2015 KIEP Visiting Fellows Program

KIEP Korea Institute for International Economic Policy

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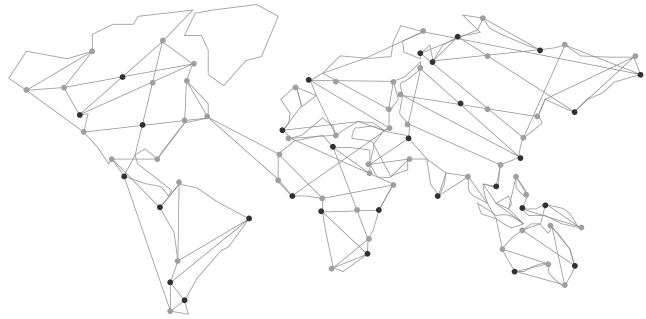

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The KIEP Visiting Fellows Program is published with the aim of promoting discussions among researchers, and to remember the outstanding achievements by the visiting fellows who came to KIEP.

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In 2009, Korea Institute for International Economic Policy (KIEP) launched "Visiting Fellows Program (VFP)" with the view of advancing cross-border exchanges of knowledge, information, insights and expertise.

Since its inception, the VFP has demonstrated that sharing thoughts and ideas through face-to-face contacts and dialogue works as a catalyst for enhancing mutual understanding among scholars and professionals with diverse background.

By successfully implementing the VFP for the past 8 years, KIEP has been motivated to assume the role as a hub for international economic research in the region. As a host of the program, KIEP has many mandates. One of those tasks is to let more people know what has been accomplished through the program and how valuable it is.

In an effort to do so, KIEP has published series of research every year. This volume, the 7th of its series, contains eight research papers contributed by 2015 Visiting Fellows.

Publication owes many debts. Here I acknowledge just a few of them. First of all, I must express my deepest gratitude to the 2015 visiting fellows for their outstanding performances. My special thanks also goes to Ms. RIM Jeewoon and the staffs of the KIEP Publishing Team who worked very hard for the publication of this volume.

The views expressed in this publication are the views of the author and do not necessarily reflect the views or policies of KIEP. KIEP does not guarantee the accuracy of the data included in the publication.

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1

Study on the Marine Development Cooperation between China and South Korea

*Cao Zhongxiang**

I. Introduction

(1) Background and Goal of Research

The 21-century represents the new century of the human race in terms of utilizing the resources of the oceans and stimulating marine economic development. With the rapid growth of economy, the pressures on terrestrial resources, space, and energy sources from the land is growing with each passing day. As a result, the humanity has begun playing greater attention to social and economic development with respect to oceans, which have rich resources and vast area. At the same time, along with acceleration of economic globalization and regional integration, the status and role of ocean in the contact of world economy continue to strengthen as an

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important link in the world economy. Therefore, the coastal countries have adopted the bolstering of maritime power as part of their long-term development strategies, assigning greater importance to the development of the marine economy, and correspondingly increased the intensity of ocean development and management, while cooperation in marine development has garnered increasing attention as an important part of international cooperation.

China and South Korea are friendly neighbors of the Yellow Sea rim region, and share a long history of close relationship in terms of politics, economy and culture, in which the economic and trade cooperation with each other has played a decisive role in the development of two countries. Marine development cooperation, as an important facet of economic and trade cooperation, is of great significance to consolidating and enhancing economic relations and trade between China and South Korea, and promoting stable economic development of two countries.

(2) Objectives of Research

This research will focus on a comparative study of strategy, policy and status of development of marine development between China and South Korea, conducting in-depth analysis of basic conditions of and the main issues in marine development cooperation of the two countries, in addition to proposing plausible approaches and relevant countermeasures for the marine development cooperation between China and South Korea. More specifically, research work here seeks to achieve the following three objectives:

(2-1) Promote the research information exchange in the field of marine development with your unit, to establish long-term communication channels, and to lay the foundation for future research cooperation;

(2-2) To fully understand the current situation, trends, strategies and policy of marine development of South Korea, to summarize relevant experiences of marine development and management in South Korea, providing a reference point for

the formulation of marine development policies in China;

(2-3) Through a comparative study of marine development policies and practices of China and South Korea, to put forward some ideas and measures for promoting marine development cooperation of two countries.

(3) Focal Points of Research

(3-1) Introduce the current and related planning, policy and progress in practice of marine development in China to the cooperative unit; through daily work exchanges; academic reports and other forms Based on previous achievements.

(3-2) Elicit active participation in comparative research activities in the cooperative body, collect basic relevant information data on Korean marine development in order to understand the basic situation regarding Korea's ocean development and management and update pertinent information. Focus should be given to delineating everything from management experience, marine science and technology, port construction, construction of industrial parks close to port, reclamation and marine ecological environment protection etc.

(3-3) Carry out the comparative study on marine development policy and practices of China and South Korea, and submit research reports to the cooperative body.

II. Body

(1) The status of marine development in China

(1-1) Major achievement of marine development

Since the reform and opening up, the implementation of the regional development strategy of focusing on the coastal, meant that coastal areas has taken full advantage

of geographical location and rich marine resources to assume a central position in the national and regional development, which boosted the marine economy and process of marine development. In the twenty-first Century, with the tendency of turning seas into territory increasing worldwide along with rapid emergence marine science & technology and the marine resources as the core of marine competition, China has attached a level of importance to the sea and oceans that is unprecedented, and is strengthening development strategy and planning to lead the way in improving the ability and level of marine development, with the intention of building a good foundation for the future implementation of the full range of ocean development.

(1-1-1) Leading role of national strategy and planning

Since entering the new century, the state has emphasized the importance of the sea, and marine development gradually made its way into national macro strategic decisions. The content related to sea has been increasing in the three five-year plans since 2000, and the emphasis has shifted from development and protection of marine resources to the development of marine economy, marine management, the maintenance of maritime rights and interests and realization of the goal of becoming a powerful maritime state. This shows the level of national awareness of marine issues and the continuous increase of the role of oceans in national development.

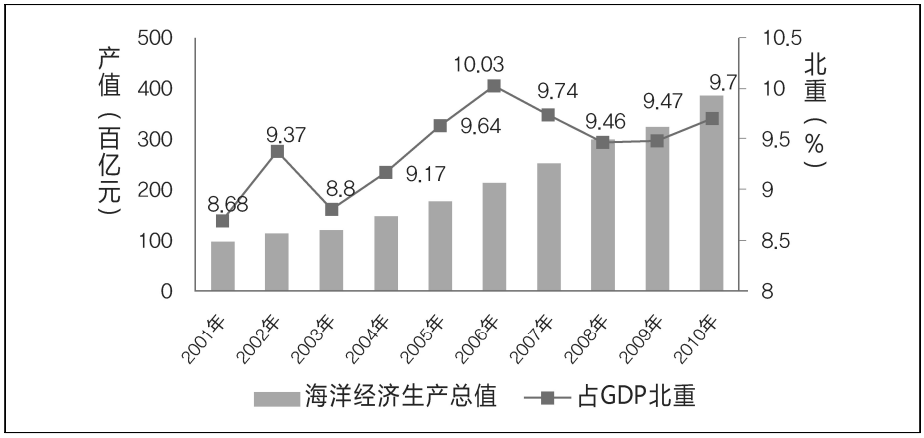
At the same time, the methods of planning guidance measures have continuously been improved and strengthened. A variety of plans were formulated intensively and implemented, covering the fields of marine functional zoning, marine economic development, use of sea areas, protection of the marine environment, marine industry, marine science and technology and so on. The country introduced a number of coastal development plans which, at first, formed a pattern of regional planning in such areas as the Bohai rim region, Yangtze River Delta, Pearl River Delta, the coastal economic zone of Liaoning, the coastal economic belt of Hebei, Yellow River Delta ecological economic zone of Shandong, the coastal economic zone of Jiangsu, on the west straits economic zone of Fujian and Beibu Gulf economic zone of Guangxi. In addition, the establishment of the Marine Economy Demonstration Zone and introduction of

related special planning in Shandong, Zhejiang, Fujian and Guangdong have stimulated restructuring and development of local marine economies.

（1-1-2）Marine economic development speeding up

The status of marine economy in the national economic development increased significantly. During the period 2001-2010, the total marine production of China had grown rapidly at an annual rate of 13.4%, faster than the pace of growth of 10.7% in gross domestic product in the same period. The total marine economic output expanded four-fold, from 951.8 billion yuan in 2001 to 3843.9 billion yuan in 2010, leading to an increase in its proportion of GDP from 8.7% in 2001 to 9.7% in 2010.

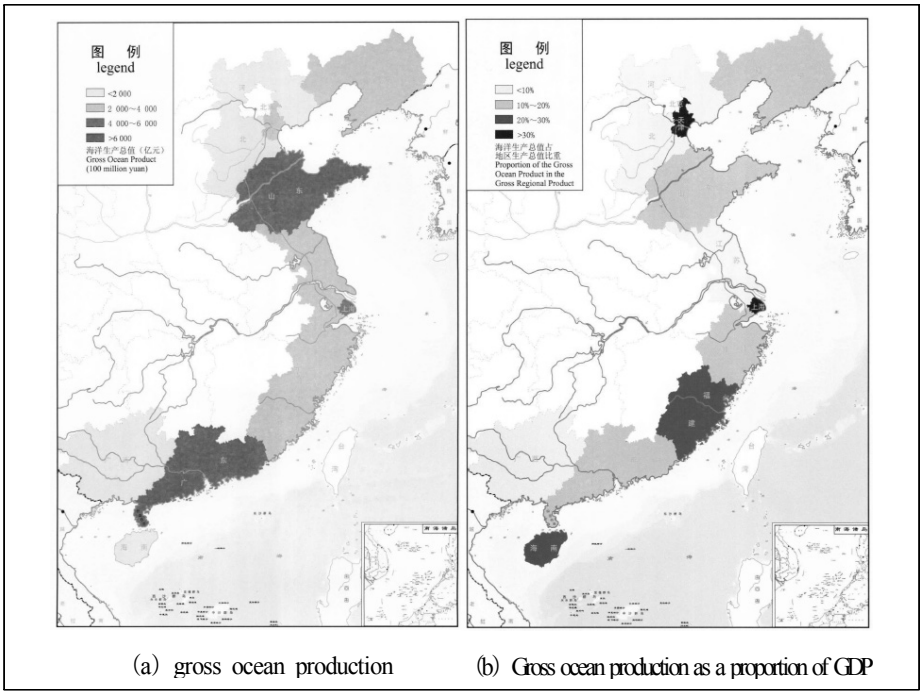
Figure 1. changes of output value of marine economy and proportion accounted for GDP in China



The process is being accelerated by developmental integration of sea and land. First of all, a macro development pattern of interactive promotion and dependence between land and sea has been formed. The level of marine economic development is consistent with that of regional economic development in most provinces (Figure 1, figure 2). In 2012, the three core coastal areas grossed a total marine production of 4354.6 billion yuan, or about 86.9% of national total; of which the Bohai rim

region accounted for 36.1%, the Yangtze River Delta for 30.8%, and the Pearl River Delta region for 20%. Secondly, heavy and chemical industries such as petrochemical and steel moved to the coast, where various types of coastal Industrial clusters and bonded logistics parks appeared in large numbers. In addition, a number of strategic emerging industries directly related with sea, such as seawater desalination, marine pharmacy, new marine energy development and so on, also experienced accelerated development, forming a number of advantageous industrial areas (Table 1) around the coast. Thirdly, construction of new industrial area around the coast is speeding up, resulting in visible and obvious pattern of seaward development. At present, in the 53 coastal cities level above prefecture-level, there are 47 cities that have established new towns closer to the shore.

Figure 2. Gross ocean production of China in 2010 by provinces



(a) gross ocean production (b) Gross ocean production as a proportion of GDP

Table 1. Regional agglomeration of marine high-tech industry in China

Marine life breeding and healthy aquaculture	Marine life breeding, healthy marine culture, ecological culture	Yantai Dongying
Marine resources utilization	marine pharmacy biological products	Beijing Shanghai Qingdao Shenzhen Xiamen
Seawater utilization	1. seawater desalination 2. seawater cooling 3. seawater chemical	Tianjin Dalian Qingdao Hangzhou
Renewable marine energy	1. tidal power station 2. offshore wind power	Tianjin Shandong Jiangsu Zhejiang Guangdong
Marine engineering equipment manufacturing		Shanghai Qingdao
Modern marine service		Dalian Ningbo Tianjin Shanghai Guangzhou Zhoushan
Deep ocean resource exploitation		Shanghai Qingdao Wuxi

(1-1-3) Progress has been made in ecological construction and environmental protection based on the co-ordination of land and sea.

In both the state and local government level, there have been an unprecedented increase in attention to ecological and environmental protection. Efforts to create ecological security barrier accelerated building of land ecological function area; efforts to control pollution in river basins continue to increase; ecological compensation, pollution rights trading and other measures continue to be strengthened, which have obvious effect on the protection of land environment and eased the pressure of land-based pollution of the marine environment to a certain extent. At the same time, the implementation of laws about the marine functional zoning system, laws on utilization of the seas and the marine environment protection, together with the projects to facilitate ocean ecological management and restoration at the important ecological function areas including main estuaries and gulf areas. This has played

a positive role in curbing the rate of deterioration marine ecological environment. In addition, the new concept of management based on ecological system and overall planning of for both land and sea is gradually being accepted, as planning of marine eco-environmental protection of land is increasingly integrated with that of sea, which leads to accumulation of experience for the coordinated environment protection. In 2010, the state environmental protection department and the State Oceanic Administration signed the "framework agreement" on the communication and cooperation mechanism of environmental protection, marking the initial formation of ecological environment mechanism of overall land and sea in China.

(1-1-4) Marine integrated management and technical level has improved significantly

Marine integrated management system has achieved a big adjustment, and management measures have been strengthened. In 2008, in order to meet the need of comprehensive marine management, the State Council further improved the functions of the State Oceanic Administration by strengthening marine strategic research and comprehensive coordination on ocean affairs. In 2013, the institutional reform of the State Council decided to establish a high-level coordination agency named the National Ocean Council, responsible for the formulation of national marine development strategies, which would coordinate major issues related to oceans. At the same time, the State Oceanic Administration began to implement marine rights maintenance and law on behalf of the China Coast Guard, accepting the guidance from Ministry of Public Security, thus assuming responsibility for the work of the national ocean council. The relevant system, law and planning focusing on the major fields is expected to bolster marine management, especially the legal basis to further strengthen.

Supporting ability of Science and technology has been greatly enhanced, to effectively support marine development. At present, China has formed a scientific system with regional and multi-disciplinary characteristics. Marine technology has formed a system involving three main categories of marine environment, marine resources exploration/development and general engineering, including more than 20 technical fields. It is particularly worth mentioning that China's deep-sea technology has developed rapidly in recent years, with many technologies including marine

geological survey, exploration, oil exploration/development and other aspects have reaching advanced levels internationally; deep sea mineral exploration, mining, transportation and smelting technology has assumed their position as supporting fields.

(1-2) Main problems facing marine development

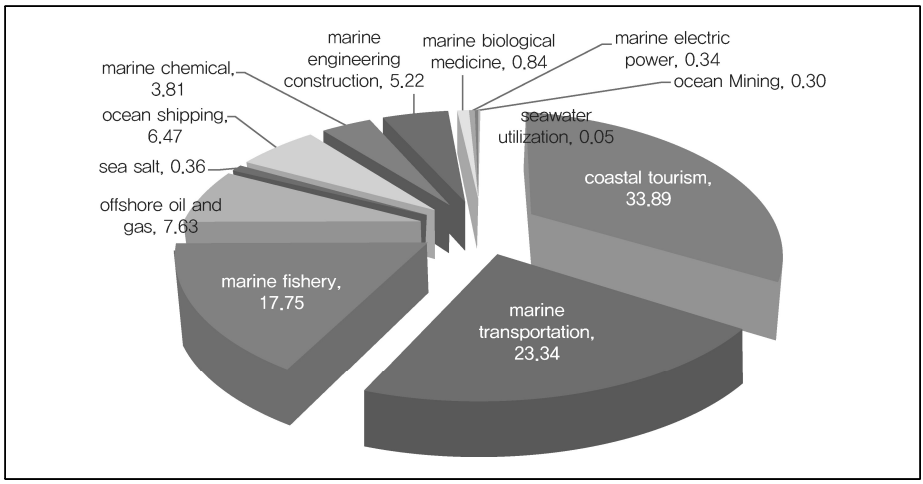
Overall, not only does the relatively backward marine economy of China stand in stark contrast with the world's major countries, but also is not commensurate with China's status as a marine power. The past history of China's development reveal that its marine economic growth depended, to a large extent, on the expansion of traditional resource-dependent industry. The mode of marine development can only be described as 'extensive.' The problems of low-level industries, unreasonable layout, depletion of the resources, environmental degradation and unreasonable management system, are factors limiting ocean development as a long-term processes.

(1-2-1) The low-level traditional industries occupy a dominant position

As marine development in China had a relatively late start, its overall level is not very high. There is a significant gap between proportion of the marine economy in China's national economy with the developed coastal countries. Also, the structure of the marine industry cannot be considered a reasonable one, as low-level resource-dependent traditional industries occupy a dominant position, and the marine economy on the whole is still at the stage of extensive development mainly relying on resources development and production of primary products. In 2012, the three traditional industries including coastal tourism, marine transportation, and marine fisheries accounted for up to 75% of the marine industry, and the total output value of marine bio-pharmaceutical industry, seawater utilization industry and other emerging industries accounted for less than 1% of the major marine industries (Figure 5).

Figure 3. Added value structure of marine industry in 2012

(Unit: %)



(1-2-2) Disorder of Resources development; coexistence of a lack of and excessive development

Ocean development activities are mainly concentrated in beaches, estuaries and bays which have abundant resources and relatively high productivity, and there is higher percentage of marine resources development close to shore. However, the lack of order surrounding shoreline utilization, the conflicts between different types of development and resource depletion have become obvious problems. In contrast, the deep-sea resources, especially in exclusive economic zones and continental shelves, is basically in an undeveloped state, which led to a serious imbalance in the distribution of production.

(1-2-3) Prominent problems of lack of structural diversity in industry and overlapping construction

Because geographic conditions, natural resources and the basis for social economic development are different, the differences in marine economic development level are more prominent in coastal areas. An assessment of the composition of

marine industry reveals that marine fisheries, coastal tourism and marine transportation industry occupy the leading positions in most provinces. Marine industries tend to be the same in various regions, and regional labor division of marine economy is not obvious. Vicious competition in port construction and scattered layout of heavy chemical industry close to ports have not only led to serious excess production capacity, but also brought about great pressure on the environment.

Table 2. The degree of concentration of major marine industries in coastal provinces[1)]

Tianjin	0.536	0.874	marine oil and gas industry, coastal tourism, marine transportation, marine chemical industry
Hebei	0.426	0.733	Coastal tourism, marine fisheries, marine engineering, marine transportation
Liaoning	0.697		marine fisheries, Coastal tourism
Shanghai	0.890		Coastal tourism, marine transportation
Jiangsu	0.518	0.793	marine fishery, marine shipbuilding industry, coastal tourism, marine electric power industry
Zhejiang	0.474	0.752	marine fishery, coastal tourism, marine electric power industry, marine transportation
Fujian	0.779		marine fishery, marine transportation, coastal tourism
Shandong	0.691		marine fishery, coastal tourism, marine transportation
Guangdong	0.512	0.841	Coastal tourism, marine fisheries, marine electric power industry, marine oil and gas industry
Guangxi	0.923		marine fishery, coastal tourism
Hainan	0.866		marine fishery, coastal tourism

(1-2-4) Resource degradation and environmental pollution

Compared to the early 1980s, in the twenty-first Century, Chinese marine ecological and environmental problems have undergone profound changes in the

1) $$CR_n = \sum_{i=1}^{n} X_i \Big/ \sum_{i=1}^{N} X_i$$

type, size, structure, properties etc. Currently, problems of environment, resources, disaster and other issues coexist, which are superimposed on and influence each other. Related to this, marine ecological security has become a constraint upon marine power construction. Discharging of land-based pollutants into the sea and large-scale reclamation are the main reasons for the recent, drastic changes in the marine environment.

(1-2-5) Lack of technology and management ability

Regarding development of science and technology, the overall level of marine science and technology at present in China is still relatively low. The level of the scientific-technological contribution, technical self-sufficiency, technological achievements and technological transformation in key areas lag far behind maritime countries of the world. Such situation cannot adapt to the requirements of large-scale ocean development.

From the management point of view, although China has established the mechanism for marine management and coordination across sectors, and adjusted the functions of some departments, responsibilities pertaining to marine development are still dispersed among many departments. Consequently, this has led to problems with decentralized management and made coordination difficult. At the same time, the decentralization of fiscal and performance evaluation system both at the central and local levels have not helped in curbing blind development of heavy industry locally.

(2) Evaluation of South Korean Marine Development

(2-1) South Korea Maritime Strategy in the twenty-first Century

South Korea's land area is small, but is surrounded by the sea on three sides. Naturally, there is a high degree of dependence on marine development in overall national development. Therefore, the South Korean government has prioritized marine/maritime development for a long time. At the end of the 1990s, South Korea began to implement the "First Marine Aquatic Development Plan" (Ocean

Korea 21, OK21), which generated great impetus toward marine development. As a result of 10 years of continuous effort, Korea is now ranked tenth in the world in terms of comprehensive national competitiveness in marine/maritime fields. More specifically, it is ranked first in shipbuilding, fifth in container handling capacity and fifteenth in production of aquatic products.

Table 3. 《First Marine Aquatic Development Plan》(Ocean Korea 21)

Overall objective	Basic objectives	Promotion strategy	Prospect for 2030
Realization of marine power	1. revitalize marine territory 2. development of marine industry based on high-technology 3. maintain sustainable development of marine resources	1. to create a vibrant and livable marine territory 2. restore clean and safe environment 3. to revitalize marine industry with high technology and high added value 4. to create the world's leading marine service industry 5. establish fishery production base of sustainable development 6. promote commercial development of marine mineral resources, energy and space 7. carry out a full range of marine affairs and strengthen cooperation with North Korea	1. develop five oceans of the world; build up marine power 2. to improve the quality of residents life, to improve quality of marine environment 3. promote high-tech transformation of marine industry; build country with strong ability of anti risk 4. Create Logistics Hub for Northeast Asia 5. Create country with stable and secure aquatic production

In December of 2010, to deal with the new changes in the international and domestic arenas amidst a global marine development boom, South Korea forwarded the “Second Basic Plan for Marine and Aquatic Development,” published through contribution of 14 departments including the Ministry of Science and Technology, Ministry of Foreign Affairs and Trade, Ministry of Defense, Ministry of Culture, Ministry of Agriculture and Fisheries, Ministry of Environment, the Ministry of Labor, Ministry of Land, the Meteorological Agency and Maritime Police Agency. The “plan” is the development plan based on “basic law” legislated for a period of 10 years（2011-2020, and contains provisions related to the scope of South Korea’s territorial seawaters, the sea areas under the jurisdiction of Korea and the base of global ocean development; organized into three basic objectives, five promotion strategies and 26 key topics.

This plan went beyond the limitations of the First Marine Aquatic Development Plan" to a certain extent; reflecting international developments in climate change, resource issues, the development of science and technology, fostering of emerging industries, continuous expansion of marine tourism and competition for the East Asian shipping logistics hub; becoming the basic national policy for marine exploitation, utilization and protection of South Korea. Its implementation led to a great impact on the marine development of South Korea.

Table 4. South Korea's "Second Basic Plan for Marine Aquatic Development"

Overall objective	Basic objective	Promotion strategy
Realization of Korea as a top power in marine fields	1. to protect and manage marine environment for sustainable development 2. to develop emerging marine industries, to realize the upgrading and transformation of traditional marine industries 3. to adapt to the new order of international ocean; to expand the fields of marine development	1. Realize Marine utilization and management of health and safety 2. Develop marine science and technology, to innovate a new developing power 3. to construct the futuristic, high-level ocean culture and tourism industry 4. Keep up with pace of economy and cultural development in East Asia, to achieve modernization of ports, shipping 5. Strengthen the maritime jurisdiction, to expand marine territory

In terms of marine development planning, South Korea has always put environment and technology in a prominent position, emphasizing maintenance of maritime rights and interests, to protect marine environment and to realize industrial upgrading, based on the improvement of environment and science-technology.

(2-2) The status of marine economy development in Korea

(2-2-1) South Korea has become a country with one of the most highly developed marine economy in the world.

Under the guidance of Ocean Korea 21, the Korean government continues to increase investment which has led to the rapid development of the country's marine economy. According to the data obtained by China's press delegation visiting South Korea in 2013, South Korea's marine industry accounted for 7% of South Korea's GDP, or tenth among all countries.[2)]

2) There are also Korea experts in China that estimated, according to China's classification standard of ocean related industries, that the increase in 2010 South Korea's main marine industry accounted for 5% of South Korea's GDP; the total marine production (including the main marine industries and marine related industries) accounted for about 10% of South Korea's GDP.

(2-2-2) The development of marine economy gives priority to technology-intensive high-end industries

Industries of Shipbuilding, marine equipment, marine transport, construction and tourism are the pillars of the marine economy of South Korea. Especially, South Korea boasts a world-class technologies in the field of marine engineering equipment, tidal power, cross sea bridge construction and health culture. According to a distribution map of global innovation resources in high-end marine industry, South Korea has a significant presence in four of the 10 largest high-end industries in the world, which include such industries as marine engineering equipment manufacturing, marine equipment, marine biopharmaceuticals/biological products, marine health culture and fishing. The centers for innovation in this field in Korea are respectively located in Busan, Geoje Island, Ulsan, and Seoul. Busan - Geoje Island-Ulsan is a global innovation hotspot with respect to marine engineering equipment manufacturing, and also that for innovation in ship equipment manufacturing; Seoul is one of the world's ten biggest innovation hubs in marine bio pharmaceutical and biological products industry, in addition to healthy mariculture and fishing along with ship equipment.

