields such as electronic data, communications equipment, new energy, bio-products and pharmaceuticals, civilian nuclear energy technology, and aerospace next five years.
 - January 2012, announced strengthening the cooperation in energy sector in summit meeting and also proposed cooperations on 7 strategic emerging industries of China and 17 Korean growth engine industries.

3. Future Issues

A. From Processing Trade to General Trade

- Although China is shifting its focus from simple toll processing trade built on low-wage and low added value to general trade built on the expansion of domestic purchasing power and high added value, the rate at which Korea is adapting to this is slower than other nations (Table 7).
 - In China’s 12th 5-Year Plan, a specified shift from toll processing trade to general trade was revealed, and in actuality, China’s volume of general trade increased from 44.8% in 2007 to 52.8% by 2011.
 - In comparison, Korea’s general trade volume increased from 29.1% in 2007 to 34.4% in 2011, a 5.3% increase, whereas during the same period Japan increased 14.0%, the US 14.9%, Germany 9.5% (as of 2010), and Taiwan 9.3%.

- As of 2011, Korea’s share of the Chinese import market held second place at 9.6% after Japan, but the share of the domestic market, at 6.3%, was lower than Japan (11.3%), the US (9.1%), and Germany (7.5% in 2010).

Table 7. Major Nations with Shares in the Chinese Domestic Market

(Unit: %)

	2007			2008			2009			2010			2011		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
China	100	44.8	100	100	50.6	100	100	53.4	100	100	55.8	100	100	52.8	100
Japan	14.0	37.7	11.8	13.3	41.3	10.9	13.1	47.9	11.8	12.8	50.6	11.6	11.5	51.7	11.3
Korea	10.9	29.1	7.1	9.9	31.4	6.1	10.2	33.7	6.4	10.0	32.7	5.9	9.6	34.4	6.3
Taiwan	10.6	18.1	4.3	9.1	19.5	3.5	8.6	23.3	3.8	8.4	25.3	3.8	7.4	27.4	3.8
US	7.3	51.8	8.4	7.2	57.7	8.2	7.7	64.8	9.3	7.4	62.5	8.3	7.2	66.7	9.1
Germany	4.7	68.4	7.2	4.9	67.8	6.6	5.6	74.5	7.8	5.4	77.9	7.5	-	-	-

Note: A - Import Market Share, B - General Trade Share, and C - Domestic Import Market Share.

Source: Lee, Seungshin *et al.* (2011), "Strategies to Promote Trade and Investment between Korea and China," Research Report, 11-27, Korea Institute for International Economic Policy.

- To increase shares in Chinese domestic market, Korea needs to Δ build logistics channel for the distribution of Korean products Δ establish strategies for high-end consumer market which witnesses rapid increase recently and Δ lower non-tariff barrier by concluding FTA.

B. Creating New Momentum for Investment in China

- The reasons for Korea's investment in China remaining stagnant are because (a) Korean businesses have been unable to adapt to the business environments resulting from the advancement of China's industrial structure, (b) the investments in existing types of businesses are saturated and new investment fields cannot be found, and (c) the business performances by the Korean subsidiaries in China have been weak.
 - [Business Environment] Korean firms recognize that business environment in China is worsening because of increase in labor costs and difficulties in personnel management.
 - o KOTRA's 2011 Grand Survey revealed that only 12.7% responded that the business environment had improved, whereas 55.8% responded that it had worsened.
 - o Especially, the number of respondents who thought that the cost has increased reached 79.5%. This was followed by personnel management (43.5%) and the tax environment (17.1%).
 - [Investment Saturation] By the middle of the 2000s, Korea's primary industries, such as the automobile, electronics, semiconductor, and petrochemical had nearly all established production bases in China.
 - [Business Performance] Average net profits of Korean subsidiaries in China was 5.6% in 2003 and has since then been at a level of 1~2%. The number of firms running a deficit reached 50%.

- Consequently, new growth engines that can develop the Chinese domestic market are required. At the same time, Korea's strength in manufacturing area should be accessed in Chinese production network.
 - As explained, investment for Chinese domestic market is directly related to Korea's export to China.
 - However, if it is difficult to make inroad to the domestic market immediately, Korea can consider (a) to move the existing production facilities to the inland central-western regions which still have needs for toll processing, (b) to build Korean industrial complexes or (c) to support small and medium-sized companies which are retaining business items.
- o The Chinese government has declared that it would construct 9 relocation bases for processing trade in regions such as Henan, Hunan, Jiangxi, and Hubei.
- o Korean industrial complex are established in Shandong and Chongqing. It would be a natural strategy to preserve Korea's economic competitiveness by establishing additional centers as well.
- o There is a need to establish organizations tasked exclusively with supporting the entrance into China for small and medium-sized firms which have items and technology but do not have the ability to execute individual investment.