(2-2-3) To establish special marine economic zones, expand the scope of marine economic activities, and strengthen the management of seas

In 2013 April, Korean Ministry of Maritime Affairs and Fisheries proposed establishment of Marine Economic Zone in the work plan, which will integrate the port facilities, complete sets of equipment, shipbuilding, etc., and give preferential policies such as tax etc.. In order to strengthen the management of territorial sea area and exclusive economic zones, maritime territorial management law was enacted in 2014. Also, the management of uninhabited islands and the coast guard enforcement equipment were simultaneously strengthened. To strengthen the construction of the Antarctic polar expedition, Jang Bogo Research Station was established, in addition to initiating efforts to open up the Arctic route.

(2-3) Development of major marine industries

Shipbuilding industry. South Korea is one of the world's three major shipbuilding

nations; amongst the highest in the world in terms of new orders, shipbuilding capacity and hand-held orders. South Korea accounts for 30% of the world's total in number of ships completed and new orders commissioned. South Korean shipbuilding enterprises took advantage of large number of orders for liquefied natural gas (LNG) ships, container ships and construction of other high value-added ships, which is the main reason Korea has achieved good results in terms of total orders. With the emergence of green shipbuilding technology and other advantages, South Korea is expected to continue to expand its share in the high value-added ship market.

Table 5. Three indicators of world shipbuilding from 2013 to 2014

Indicator		world	China	Korea	Japan
Shipbuilding production of 2013	Million dead weight tons	10757	4335	3336	2468
	Proportion(%)	100	40.3	31	22.9
	Compensated gross tons	3657	1288	1252	684
	Proportion(%)	100	35.2	34.2	18.7
New shipbuilding orders of 2013	Million dead weight tons	14477	6884	4419	2260
	Proportion(%)	100	47.6	30.5	15.6
	Compensated gross tons	4866	1991	1608	719
	Proportion(%)	100	40.9	33	14.8
Handheld shipbuilding orders of 2013	Million dead weight tons	28430	13010	7641	5443
	Proportion(%)	100	45.8	26.9	19.1
	Compensated gross tons	10387	3995	3203	1599
	Proportion(%)	100	38.5	30.8	15.4
Shipbuilding production in 2014 1-2 month	Million dead weight tons	1513	65.3	341	386
	Proportion(%)	100	43.1	22.5	25.5
	Compensated gross tons	535	189	169	98
	Proportion(%)	100	35.4	31.5	18.3

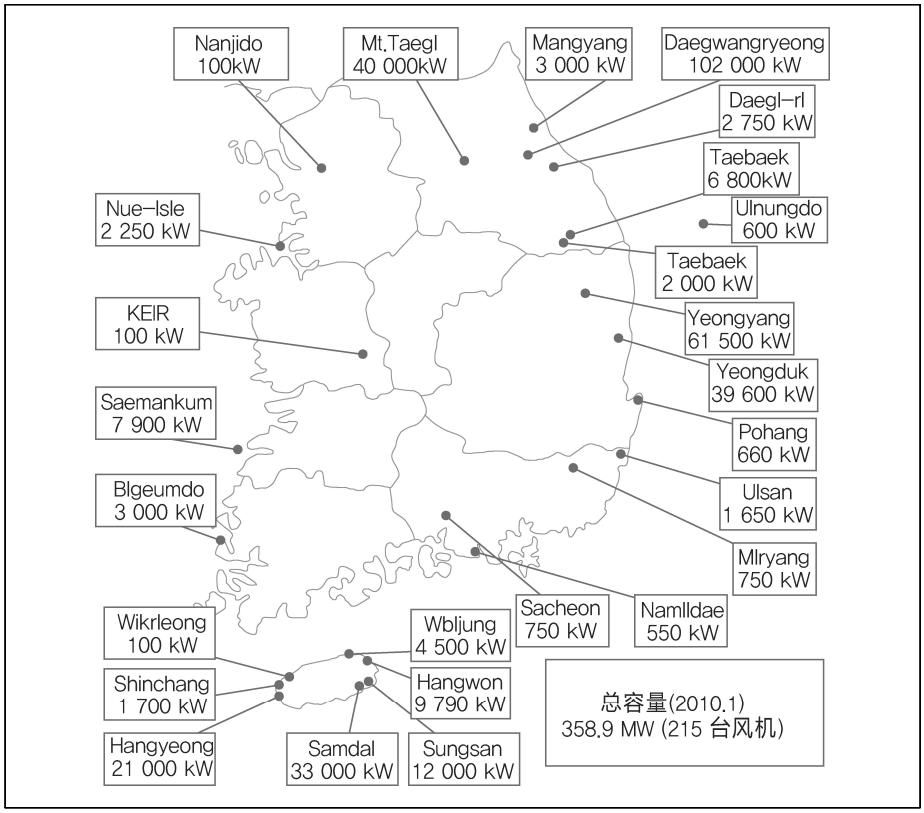
New shipbuilding orders in January-February of 2014	Million dead weight tons	2283	860	10690	243
	Proportion(%)	100	37.7	47.8	10.6
	Compensated gross tons	741	233	313	106
	Proportion(%)	100	31.4	42.3	14.3
hand-held orders at the end of February of 2014	Million dead weight tons	29569	13163	8382	5424
	Proportion(%)	100	44.5	28.3	18.3
	Compensated gross tons	10711	4142	3335	1665
	Proportion(%)	100	38.7	31.1	15.5

Data source: Clarkson Research Services Ltd.

Marine engineering equipment Industry. In the first quarter of 2012, the three major shipbuilding giants (Hyundai Heavy Industries, Samsung Heavy Industries and Daewoo shipbuilding and marine) in South Korea received a total of $9.6 billion in orders. Among them, the offshore oil and gas production equipment orders amounted to $6,800,000,000, or more than 70%; while the traditional ship orders dropped to below 30%. Marine engineering equipment has gradually become the main contributor to the South Korean shipbuilding industry in terms of production.

Marine renewable energy industry. South Korea has increased support for the utilization of offshore wind and marine energy in recent years. The initial purpose is to build foundation for offshore wind power industry so as to enter the world's three largest offshore wind power list. On the other hand, the tidal power plant construction is accelerating and ocean energy development is also garnering support from the government. In addition to tidal energy, power generation technologies by the use of ocean currents and waves are also under development.

Figure 4. Wind farms built in Korea



Coastal tourism. South Korea's tourism resources are not very rich in comparative terms, but it has been very successful tourism development. In addition to the traditional coastal tourism, shopping tourism and cultural tourism; much development has taken place in other areas of the tourism industry including medical tourism industry, international tourism and others in coastal areas. Since 2006, South Korean Tourism has shown a continuous increasing trend, exceeding 1000 billion US dollars in 2010, topping out at $1420 billion eventually; the average monthly revenue exceeded $1 billion in 2012. Through industrial support policies, such as integration

of the tourism industry with film and television, medical treatment and overseas Studies, together with the implementation of three “magic weapons” of tourism destination marketing, the South Korean government made great strides in coastal tourism industry development. Concomitantly, tourism has become one of the most successful industry of Korea ocean development.

Cross-sea bridge construction industry. South Korea has been among the leaders in bridge construction and engineering. Bridge construction in South Korea has already entered the fourth generation. In addition, South Korea has made much progress in all areas of bridge construction, from design to construction, and gradually gained independence from foreign technology. As for policy change, changes into the general contractors and suggestions on diversification and aesthetics, has led to mixed application of South Korean and foreign design codes. South Korea also mastered the suspension bridge construction technology after successfully applying domestic technology to complete many cable-stayed bridges.

However, due to the global economic downturn, prospects for the development of transportation industry is not optimistic in Korean, which means troubles and dilemmas for the short term. The entire shipping industry is facing financial difficulties, but the cargo and container throughput of port showing signs of slow growth, despite the low level of operation.

(3) Comparison of marine development between China and South Korea

(3-1) Comparison of marine management system

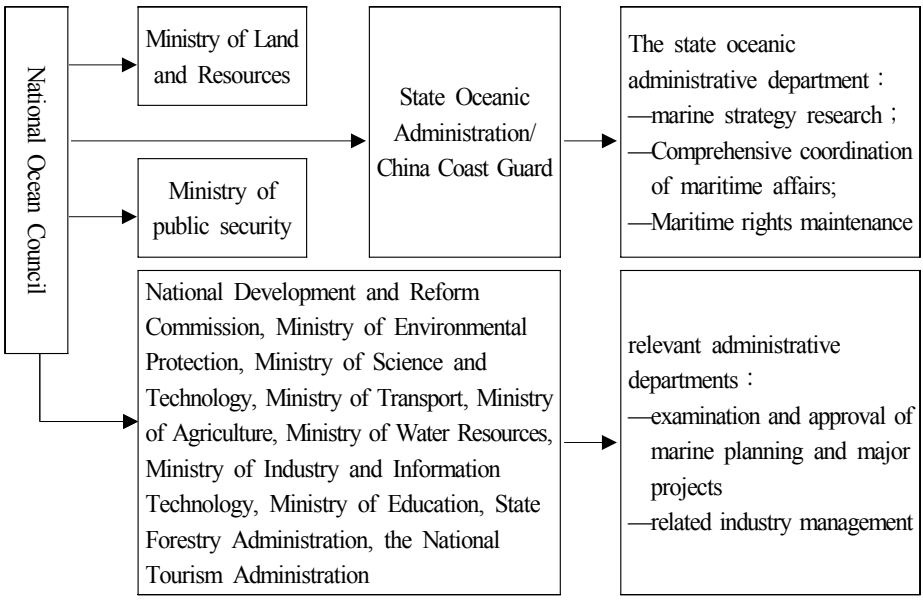
South Korea was one of the countries in the world to explore comprehensive marine management early. The comprehensive marine management system has played an important role in enhancing the ability for marine development and control. The marine integrated management mechanism and marine strategy of South Korea serve as important benchmarks for Chinese marine management.

South Korea: So far, the Korea maritime organization has experienced the range of processes from scattered to centralized integrated management. However, by adopting the comprehensive management as the main direction (re-establishment of the Ministry of maritime affairs and fisheries in 2013; the establishment of integrated management system of industries and fields), integrated coastal zone management achieved remarkable results. Also, there is more attention being devoted to the comprehensive development strategy; and to legislative means to ensure implementation of the relevant plans.

Figure 5. Transformation of the South Korean Marine Management System

1955-1960	Maritime Affairs Office	Relatively comprehensive
1961-1996	National Ocean Council /13 ministries related marine development	Decentralized
1997-2007	The Ministry of Maritime Affairs and Fisheries	comprehensive
2008-2012	The Ministry of land and sea	comprehensive
2013-2015	The Ministry of Maritime Affairs and Fisheries	comprehensive

Figure 6. The China's main management system related to the sea



China: is currently experiencing a slow transition from dispersion to integration; as it is in the midst of implementing compound management systems through combination of comprehensive management and industry management, as well as combination of central management and local management. The Establishment of National Ocean Council and China Coast Guard in 2013 strengthened comprehensive management in a certain extent, but the ability for comprehensive coordination of State Oceanic Administration(SOA), as the maritime administrative department, is still insufficient. The conflicts between departments and industries are very visible and with much improvement of planning and legislation system still necessary.

(3-2) Comparison of marine environment protection

South Korea: Much public awareness of the protection of the marine environment and the high level of participation; protection of the marine environment taking priority

in strategy and planning; the state of the marine environment is generally good.

China: Experienced a long process from ignoring protection to paying more attention to protection and preservation of the environment and ecological problems have eased as a result, but the problems of water pollution, ecosystem degradation and reclamation, still cannot be ignored.

（3-3）Comparison of the development of marine science and technology

The two countries have attached great importance to the development of marine science and technology, which plays an important role in promoting research on core technologies related to the oceans, but South Korea has achieved the more obvious progress.

South Korea: Vigorously promoting the development of core technologies with technologies in high-end marine equipment manufacturing, shipbuilding and other aspects nearly on par with the developed countries of Europe and USA, and in a leading position in Asia. Korea's Marine science and technology continue to expand to the deep sea; and Korea is devoting greater attention to the contribution and industrialization of marine sci-technological achievements by putting forward the strategies for technology integration, system promotion and budget security to ensure information sharing, joint use of infrastructure and investment in R & D.

China: Its scientific research management is divided, capability of R & D dispersed, duplication of investment, utilization rate of equipment is low ; in addition to most sci-technological achievements being at the developing stage coupled with low level of industrialization ； dependence on imports for core components of high-end equipment is high and core competitiveness is low.

（3-4）Comparison of the development of marine industry

South Korea: The development of the emerging marine industry and the third industry put in a priority position; to promote the fishery structure adjustment by implementing aquaculture construction plan (1998) and developing deep-sea fishery; to promote the comprehensive development of marine tourism resources, to establish a comprehensive system of marine tourism management, and to popularize and raise the level of marine leisure and tourism; to develop port industries of high-output

and low-consumption, to encourage the development of low-carbon green sea ports. In high-end manufacturing equipment, efforts are under way to develop the core technology as the goal and to improve the core competitiveness of the industry; with ocean energy (especially tidal energy utilization and seawater desalination) in a priority position.

China: Activities in the marine industry mainly focuses on the coastal zone and offshore development, where development of deep water sea areas are lacking currently; the three major traditional industries including Coastal tourism, marine fisheries and marine transportation dominated the marine economic development while emerging industries are lagging behind, which resulted in serious structural contradiction. In addition, insufficient investment in science and technology related to emerging strategic industries has restricted the pace of marine industry structure upgrading.

⑷ The foundation and condition of marine cooperation between China and South Korea

(4-1) The foundation of marine cooperation

Since the two countries established diplomatic relations in August 24, 1992, marine cooperation has been deepening. The signing of the "the Science and Technology Cooperation Protocol" opened the channel for marine sci-tech cooperation between the two countries.

In October 1994, for the initiation of marine cooperation in science and technology, the China State Oceanic Administration and the Korea Ministry of Science and Technology signed the "Memorandum of understanding on cooperation in marine science and technology," laying the foundation for the cooperation between China and South Korea.

In May 12, 1995, under the framework of the "memorandum," the two departments signed the "Agreement on the Establishment of the Joint Marine Scientific Research Center of China and Korea," and established the center thereafter. Meanwhile, the

establishment of the center marked the concrete beginnings of marine sci-technology cooperation between China and Korea.

Since 1995, the related departments of the two countries have greatly promoted exchange and cooperation in the marine field at the platform joint research center. Especially after 2005, a number of marine-related institutions of two countries signed MOUs on cooperation, resulting in an average annual exchange of visits by than 120 people, reaching a cumulative total of more than 2000 people, resulting in over 60 technical cooperation projects completed. At the same time, the cooperation in maritime law enforcement, joint efforts in polar research and development of deep-sea mineral resources is also being actively promoted, with continuous expansion of cooperation areas and the level of participation. The marine sci-tech cooperation between China and South Korea has entered a new era.

（4-2）Main problems and obstacles facing cooperation

Overall, the development of marine cooperation between China and Korea has been relatively slow, and its low level does not match the status of Northeast Asia regional cooperation and the closeness of relations between the two countries.

（4-2-1）Maritime cooperation under the guidance of governments mainly focused on the single form of science and technology research

Maritime cooperation so far in scientific research activities is dominated by governments through the platform of joint research center, mainly related to the fields of Oceanography, marine environment, marine resources, marine management and marine policy, economic and cultural and data sharing service. Marine law enforcement, polar and deep-sea resources development cooperation is mainly limited to personnel exchange, exchange of experience/expertise and mutual participation in scientific research activities. However, meaningful and deeper cooperation are lacking on relative terms.

（4-2-2）Marine industry cooperation is of limited range, small-scale and low-level

Marine economic cooperation includes two aspects: the industrial cooperation and the sea-related investment and trade. From the point of view of industry cooperation,

cooperation is mainly concentrated in coastal tourism and marine transportation. From the investment point of view, given the impacts from the overall situation of the bilateral economic and trade cooperation, South Korea's investment in China is largely dependent on small and medium scale enterprises, mainly concentrated on labor-intensive industries. There is much less investment into the fields of marine engineering and new energy in China which desperately need investment. And China's investment in South Korea has just started, and has not reached the level needed for cooperation.

Marine trade generally involves aquatic products, amount of which accounts for the largest share of the agricultural products trade, but it is also restricted by the low degree of opening of the agricultural products market.

(4-2-3) The cooperation of marine resources development being subject to capital and technology

The marine industry is capital-intensive and technology-intensive, and especially, deep-sea resources development is even more dependent on technology than coastal resources. On the one hand, China and South Korea all face the problem of fund shortage in different degrees. On the other hand, China and South Korea have similar marine industrial categories. While the level attained by South Korean marine industry is much higher, but the development of deep-sea resources is only at the stage of technology development. Therefore, technical problem is an important problem facing China and South Korea.

(4-2-4) Maritime delimitation being a major obstacle.

There are differences between China and South Korea in the maritime delimitation, case in point being the dispute over ownership of Socotra Rock. Although the governments of the two countries maintained positive contact on this issue over the years, they have not yet come up with a solution acceptable to both sides. The "China - South Korea Fisheries Agreement" that entered into force in 2001, has played an important role in strengthening conservation and management of fisheries resources, and coordinating economic interests related to fisheries of the two countries. However, as a transitional measure before a formal agreement on

maritime delimitation, the effect is limited, and the continual shrinkage of China's traditional fisheries caused by the agreement is bringing difficulties upon livelihoods of fishermen, not to mention becoming a latent issue for bilateral fisheries dispute.

(4-3) Favorable conditions for cooperation in the future

(4-3-1) Acceleration of economic and cultural cooperation between China and South Korea

In the context of economic globalization, economic internationalization, and regionalization have become a historical trend, and mutual-benefit cooperation is now the general, established pattern of inter-state relationship. In recent years, Northeast Asia regional cooperation progressed rapidly, with acceleration of sub-regional cooperation such as "Tumen River Economic Development Area" and "Economic Zone Circling Yellow Sea and Bohai Sea" being cases in point. Also, there has been much attention paid to regional free trade, and bilateral cooperation has greatly improved. South Korea and China have a long history of economic and cultural exchanges, laying good objective foundation for carrying out a full range of economic and trade cooperation. That efforts to establish a comprehensive partnership, and building of consensus on creation of Free Trade Areas and related negotiations are accelerating between China and South Korea, indicate that the relationship between two countries will rise to a new level, which will create an environment favorable to maritime cooperation.

(4-3-2) Bilateral strategic direction of maritime power construction

China and South Korea are all coastal states that naturally depend on the seas and oceans, and expediting marine development has become an important part of the national strategy of the two countries. In addition, preserving marine ecological security, speeding up technological innovation and promoting emerging industries development are also goals that two countries are pursuing in common.

Ocean Korea 21 had put marine resources development and environmental protection in an important position, and proposed strategic plans for building the world's fifth largest marine power by 2020. On April 17, 2013, the president Park Geun-hye made a speech to the Ministry of Maritime Affairs and Fisheries entitled

“the ocean, the dreams and happiness,” including intentions "to expand the territory of marine economy, to realize future industrialization of traditional marine fisheries, to create the engine for future development based on marine sci-technology, and create a ocean space for the health of nation as a whole.

In recent years, Chinese government has attached increasing importance to marine development, and ocean development has risen to the realm of national strategy. Strategic planning and a great deal of investment in marine sci-technology and environmental protection greatly stimulated marine exploitation and protection. The new collective leadership at the center put forward strategic concepts for overall planning of land and sea to develop marine power, pointing out the future development direction for the seas around China. The two countries share common strategic objectives for marine power, and only when our two countries strengthen cooperation to jointly cope with the problems facing marine development, can they truly achieve peaceful growth.

(4-3-3) Complementarity of marine development ability and structure

China and Korea are in different stages of development, there are obvious gaps in ability and level of marine development, so prospects for cooperation are very broad. In addition to the cooperation carried out in the Yellow Sea waters, there is still more room for future cooperation in port logistics, tourism, fisheries, new marine energy development and oceanic mineral resources study, etc. Therefore, differences in development actually serve as an important foundation for carrying out maritime cooperation between the two countries.

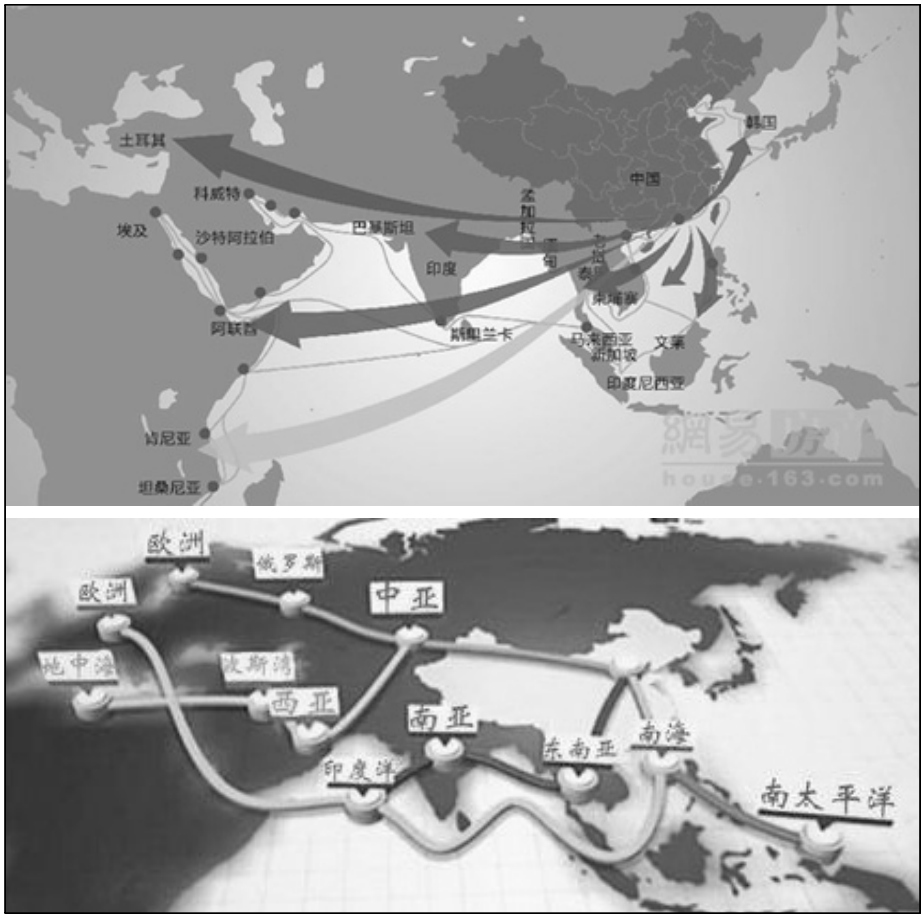
(4-3-4) Opportunities from “China 21st Century Maritime Silk Road” strategy

Standing at a new historical starting point, the President Xi Jinping proposed strategic ideas to build the so-called 21st Century Maritime Silk Road. The proposal will be of great strategic significance toward mutually beneficial cooperation, as well as prosperity of China and the relevant countries.

As an important measure to promote general opening up and international cooperation on the part of China, the strategy of Maritime Silk Road aims at vigorously promoting the construction of upgraded versions of free trade zones, which would

promote communication of policy, roads, trade, money and people, so as to promote peace, stability and common progress in the related region. Ocean development cooperation is an important component in the creation of the Maritime Silk Road, and the implementation of the strategy will have significant impacts in promoting economic cooperation between China and Korea.

Figure 7. The China's main management system related to the sea



III. Conclusions

(1) To actively promote comprehensive Maritime Cooperation between China and South Korea

(1-1) Strengthen advantages of industrial cooperation

(1-1-1) The merging of port construction and marine transportation

Strengthening of cooperation in marine infrastructure construction would involve constructing coastal ports, waterways, parking, storage and other facilities via joint venture and cooperation. If maritime transportation is to be regarded as the main body, commitment to establish international three-dimensional transportation network between China and South Korea by sea, in the form of efficient low-cost logistics channel and international container transportation system, should become priority. This also gives rise to the need to discuss deeper strategic port cooperation between China and Korea through collaborative planning in terms of organizing transportation and infrastructure construction, increasing business in container transportation and international transit, distribution, and cruises. Fully utilizing the advantages offered by Lianyungang and Rizhao as the bridgehead of New Eurasian Continental Bridge, China and South Korea should jointly carry out plans for 'continental bridge' transport, which would mean vigorously opening up international shipping market by jointly setting up large ocean-going fleets.

(1-1-2) Marine tourism cooperation.

Cooperation in marine tourism would entail taking full advantages of marine tourism resources and markets of China, applying successful experience of tourism destination marketing of South Korea, establishing travel agency and develop tourist attractions via joint venture, to jointly set up a tourism hotline by air and sea, and to cooperatively open up tourism market of the third country.

(1-1-3) Cooperation in Shipbuilding and marine engineering equipment manufacturing

This means taking advantages of capabilities of the two countries as fellow

shipbuilding giants and actively promoting joint bilateral efforts of shipbuilding enterprises to improve competitiveness in the global market. South Korean shipbuilding industry should seize the opportunity for upgrading of industries and eliminating backward production capacity in China, to increase investment and technological cooperation so as to jointly develop the marine engineering ship market. There is also the need for deep-sea resources development; necessitating strengthening cooperation in technological research, jointly promote the construction of deep-sea oil drilling platforms and resources exploitation platforms, and work together to compensate for the lack of deep-sea technology together.

（1-1-4）Marine construction industry cooperation

In terms of island development, combining Korean technology in designing and construction with Chinese labor would facilitate cooperation of offshore Engineering Construction such as cross-sea bridges.

（1-2）Speed up the cooperation of marine resources development

（1-2-1）Fishery resources development cooperation

China and Korea are all major fishing countries, and thus can jointly promote the cooperation of marine ranching, aquaculture, marine medicine and marine fisheries resources conservation.

It would begin with applying Korea's experiences of marine ranching construction to actively promote cooperation in marine ranching construction. On the other hand, integrating China's advantages in aquaculture with that of South Korean's aquatic products processing, would strengthen technological cooperation in production of marine drugs and health foods. There is also the issue of maintaining fishery resources in overlapping sea areas, making it vital that efforts to jointly safeguard fishery order of the Yellow Sea and improve bilateral fishery relationship be initiated. To strengthen pelagic fishery cooperation, the two countries need to form a joint ocean going fleet, and jointly develop ocean fisheries. Last but not least, there needs to be joint establishment of an aquatic products safety system, and expansion of aquatic products trade.

(1-2-2) Ocean energy resources development

South Korea has more experience in the use of tidal energy than China, while China has certain technical reserves and practical experience regarding tidal power, which can become the basis for exploitation of marine energy resources.

(1-2-3) Marine new energy cooperation

Natural gas hydrate (NGH) is a new energy resource with great developmental potential, but its development is still in the initial stage both in China and South Korea. There is much room for cooperation between the two countries in this field.

(1-2-4) Cooperation in seawater utilization

South Korea is one of the leaders in the world with respect to desalination technology. Seawater desalination also happens to be an important field of industry receiving policy support in China. Increased bilateral cooperation in desalination will allow the two countries to resolve the problem of the freshwater shortage in coastal areas.

(1-2-5) Cooperation in the development of offshore oil and gas

There are abundant oil and gas resources in the overlapping seabed between Korea and China. Due to the influence of maritime delimitation disputes between the two countries, there has been no substantive progress in oil and gas resources exploration. In the future, under the principled consensus of "shelving disputes and jointly development," the two countries should strive to make progress through positive negotiation as soon as possible.

(1-3) Further strengthen cooperation in marine science and technology

Supported by Joint Marine Scientific Research Center of China and Korea, the governments of the two countries should increase investment, strengthen the organization and coordination, and key technology problems related to the joint drive. We should secure substantive roles for universities, scientific research institutions, large enterprises, and promote inter-state exchange and industry-academia-research cooperation mechanism. This would assure a key position for research on the Yellow Sea, and simultaneously, speed up scientific and technological cooperation on climate change, the polar sea and deep-sea development, etc. There should also be active

promotion of joint training of talented researchers marine science-technology.

（1-4）Strengthen cooperation in marine eco-environmental protection

There should also be a stronger sense of identity and camaraderie in the marine environment community. Both countries should undertake the responsibility to safeguard the ecosystem of its coastal waters, strengthen scientific planning and management of the use of their seas, increase investment in ecological construction and protection, and also strengthen control and punishment for illegal acts. The two countries should also carry out cooperation in marine environment protection in the overlapping areas, especially in promoting pollution prevention and joint law enforcement for fishery resource maintenance, together with establishment of a mechanism for sharing of information on marine environment and oil-spill disaster emergency response. There must also be active promotion of communication on planning and policies related to environmental protection. Lastly, both countries should advocate public participation in protection of the marine environment.

（1-5）Pay attention to maritime security cooperation

Bilateral exchange should be carried out regularly in terms of maritime security efforts to enhance a sense of mutual trust and cooperation. In this regard, the two countries will do well to establish the mechanism of information communication, joint law enforcement and handling cases, and joint efforts against piracy, smuggling and other non-traditional security incidents at sea. Lastly, a cooperation mechanism on marine disaster emergency should be established, with regular bilateral exercise for maritime rescue.

(2) Safeguard measures

（2-1） Governments of the two countries to play a leading role

From the overall strategy to enhance bilateral strategic partnership, a great importance has been attached to bilateral cooperation in marine development. The two governments should play a role in strategic guidance and policy coordination related to marine cooperation. First, they must strengthen official communication

in the marine development strategy, strengthen mutual trust and strategic awareness of the significance of common development of marine resources. Second, they should strengthen policy and financial support to marine cooperation. Third, negotiations on Free Trade Area to optimize cooperation environment should be expedited.

(2-2) Encourage coastal areas of two countries to actively carry out sub-regional cooperation across the sea

If the Free Trade Area is to achieves substantive results, it is necessary for local governments in the coastal areas to take the initiative and take advantage of their flexibility to actively promote the development of sub-regional cooperation across the sea, based on friendly city relationships as a link, supported by various economic development zones and bonded logistics zones as well as export-oriented industrial complexes. Overall development of bilateral maritime cooperation can be promoted through the sub-regional cooperation to accumulate experience for solving related issues.

(2-3) Encourage industry associations and enterprises to carry out marine cooperation

Industry associations can take the advantage of both their flexibility and available scientific research to carry out study on marine areas, especially overlapping areas and provide technical assistance and financial support for the enterprises. There should be encouragement and support for exchanges between industry associations to strengthen their technical cooperation, and they should be allowed to assist the government in dealing with the problems such as fishing vessel accidents. Under the guidance of policy, related enterprises should make effort to technical improvement, actively carry out international cooperation, and cooperate to exploit resources in overlapping waters.

(2-4) Expand personnel and cultural exchanges

First, there needs to be a continued trend towards more extensive exchange between government institute think-tanks, consolidation of the existing academic exchange mechanism, along with initiation of cooperative research on the marine issues of common concern. Second, exchange of management personnel in marine management departments, marine economic zone and other levels must be promoted. Third, there should be

increased personnel exchanges in the marine service industries, such as selecting personnel of commodities trading center to attend professional and technical training.

（2-5）Accelerate the maritime delimitation negotiations

Bilateral maritime delimitation negotiations should be accelerated in a constructive manner while abiding by the "The United Nations Convention on the Law of the Sea," for the formation of division plan acceptable to both sides. Presently, more attention should be paid to strengthening coordination to resolve fishery disputes between the two countries, establish a set of long-term cooperation mechanism for fishery resource management, and conflict prevention and resolution, in order to prevent the occurrence of serious conflict.

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2

Study on the Innovation Driven Industrial Upgrading in Korea

*Sheng Chaoxun**

I. Introduction

Though industrial upgrading through an innovation drive is the outcome of economic development to a certain stage, is also important to benchmark experience of Korea in promoting the transformation and upgrading of its industry. At present, China is in a critical period of growth power transition; through the innovation drive to develop a new foundation for growth. Promoting the optimization and upgrading of industrial structure is by far the main task in the future period of economic development. Therefore, it is necessary to study the transformation and upgrading of electronic information, steel, shipbuilding, automobile and other industrial innovation; and also the process of Korean industrial upgrading; summarize the experience of Korea with respect to innovation driven industry development,

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as well as problems and applicability, and put forward the policy measures to drive the industrial upgrades in China.

II. The Course of Industrial Upgrading Driven by Innovation and the Main Measures of South Korea

(1) The development process and criterion

From the beginning of the 1960's, South Korea has made great progress in economy, science and technology, culture and other aspects; quickly entering the ranks of the OECD countries and the $10,000 per capita GDP club, became one of the "four mini-dragons of Asia" and 13th largest economy in the world, has made outstanding achievements. In the meantime, Korean automobile, electronics, information and communication (ICT), shipbuilding, steel and other leading industries also occupy a certain market share in the world. They also represent areas where there a number of world class leading enterprises have emerged and has an important influence in the world, including scientific and technological fields related to development and application of robots, broadband Internet, mobile communication, etc. Korea has also become one of the leaders in the world economy. In a sense, the success of South Korea, is due to a combination of "a Confucian society and market economy and government intervention." In a period of 30 years, South Korea established the high saving rate, high investment rate, value of hard work, the long term stability (authoritarian society); characteristics that are similar and familiar to China, making the Korean case important for Chinese innovation driven economic development. Therefore, this paper focuses on the driving process, industrial upgrading and innovation development stage of South Korea, particular its main policies and experiences. At the same time, comparative analysis with Chinese case is undertaken, to put forward conclusions and concomitant suggestions for

China's innovation driven industrial upgrading.

In order to get a more comprehensive understanding of the Korean innovation driven industrial upgrading, we try to approach from a broader perspective, that includes South Korea's economic, cultural, industrial structure and industrial policy changes and the historical point of view; as well as make a comparison with OECD countries such as the United States, Germany, Japan and other emerging economies such as China, India and Russia. Through the comparison, we attempt to gain more knowledge about the background, main methods, the industrial upgrading of the Korean innovation experience and draw inspirations from it.

(1-1) Based on the judgment of South Korea into the innovation driven stage of development

According to the study of Michael Porter's "four stage theory of economic development", with per capita GDP promotion, economic development will generally follow the pattern that includes "factor driven, investment driven, innovation driven wealth driven", often referred to as four stages of development. The innovation driven economic development is the intermediate stage where economic development moves from investment-driven stage to a wealth-driven stage. But he did not put forward specific indices for distinguishing different stages of development.

The follow-up research are summarized the characteristics of innovation driven stage of economic development by including methods for advancements in GDP per capita, labor productivity, total factor productivity, technology and talent accumulation. For example, according to the World Economic Forum, a country enters the innovation driven stage of development when its per capita GDP surpasses $17000. By that measure, USA, Germany, Japan, South Korea entered the innovation driven stage of development in 1962, 1973, 1976 and 1995, respectively. Therefore, we first identify the history of South Korea as it progressed toward the innovation driven stage of development from the historical data, taking into account the continuity and the authority of the data, and many important initiatives. We mainly use historical data from "The Retrospect for the 200 Years of the World Economy" (Angus Maddison) to describe the Korean economic growth, technological progress and

innovation performance, and the contribution of the South Korean government toward promotion of scientific and technological progress and innovation.

According to the data from Maddison on the GDP per capita of South Korea, it rose from $850 in 1900 to $948 per person per capita in 1913, but fell to $876 after the Second World War. Also, the growth of South Korea GDP was slow during this period: the compound annual growth rate for 1900-1913 was only 1.17%, slightly improving to 1.67% for 1913-1950, which is still rather slow. As for labor productivity and total factor productivity we have no way of knowing due to the lack of historical data, However, historical knowledge would dictate that during in this period, South Korea is still an agricultural country, and suffering from war; there would be little technological innovation and consequently, would not contribute much to economic growth.

The period of slow growth in South Korea's GDP per capita gave way to rapid growth for 1950-1992, from $876 in 1950 to $2840 in 1973; South Korea eclipsed the $10,000 mark in 1992, reaching $10010. There was also corresponding rapid growth in overall GDP; the annual compound growth rate of 1950-1973 was 7.57%; and for 1973-1992, 8.27. Labor productivity also rose fast during the rapid growth phase of the South Korean history. A compound annual growth rate was 4.09% was registered for 1950-1973, and 5.23% for 1973-1992. South Korea also advanced rapidly in terms of economic aggregate and per capita level rapidly. At the same time, the role of technological progress and innovation in economic and industrial development has become increasingly prominent, ushering in the innovation-driven stage of development.

Table 1. The per capita GDP of 9 national sample calculated according to the 1990 international dollar

	1820	1870	1900	1913	1950	1973	1992
Germany	1112	1913	3134	3833	4281	13152	19351
U.S.A	1287	2457	4096	5307	9573	16607	21558
France	1218	1858	2849	3452	5221	12940	17959
Holland	1561	2640	3533	3950	5850	12763	16898
Britain	1756	3263	4593	5032	6847	11992	15738
Japan	704	741	1135	1334	1873	11017	19425
China	523	523	652	688	614	1186	3098
Korea	--	--	850	948	876	2840	10010
Soviet Union	751	1023	1218	1488	2834	6058	4671

Source: Maddison, "The Retrospect for the 200 Years of the World Economy," the reform publishing house, (Jan. 1997), pp. 4-5.

Table 2. CAGR of GDP of 9 national sample

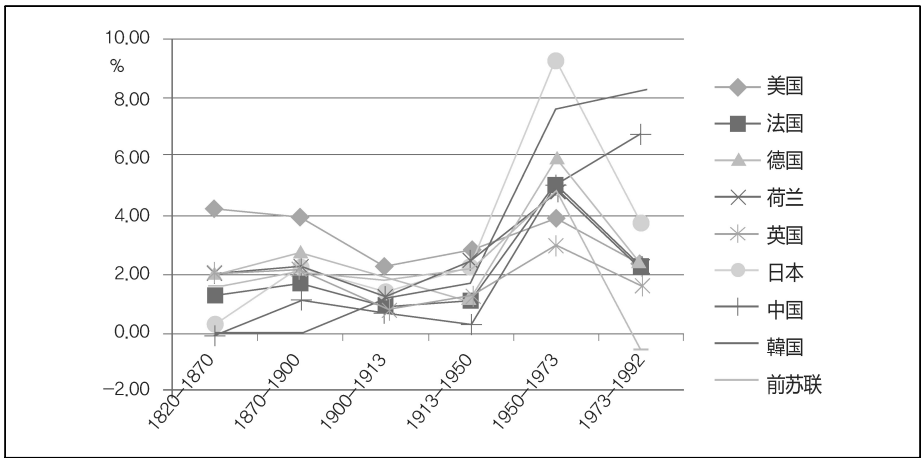
(Unit: %)

	1820-1870	1870-1900	1900-1913	1913-1950	1950-1973	1973-1992
Germany	4.22	3.93	2.22	2.84	3.91	2.39
U.S.A	1.27	1.62	0.93	1.15	5.02	2.26
France	2.00	2.74	1.66	1.06	5.99	2.30
Holland	1.93	2.17	1.28	2.43	4.74	2.14
Britain	2.04	2.06	0.85	1.29	2.96	1.59
Japan	0.31	2.27	1.40	2.24	9.25	3.76
China	-0.12	1.11	0.63	0.29	5.07	6.75
Korea	-	-	1.17	1.67	7.57	8.27
Soviet Union	1.60	2.06	1.80	2.15	4.84	-0.54

Source: Maddison, "The Retrospect for the 200 Years of the World Economy," The reform publishing house, (Jan. 1997), pp. 124-133.

Figure 1. CAGR of GDP of 9 national sample

(Unit: %)



Source: Maddison, "The Retrospect for the 200 Years of the World Economy," the reform publishing house, (Jan. 1997), pp. 124-133.

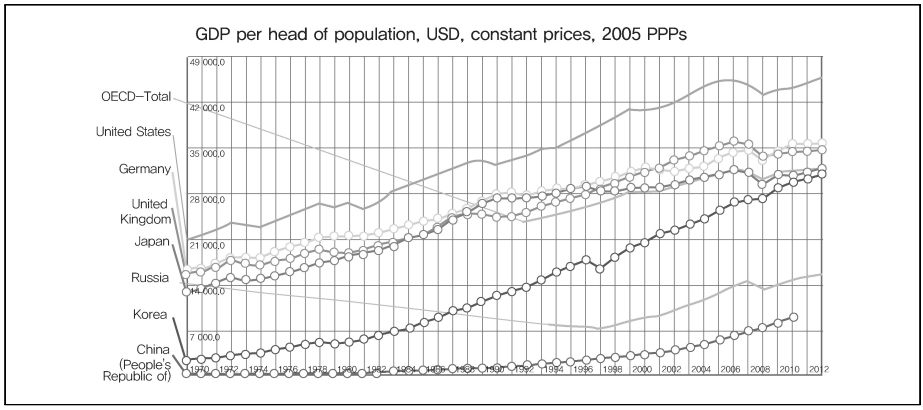
Table 3. The average annual growth rate of labor productivity of 9 national sample in 1870—1992

(Unit: %)

	1870-1913	1913-1950	1950-1973	1973-1992
Germany	1.87	0.60	5.99	2.69
U.S.A	1.92	2.48	2.72	1.14
France	1.74	1.87	5.11	2.73
Holland	1.27	1.31	4.78	2.21
Britain	1.22	1.58	3.12	2.18
Japan	1.89	1.85	7.69	3.13
China	-	-	2.06	4.06
Korea	-	-	4.09	5.23
Soviet Union	-	-	3.38	-0.80

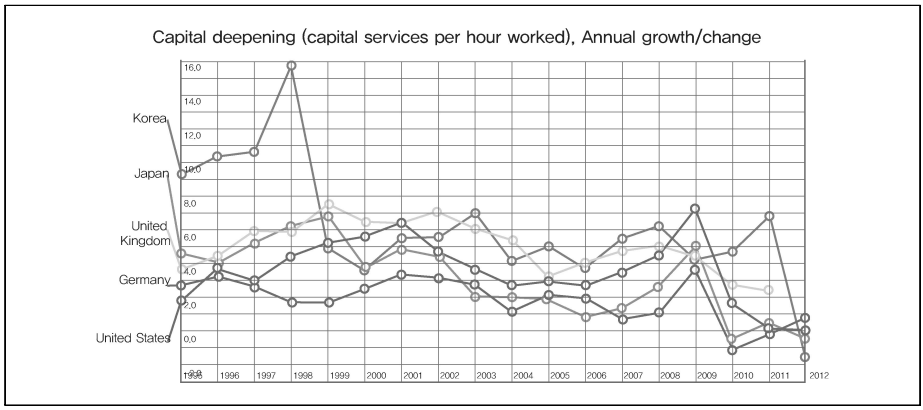
Source: Maddison, "The Retrospect for the 200 Years of the World Economy," the reform publishing house, (Jan. 1997), pp. 170. labor productivity is GDP per hour(1990 international dollar).

Figure 2. Comparison of several major countries in per capita GDP For Years 1970-2013



Source: OECD statistic.

Figure 3. Comparison of total factor productivity growth in major countries (1970-2012)



Source: OECD statistic, Growth in multifactor productivity.

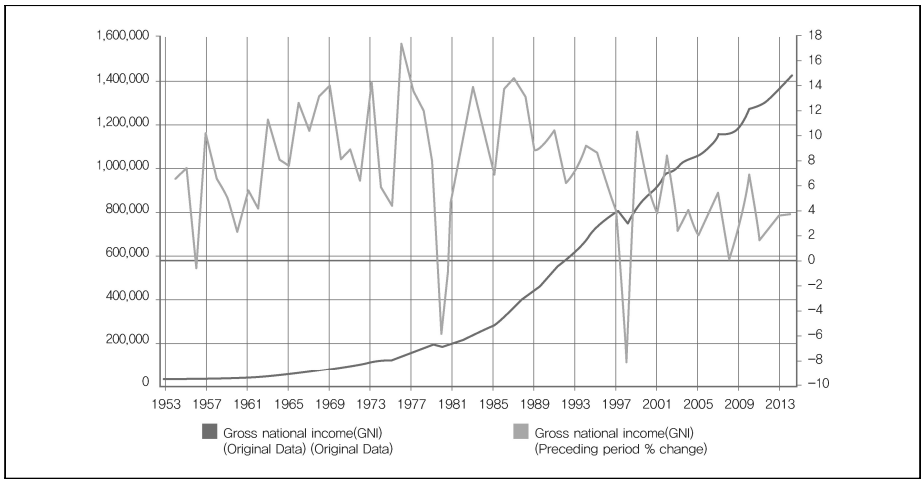
A close scrutiny of historical data from South Korea enables a more intuitive understanding of the innovation that took place. South Korea implemented the first five year plan in 1962, beginning with the government of Park Chung-hee. In the next 35 years, Korea went from a poor country with virtually no industry

and lacked international influence, to a developed country, achieving a national per capita income of $12000 in 1996 (in 2006 the price), the same year when Korea successfully joined the OECD, considered the "club" of developed countries.

South Korea raised its stature not only economically, but also in terms of social progress, such as in education and social security. According to the OECD standards, Korea had entered the ranks of moderately developed countries in many, on top of achieving economic modernization. Although the range of South Korea's economic growth rate dropped to 3%-5% after a certain point, its per capita GNI continued to rise, throughout 2001-2013 years, despite declines in 2008-2009 due to financial crisis, registering positive growth in all other years during the period. In fact, the growth rate doubled in 2001 and in 2013 than in 2001, eventually reaching $26205, equivalent to half of USA's per capita GNI, and 4 times that of China.

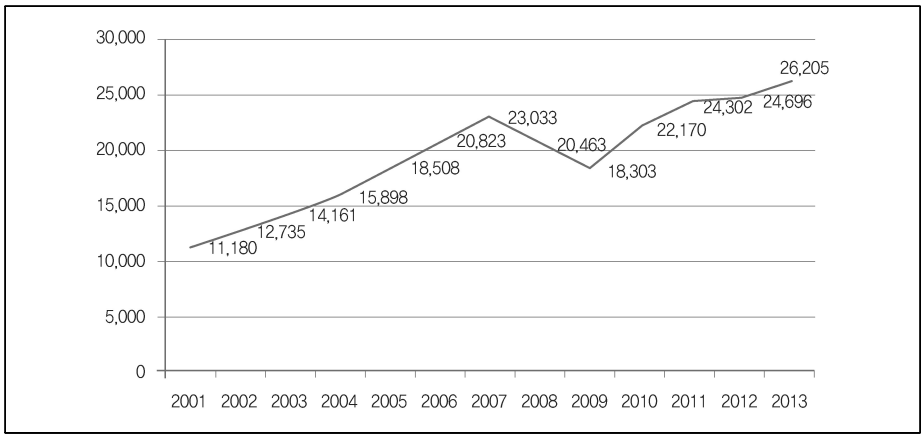
Figure 4. The total national income and growth of South Korea in 1953-2014

(Unit: Billion won)



Source: bank of korea, http://eng.bok.or.kr.

Figure 5. South Korea after entering the innovation driven stage GNI per capita growth chart
(Unit: US dollar, at current prices)



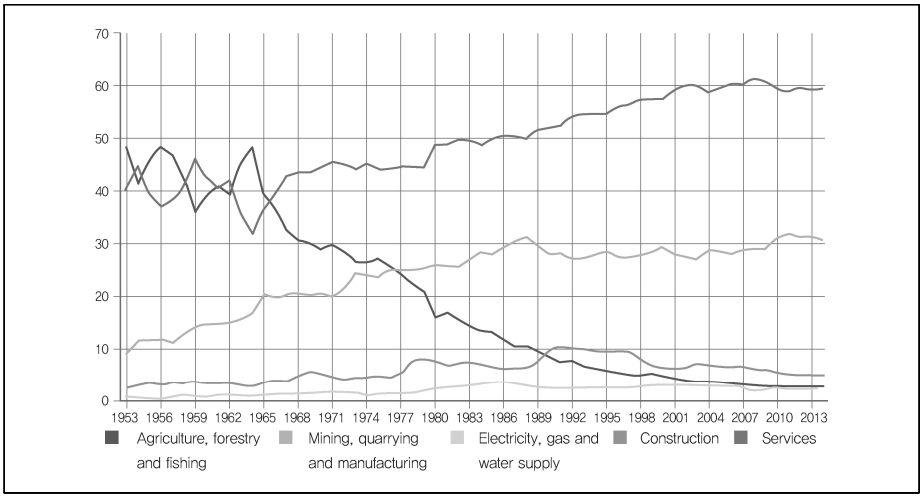
Source: KIET, Principal Economic Indicators 201503.

(1-2) Trends of Industrial structure change in South Korea in the innovation driven stage of development

Since 1953, with the rapid development of manufacturing industry[1] and service industry, South Korean industrial structure has changed dramatically. In 1953, South Korea was an agricultural country, as agriculture accounted for 48.2% of its GDP and was the largest industry in South Korea. Mining and manufacturing industries accounted for only 8.9%, with the services sector accounted for 40.3%, mainly in traditional wholesale, retail and logistics and other life services industries.

1) The main industry in Korea is divided into five sectors, including agriculture, forestry and fisheries, mining and manufacturing (as South Korea due to the lack of mineral resources, this mainly refers to manufacturing), electric power, gas and water supply industry, construction industry and service industry. Mining and manufacturing, electricity, gas and water supply industry and the construction industry represents second industries of China.

Figure 6. The change trend of the industrial structure of South Korea in 1953-2014



Source: Bank of Korea, http://eng.bok.or.kr.

The years 1953-1962 represented a period of post-war reconstruction and economic recovery for South Korea and it is during this period that we see accelerating development, growth in the manufacturing industry that raised its proportion in the GDP to 14.7%. Concomitantly, the proportion of agriculture and service industry would fluctuate several times with proportion of agricultural services sometimes being greater than the services, sometimes the proportion of service industry increased over agriculture. By 1962, the proportion of agriculture had fallen to 39.1%, and the proportion of the services increased to 41.9%.

In the years 1963-1971 was when the first and second "five-year plans" were implemented in South Korea. This period marked a period of truly rapid economic growth for South Korea, with the per capita GNI increasing from $87 in 1962 to $290 in 1971. Rapid growth also occurred in terms of the proportion of manufacturing industry and service industry; the manufacturing sector would account for 19.5% of GDP by the end of the period, and the service industry since 1966 is South Korea's largest industry, with its share of the GDP increasing to 45.4% by 1971.