C. Concluding Korea-China FTA

- The reduction of tariffs and overcoming of barriers to entrance into the service industry, through the concluding of Korea-China FTA, can provide enormous momentum towards securing a position in China's domestic market.
 - China has never established an FTA with a completely industrialized nation that has been globally competitive in the fields of automobiles and electronics. The establishment of FTA with Korea is being seen as a type of test for a higher level of economic openness.
 - As China had already ECFA with Taiwan and CEPA with Hong Kong, these regions hold a more advantageous position in Chinese markets.
- With mechanisms for somewhat more comprehensive economic integration focused on East Asia, such as the RCEP (Regional Comprehensive Economic Partnership), EAFTA (East Asia FTA), TPP (Trans-Pacific Partnership), etc., being discussed, Korea will be able to exercise leverage in future multilateral negotiations if it concludes FTA with China.
- Korea-China FTA should be signed as inclusive one but at the same time, negotiations must be conducted minimize the losses to the domestic agricultural industries, as well as small and medium-sized businesses.

- Through the effect of tariff reduction, depending on the level of economic openness, it is predicted that the real GDP will increase by 0.77~1.25% within 5 years after the FTA takes effect and 1.82~3.04% within 10 years. Beyond this, when considering the greater effect of deregulating the service and investment industries, the economic effects from the Korea-China FTA could be immense.⁵⁾
- However, looking at the results of the revealed comparative advantage (RCA) for 25 primary agricultural products, it was reported that China had an advantage for 20 products, whereas Korea had 5. As a consequence, there is needs to put an emphasis on protection for agricultural products.⁶⁾

D. Developing New Cooperative Fields

- [Emerging Industries] After the global financial crisis of 2008, both Korea and China have emphasize on emerging industries and share similarities in the directionality of the new industrial policies. Both can jointly develop those industries by maximizing each one's comparative advantage.
 - In the fields of advanced IT and green vehicles, Korea has comparative advantage in technology, industrial foundations and business models, whereas China has comparative advantage in markets, workforce and policy environments.
 - o In order to promote cooperation, the two countries are able to (a) organize strategic relationships between industrial and academic research, (b) establish international technological standards and (c) include joint development products on the respective government procurement lists.
 - In the areas in which both have comparative disadvantage, it is required that strengthening the cooperation by joint research and development and joint standards establishment.
 - o Korea and China are dependent on the foreign countries for core technologies and components and are trapped in the low-middle levels in the global division of labor structure in the fields of energy conservation, environmental protection, bio-products, new energy, advanced materials and so on.
 - o Accordingly, Korea and China jointly embrace technology transfers from Europe and the US, cooperate in international market competition and establish technical patents standardization in combination.
 - Joint development can be sought in the fields of high value added service industries, such as healthcare, education, cultural contents which are predicted to grow in accordance with economic development and income increase.
- [Finance] In the field of finance where possibilities for cooperation are increasing due to the internationalization of RMB and Korea-China FTA, there is a need to create a cooperative model that combines Korea's experience and China's market.

5) Kim, Young gui (2012. 2), *Macroeconomic Effects of Korea-China FTA*, Korea-China FTA Public Hearing.

6) Keun Eor Myong (2011. 7. 14), "Plan for Agricultural Sector in Korea-China FTA," KIEP Policy Seminar.

- the fields have potentialities are as below:- In the banking industry △ the issuance of letters of credit and handling of remittance through the use of mutual currency △ the expansion of private banking (PB) business, and △ the expansion of mobile banking. In the securities industry △ the development of investment banking (IB) business △ QDII's investments to Korea △ the establishment of brokerage firm partnerships, and △ the listing of Chinese firms in the Korean stock market. In the insurance industry △ entering the group insurance and health insurance markets, and △ preparations to opening of automobile insurance. In the asset management industry △ the management of public investment funds and △ private equity (PE) and real-estate management.⁷⁾

■ [Urban Development] China is shifting emphasis to new forms of urban development, such as Eco-City and Smart City. Along with this subsequently increasing demand in fields related to urbanization, opportunities for the entrance of Korean businesses are also increasing.

- In China, recently, there has been an annual increase of over 20 million people in the urban population. As a result, packaged markets that embrace fields not only construction, but also IT, environment, transportation, medicine, culture are forming.
- There have already been a various precedents such as Suzhou Industrial Park, Tianjin Eco-City and Guangzhou Smart City with Singapore, Tangshan Eco-City with Sweden, Qinzhou Industrial Park with Malaysia, and Zhengdong new district with Japan.⁸⁾ 

7) Lee, Chang Young (2011), Comparing Competitiveness of Korea and China's Financial Sector and Prospective Businesses in regard to Korea-China FTA, China Capital Market Research, China Capital Market Society.

8) Jung *et al.* (2012, to be published), Cases of Foreign Investment in China's Urban Development and its Implications, KIEP Policy References