In 1972-1981, South Korea saw a rapid development of its heavy chemical industry; GNI per capita increased 4.8 fold, from $290 in 1971, to $1676 by 1982. The proportion of manufacturing and service industries continued to rise. The proportion of service industry reached 48.8% at the end of the period; the manufacturing industry surpassed the agricultural industry and became entrenched as Korea's second largest industry, as the proportion of manufacturing increased to 25.6% while that of agriculture dropped to 16.7%. South Korea had successfully accomplished the process of transformation from an agricultural to an industrial country.

The decade from 1982 to 1991 followed a period of brief decline for the Korean economy due to the oil crisis that lasted from 1977 to 1981. However, impetus and growth was soon restored, as South Korea continued to optimize the industrial structure. By 1990, the construction industry's proportion of the GDP would exceed agriculture, and the agriculture dropped to fourth place among South Korea's industries. The proportion of the manufacturing industry, which reached its highest point (31%) in 1988, began a slow decline and fell to 27.9% in 1991. The proportion of the service industry continued to rise, passing the 50% mark in 1986, and reaching 52.3% in 1991. It is worth mentioning that, as the 1988 Olympics took place in Korea, during this period, the Korean construction industry accounted for the bulk of the GDP increase, with the industry representing 10.2% of the Korean GDP in 1991.

South Korea's seventh and eighth five-year plans were implemented in years 1992-2002. From during this period, a series of landmark events occurred in South Korea. South Korea became a member of the OECD (Organization for Economic Cooperation and Development) in 1996, the same year that South Korea's per capita GNI reached $12197, and joined the ranks of developed countries. However, the economic situation quickly went awry the following year in 1997, as South Korea was hit hard by the Asian financial crisis, and suffered the collapse of the stock market and massive budget cuts. Normalcy was gradually restored by 2000. In 2002, the share of the service sector in the South Korean GDP reached 59.9%, with the country basically entering the era of the service economy. The share of the manufacturing

sector remains unchanged, the construction industry declined gradually in terms of its position in the economy, with its share in 2002 falling to 6.1%, which was the level prior to the Seoul Olympic games. Agriculture as a proportion of the GDP continued to decline, falling from 7.3% in 2002 to 3.8% in 1992.

Since 2002, the Korea industrial structure have remained stable, as the service industry's proportion of the GDP stayed at around 60%, and the manufacturing sector accounted for about 30% during the period (30.5% in 2014). This represented only a 3% 'rise' compared to 2002 only 3 percentage points. The construction industry accounts for the proportion of GDP declined slightly but further, falling from 6.1% in 2002 to 4.9% in 2014. A further decline occurred in the proportion of agriculture, which stood at a paltry in 2014, lower than the electric power, gas and water supply industry, registering the lowest percentage of the GDP out of all industries in South Korea.

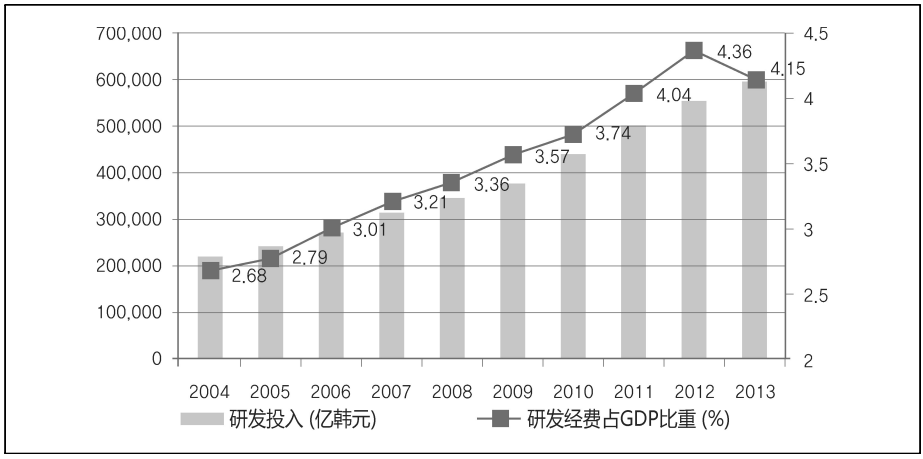
Looking at the trend of changes in the Korean industrial structure from 1953 to 2014, we find that fundamental changes have taken place in the industrial structure, with agriculture going from the largest industry in the national economy to the smallest, decreasing from a high of 48.3% to 2.3% in 2014. The weight of the manufacturing industry as a proportion of the GDP grew steadily, from less than 10% to about 30%. For the most part, the pattern for manufacturing has held relatively steady at this level for about 30 years. At the same time, the service industry raised in proportion of the GDP from 40% to 60%, becoming the leading industry of the national economy. Consequently, the internal structure of the service industry has also undergone a fundamental change. As for electricity, gas and water supply industry, its proportion in the national economy has changed little. Due to shortage of mineral resources, the presence of the mining industry in GDP has been relatively small, at less than 1% and did not see drastic changes little. Accompanied by industrialization and urbanization, there was a gradual upward trend with respect to the construction industry, but after peaking at 10%, its proportion of GDP stabilized at around 5%.

(2) South Korea's current level and the main indicators of innovation driven development

(2-1) Innovation input and level of development

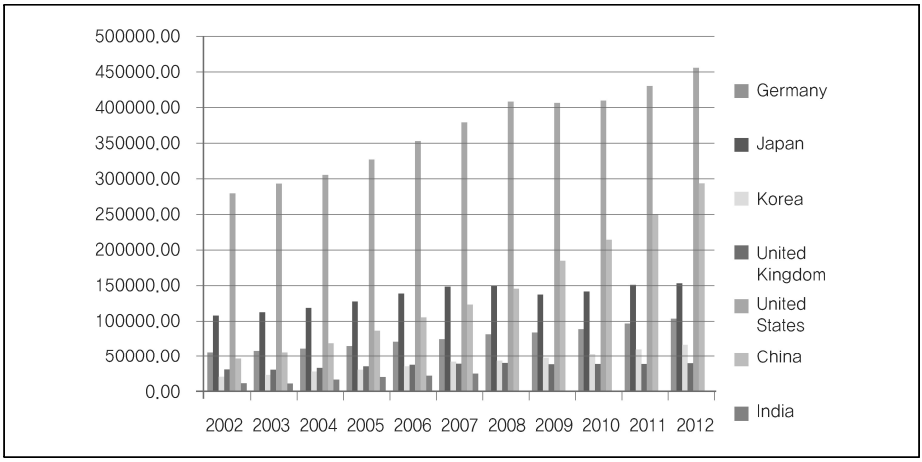
Seeing from the perspective of innovation input, since entering the twenty-first century, the amount of South Korean government's investment in science and technology and R & D personnel grew at a rate of about 10%. By 2013, the total investment reached 59.3 trillion won, accounting for 4.15% of the GDP. It reached of which up to 4.36% in 2012. This meant that South Korea was one of the world's leading countries in this regard, higher than the national average of OECD (2.4%), also higher than the supposed leading innovation power, USA (2.79%).

Figure 7. South Korea's total R & D investment and the proportion of GDP in 2004-2013



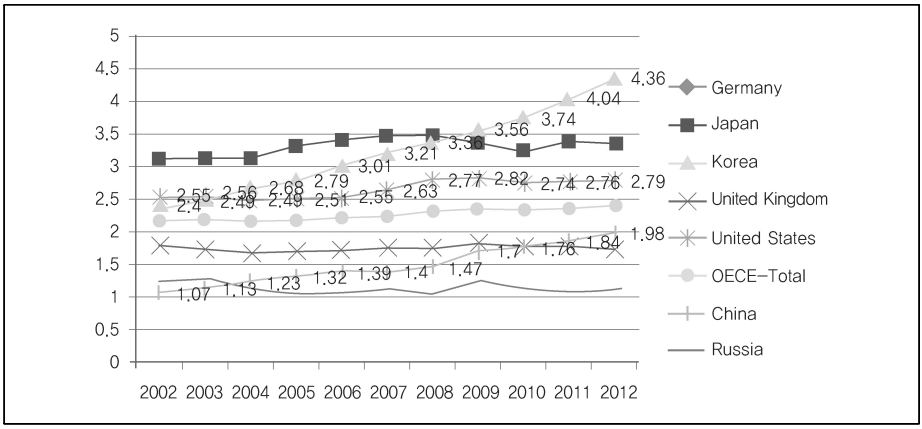
Source: Korea National Science & Technology Commission, *Survey of Research and Development Report*.

Figure 8. International Comparison of total R & D expenditure in South Korea: 2002-2012



Source: OECD.

Figure 9. International Comparison of the proportion of R & D investment in GDP

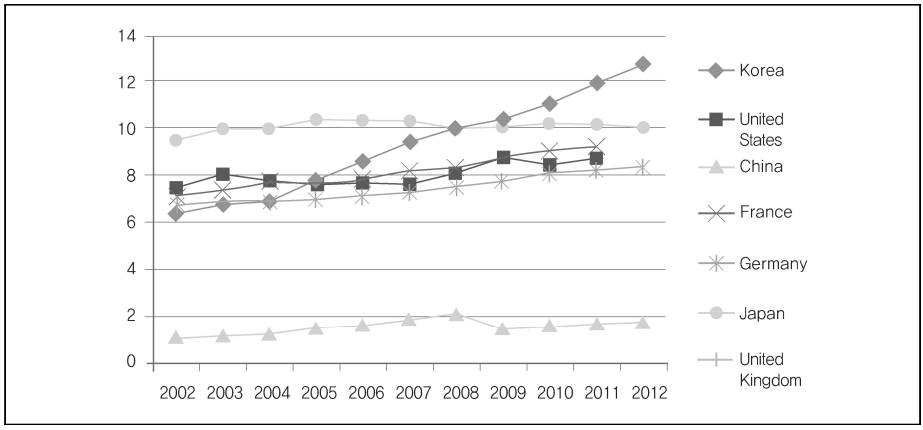


Source: OECD statistics.

The growth rate of the number of full time R & D personnel in South Korea growth rate was relatively fast, but as of 2002, it was still lower than that of developed countries American, Japan, France, Germany. Yet Korea showed astonishingly rapid growth in this area thereafter, with an average annual growth rate of 8%-9%, when the rest of the world managed about 1%-2% growth. As a result, number of full time R & D personnel per 1000 economically active persons in South Korea and their economic activity exceeded the USA in 2009, and South Korea became a country with the highest density of R&D personnel in the population with in the world in 2012, registering 12.79 per 1000 economically active persons.

Figure 10. South Korea's per thousand population of economic activity of full time equivalent number of R & D personnel international comparison

(Unit: person)

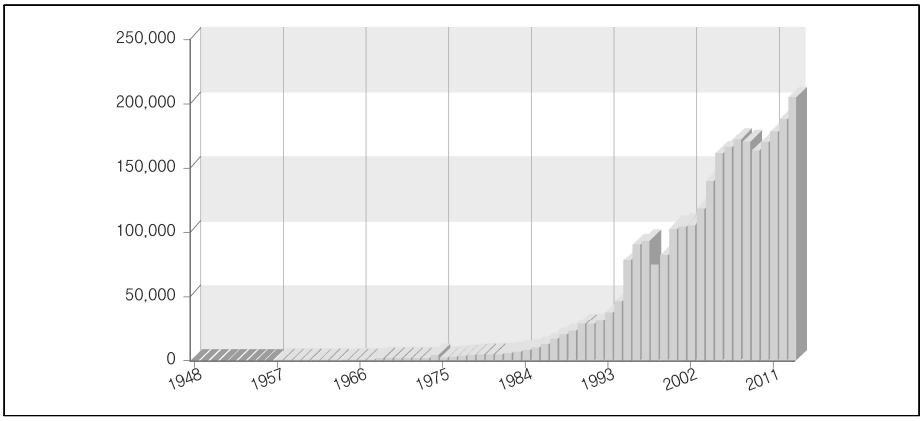


Source: OECD statistic.

The amount of patent application rose from 169 in 1948 to 204589 in 2013. From the viewpoint of the amount of third party patents as core indicators and reflection of national and international competitiveness, the amount of third party patent granted to South Koreans also increased significantly, from 1828 in 2008 to 2878 in 2012, which also means an increase in the proportion of South Korea

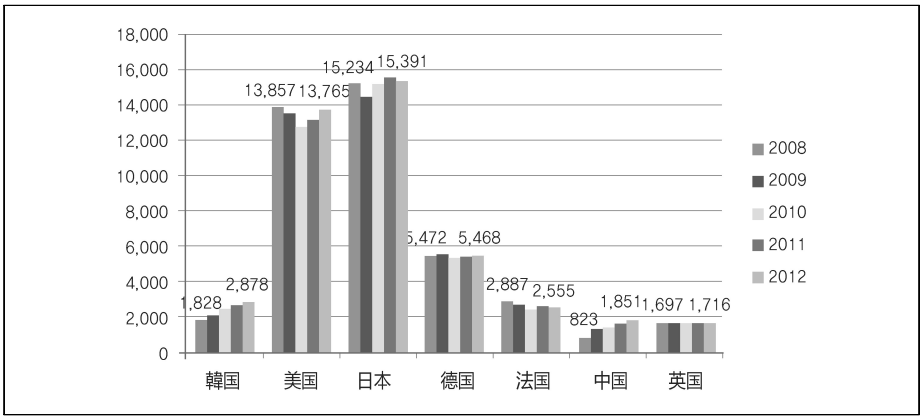
in the total number if third party patents, from 3.68% in 2008 to 5.62% in 2012. At the same time Chinese third party patents rose from 823 to 1851, with the proportion rose from 1.66% to 3.62%.

Figure 11. Growth in Volume of South Korean patent application



Source: Patent intellectual property statistics annual report.

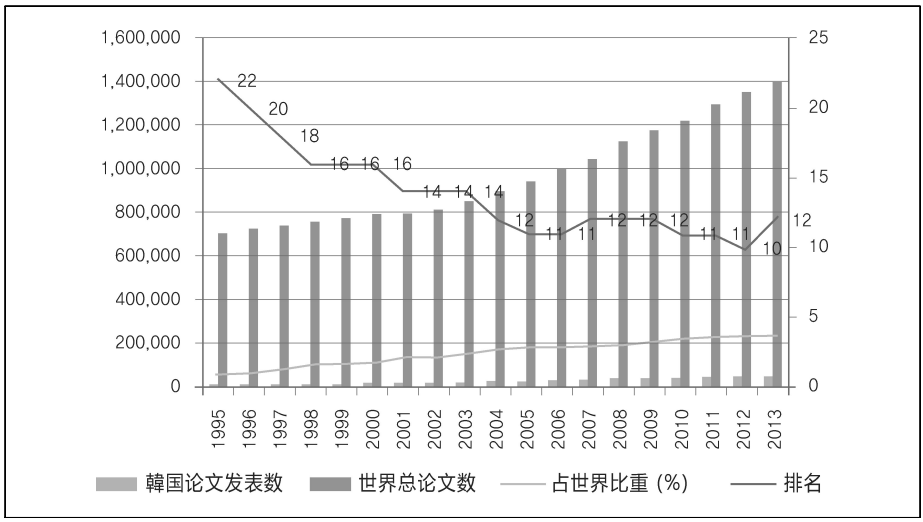
Figure 12. Three party patent authorization amount and major countries in South Korea



Source: Main Science and Technology Indicators, 2014.

In the technical field in 2013, most of the South Korean (Korean domestic patent applicant) patents were in ten technology areas including: electronic components and semiconductor, optical, measuring / transport / packaging, electronics / communication, computer, construction, lighting, medical / leisure, household products, metal processing. The proportion of total patents were 12.24%, 9.21%, 7.83%, 8.20%, 7.54%, 4.59%, 6.42%, 4.18%, 3.85%, and 2.97%, respectively. These areas also represent the leading technological field of South Korea. South Korea has also been highly consistent with the direction of the upgrading of industrial structure. The number of SCI papers published in South Korea also rise rapidly, from 5872 in 1995 to 51051 in 2013, increasing from 1% to 3.64% in terms of the share of the total of SCI papers for the world, rising in the world ranking from twenty-second to twelfth in 2012, and once even reaching tenth place.

Figure 13. South Korea the number of published papers and the world rankings is 1995-2013

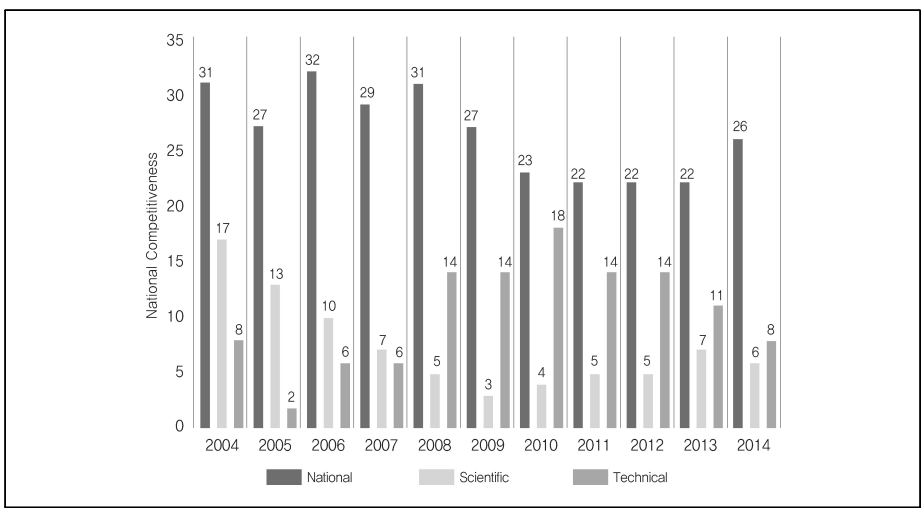


Source: South Korea's future creation science department, science and technology papers (SCI) analysis, http://sts.ntis.go.kr/lo14/retrieve.jsp?icode=DT_RSTH001.

(2-2) The international evaluation index

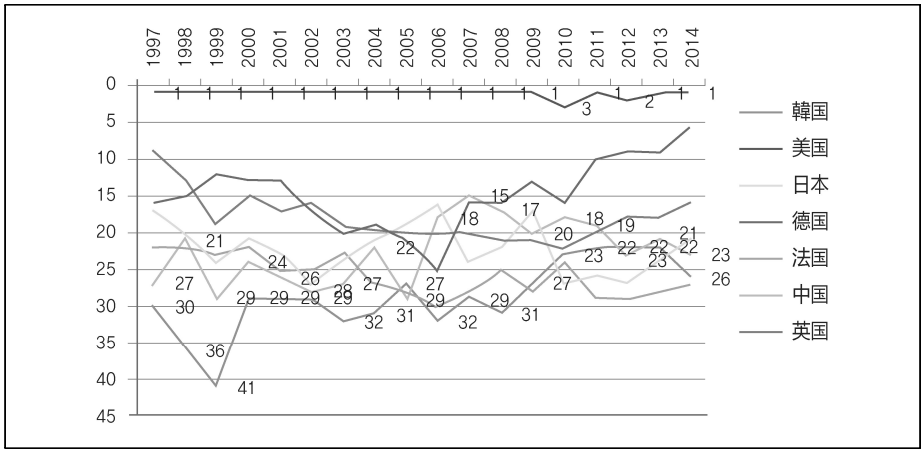
According to data from the prestigious evaluation agency the Lausanne International Institute of Management (IMD), in 2014, South Korea was 26th out of 55 countries in national competitiveness, improving by more than 15 places since 1999 when it was 41st. The competitiveness of China in 2014 compared to 1997 did not experience such drastic changes. Although China reached 15th place at one point (2007), but dropped to 23 in 2014, rising four places compared to 1997 but dropping by two spots compared to 1998. According to the scientific competitiveness index, Korea Science competitiveness index ranking rose rapidly, from twenty-sixth in 1999 to sixth in 2014, among the scientific powers. The Chinese saw an equally rapid rise in scientific competitiveness, from twenty-eighth in 1997 to seventh in 2014. The same was true with respect to the technology competitiveness index, with South Korea rising in technology competitiveness ranking from 28th in 1997 rose to eighth in 2014. At the same time, China's technology competitiveness ranking rose from forty-fifth in 1997 to twentieth in 2014.

Figure 14. South Korea IMD, National Science and technology competitiveness rankings change in 2004-2014



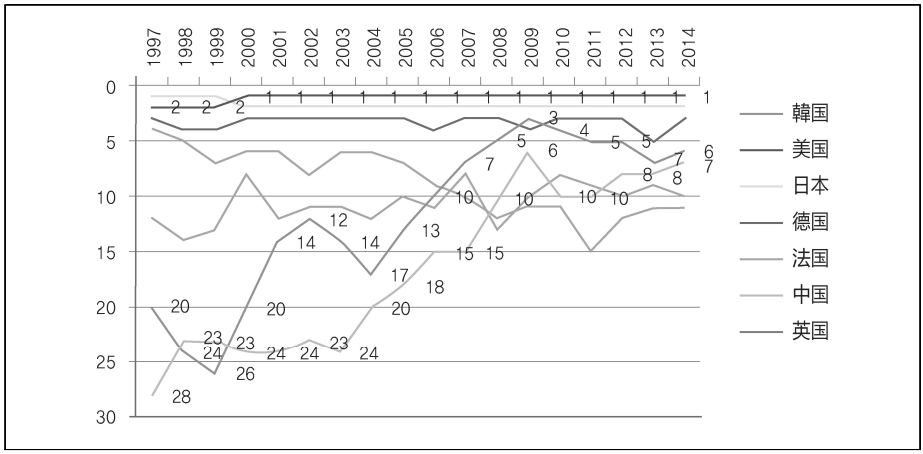
Source: IMD WORLD COMPETITIVENESS YEARBOOK.

Figure 15. IMD The main national competitiveness index ranking



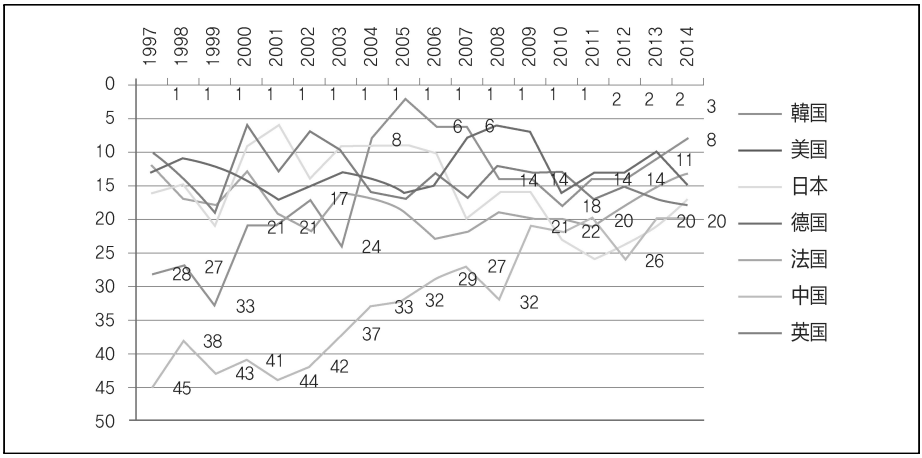
Source: IMD WORLD COMPETITIVENESS YEARBOOK.

Figure 16. IMD The main national international scientific competitiveness index ranking



Source: IMD WORLD COMPETITIVENESS YEARBOOK.

Figure 17. The main national technical competitiveness index ranking (IMD)



Source: IMD WORLD COMPETITIVENESS YEARBOOK.

(2-3) The competitive industry

Mainly from the field of view, we can analyze the intensity and the degree of upgrading of comparative advantage of Korea's industrial technology and industrial technology itself. According to data provided by the KIET, South Korea's shipbuilding, automobile, steel, semiconductors, electronic information industry, rank first in the world in terms of international market share.

Table 4. World market share and ranking of the main industries of South Korea

(Unit: %, the brackets to the world ranking)

	1990	1995	2000	2006	2012
shipbuilding	23.8 (2)	30.4 (2)	35.1 (1)	40.4 (1)	35 (2)
automobile	2.7 (10)	5.0 (5)	5.3 (5)	5.5 (5)	5.4 (5)
Steel	3.0 (7)	4.9 (6)	5.1 (6)	4.2 (5)	
Petroleum and chemical industry	1.8 (14)	5.0 (5)	5.2 (4)	6.2 (5)	
semiconductors	3.1 (3)	10.4 (3)	7.4 (3)	10.2 (3)	51.9 (1)

	1990	1995	2000	2006	2012
Electronics	3.4 (6)	4.5 (4)	5.6 (4)	5.8 (4)	

Sources: the Science and Technology Committee of "national new growth power Implementation schedule," present and future, according to research data of 2012.

(3) WHY did Korea succeed?

(3-1) From Imitation to Innovation

The process and the path of industrial technology upgrade taken by South Korea is typical imitative innovation, especially in the early period of Korea's development, relying mainly on the USA, introduction of technology from Japan and other OECD countries, and also various reforms, contributed to the advancements in industrial technological and the upgrading of the structure of South Korea in the Twentieth Century. Several decades later, by virtue of its technical ability and upgrades, increase in research of key technologies including technologies related to industry and public welfare, South Korea has become a world leader in the field. After entering in twenty-first Century, South Korea has been engaged in efforts to advance further its target technologies, but it also seeks to change the path and mode of its development path through greater reliance on the basic and frontier technologies in connection with development, to promote their core competitiveness.

OECD has done research specifically on Korea and in July of 2009. The OECD announced its national innovation policy evaluation in the "Review of Korean Innovation Policy"[2], put forward assessments concerning South Korea's banking system. The review details a system marked by strong state leadership, controlled by the state and the large family firms formed that, and became the main conduit for large-scale strategy technology development as the center. Naturally, the government affiliated

2) OECD, 2009-10-20. OECD Reviews of Innovation Policy:Korea 2009. http://puck.sourceoecd.org/vl=3551085/cl=12/nw=1/rpsv/cgi-bin/fulltextew.pl?prpsv=/ij/oecdthemes/99980134/v2009n14/s1/p1l.idx.

research institutes and large enterprises play a leading role in global competitiveness. Strong willingness to learn from failure and also from others, adapting to a combination of fast changing market opportunities and rapid changes in technology, allowed South Korea achieve much progress in imitative innovation.

It is precisely because of the heavy demand for imported technology that South Korea took international cooperation and innovation very seriously, and actively implemented the "plans for introduction of excellent foreign research institutions" (2004), "Korea-Global Innovation Network plan" (referred to as K-GIN plan, 2005) and "Global Research Lab" (GRL, 2009), and encouraged enterprises and KIST to set up major research institutions in foreign countries, to learn and import advanced science and technology.

(3-2) Great importance attached to scientific and technological innovation; technology innovation input rise rapidly

As mentioned before, the level of South Korea's R&D investment and personnel input have been among the highest in the world, of which R&D investment accounted for more than 4% as a proportion of GDP along with Israel, making the two countries the highest in the world countries. Personnel input level was just as high, with 12 scientific research personnel per 1000 economically active persons. In addition, South Korea also attaches great importance to innovation and infrastructure construction, pushing the frontiers of science and also promoting basic research in the field of instruments and facilities investment, through legislation to nurture the open sharing of scientific instruments to the society; these efforts include the construction of agencies and large-scale facilities such as the Korea Basic support Science(KBSI), Korea Institute of Science and Technology Information(KISTI), the national electronic library, very long baseline interferometer observation network (KVN), neutrino detection device, high temperature plasma generating device, Pohang Accelerator Laboratory (PAL), Antarctic research base and a number of other research bases. The construction and development of modern science and technology research is more and more dependent on the maintenance of a strong information network infrastructure.

South Korea's performance is also very prominent in this regard; according

to Akamai's State of the Internet Report, Korea is ranked No. 1 in the world in terms of Internet connection speed, penetration rate, and mobile connectivity. Though it was the result of domestic demand, at the same time, it also promoted development of industry and technology.

(3-3) To construct a national innovation system in accordance with the path and the laws of innovation

South Korea, since the establishment of "technology" strategy, actively built and improved the national system of innovation in accordance with prior path and the experience of innovation of the western countries, forming a "perfect development path of technological innovation, technology transfer, industrialization"; thus promoting scientific/technological progress, and innovation-driven economic growth.

First, through effective legislation, Korea established a sound legal system related to science and technology, establishing a series of supporting systems with respect to taxation, credit, personnel training, support and promotion of scientific research.

Regarding the national innovation system, South Korea established a national innovation system consisting of public research institutions, universities, corporations, the public research institutions including the government-funded Korea Institute of Science and Technology(KIST), Korea Research Institute of Bioscience and Biotechnology(KRIBB), Korea Electronic Telecommunication Research Institute(ETRI). The said institutions, though receiving government funds, are independent in terms of operation, which enables extensive contacts and cooperation with enterprises and allows them to play important roles in the field of science and technology. Among colleges and universities, Seoul National University (SNU), being Korea's first comprehensive university, received funding for research and development that accounted for 10% of the total funding for universities in Korea. The Korea Advanced Institute of Science and Technology (KAIST) is the largest university in science and engineering, accounting for about 5% of all South Korea university R&D funding. Samsung Advanced Institute of Technology (SAIT) and other enterprises in also play an important role among research institutions in application of technology., Korea had built and improved the national innovation system with its own characteristics, by way of close cooperation

with the innovation unit.

In the transfer of technology, the implementation of the "Connect Korea" project (mainly by KIST through its office of technology transfer, to establish a good comprehensive technical mechanism), to help universities, research institutes and other institutions in technology transfer and commercialization. The project introduced plans for technology transfer and industry promotion, setting up and operating the Korea Technology Transfer Center(KTTC), and construction of Development Zone (Dade incubator to promote risk investment and venture business development through the nursery) and other measures to promote R & D that would lead to concrete achievements. To implement the "management system of patent trust" starting in 2008, it helped transform technologies or patents by non-profit public institutions.

(3-4) Closely combined with the focus on industrial policy and technology policy

The South Korean government attaches great importance to the development of the system at the macro level and the regulation of science and technology, through the development of science and technology planning, centralized coordination management system for science and technology, to maintain the continuity and the speed of the development of science and technology. Also, the government sought to dominate the direction of development of science and technology from top to bottom in a top-down manner, and thus in accordance with the government's plan of support of innovation in science and technology, effectively securing for the state a leading role in scientific and technological innovation, which is the significant feature of the innovation system in South Korea.

Not only that, it is very obvious that policies for the innovation of science and technology and industrial policy is closely linked in South Korea, and adjustments made according to the focus of the development strategy of science and technology that reflect the international situation, the industrial policy, and the effects of innovation driven economic development. For example, in the last century (1960s, 1970s), South Korea was in the midst of factor-driven stage of economic development; when Korean industrialization was marked by lack of technical ability, weak scientific and technological foundation, and meeting science and technology development

objectives depended on imported technology and equipment. In the 1970s, iron and steel, petrochemicals, shipbuilding, electronics, machinery and other heavy chemical industry became pillars upon which the national economy was built, and correspondingly, the focus of the science and technology strategy shifted to development of industrial strategy and technology; in addition to expansion of the introduction of foreign advanced technology, promoting the construction of the technological research institutions, and stimulation of development of activities private enterprises. During the 1980s, South Korea entered the investment-driven stage of development, where the strategic goal of economic development is the development of high-tech industry, machinery and electronic technology; and transforming the industrial structure based on the direction of comparative advantage.

At the same time, national innovation system in South Korea would be defined by adaptation and learning, through establishment of a comprehensive scientific management system with the Ministry of Science and Technology as the center. This was coordinated with other agencies, and South Korea began to see improvements in local industry competitiveness and production of main mechanical products related to the core and cutting-edge technology development strategies. From 1990 to the twenty-first Century, South Korea gradually entered the innovation driven stage of development, and the South Korean government proposed terms such as "knowledge economy" and "creative economy" and related policies, stating that the development of the strategic objectives of this technology would enhance the competitiveness of the country. Therefore, the government deemed achieving comparative advantage via establishment of the system of national technological innovation as the key component of the industrial policy; this would be made possible through the adjustment of industry structure, promotion of technological innovation, the transformation of information network, the effective use of human resources to enhance industrial competitiveness. The meaning of Korean national innovation system shift again, from adaptation and absorption to independent innovation.

(4) There are still some problems

(4-1) Practical technology but no original Technology

Technology research and development in South Korea, especially in technology research and development led by large enterprises in 'practical' technologies, basic research capacity remains relatively backward. According to the OECD report, basic research is relatively weak in South Korea, with the weakest being basic research ability of universities, which need to be strengthened. Korean universities hired 70% of Ph.D holders in South Korea, but the University R & D spending only accounted for 10% of the national total. In addition, the relationship between the respective constituents of the South Korea innovation system still needs to be strengthened, especially between the government and university research institutions.

(4-2) The relative weakness of small and medium sized enterprises

As South Korea's economic growth has been dominated by large enterprises, the industrial structure dominated by such large firms played an important role in the rapid catch-up period, which led to glaring weakness of small and medium-sized enterprises. As everyone knows, the success of America's Silicon Valley was not due to the number of well-known large companies, but the fertile soil of innovation spawning a number of innovative, small/medium size firms. The industrial structure and innovation system so dominant in South Korea's investment approach is not conducive to the establishment of the innovative enterprises, transfer of technology and construction of basic research capacity. Therefore, if Korea wishes to 'shift gears' to being an innovative country, it needs to improve the innovation capacity of small and medium enterprises.

(4-3) Over specialization

South Korea's R&D and innovation activities are highly concentrated in a few sectors of the economy, especially in the information and communications technology sector, resulting in significant dualism in the South Korean economy, which may not provide sufficiently broad R&D based commensurate with the level of developed countries. In addition, in recent years, South Korea's declining national competitiveness and long-term

stagnation meant that labor productivity is only half of the US, meaning Korea needs to accelerate the transformation of its innovation system from catch-up to the more creative mode. This requires strengthening of policy coordination between the various ministries, redefining of the role of research institutions, bolstering basic research support, promotion of corporate innovation, broadening the fields of specialization, increasing higher education's contribution to innovation, accurately grasping the new phase of technological revolution, and strive to break through the bottleneck.

III. Chinese Case: The New Situation and New Characteristics of Innovation Driven Industrial Upgrading in China

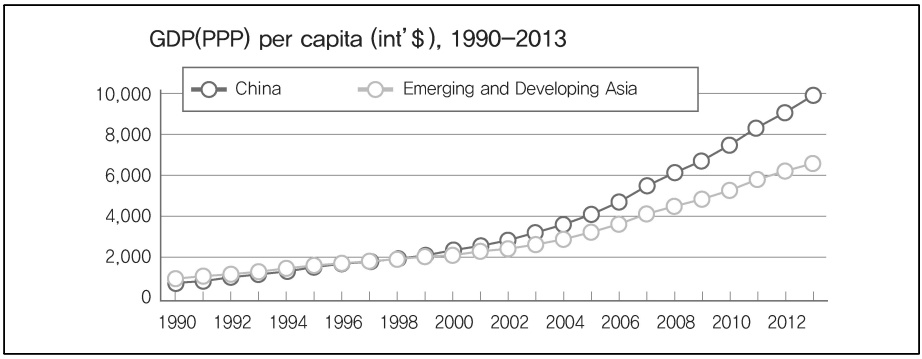
In 2014, Chinese GDP per capita has exceeded the $7000 mark, in accordance with the standard of the world economic forum, is in a critical period of transition from factor driven to innovation driven stages of the economy. During this period, China must increase significantly its level of innovation driven development; secure a large number of innovative enterprises and new technology, new products, new formats, new business models to accelerate the emergence; improve significantly China's innovation driven global ranking. Even with success, there will still be some factors that restrict innovation driven development and disorders. The Chinese government must engage in positive action, and strives to create a favorable institutional environment for innovation and entrepreneurship, and better market conditions.

(1) China is entering a critical stage of transition from factor driven to innovation driven stages

From the development stage of industrialization, China is now in a critical period of industrialization in the late phase of post-industrial transition - along

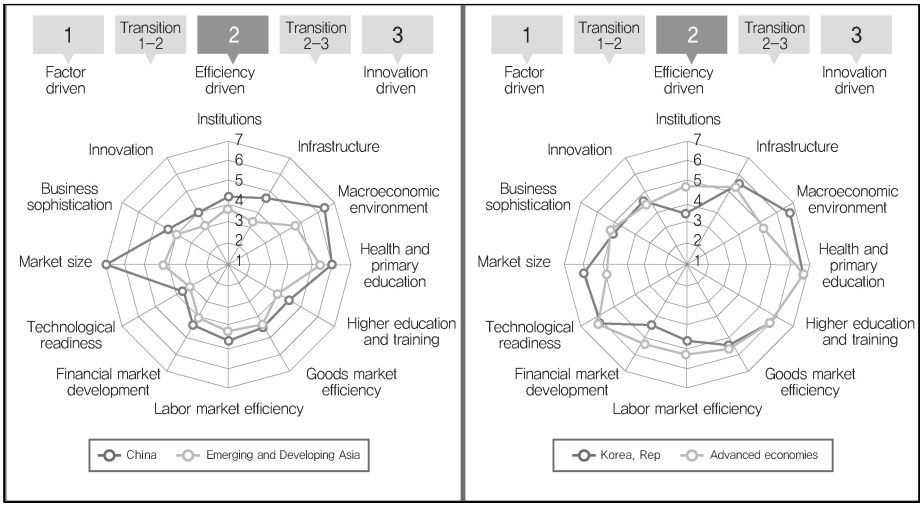
with the increase of per capita GDP, the manufacturing industry will decline after reaching a peak, and gradually transition from factor-driven to innovation-driven industrial development.

Figure 18. Growth of China's GDP per capita



Source: WEF, Global Competitiveness Report_2014-15, p. 154.

Figure 19. Comparison of innovation driven stage between China and South Korea



Source: WEF, Global Competitiveness Report_2014-15, p. 154, p. 234.

From the innovation standpoint, the infrastructure gap between China and the developed countries has yet to be narrowed. In 2014, R & D investment in China continued to grow rapidly, after exceeding the one trillion Yuan mark (reaching 1.33 trillion Yuan) the year before, representing a year-on-year increase of 12.4% and accounting for 2.09% as a proportion of the GDP. However, the total amount is still only about half that of the USA, and even as a proportion of the GD, there is still a huge gap vis-à-vis countries like South Korea and Israel which are higher than 4%. As for R&D personnel, at present the proportion of R&D personnel in China is approximately 1300 per million, lower than most developed countries in 1990s, and is only 1/4-1/3 the major the proportion of R & D personnel of developed countries and 1/9 of South Korea.

Table 5. Comparison of the proportion of R & D personnel Chinese and main developed countries

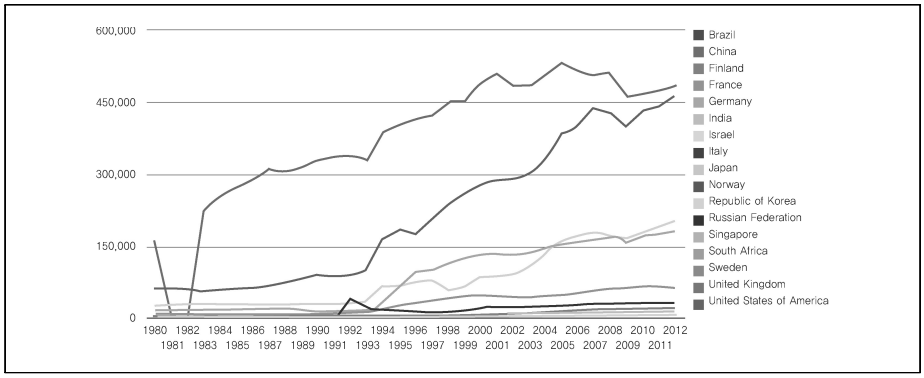
Country	The proportion of R & D personnel (people / million)	China/other country
China	1300	---
U.S.A	4000-5000	about1/4-1/3
Germany	3700	about 1/3
Japan	5000	about 1/4
Korea*	11000-12000	about 1/9

Source: The World Bank World Development Indicators (WDI) database, the South Korean R & D personnel, including scientific research personnel.

In terms of innovation achievements, however, China's science and technology output leads the world. According to the World Intellectual Property Organization (WIPO) data, from the beginning of 2011 China was ranked first in the world in the number of domestic patent applications. In 2013, Chinese was third in the world over Germany in PCT patent applications, which reached 25539 in 2014, accounting for 11.9% of the proportion of the global total has become one of the leading countries with respect to the number of patents. The Chinese technology

company HUAWEI and ZTE doubled their enterprise global patent up to 2014, together becoming the world's largest international patent applicants again. The United States' Qualcomm Corp ranked second in the world, with China's ZTE Corp was third when taken alone. From the published numbers that reflect the scientific research achievements; China, has shown rapid growth since 2008, was ranked second in the world in the number of papers published since 2000. But from the survey of the quality of the papers from citation indicators, China only ranked seventh in the world in 2011, and there is a large gap in terms of quality.

Figure 20. The main national patent application volume change



Source: World Intellectual Property Organization (WIPO) database.

(2) China innovation driven development level increased significantly

Needless to say, in recent years, the innovation driven development in China improved significantly. Based on the evaluation of relevant institutions, China has shown greater improvement both overall and in industrial development/enterprise innovation ability etc. According the "2014 global innovation index jointly issued by the Cornell University in the United States, France's INSEAD School of business and the World Intellectual Property Organization (WIPO), China ranked twenty-ninth

out of 143 countries and regions. All countries that were ahead of China (Switzerland first, UK second, Sweden third, sixth in the United States, Germany thirteenth, South Korea sixteenth, Japan twenty-first etc.) were countries with higher incomes. China ranked first among emerging countries, and was significantly ahead of other emerging countries (Russia was forty-ninth, South Africa was fifty-third, Brazil sixty-first, and India was seventy-sixth).

At the industry level, China manufacturing is gradually extricating itself from is a past mainly engaged in the assembly process, relied on the price advantage, that relied on the export volume in the lower end of the global value chain, and is striving toward innovation-driven transformation. A list published in Forbes puts China in front of many other countries in 8 industries: mobile payment, e-commerce, Internet banking, smart courier, cheap mobile phone, High-speed Rail, hydropower, DNA sequencing and other fields. In other words, China is showing a vigorous development momentum, becoming a global leader in terms of business models, market applications, and other aspects of business innovation.

At the enterprise level, according to the 2014 survey of 1500 executives released by the Boston Consulting Group entitled, “the world’s 50 most innovative enterprises” shows that 4 Chinese enterprises that were included, namely Lenovo, Xiaomi, Huawei and Tencent; China was fourth in terms of number of companies in the list, after the US (25), Germany (7), and Japan (5).

(3) Some difficulties and obstacles

Although China’s innovation driven development level has been significantly improved, but there are still obstacles and difficulties. The first involves the lack of protection of intellectual property rights. China has established a relatively complete management system for intellectual property rights with requisite legal rules and regulations, there is much contradiction in reality. Between the high cost of law enforcement, and relatively low penalties for illegal acts has "led some companies

to not rely on innovation, but rather opted for imitation and plagiarism to earn a lot of money. Protection for the rights and interests of innovation of enterprises remain difficult.

Secondly, financing difficulties is also a problem. In order for new technology or new ideas to be converted into new arrangements or new industry, venture investment, capital market, credit and other financial support is key. However, at present, while China encourages innovation, entrepreneurial venture capital is not playing its intended role. As some China entrepreneurs regard China investment as "not risk investment, but insurance investment," in the recent periods, venture capital mainly invested in established enterprises, and the insufficient investment went to start-up companies. In addition, capital market support for the innovation driven is insufficient.

Development of emerging industries is still an "off-to-the-side," but a lingering problem. Take the "advance management and selective support" for example. This means that a large number of new enterprises cannot enter the industrial development, due to lack of vitality; which stems from ability to adapt to the mobile Internet, the Internet and other new technologies; and thus become unable to contribute to rapid development. "Pre selective support" in terms of financial investment in science and technology, leads to repeated fragmentation and dispersion, low efficiency, and difficulty in achieving integration of open innovation and collaborative innovation. After restructuring at more than 240 research institutes, prompted by absence of comprehensive research institutions, arrangements for meeting the need for innovation driven development through a modern national innovation system need to be transformed.

(4) Chinese government action

On August 18, 2014, at the seventh meeting of the central financial work leading group, China announced that it would accelerate the implementation of the innovation driven development strategy, proposed to strengthen development

driven by design innovation at the highest level, and innovation and institutional mechanisms, to build a comprehensive pilot area for innovative ideas The overall tentative plan and arrangements are being gradually implemented. For example, China issued an announcement for innovation driven development strategy "on deepening the reform of mechanism of system to accelerate the implementation of a number of opinions" on March 13th this year. This was done to create incentives for innovation in an environment of fair competition, to establish a market-oriented mechanism for technology innovation, strengthen financial innovation, promote the transformation, create an effective training mechanism, promote eight aspects of internationalization and strengthen policy coordination, and put forward 100 specific reform measures for scientific research system and nurturing innovative talent. The implementation of these policies will lead to innovation development that contributes to the formation of "demand oriented, people-oriented comprehensive innovation," in order to carry through the strategy of innovation driven development and will create a favorable environment for public entrepreneurship, and instituting innovation policy and system.

In addition, this will enhance contribution of scientific and technological progress to economic development, present new advantages for China with respect to international competition, bringing about change in image of China associated with low value-added processing and manufacturing, and instead, adding value to Chinese manufacturing and brand image. The end result will be a formation of a new pattern of sustainable development, and initiation of the transformation of the mode of economic development.

IV. Conclusions

(1) South Korea imitated its way to innovation and become the world's important scientific and technological power; its successful experience is worth learning

Korea's progress from a backward agricultural country to become one of the top emerging industrialized countries is closely related to South Korea's efforts to develop science and technology and raise the level of development of its manufacturing industry, thereby improving the international competitiveness of its products. The adoption of imitative innovation is of great importance to technological innovation, as is increasing R&D investment funds and personnel to create proper laws and regulations; all in accordance with the path of innovation being taken and creation of innovation system creation, promoting the transformation and convergence of industrial and technology policy convergence, all of which is worth learning for China.

(2) We should pay attention to avoid the shortcomings that were revealed in Korea's innovation driven process: focus on practical technology, less original technology, lack of small and medium-sized enterprise development and industrial competitiveness in recent years; this would give full play to our potential market, and give rise to reform which would offer unique advantages for achieving innovation-driven growth

South Korea's rise in a short span of 30 years, has made "the miracle on the Han" worth learning. However, problems with the South Korean system of innovation are worth our vigilance and prevention. In recent years, the South Korean industrial competitiveness has been found wanting, the gap with most developed countries is still large with no immediate prospect of reduction, and its per capita GDP is equivalent to half of most countries and 60% of Germany's. South Korea,

it seems, is still facing some obstacles and bottlenecks. The most significant of those obstacles is the government-led R & D model, which can be well-suited to rapid catch-up, but incapable of making progress in the innovative development stage. Forward progress should not depend just on the government support, but instead should rely on innovation. In this regard, fertile ground for innovation should be created, an environment that encourage innovation and entrepreneurship must be promoted, such as in Silicon Valley. Case in point, China has recently began advocated "the entrepreneurial innovation for the public," and likewise, China should avoid previous modes of innovation such as South Korea's government-led industrial technology development. China should rather focus on utilization of market means, cultivating a more innovative environment, take advantage of large market potential, and facilitate reforms; resulting in many unique advantages for innovation-driven development.

(3) Innovation driven industrial upgrading offers huge potential for cooperation in such fields as the electronics, IT, cultural and creative industries; strengthening R&D in science and technology, personnel exchange and cooperation in trade and investment

As mentioned earlier, in their respective processes of industrial development, Korea and China have shown differing areas of strength: South Korea's advantage lay mainly in electronics and IT, cultural and creative fields; while in China, its strength was in electronic and IT, equipment manufacturing, Internet banking, logistics and other fields. Though there is some overlap in terms of fields, the two countries have different characteristics, meaning there is great potential for cooperation between the two sides. For example, according to the Korea Development Institute data, the presence of the South Korean game industry in the Chinese market is rising as is their export market share, from 26.7% in 2008 to 38.6% in 2012. Sales of Korean games in the China market, correspondingly, underwent rapid growth, by 38% in 2013. Growth was more pronounced in the mobile game industry, which

saw an increase of 246.9%. From the viewpoint of technology development, South Korea's main innovation was in practical application of technologies, manufacturing capacity, and the industrial innovation. As for China, its main thrust in innovation was in business model innovation, but while China has competitive in certain subdivisions, is still not formed a powerful system of innovation; its foundations for innovation foundation is not solid; and there is lack of achievement in terms of transformation in the research institutes of higher education institutions, which represents the basis of its based on the strength in innovation.

Needless to say, Korea and China must learn from each other, strengthen cooperation in industrial upgrading driven by innovation driven, jointly set up research funds for research in common areas of interest to both sides. China should learn from South Korea in applying the latter's experiences in scientific and technological achievements to promote those of China, and universities and research institutes in both China and South Korea must undergo changes. At the same time, the two countries should actively promote bilateral exchanges and cooperation in science and technology and personnel, to facilitate construction of research networks in East Asia and internationally, and lastly, promote greater cooperation in trade and investment cooperation.

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3

Gravity, Borders, and the Potential for Economic Integration in the Asia Pacific: Evidence from Korea and Russia

*Kiril Tochkov**

Abstract

Over the past decade, Russia has increasingly focused on promoting the economic development of its Far Eastern region by fostering cross-border cooperation with Northeast Asian countries. Korea has become one of the major trading partners of Russia's Far East (RFE). This paper examines the relations between Korea and Russia at both the national and regional levels using trade data in a gravity-model framework over the period 1992-2014. In particular, the study provides estimates

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of the border effects between the two countries that allow the assessment of the extent of their economic integration. The results provide a mixed picture. The barriers to trade between Korea and Russia at the national level are significantly higher than between Korea and any other of its trading partners in the West or in East Asia. While these adverse border effects have declined in recent years, they remain high. At the regional level, Korea's border effects with RFE are on average not significantly different from those between Korea and the rest of Russia. However, while the former have gradually disappeared between 2010 and 2012, the former have remained largely constant. These findings suggest that RFE is increasingly integrated with Korea but numerous hurdles remain and prevent the full realization of the potential for regional development in Northeast Asia.

JEL Classification: F15, O53, R10
Keywords: Trade, Border effects, Regional integration, Korea, Russia, Northeast Asia

I. Introduction

Over the past 25 years since Korea and Russia established diplomatic relations, both countries experienced a fundamental transformation of their economic and political systems. In the 1990s, expectations were high that democratic reforms, economic liberalization, and globalization would offer both countries a unique chance to foster a close relationship that would prove mutually beneficial. Although Korea has indeed developed into one of Russia's major trading partners, the potential for cross-border economic cooperation has not been fully realized. Recent developments seem to offer new hope that the two countries can deepen their economic ties. This study explores the trade barriers between Korea and Russia and analyzes the potential for closer economic cooperation between the two countries

in the context of regional integration in Northeast Asia (NEA).

The Russian economy has traditionally been oriented towards Europe, and the region west of the Urals has developed as the center of economic, and especially industrial, activity in the country. In contrast, Siberia and the Russian Far East (RFE) have remained sparsely populated, economically underdeveloped, internationally isolated, and focused on the extraction of natural resources. The past two decades have seen profound changes in the global economic and geopolitical structure that have had an impact on regional development and integration in Russia and NEA. The breakdown of the Soviet Union allowed Russia to restore and improve its relations with Japan, China, and Korea. After being sealed off from its NEA neighbors for almost eight decades, RFE was supposed to be one of the main beneficiaries of Russia's opening to the world. However, the difficult economic transition and political instability in Russia coupled with the East Asian Financial Crisis in 1997 and Russia's debt default a year later impeded the expansion of cross-border ties and stalled economic development in the RFE.

Over the past decade, Russia's economic boom driven by high commodity prices on world markets, China's emergence as a global economic superpower, and the deepening integration of Korea's dynamic and innovative economy within NEA have created new opportunities that resulted in a number of national, bilateral, and multilateral initiatives. At the multilateral level, the Greater Tumen Initiative (GTI) aims at promoting regional cooperation between China, Russia, Korea, and Mongolia mainly by facilitating trade, investment, and tourism, and expanding cross-border transportation infrastructure (Wang 2014).[1] Moreover, the creation of a multilateral financial institution focused on supporting development projects in the NEA has been discussed since the 1990s. This idea was realized in part by the founding of the Asian Infrastructure Investment Bank (AIIB) in 2015, although the regional scope of AIIB is broader in that it covers the whole of Asia.

1) GTI was initiated in the 1990s under the auspices of the United Nations Development Program (UNDP) but in 2005 the member states took over the initiative, turning into a multilateral intergovernmental cooperation mechanism (Wang 2014).

The establishment of a free trade area between China and Korea in 2015 has been one of the major bilateral initiatives in NEA for the past decade. In addition, China and Russia have signed a number of agreements aimed at strengthening the economic ties between the two countries. The main goal of the 2009 "Program for Cooperation between the Regions of Siberia and RFE and China's Northeast" is to deepen long-term regional cooperation by expanding cross-border trade, infrastructure and investment (Izotov 2014). Also in 2009, Russia agreed to deliver Siberian oil to China for 20 years using a spur pipeline of the Eastern Siberia-Pacific Ocean Pipeline. Similarly, in 2014, China and Russia negotiated a deal to deliver gas from RFE to China over a 30-year period along the planned "Power of Siberia" pipeline.

Countries in the region have also been active in promoting national-level initiatives with a focus on economic cooperation in the NEA. The Eurasia Initiative announced by Korea's President Park in 2013 targets the expansion of trade, energy, and transportation links between Korea and Russia as well as the promotion of knowledge-based economic development in the region (Lee 2015; Jeh 2015). The initiative places a particular emphasis on establishing logistics networks that would connect Korea to Russia's railway and energy networks, which in turn requires the active engagement of North Korea in the process (Lee 2015; Jeh 2015). Russia's national level strategy with respect to NEA has focused on the economic development of RFE as the key link to regional integration in the Asia-Pacific region (Lee *et al*., 2010). Some of the main components of this strategy include the adoption of the "Socio-Economic Development of the Far East and the Baikal region" program, the creation of a federal-level Ministry for the Development of the Far East in 2012, and plans to create zones of advanced socio-economic development in order to attract foreign investment from NEA (Jeh and Kang 2013; Jeh *et al*. 2014).

These initiatives have had some positive effects. According to Russian customs data, Korea in 2005 was the third largest importer of goods from RFE and the third largest exporter to RFE after China and Japan. Only seven years later, Korea was already the second largest importer from RFE and was exporting twice as much to RFE than Japan, ranking second behind only China. At the same time, the poor

infrastructure, red tape, institutional and legal barriers, haphazard applications of the rule of law, ineffective coordination between federal and local authorities, and high production costs have created obstacles to trade and investment in the region.

The goal of this paper is to examine the relationship and the extent of integration between Korea and Russia at the national as well as at the regional level over the period 1992-2014. For this purpose, trade data is used to estimate a gravity-type model that produces estimates of the border effects between the two countries. These effects measure the cost of moving goods across the border by controlling for the impact of geographical distance and the size of the trading partner's economies and are calculated for the trade between Russia and Korea as well as between RFE and Korea. The objective is to explore whether the barriers to trade as represented by the border effects have increased or declined over time, which in turn can show whether the economic integration of the two countries or regions has deepened.

The issues explored in this study have important policy implications. The weak demand on Western markets for Russia's natural resources in the aftermath of the global economic crisis and the deterioration of political and economic relations with the West as a result of the Ukrainian crisis have compelled Russia to accelerate its economic cooperation with NEA and to speed up the development of RFE. At the same time, Korea is increasingly seeking access to the energy resources and transportation networks in RFE which would not only help expand its foreign trade and investment but would also contribute to its engagement with North Korea. The findings of this study would make it possible to assess the success of both countries' initiatives. This, in turn, will assist policy makers with the decision of whether to revise or expand their current strategies.

The rest of the paper is organized as follows. The next section describes the gravity model that is used to estimate the border effects, while Section 3 discusses briefly the data used. Section 4 presents and interprets the results of the empirical analysis. Section 5 discusses the potential determinants of the border effects between Russia and Korea. The concluding remarks are in Section 6.

II. Methodology

2.1. Theoretical model

The theoretical foundation of the gravity model of trade was first set by Anderson (1979) and later augmented by Anderson and van Wincoop (2003). They assume that each country is specialized in the production of a single good and that consumer preferences are identical, homothetic, and approximated by a constant elasticity of substitution (CES) utility function. The representative consumer of a given country j maximizes the following utility function:

$$U_j = [\sum_{i=1}^{N} \left(\frac{c_{ij}}{\gamma_i} \right)^{\frac{\sigma-1}{\sigma}}]^{\frac{\sigma}{\sigma-1}} \quad (1)$$

subject to the budget constraint

$$y_i = \sum_{i=1}^{N} x_{ij} = \sum_{i=1}^{N} p_{ij} c_{ij} \quad (2)$$

where c_{ij} stands for country j's consumption of the imports from country $i (i = 1, \ldots, N)$, γ_i is a positive distribution parameter representing the share of country j's exports in country i's consumption, and σ is the elasticity of substitution. Furthermore, y_j is the total nominal income of country j, x_{ij} denotes the nominal value of exports from i to j, and p_{ij} is the price of country i's exports faced by country j's consumers. It is assumed that p_{ij} includes transportation costs (i.e., cost including freight), while the supply price in country i, p_i, is net of these costs (i.e., free on board). The relationship between the two is expressed as $p_{ij} = p_i t_{ij}$, where t_{ij} stands for the trade costs between i and j.

The representative consumer's optimization yields

$$x_{ij} = y_i (\frac{\gamma_i p_i t_{ij}}{P_i})^{1-\sigma} \quad (3)$$

where country j's consumer price index, P_j, is given by

$$P_j = [\sum_{i=1}^{N} (\gamma_i p_i t_{ij})^{1-\sigma}]^{\frac{1}{1-\sigma}} \quad (4)$$

The assumption of market clearance implies that $y_i = \sum_{j=1}^{M} x_{ij}$, which can be used to solve for the scaled prices $\{\gamma_i p_i\}$ and then substitute them into equation (3). If trade costs are assumed to be symmetrical ($t_{ij} = t_{ji}$), this yields

$$x_{ij} = \frac{y_i y_j}{y^w} (\frac{t_{ij}}{P_i P_j})^{1-\sigma} \quad (5)$$

where P_i is country i's consumer price index and $y^w = \sum_{j=1}^{M} y_i$ is the world nominal income. The gravity model in equation (5) indicates that bilateral trade depends on the world income shares of the two economies, the trade costs, and the price index of each country. Anderson and van Wincoop (2003) refer to P_i and P_j as multilateral trade resistance terms because each is a function of all bilateral trade costs and not only those between i and j. In other words, bilateral trade is determined by the trade barriers between both countries relative to the average trade barriers that each of them faces with all their trading partners.

2.2. Empirical model

To estimate the gravity model empirically, equation (5) is linearized and becomes

$$\ln x_{ij} = \ln (y_i y_j) - \ln y^w + (1+\sigma) \ln t_{ij} - (1-\sigma) \ln P_i - (1-\sigma) \ln P_j \quad (6)$$

Some studies interpret P_i and P_j literally as aggregate price levels and use the corresponding statistical indicators in their estimation (Baier and Bergstrand 2001). However, as multilateral resistance terms, the two variables are not observed in practice because they have a much broader definition of trade costs than price indexes. Anderson and van Wincoop (2003) solve for P_i and P_j after obtaining

the bilateral trade cost variable, t_{ij}, but this strategy requires a custom-programmed simultaneous estimation of a large system of equations. As an alternative, Feenstra (2002) suggests using exporter (country i) and importer (country j) fixed effects to account for the two unobserved multilateral resistance terms, which also produces a consistent estimate of the average border effect with a very similar magnitude.

The main variable of interest in the gravity model is the bilateral trade cost factor, which is not observed in practice but can be approximated in line with Anderson and van Wincoop (2003) as follows

$$t_{ij} = b_{ij} d_{ij}^{p} e^{\tau ij} \tag{7}$$

where b_{ij} represents the border effect and d_{ij} the distance between countries i and j, while τ_{ij} includes all remaining factors that could affect bilateral trade costs, such as contiguous borders, common language, colonial ties, free trade agreements, etc. The border effect is defined as $b_{ij} = b^{1-\delta_{ij}}$, where δ_{ij} is a dummy variable that takes the value of one for intranational trade (i.e., i and j are regions of the same country) and zero for cross-border trade (i.e., i and j are in different countries).

Inserting equation (7) into (6) yields

$$\ln x_i = \ln(y_i y_j) - \ln y^{w} + (1-\sigma)\ln b(1-\delta_{ij}) + (1-\sigma)\rho \ln d_{ij} + (1-\sigma)\tau_{ij} - (1-\sigma)\ln P_i - (1-\sigma)\ln P_j \tag{8}$$

The stochastic form of the gravity model in equation (8) is then given by

$$\ln\left(\frac{x_{ij}}{y_i y_j}\right) = \alpha_i \lambda_i + \alpha_j \lambda_j + \beta_1 \ln d_{ij} + \beta_2 \tau_{ij} + \beta_3 (1-\delta_{ij}) + \epsilon_{ij} \tag{9}$$

where following Feenstra's (2002) approach, λ_i and λ_j denote the exporter and importer fixed effects, respectively, with $\alpha_i = \ln(P_i)^{\sigma-1}$ and $\alpha_j = \ln(P_j)^{\sigma-1}$. In particular, $\lambda_i(\lambda_j)$ is a dummy variable that takes the value of one if country i (country j) is the exporter (importer), and zero otherwise.[2] Furthermore, $\beta_1 = (1-\sigma)\rho$, $\beta_2 = (1-\sigma)$, and $\beta_3 = (1-\sigma)\ln b$. In line with Anderson and van Wincoop (2003), the dependent variable is defined as the natural logarithm of size-adjusted

2) The world nominal income is no longer included in equation (9) because it has been absorbed by the fixed effects as it does not fluctuate across countries.

trade, which carries several advantages. Bilateral trade adjusted for the size of the economies eliminates the need for converting nominal trade flows into real values, which can be problematic (Baldwin and Taglione 2006). In addition, it resolves the issue of the endogeneity of aggregate income and helps to deal with heteroscedasticity (Olivero and Yotov 2012).

The gravity model in equation (9) is adapted in the context of the current paper as follows

$$\ln\left(\frac{x_{ijt}}{y_{it}y_{jt}}\right) = \alpha_i\lambda_i + \alpha_j\lambda_j + \eta_t + \beta_1 \ln d_{ij} + \beta_2 CONT_{ij} + \beta_3 FAT + \beta_4(KOR\times RU) + \beta_6(RU\times ROW) + \beta_7(ROW\times ROW) + \epsilon_{ijt} \quad (10)$$

The panel structure of the data is exploited by allowing exports and aggregate income to vary across time as well. In addition, time fixed effects (η_t) are included in the equation to control for any factors that fluctuate across time but not across countries. The trade barrier indicator, τ_{ij}, is now broken down into two components. Contiguous borders (CONT) is a dummy variable that takes the value of one if countries i and j share a border, and zero otherwise. Free trade agreement (FTA) is a dummy variable that takes the value of one for country pairs that have implemented an FTA in bilateral trade, and zero otherwise.

Most importantly, the model in equation (10) includes four border effects. The dummy variables $KOR\times RU$ and $KOR\times ROW$ take the value of one when Korea trades with the Russia and the rest of the world, respectively, and zero otherwise. The remaining two dummy variables, $RU\times ROW$ and $ROW\times ROW$, capture the effects of the borders on trade between Russia and the rest of the world and within the rest of the world, respectively. The control group for all border effects is the trade between Korea and the rest of the world.

As mentioned above, the estimates of the coefficients β_4 through β_7 are each equal to $\hat{\beta}=(1-\sigma)\ln b$, whereby the ad-valorem tariff equivalent of the border barrier is defined as $b-1$. Dividing both sides of the equation by $(1-\sigma)$ and taking

the exponent yields $b = \exp[\frac{\hat{\beta}}{1-\sigma}]$. Accordingly, the border effect is obtained by $\exp[\frac{\hat{\beta}}{1-\sigma}] - 1$. In line with previous studies (Head and Ries 2001, Anderson and van Wincoop 2003), the elasticity of substitution, σ, is assumed to range between 5 and 10 and the tariff equivalent of the border is calculated for three σ values (5, 7, and 10).

III. Data

The data on bilateral trade over the period 1992-2014 is obtained from the International Monetary Fund's Direction of Trade Statistics (DOTS) database. Korea's trading partners included in the analysis are the European Union (EU) and the Association of South East Asian Nations (ASEAN) (each of which is treated as a single entity), the United States, Russia, China (which includes Hong Kong), Japan, and Taiwan. In some specifications of the model, all countries except for Russia and Korea are lumped together as rest of the world (ROW), while in others they are divided into Western countries (EU and US), East Asia (China, Japan and Taiwan) and ASEAN. In the latter case, Korea's trade with the West is used as a benchmark for evaluating the border effects between Korea and Russia.

The regional data for Russia includes the trade of RFE with China, Japan, and Korea and was collected from the Customs Office of the Russian Federation. Due to data availability, the sample period is limited to the years 2005-2012. The data for trade between RFE and the rest of Russia was obtained from the Federal State Statistics Service of Russia. It is worth mentioning that the RFE is not treated as a single entity but rather the trade flows of each of the 9 RFE regions is included separately. In the regional analysis, the benchmark for the border effect between Korea and Russia is the trade between RFE and the rest of Russia.

Geographical distance is measured as the great-circle distance in kilometers between the capital cities or administrative centers of the trading partners. Data on gross domestic product (GDP) by country measured in current US dollars was obtained from the World Bank's World Development Indicators database. The GDP of Russian regions in rubles was collected from the Federal State Statistics Service of Russia and converted into US dollars using the average annual exchange rate reported by the Central Bank of Russia.

IV. Results

4.1. National level

This section begins with the analysis of trade flows between Korea and some of its major trading partners over the period 1992-2014. The exports shown in Table 1 indicate that in the early 1990s, Japan, the US, and the EU were the main destinations for Korean goods and accounted for more than half of the total exports. While the dollar value of exports increased in the following two decades, the percentage share of these three trading partners decreased by half. At the same time, China (which also includes Hong Kong) has been absorbing an increasingly

Table 1. Korean exports to its major trading partners, 1992-2014

(Unit: billion USD)

	Russia		China		Japan		Taiwan		ASEAN		EU		USA	
	USD	%	USD	%	USD	%	USD	%	USD	%	USD	%	USD	%
1992	0.1	0.2	8.6	11.1	11.6	15.0	2.3	2.9	9.0	11.7	10.3	13.3	18.2	23.5
1993	0.6	0.7	11.6	13.5	11.5	13.5	2.3	2.7	10.1	11.7	10.8	12.5	18.2	21.2
1994	0.9	1.0	14.2	14.0	13.5	13.3	2.7	2.7	12.4	12.2	12.2	12.1	20.7	20.4
1995	1.4	1.1	19.8	15.1	17.0	13.0	3.9	3.0	17.9	13.6	17.9	13.6	24.3	18.5

1996	1.9	1.4	22.5	16.3	15.8	11.5	4.0	2.9	20.1	14.6	17.6	12.8	21.9	15.9
1997	1.7	1.2	25.3	17.6	14.8	10.3	4.6	3.2	20.1	14.0	19.3	13.4	21.8	15.2
1998	1.1	0.8	21.3	16.0	12.3	9.2	5.2	3.9	15.1	11.4	20.9	15.7	23.1	17.4
1999	0.6	0.4	22.7	15.8	15.9	11.0	6.4	4.4	17.4	12.1	22.2	15.4	29.6	20.6
2000	0.7	0.5	29.2	16.9	20.5	11.9	8.0	4.7	19.7	11.5	24.9	14.5	37.8	21.9
2001	0.9	0.6	27.6	18.4	16.5	11.0	5.8	3.9	16.1	10.7	21.3	14.2	31.4	20.8
2002	1.1	0.7	33.9	20.9	15.1	9.3	6.6	4.1	18.1	11.2	24.0	14.8	32.9	20.3
2003	1.7	0.9	49.8	25.7	17.3	8.9	7.0	3.6	19.9	10.3	27.3	14.1	34.4	17.7
2004	2.3	0.9	67.9	26.8	21.7	8.6	9.8	3.9	23.7	9.3	38.5	15.2	43.0	17.0
2005	3.9	1.4	77.4	27.2	24.0	8.5	10.9	3.8	27.1	9.5	44.4	15.6	41.5	14.6
2006	5.2	1.6	88.4	27.2	26.5	8.2	13.0	4.0	31.7	9.7	49.4	15.2	43.3	13.3
2007	8.1	2.2	100.6	27.1	26.4	7.1	13.0	3.5	38.1	10.3	56.3	15.1	45.9	12.4
2008	9.8	2.3	111.2	26.3	28.3	6.7	11.5	2.7	48.6	11.5	58.7	13.9	46.5	11.0
2009	4.2	1.2	106.4	29.3	21.8	6.0	9.5	2.6	40.2	11.1	46.7	12.9	37.8	10.4
2010	7.8	1.7	142.1	30.5	28.2	6.0	14.8	3.2	52.2	11.2	53.7	11.5	50.0	10.7
2011	10.3	1.9	165.2	29.7	39.7	7.2	18.2	3.3	70.1	12.6	56.4	10.2	56.4	10.2
2012	11.1	2.0	166.9	30.5	38.8	7.1	14.8	2.7	76.9	14.0	49.7	9.1	58.8	10.7
2013	11.2	2.0	173.6	31.0	34.7	6.3	15.7	2.8	80.4	14.4	49.1	8.7	62.3	11.1
2014	10.1	1.8	172.5	30.1	32.2	5.6	15.1	2.6	82.7	14.4	52.2	9.1	70.6	12.3

Note: Exports are reported in billions USD and as a percentage share of Korea's total world exports.
Source: DOTS.

larger share of Korean export that reached 30% in 2014, exceeding the combined contribution of Japan, the US, and the EU. While exports to Taiwan and ASEAN intensified in dollar terms, their shares remained relatively stable. Compared to other trading partners, Russia showed relatively modest levels of Korean imports. Only since 2005 exports began to climb and their dollar value more than doubled over a period of five years. However, the share of Korean exports to Russia in total exports never exceeded 2%.

On the one hand, these numbers are not surprising given that Russia and Korea established diplomatic relations only in 1991. In addition, Russia experienced a difficult period of economic transition and financial crises over the 1990s. On the other hand, the share of Korean exports destined for Russia is disappointing when the geographic proximity and the complementarity of the two economies are taken into account.

Table 2 presents a similar picture for Korean imports. Although Russia exports more to Korea than it imports, the amounts involved are relatively small and are dwarfed by the trade between China and Korea. Moreover, the importance of Japan, the US, and the EU as suppliers to the Korean market has declined dramatically over the past two decades, which again parallels the rise of China as one of the key trading partners.

Although the data in Tables 1 and 2 already indicate that Korea's trade with Russia is much smaller in scale than with other countries, it is necessary to control for the effects of size and geographical distance before any conclusions can be made. For this purpose, the gravity model is estimated and the results are shown in Table 3. The baseline specification includes Russia, Korea, and its six other trading partners in the sample. The border effects are estimated via four variables that account for the trade between Korea and Russia, between Korea and the six countries, between Russia and the six countries and among the six countries themselves. The trade between Korea and the six countries is chosen as the benchmark and its variable is dropped from the equation as it is represented by the constant.

Table 2. Korean imports from its major trading partners, 1992-2014

(Unit: billion USD)

	Russia		China		Japan		Taiwan		ASEAN		EU		USA	
	USD	%	USD	%	USD	%	USD	%	USD	%	USD	%	USD	%
1992	0.1	0.1	4.5	5.4	19.5	23.5	1.3	1.6	6.8	8.2	10.6	12.8	18.3	22.1
1993	1.0	1.1	4.9	5.6	20.0	23.1	1.4	1.6	7.0	8.1	11.3	13.0	18.0	20.7
1994	1.2	1.2	6.1	6.0	25.4	24.8	1.8	1.8	7.5	7.4	14.8	14.5	21.6	21.1
1995	1.9	1.4	8.2	6.1	32.6	24.1	2.6	1.9	9.7	7.2	18.6	13.7	30.4	22.5
1996	1.8	1.2	9.7	6.4	31.4	20.9	2.7	1.8	11.6	7.7	21.6	14.4	33.3	22.2
1997	1.5	1.0	10.8	7.5	27.8	19.2	2.4	1.7	12.0	8.3	19.3	13.3	30.0	20.7
1998	1.0	1.1	7.0	7.5	16.8	18.0	1.7	1.8	8.8	9.4	11.2	12.0	20.4	21.9
1999	1.6	1.3	9.8	8.1	24.1	20.2	3.0	2.5	11.9	10.0	12.9	10.8	24.9	20.8
2000	2.1	1.3	14.1	8.8	31.8	19.8	4.7	2.9	17.7	11.0	16.2	10.1	29.3	18.2
2001	1.9	1.4	14.5	10.3	26.6	18.9	4.3	3.0	15.4	10.9	15.3	10.9	22.4	15.9
2002	2.2	1.5	19.1	12.6	29.9	19.6	4.8	3.2	16.2	10.7	17.6	11.6	23.1	15.2
2003	2.5	1.4	24.6	13.8	36.3	20.3	5.9	3.3	17.9	10.0	19.9	11.1	24.9	13.9
2004	3.7	1.6	32.9	14.6	46.1	20.6	7.3	3.3	21.7	9.6	24.4	10.9	28.9	12.9
2005	3.9	1.5	40.7	15.6	48.4	18.5	8.0	3.1	25.2	9.7	27.4	10.5	30.8	11.8
2006	4.6	1.5	50.7	16.4	51.9	16.8	9.3	3.0	28.4	9.2	30.2	9.8	33.8	10.9
2007	7.0	2.0	65.2	18.3	56.3	15.8	10.0	2.8	32.0	9.0	36.9	10.3	37.4	10.5
2008	8.3	1.9	79.2	18.2	61.0	14.0	10.6	2.4	39.0	9.0	40.0	9.2	38.6	8.9
2009	5.8	1.8	55.7	17.3	49.4	15.3	9.9	3.0	33.0	10.2	32.3	10.0	29.2	9.0
2010	9.9	2.3	73.5	17.3	64.3	15.1	13.6	3.2	42.4	10.0	38.7	9.1	40.6	9.5
2011	10.9	2.1	88.7	16.9	68.3	13.0	14.7	2.8	50.7	9.7	47.4	9.0	44.8	8.5
2012	11.4	2.2	82.8	15.9	64.4	12.4	14.0	2.7	49.5	9.5	50.4	9.7	43.7	8.4
2013	11.5	2.2	85.0	16.5	60.0	11.6	14.6	2.8	50.8	9.8	56.2	10.9	41.8	8.1
2014	15.7	3.0	91.8	17.5	53.8	10.2	15.7	3.0	51.3	9.8	62.4	11.9	45.5	8.7

Note: Imports are reported in billions USD and as a percentage share of Korea's total world exports.
Source: DOTS.

The estimates in the first column of Table 3 show that the coefficients of the control variable have the expected signs. Distance has an adverse effect, while contiguity and FTAs promote trade. The coefficient for FTA is not statistically significant, which is mainly due to the fact that the number of FTAs, especially in East Asia, has only increased in recent years. The variable of interest is the dummy representing trade between Russia and Korea.[3] The negative sign of the coefficient indicates that the value of size-adjusted trade between Russia and Korea is lower than the trade between Korea and its six main trading partners. For a better interpretation of the magnitude, the coefficient is converted into the tariff equivalent of the border effect using three different values for the elasticity of substitution. The resulting numbers are shown in bold and suggest that the border between Russia and Korea adds a tariff equivalent of 41.4% (assuming σ=7) above the one that exists between Korea and its six main trading partners. Depending on the elasticity of substitution, this number can vary between 26% and 68%. This border effect is statistically significant and confirms the idea that even after controlling for distance and contiguity the trade between Russia and Korea is not optimal.

Table 3. Baseline regression estimates and border effects

	(1)			(2)			(3)		
$KOR \times RU$	-2.08*** (0.16)	σ=5	68.2	-2.89*** (0.12)	σ=5	105.96	93-98	-3.14***	68.76
		σ=7	41.4		σ=7	61.88	99-08	-2.80***	59.47
		σ=10	25.9		σ=10	37.87	08-14	-1.96***	38.63
$KOR \times EA$	-	-	-	-1.78*** (0.20)	σ=5	56.05	93-98	-1.89***	37.03
					σ=7	34.54	99-08	-0.68	12.00
					σ=10	21.87	08-14	-1.58***	30.13

3) The coefficients for the variables representing trade between Russia and the other countries as well as trade among the other countries themselves are not reported, as their interpretation is not relevant in the context of the paper. The results are available from the author upon request.

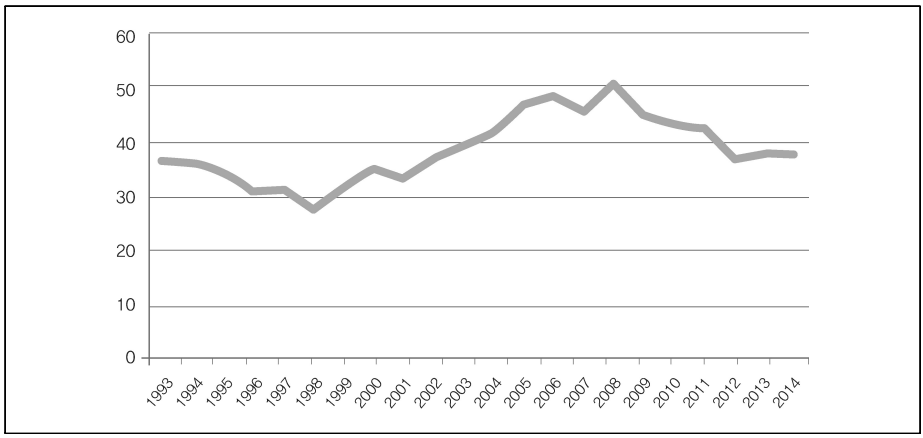
$KOR \times ASEAN$	-	-	-	-0.57*** (0.11)	σ=5 σ=7 σ=10	15.32 9.97 6.54	93-98 99-08 08-14	-0.67*** -0.54* -0.31	11.81 9.42 5.30
$\ln(Distance)$	-1.60*** (0.04)	-	-	-1.08*** (0.10)	-	-	-	-	-
$Contiguity$	0.43*** (0.07)	-	-	1.30*** (0.06)	-	-	-	-	-
FAT	0.08 (0.06)	-	-	-0.12 (0.08)	-	-	-	-	-
$Contant$	1.34*** (0.34)	-	-	-2.69*** (0.96)	-	-	-	-	-
Time FE Exp./Imp. FE	Yes Yes	-	-	Yes Yes	-	-	-	-	-
Obs. R^2	1334 0.93	-	-	1334 0.92	-	-	-	-	-

Note: *** p<.01; **p<0.05; *p<.10. The estimated coefficients for the border effects between countries or group of countries not involving Korea and Russia are not reported in the table but are available upon request. The estimates in the third column assume an elasticity of substitution of σ=7. Robust standard errors are in parenthesis.
Source: Author's calculations.

Fig. 1 illustrates the tariff equivalent of the border effects for individual years. It is evident that over the early 1990s the border effect was decreasing and reached a low of 28% in 1998. However, over the following decade it increased steadily to an all-time high of 50% in 2008. Over the past few years, the border effect has again returned to the same level as in 1993. Interestingly, Russia's entry into the WTO in 2012 does not seem to have had any immediate impact on its border effects with Korea in relative terms.

Figure 1. The border effect on trade between Korea and Russia(Tariff equivalent)

(Unit: %)



Note: Calculations conducted assuming an elasticity of substitution σ=7.
Source: Author's calculations

The increase in the border effect between 1998 and 2008 is most likely caused by changes in the shares of trade. As can be seen from Tables 1 and 2, this is the period when both Russian exports to and imports from Korea grew almost tenfold but from a relatively low base of $1 billion in 1998. However, this was not sufficient to compensate for the rise in trade between Korea and its other trading partners. Specifically, China's trade with Korea also expanded by a factor of six for exports and 10 for imports but the starting point in 1998 was more than 20 times larger than Russia's in the case of exports and 7 times larger for imports.

The reason for the decline in the border effect after 2008 seems to be the global financial crisis and the economic downturn that followed, which slowed down the relative expansion of trade between Korea and its main trading partners. To examine the factors behind the changes in the border effects over the sample period in greater depth, the regression model is modified by decomposing Korea's six trading partners into three groups: East Asia (China, Japan, and Taiwan), the West (US and EU), and ASEAN and estimating separate border effects. The results

reported in the second column of Table 3 confirm the previous findings of a negative and significant border effect between Russia and Korea. The magnitude of the coefficient is slightly higher than in the first column and produces a tariff equivalent of the border of 62%.[4)]

The decomposition of the trading partners reveals that the border between Korea and its East Asian neighbors also serves as a trade barrier that imposes a tariff equivalent of 35% above the one that exists in Korea's trade with the West. Although the ASEAN countries also have a significant border effect with Korea, its magnitude relative to the benchmark is only around 10%. Accordingly, the EU and the US, which serve as the benchmark in this specification, have the lowest border effects with Korea among all countries included in the model. In other words, after taking into account the effects of distance and contiguity, Korea appears to be better integrated with the West than with East and Southeast Asia. In that context, Russia is ranked last with border effects that are twice as large as those for East Asia and six times larger than for the ASEAN.

The third column of Table 3 displays the coefficients and border effects for the same constellation of countries for three different periods (1993-1998, 1999-2008, and 2009-2014). The picture that emerges confirms broadly the factors behind the changing trends in Fig. 1 but also provides more detailed insights. Relative to the trade barriers between Korea and the West, the border effect between Korea and Russia decreases in successive periods but remains significant. However, the decline between the period before and after 2008 is far greater than between the years before and after 1998, which is in line with the decreasing border effects with the rest of the world after 2008 in Fig. 1.

East Asian countries exhibit a very different pattern. The tariff equivalent of the border effect is just 37% before 1998 and drops to 12% over the following decade, which is statistically not significantly different from the trade barriers between

4) For simplicity, the rest of the paper will focus on the border effects estimated with an elasticity substitution of $\sigma = 7$

Korea and the West. Accordingly, thanks to the rapid economic growth in China during this period, East Asian countries managed to strengthen their integration with Korea to levels previously reserved for the EU and the US. This relative improvement for East Asia over the 2000s is the reason behind the growing border effect between Korea and Russia relative to the rest of the world illustrated in Fig. 1. In the aftermath of the global financial crisis, the border effects between Korea and East Asia increase and become significant again, which, in turn, helps Russia to experience a relative decline in its trade hurdles with Korea after 2008. The ASEAN are found to have the most consistent integration process with Korea as their border effects decrease in magnitude and eventually even lose statistical significance relative to the West.

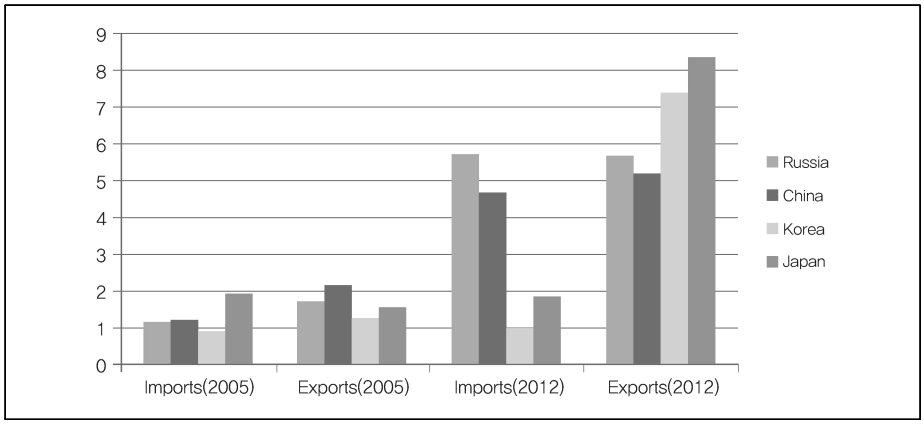
4.2. Regional level

In the previous section, the border effects between Korea and Russia were estimated at the national level. Given the size of Russia, spatial differences in economic activity across regions mean that national averages could provide a misleading picture of the trade barriers between Korea and various Russian regions. In particular, the regions of the Russian Far East (RFE) are geographically significantly closer to Korea than the Western part of the country and are therefore likely to have more intensive economic ties with Northeast Asia. Moreover, the Russian government has chosen RFE as the key link in Russia's integration into the Asia-Pacific regions. The Korean government and businesses are also interested in the economic cooperation with RFE.

To explore the extent of trade links between Korea and RFE, the gravity analysis is now applied to Russian regional data. Specifically, a four-country model is assumed whereby RFE is treated as a separate entity that trades with the rest of Russia, Korea, and Northeast Asia (China and Japan). The descriptive statistics of the trade flows between these four entities are illustrated for two years in Fig. 2.

Figure 2. Exports and imports of the Russian Far East, 2005 and 2012

(Unit: billions USD)



Source: Authors calculations based on data from the Federal State Statistical Service of Russia.

It is evident that between 2005 and 2012, RFE's trade with both Russia and Northeast Asia intensified. RFE's trade with the rest of Russia more than tripled, whereby RFE ran a small trade surplus. Exports to Northeast Asian countries quadrupled, while imports doubled. RFE's trade surplus with Northeast Asia increased by $11 billion. In 2005, Korea was the third largest trade partner of RFE in Northeast Asia behind China and Japan. Seven years later, Korea had become the second largest importer of RFE goods after Japan but China's exports to RFE dwarfed both Japan's and Korea's combined.

Table 4. Regression estimates and border effects for the Russian Far East, 2005-2012

	(1)			(2)			(3)		
$KOR \times RFE$	-1.05*** (0.22)	σ=5 σ=7 σ=10	30.0 19.1 12.4	-0.38 (0.44)	σ=5 σ=7 σ=10	9.97 6.54 4.31	05-08 09-12	-1.04*** -0.09	18.93 1.51
$KOR \times RU$	-1.62*** (0.46)	σ=5 σ=7 σ=10	49.9 31.0 19.7	-	-	-	05-08 09-12	-2.00*** -2.08***	39.56 41.44
$RU \times RFE$	-	-	-	0.77** (0.36)	σ=5 σ=7 σ=10	-17.51 -12.04 -8.20	-	-	-
$\ln(Distance)$	0.10 (0.24)	-	-	-0.01 (0.22)	-	-	-	-	-
$Contiguity$	1.68*** (0.21)	-	-	1.75*** (0.19)	-	-	-	-	-
$Contant$	-30.82*** (1.78)	-	-	-32.20*** (1.90)	-	-	-	-	-
Time FE Exp./Imp. FE	Yes Yes	-	-	Yes Yes	-	-	-	-	-
Obs. R^2	650 0.55	-	-	650 0.53	-	-	-	-	-

Note: *** p<.01; **p<0.05; *p<.10. The estimated coefficients for the border effects between countries or regions not involving Korea and RFE are not reported in the table but are available upon request. The estimates in the third column assume an elasticity of substitution of σ=7. Robust standard errors are in parenthesis.
Source: Author's calculations.

More importantly, Northeast Asia's trade with RFE was far greater than the trade between RFE and the rest of Russia over the entire period 2005-2012. This suggests that RFE might be better integrated within Northeast Asia than within the national borders of Russia. However, this could simply be the result of geographical proximity which conceals the true nature of the economic links between RFE and its Northeast Asian neighbors.

The results of the gravity model estimation are presented in Table 4. For the specification in the first column, the trade barriers between Russia and RFE serve as benchmark. The estimates show that after controlling for distance and contiguity the border between Korea and RFE has a negative and significant effect on trade relative to the benchmark. But the magnitude of the coefficient is relatively low and translates into a relative tariff equivalent of 19%. In contrast, the border between Korea and the rest of Russia exhibits a tariff equivalent of 31%. This means that RFE is better integrated within Russia than with Korea but the trade barriers between RFE and Korea do not seem particularly high in comparison.

The additional cost of crossing the border between Korea and the rest of Russia is higher relative to the trade of RFE with both Korea and other Russian regions. In the second column of Table 4, the estimation uses the trade between Korea and the rest of Russia as benchmark and the results indicate that the difference in the border effects between Korea and either RFE or the rest of Russia is not statistically significant. In other words, this means that once we control for geographical proximity, Korea does not have closer trade relations with RFE relative to the rest of Russia. This would seem to question the role of RFE as a potential hub of economic cooperation between Russia and Northeast Asia.

To test the robustness of these findings, the change in the border effects over time is explored in more detail. The third column of Table 4 reports the results for two subperiods using again trade within Russia as the benchmark. For the period 2005-08, the border effect between Korea and the rest of Russia is around twice as large as the one between Russia and RFE. This time the difference is statistically significant and indicates that indeed RFE, in comparison to Russia, has lower barriers to trade with Korea. In the period 2009-2012, the border effect between Korea and RFE disappears, while the one between the rest of Russia and Korea remains almost constant. This is a surprising result for two reasons. First, it suggests that after 2009 RFE and Korea have become as integrated as RFE and the rest of Russia, keeping the geographical distance and contiguity constant. Second, it shows that there is a significant decline in RFE's border effects with

Korea over time in relative terms. Accordingly, it seems that RFE is indeed turning gradually into a key link in the economic cooperation between Russia and Korea.

V. Potential Determinants of the Border Effects

The main results of the analysis indicate that the border between Korea and Russia represents a much bigger obstacle to trade than the borders with its Northeast Asian neighbors and Western countries. There is some hope that these obstacles to trade are on the decline, especially in RFE. Nevertheless, the findings make it obvious that there is a lot of room for improvement.

One of the main barriers to trade are tariffs and duties imposed on imported goods. Russia joined the WTO in 2012 and its average tariffs have decreased accordingly. Russia has also formed a customs union with Kazakhstan and Belarus which was absorbed into the Eurasian Economic Union in 2015. But most of Russia's trade agreements are with former Soviet countries that are much smaller in size and do not offer significant economic benefits to Russia. Korea on the other hand has implemented a large number of FTAs with the largest Western countries such as EU and the US but also with regional blocs such as the ASEAN and other countries in the Asia Pacific such as Singapore and Chile. It is therefore not surprising to see that border effects between Korea and the West are lower than between Korea and Russia.

In the case of Korean trade with RFE and the rest of Russia, however, tariffs cannot explain the border effects because tariffs are implemented at the national level and thus do not provide RFE with an advantage over the rest of Russia. Arguably, the larger part of the border effects between RFE and Korea is accounted for by non-tariff barriers, which to some extent are also applicable to the trade between Korea and Russia in general.

One of the key non-tariff barriers are the transportation costs which depend on the availability and quality of infrastructure. In Russia, and in RFE in particular, the infrastructure is in poor shape. In many parts of RFE, there are no permanent roads and if such exist, they are often accessible only to vehicles adapted to the roughest road conditions. Bridges across major rivers are few and far apart. For instance, there is not a single bridge across the Amur River that connects China and Russia. Case in point, trade across the Amur intensifies in winter because trucks with goods can cross the frozen river. Furthermore, the Trans-Siberian railway is a major transportation artery across Russia, and indeed Northeast Asia. However, the freight costs on the Russian railways are high enough to deter foreign investors who prefer to use the maritime routes instead. Last but not least, the dismal state of logistical services in Russia means that the railways do not offer a convenient trade route for Asian exports to Europe. The Greater Tumen Initiative and the Eurasia Initiative focus on linking Korea to the transportation network of Russia, which is particularly important as Korea does not share a land border with Russia. However, onerous bureaucratic hurdles involved in handling cargo and insufficient coordination between port and railways services in Russia are certainly contributing to the high border effect between the two countries (Kanaev 2015).

Another major obstacle is that goods produced in Russia are not competitive on world markets (Korenevsky 2004). This creates concerns at the local and national levels in Russia that eliminating trade barriers will expose domestic industries to foreign competition with detrimental effects. This, in turn, inhibits measures aimed at facilitating border controls, building cross-border infrastructure and promoting the integration of RFE regions with their neighbors in Northeast Asia.

Central-local relations in Russia also have an adverse effect. The strong centralization tendencies leave little room for decision making or initiatives at the local level (Glazyryna, Faleichik and Faleichik 2012). The top-down approach of the federal government often leads to resistance and inertia on the local level. National-level initiatives for cross-border integration create a lot of media attention but often prove ineffective over the long run due to lack of enthusiasm, financial

funds or infeasibility at the local level. At the same time, local politicians who derive advantages from the inefficiencies of the institutional and economic system are reluctant to conduct reforms.

Surveys have indicated that production costs, transportation, and red-tape are the biggest problems for Korean businesses in Russia (Lee et al. 2010). Inefficiencies in the legal and institutional environment, bureaucratic procedures that breed corruption and red tape, lack of support from local authorities for foreign investors, and the lack of funds to provide adequate transportation infrastructure and other public goods create risks and do not contribute to a favorable environment for trade and investment. All of these factors are reflected in the border effects reported in the previous section.

VI. Conclusions

Korea and Russia find themselves at a major crossroads in the second decade of the 21st century. Korea as a highly developed economy and a member of the OECD club looks for more efficient ways to distribute its goods and services across the globe and to invest in profitable projects abroad. The deterioration of Russia's relations with Europe and the US has led to a strategy focused on fostering closer relations with Northeast Asia. Russia's exports of natural resources and its demand for manufactured goods from abroad exhibit major complementarities with the economies of China, Korea and Japan, which in turn seek cheap resources for their manufacturing sectors. This paper examined the extent of economic links between Korea and Russia relative to other countries in a gravity model framework that employs trade data over the period 1992-2014.

The results of the empirical analysis provide a mixed picture. At the level of countries, the barriers to trade between Korea and Russia are significantly higher

than between Korea and any other of its trading partners in the West or in East Asia. While these adverse border effects have been on the decline in recent years, they remain on average high and amount to a tariff of about 40% in addition to the trade barriers faced by Korea's other major trading partners. While Korea has concluded FTAs with major global economies, Russia's entry into the WTO seems to have had little impact on its trade with Korea relative to other major Western and East Asian economies.

The paper also explores the trade between Korea, RFE and the rest of Russia. This regional dimension of the analysis indicates that RFE and the rest of Russia are better integrated with each other than anyone of them is with Korea. This is understandable given that they are part of one country but the lack of a significant difference in the border effects also means that RFE does offer any particular benefits as a hub of Russia's integration with Northeast Asia beyond geographical proximity. However, the results show that the border effect between RFE and Korea has decreased over time and that it has in fact disappeared in the early 2010s. In contrast, Korea's border effect with the rest of Russia has remained largely constant. This seems to indicate that the national, bilateral, and multilateral initiatives aimed at fostering regional integration in NEA, and between Korea and Russia in particular, are beginning to have a positive effect. The conclusion is that RFE's integration with Korea is intensifying and offers hope for a mutually beneficial relationship in the future.

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4

Korea's FTA Strategy and Its Implications to China

*ZHOU Mi**

I. INTRODUCTION

As allowed by the WTO, Regional Trade Agreements is one of the most important exceptions in the multilateral trade and economic systems. Compared with the complicated requirements and benefits of multilateral trade systems of WTO, consensus for bilateral platform consensus can be reached more easily and efficiently. When the negotiation for DDA is suspended, the process of RTAs became much quicker. There are 612 notifications to WTO as of June 2015, compared to only 43 before the establishment of the WTO establishment in 1995.

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Korea's FTA strategy represents a unique case for the world. Following its FTA roadmap, Korea has become "the hub of FTAs", which provides much more opportunities for its domestic enterprises and those in its FTA partner countries. There are certain characteristics and pattern of in Korea's FTA negotiating process. When Korea started to negotiate FTAs, it did not have an abundance of experience; Korean enterprises had few ideas as to how they could benefit from FTAs, with some of them even questioning and opposing FTAs. But as a result of clear determination and strong push from the government, Korea has successfully established its FTA network, which is not easy especially as the financial crisis was unfolding and protectionism prevailed in many countries around the world.

China has proposed its own FTA strategies and experienced a tumultuous process of FTA development. There are already 10+ FTA coming into force related to China. Although prevailing conditions in China and Korea were different, it cannot be denied that the two countries also share common or similar situations. And by benchmarking the experiences of Korea and the lessons it learned on the FTAs, China can improve the efficiency of its negotiation and make better use of these important platforms.

Researchers, most of whom are from Korea, has conducted research to discuss Korea's FTA strategy. Oxford Analytica Daily (2011) discussed the FTA effects and believed the FTA passage will spur further trade deals; automobiles, electronic goods and telephone handsets can benefit as a result, while agriculture and fisheries stood to lose much with the FTA. Horng and Der-Chin (2012) summarized the EU's FTA policy update and pointed out that for the EU, Korea is regarded one of the first candidates for negotiation of a new generation FTA. Li Xiangyang discussed the development of US's FTA strategy, who wants to strengthen its position in the global trade system and is busy with the Mega agreements like the TPP and TTIP. Jessica Seoyoung Choi (2011) affirmed the achievements of Korea's FTAs and believed that Korea is going to become an FTA hub country. Inkyo Cheong (2012) reviewed Korea's FTA Policy, and state that Korea has performed well in terms of concluding FTAs but still need more improvement in creating

domestic infrastructure building in their wake. Chinese scholar Lian Xiaomei (2014) discussed the basic characteristics of Korea's FTA strategy and the trend of regional cooperation in Northeast Asia. Kim Kyu-ryoon, Jun Byoung-Kon, Jung Sung Chul, Sung Ki-Young and Park Jinsoo authored a book named "Korea's FTA Strategy and the Korean Peninsula," which analyzed the background and strategic impacts of the Korean-US FTA and the China-Korea FTAs. The research contained in the volume focused mainly on the development process of Korea's FTA, where the effects of FTAs were not analyzed in detail.

In this paper, the Korea's progress with respect to FTAs will be reviewed to analyze the concepts and procedures of its FTAs compared with the strategies of its main FTA partners in the EU, and US and China, followed by a quantitative analysis in both time series and cross-sections concerning the impact on trade and investment by the FTAs. Then the experiences of Korea and challenges it has to face and overcome will be discussed to elicit the conclusions on what may be useful, in addition to implications of Korea's practice for China. Finally, based on the economic situation and willingness of the related parties, the possibilities and room for concomitant room will be discussed for the future.

II. BODY

Korea has a clear FTA strategy and much experience in negotiating with its main trade partners, which in turn has positive effects on promoting the economic activities. But there are still some challenges Korea faces in FTA-related issues, which will harm the effects of FTA or even lead to a regression in Korea's attitude toward FTAs if it is not dealt with properly.

(1) KOREA'S FTA STRATEGY AND PRACTICES

Korea has extensive experience regarding FTAs, despite having started late. Compared with big partners like the EU and US, Korea may be more flexible and is ready to be the hub of FTAs. And there are some similarities between Korea and China in the FTA negotiation process while it seems that Korea was more efficient up until this point.

(1-1) KOREA'S FTA STRATEGY AND PRACTICES

Korea has benefited greatly from international trade. In the 1960s, Korea was one of the least developed countries. After more than 40 years of development, Korea has changed its position from an aid recipient to an aid donor and joined OECD-DAC in 2009. Although the market played a very important role in the process, what the government of Korea has done was crucial in creating a good environment for trade and investment. Among which, the FTA is one of the most important platforms. Korea announced its FTA Roadmap in 2003 and revised it in May 2004, which initiated the process of negotiating FTAs with its trade partners. In this roadmap, potential FTA partners are categorized into 3 groups: in the short term, Japan, Singapore, ASEAN, EFTA,[1] Mexico, Canada and India would be considered with higher priority. In the mid & long term, large economies such as the U.S., EU, China, MERCOSUR, and Northeast Asian FTA would be considered. And there are some other options for negotiating FTAs such as GCC,[2] Russia, Australia, New Zealand, Peru, Israel, Morocco, Algeria and SACU,[3] etc.

As shown in Figure 1, the red areas are countries that have FTAs with Korea while the green ones are WTO members. After the China-Korea FTA was signed on June 1, 2015, Korea has signed FTAs with 15 partners, including 50 countries.

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1) EFTA has 4 membership countries of Switzerland, Norway, Iceland and Liechtenstein.

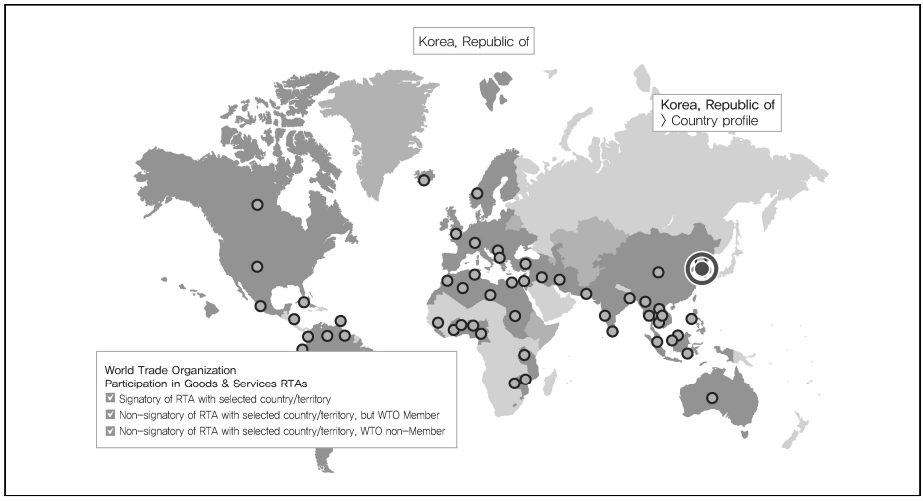
2) GCC is the Gulf Cooperation Council, which has 6 member countries of United Arab Emirates, Oman, Bahrain, Qatar, Kuwait and Saudi Arabia.

3) SACU is the Southern African Customs Union, which has 5 member countries of Botswana, Lesotho, Namibia, South Africa and Swaziland.

As for the so-called economic territory, when all the countries that have accomplished negotiations are included, Korea's FTA partner countries cover 80.2% of the world.

Actually, the order of its FTAs depend less on decisions by Korea, and more on the willingness of the counterparts. But Korea is outstanding among all the countries negotiating FTAs for its speed of implementation. It has become an FTA hub country for which an active attitude, flexible negotiation gestures, practical strategies and stronger willingness of the other partners even in the face of crises was instrumental.

Figure 1. Korea's partners in RTAs



Source: WTO RTA database.

(1-2) THE FTA STRATEGIES AND PRACTICES OF EU AND US

Since the time of Korea setting up its FTA strategy lay between that of EU and US, the comparison between them would be important for better understanding the position of Korea. EU is the region with the longest history and highest level of integration in the world. Since 1958, under a well-developed guideline and

mechanism, EU has setup trade policies in place for all its partners and abides by the global rules on international trade on GATT and WTO as well. After many years of step-by-step integration, EU has formed comparatively sound mechanisms and benefits much from the integration of factors for producing goods or providing services. In October of 2006, EU initiated a new generation Free Trade Agreement (FTA) policy, which includes 3 key economic criteria for competition in the world, market potential and protection level for new FTA partners. And when the Lisbon Agreement came into force in 2009, EU had much more power to leverage trade and foreign policy to represent its all member countries in negotiating international agreements with other trade and investment partners. Judged by this new criteria, Korea becomes one of EU's priorities and these 2 countries signed FTA in 2010.[4] Till June 2015, EU has signed 33 FTAs and CUs with other partners, most of which are in Latin America, Africa and Middle East. EU is trying to strengthen its position and relationships within the industrial value chain.

As the only current superpower in the world, US has strong confidence in its abilities to lead the world and create its own standards. There are more factors that the US must consider besides the economic ones. In 2003, United States Trade Representative (USTR) pointed out the 6 principles for US in choosing its FTA partners: (1) the political will and ability to follow the trade rules, (2) the economic benefits brought to U.S through FTA, (3) the degree of support for US's global trade policies, (4) the compatibility with US's diplomatic and security interests, (5) the support from US's private sector and congress, and (6) the abilities and resources of the US in the international trade negotiation regime. The US FTA strategy can be summarized into 3 stages: the first stage should be the time before the 1990s, when the US strengthened its global and regional security and signed FTAs with Jordan and Israel. The second stage started from NAFTA and FTA with Central America and Caribbean countries, when US pursued the multilateral trade system

4) Horng, Der-Chin(2012), "Reshaping the EU's FTA policy in a globalizing economy: the case of the EU-Korea FTA," *Journal of World Trade*, (Apr.), 301-326.

and competed with the EU for the leading position in international trade rules. The third stage started after the financial crisis in 2008, when US is trying to consolidate its position in the world over the rising emerging economies. US has transferred its interests from the multilateral platform of WTO to the regional and bilateral platforms. TPP and TTIP are the representative of these RTAs and FTAs.

It's clear that EU and US are both trying to use FTA to integrate and coordinate with related stake holders. They want to tie up the relations and interests with the major powers of the world, which is quite important for them in order to benefit from the power of decision even if they will not always be the leader in the world.

(1-3) CHINA'S FTA STRATEGY AND PRACTICES

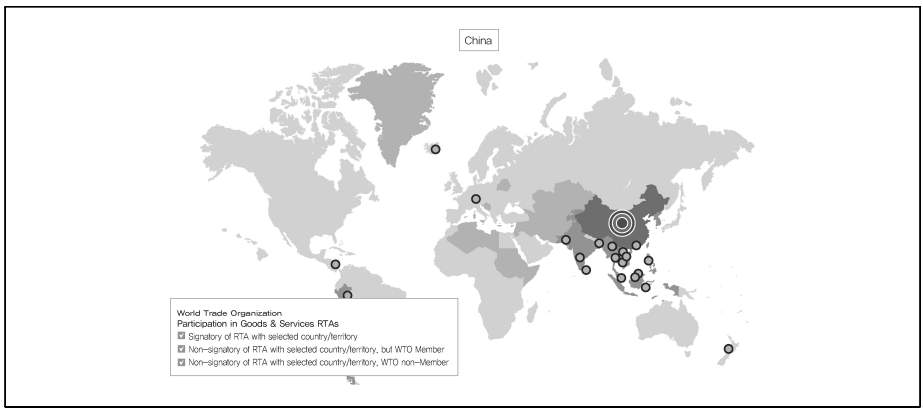
For China, the theoretical research and practice of FTA interacted with each other, in combination. China mainly focused on restoring its identity in GATT in the past two decades. Then Premier Zhu Rongji proposed the China-ASEAN FTA in 2000. Two years later, the 10 year long process of FTA negotiation was initiated. In 2004, early harvest of this FTA came into force. In the 17th national congress of the communist party of China (CPC), the network building of Free Trade Agreement emerged to attain status of a national strategy. In the 18th national congress of CPC, a more expedited FTA network building process was mandated. And in the third plenary session of 18th national congress of CPC, it was clarified for the first time that China's FTA strategy for the coming years was that the countries around China should be the bases to implement the FTA strategy and a globally-oriented, high-standard FTA network is the goal of China's target. It is clear that the acceleration of FTA network implementation became one of the important tasks for China's new round of opening.

Till June 2015, China has signed 10 FTAs with partner countries, among which only ASEAN is a bloc including 10 member countries. Compared with the FTAs of Korea, all the partners of China are relatively small economies. Although China began FTA negotiations earlier, Table 1 shows that there are some similarities for China and Korea. Aside from the FTA between each other, both countries have 5 FTA partners in common, namely Chile, Singapore, ASEAN, Peru and

New Zealand. Also, Singapore signed FTAs with Korea and China together with a member in ASEAN. But there are also some differences not only regarding partners' economic scale, but also on their order of negotiation. Although Japan and ASEAN were taken into consideration for the short term targets of Korea, it has not accomplished the FTAs with them for the early stage. Actually, Korea started to negotiate FTA from smaller economies and then moved on to bigger partners, while China only has a few FTAs signed with large countries. And for the partners, almost half of Korea's FTA partners are developed countries, while there are only a few countries of China's FTA partners. Korea's efficiency in negotiating FTAs is higher than China, as it required less time to finish negotiations. And in many FTAs of China, negotiations for different areas like goods, service and investment, finished in different time.

China has benefited from the FTAs with other partners. One important reason is that it gives support to the sustainable development of trade. While retaining the ability to use the global resources with lower cost, China must open wider with better management system and position on the decision of rules of international trade and investment.

Figure 2. China's partners in RTAs



Source: WTO RTA database.

Table 1. Korea and China's FTAs

order	Korea			China		
	Partner	Effective Year(Goods)	Effective Year(Services)	Partner	Effective Year(Goods)	Effective Year(Services)
1	Chile	2004	-	ASEAN	2005	2007
2	Singapore	2006	-	Pakistan	2007	2009
3	EFTA	2006	-	Chile	2006	2010
4	ASEAN	2009	2010	New Zealand	2008	-
5	India	2010	-	Singapore	2009	-
6	EU	2011	-	Peru	2010	-
7	Peru	2011	-	Costa Rica	2011	-
8	United States	2012	-	Iceland	2014	-
9	Turkey	2013	-	Switzerland	2014	-
10	Colombia	-	-	Korea	-	-
11	New Zealand	-	-	-	-	-
12	China	-	-	-	-	-

Note: EFTA's member countries include Switzerland, Norway, Iceland and Liechtenstein. China and Korea both signed FTAs with Chile, Singapore, ASEAN, Peru and New Zealand as indicated by italic fonts in the table. Since some of the FTAs have not included services part and some of them have not yet come into force, there are some blanks in the table.

(2) KOREA'SBENEFITSFROMFTA

Korea has benefited from the FTA network, which led to increased trade and investment. Also, better integration of the factor market and improvement of governance ability resulted in even greater benefits for Korea's export and inward FDI.

(2-1) TRADE CREATION AND TRANSFER

FTA has relatively strong effects on trade among its partners, where trade transfer and trade creation are the most important. In the short term, when the tariff on the goods change, the supply chain will be reorganized to let the stake holders optimize its arrangement to secure lower prices for purchasing materials

or intermediates. Some of the trade with other countries will be transferred to the FTA partners. This is referred to as trade transfer, which also happens when domestic production is substituted with imports from foreign countries also. During this transfer, some of its trade partners may suffer from decreased trade demand in a zero-sum game. In the long term, when the producers can update its technology or find better industries to operate, they will adjust their working plans and make better use of the endowments to move to the higher end on the supply chain, when they may need to import different goods while also providing better and more diversified products to its trade partners. This is known as trade creation, from which it is possible for all the stakeholders experience welfare improvement with increase trade volume and meet the diversified and updated demands of consumers worldwide.

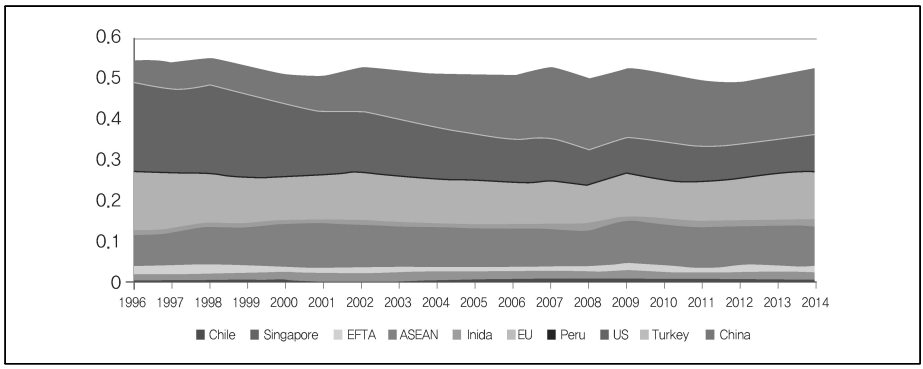
An observation of the positions of Korea's FTA partner reveal that they are quite important in terms of Korea's foreign trade. Case in point, regarding Korea's imports in 2014, FTA partners are 1st, 3rd and 6th place, which are China, United States and Germany, respectively. Extending this further, 10 of its first 20, 27 of the first 50 and 41 of the first 100 import origins are Korea's FTA partners. As for Korea's export in 2014, FTA partners are 1st, 2nd, 5th, 8th, 9th and 10th place, which are China, United States, Singapore, Germany, India and Vietnam, respectively. 10 of its first 20, 25 of the first 50 and 38 of 100 export destinations are accounted for by Korea's FTA partners.

Import: not quite strongly related with the FTAs

Korea's import from its FTA partners reached a historically high level of $ 280.3 billion in 2014, an increase of 6.0% increase from 2013. As shown in Figure 3, Korea's import from FTA partners increased steadily from 2001 to 2008. After the financial crisis, the import recovered quickly but following readjustment in 2012, entered a phase of comparatively sluggish increase.

Figure 3. 996-2014 Korea's import from its FTA partners

(Unit: $ billion)



Source: Korea custom.

Korea has benefitted much from the increase of import with some of its FTA partners. As shown in Table 2, the annual average increase of import from 4 partners of Chile, EFTA, ASEAN and EU have accelerated after the launch of FTA by 2.27, 11.19, 1.12 and 4.20 points. Three of the four partners are regional economies. Meanwhile, imports from other 5 partners slowed after the launch of FTAs. The slowdown especially marked in the case of the resource-rich country of Peru (by 27.06 points) due to the sharp drop in commodity prices in the international market.

After considering of the system factor, the percentage of its import in Korea's total import are calculated in Table 2. With FTA, trade transfer and creation happened together, resulting in the increase of the average share of Korea's import among 5 partners, namely Chile, ASEAN, India, Peru and Turkey. But Singapore, EFTA, EU and United States all saw the share of their export decrease among Korea imports.

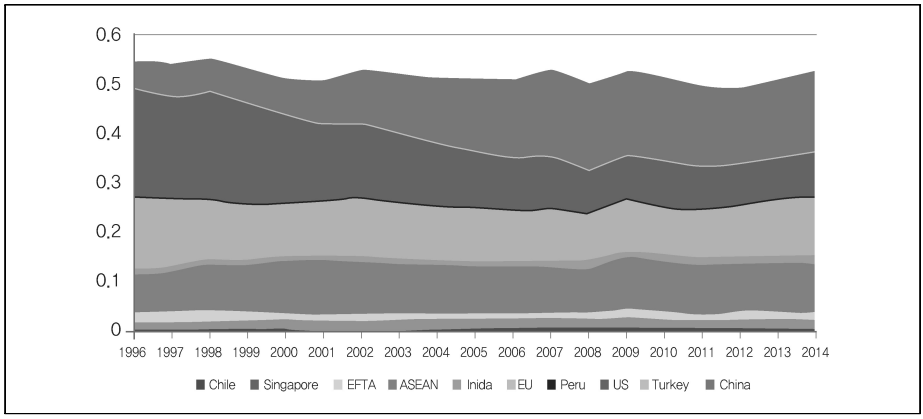
Table 2. Korea's import from its FTA partners (divided by FTA coming into force)

	Average change			Average Share		
	Before	After	Change	Before	After	Change
Chile	7.27%	9.54%	2.27%	0.64%	0.97%	0.33%
Singapore	8.82%	8.50%	-0.33%	2.00%	1.97%	-0.02%
EFTA	-1.31%	9.88%	11.19%	1.23%	1.13%	-0.10%
ASEAN	8.30%	9.42%	1.12%	9.88%	10.26%	0.38%
India	13.40%	-1.81%	-15.21%	0.88%	1.27%	0.39%
EU	5.38%	9.57%	4.20%	10.90%	10.38%	-0.52%
Peru	17.21%	-9.85%	-27.06%	0.15%	0.34%	0.19%
United States	1.96%	0.53%	-1.43%	14.34%	8.34%	-6.01%
Turkey	9.11%	-5.31%	-14.42%	0.08%	0.13%	0.05%
China	13.98%	-	-	12.85%	-	-

Note: Calculated in the period from 1996 to 2014. The Before means the time span from 1996 to the year FTA came into force and the After means the time span from the year the FTA came into force to 2014. The Average change are compound increase rates while the Average Share is the arithmetic average. As the China-Korea FTA has yet to come into force, the data is for the past 18 years. Since China-Korea FTA has not come into force, the data of China is for the whole period from 1996 to 2014 for better understanding of the position of China in Korea's imports.
Source: Korea custom.

For the share of its import from the FTA partners, there is no significant change over the last 18 years. If we count all its FTA partners, they provided 55.2% of Korea's total imports in 1996. In 2014, this percentage is 53.3%. And it is clear that the share of US is decreasing and which is in some degree compensated by China. In 1996, China and US provided 5.7% and 22.2% of Korea's import, respectively. While their share changed to 17.1% and 8.6% in 2014, which may belie the fact that there is increased supply chain cooperation between China and Korea now even without the conclusion of the China-Korea FTA.

Figure 4. Korea's import percentages from its FTA partners



Source: Korea Customs.

Korea imported more Machinery, with a 9.3% annual increase, after the FTA came into force in 2012, a pace much quicker than the past 16 years of -0.1%; while trade transfer happened when Korea imported less Electrical Machinery and Optical Equipment. The import of Cereals and Meat from the US also increased annually at a rate of 3.3% and 12.0% from US.

Chile is an important source of natural resources imports for Korea. After 2004, the import of Copper, Ores and Wood pulp from Chile increased by 6.7%, 11.1% and 10.4%, respectively. It is similar with respect to Peru and India, another important suppliers of raw materials for Korea, while Peru has Minerals and Coffee, India has Minerals and Animal Feeds.

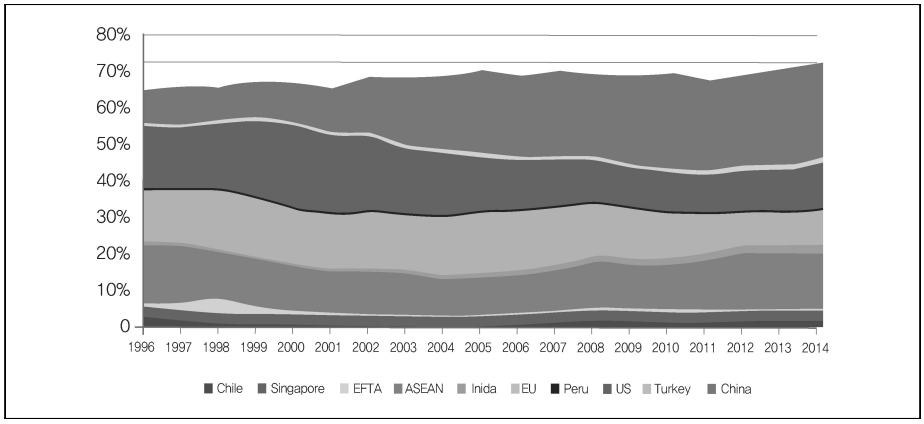
Singapore is an important source of Electrical Machinery, Mineral Fuels, Machinery and Organic Chemicals for Korea. The import of the second and third category increased much more quickly after the FTA came into force in 2006. Singapore is not only an international center for re-exporting, but is also significant in terms of trade in services, which provides much better services for Korea on the FTA platform.

Export: strong increase in real term and share with FTAs

Korea's export to its FTA partners reached a historically high level of $400.5 billion, 4.2% higher than in 2013. As with import, exports maintained a stable pace of increase after 2001. When the economic crisis hit, exports dropped 14.1% in 2009 (the export to China dropped 5.1%). After 2 years of quick rebound, exports also entered a sluggish stage from 2011.

Figure 5. 1996-2014 Korea's export to its FTA partners

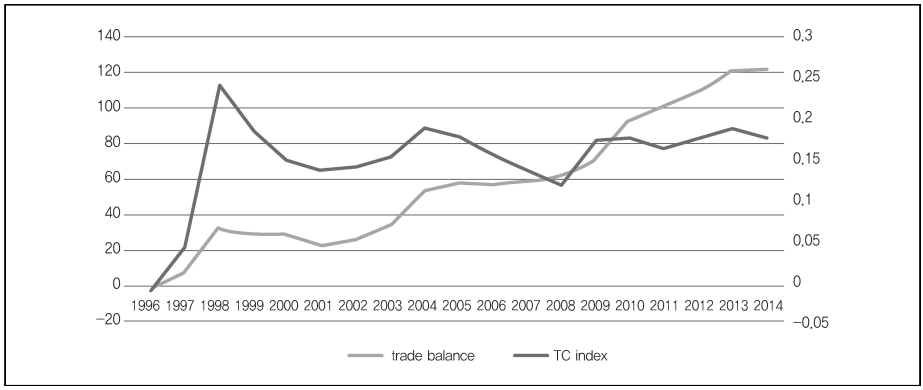
(Unit: $ billion)



Source: Korea custom.

When combined with its import data, Korea's benefits from trade are revealed. As in Figure 6, except for the year 1996, Korea maintained surplus in trade with its FTA partners. With the exception of a slight deficit of $1.8 billion happened in 1996, Korea's bilateral trade with its FTA partners there are always resulted in surpluses. And the surplus increased from $7.3 billion in 1997 to $120.2 billion in 2014. The TC index can be used to measure the scale of trade imbalance. Korea appears to be a fairly stable in the past 18 years. The average of TC indexes is 0.159 while the standard deviation is 3.9%.

Figure 6. Korea's trade balance and TC index with its FTA partners



Source of data: Korea custom.

The comparison of its export before and after the FTA coming into force can be found in Table 3. After the effective date of FTA, Korea's export to 5 of 9 partners increased, which are Chile, Singapore, ASEAN, United States and Turkey; the average change rate have increased rapidly by 10.12, 8.20, 10.05, 1.19 and 5.15 points, respectively. With deduction of the systemic factors, the share of these countries change also. Korea's export to Chile, Singapore, ASEAN, India, Peru and Turkey increased as a share of its total export.

Table 3. Korea's export to its FTA partners (divided by FTA coming into force)

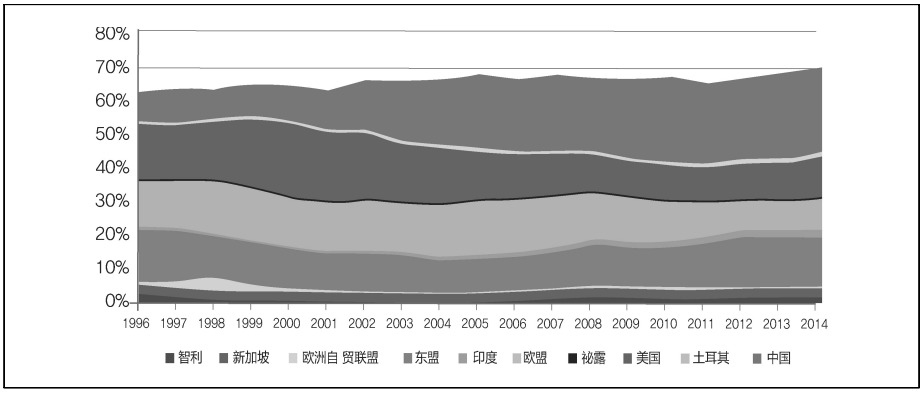
	Average change			Average Share		
	Before	After	Change	Before	After	Change
Chile	1.27%	11.39%	10.12%	0.37%	0.51%	0.14%
Singapore	3.95%	12.15%	8.20%	3.15%	3.67%	0.52%
EFTA	6.13%	1.57%	-4.57%	1.15%	0.46%	-0.69%
ASEAN	5.55%	15.59%	10.05%	11.54%	13.25%	1.71%
India	17.63%	2.82%	-14.80%	1.35%	2.24%	0.89%
EU	7.99%	-2.55%	-10.54%	14.36%	9.21%	-5.16%

	Average change			Average Share		
	Before	After	Change	Before	After	Change
Peru	13.51%	0.55%	-12.96%	0.14%	0.25%	0.11%
United States	6.55%	7.74%	1.19%	15.62%	11.35%	-4.27%
Turkey	12.65%	17.80%	5.15%	0.78%	1.09%	0.31%
China	15.19%	-	-	18.33%	-	-

Note: As those in Table 2. Since China-Korea FTA has not come into force, the data of China is for the entire period from 1996 to 2014, to clearly display the position of China in Korea's export.
Source: Korea custom.

The structure of Korea's export to its FTA partners can be found in Figure 7. It is similar to that of Korea's import. The exports to Korea's FTA partners represents 69.6% of its total export in 2014, compared with 62.6% in 1996. China has replaced the United States as the most important trade partners. In 1996, the export to China and US represented 8.8% and 16.7% of its total export, while this percentage has changed gradually to 25.4% and 12.3%, respectively.

Figure 7. Korea's export percentages to its FTA partners



Source: Korea custom.

The US remains important export destination for Korea's manufactured products. The annual average growth rates of Vehicles, Electrical Machinery and Machinery is 9.7%, 8.0% and 15.0%, all higher than those before the FTA.

For Chile, it's even more obvious for the increase of Korea's export. Korea's export of Vehicles increased with annual average rate of 15.2%, compared with the -2.6% before the FTA went into effect. The export of Machinery also benefited, with the annual rate increasing to -1.8% to 9.3%, while export of Plastic dropped from 26.6% to 9.5%. We also see much the same pattern for Korea's export to Peru.

Besides Machinery and Plastic, the export of Iron and Steel products benefitted much from Korea's export to India. Korea's export of Mineral Fuel and Ships to Singapore increased quickly.

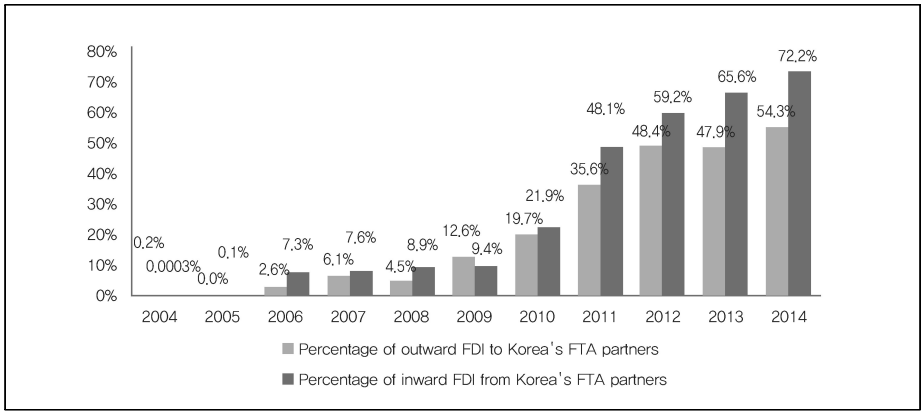
(2-2) BILATERAL INVESTMENT AND IMPROVEMENT IN THE GLOBAL VALUE CHAIN

Investment usually follows in the wake of international trade and can better combine different factors together to make them work more effectively. With outward FDI, a company can have better guarantees regarding raw materials or other inputs, both on cost and quantity, strengthen its position in the worldwide network by closing the distance to customers and improve its technology with innovation. FTA is an important platform for reducing the market barriers and providing better protection for foreign investors. Thus, the potential investors may make use of the FTA opportunities to expand in the other market for better profits. In the platform of FTA, enterprises can perform better and move upward in the global value chain. With respect to volume of investment, Korean enterprises would be better off in taking advantage of opportunities presented by FTAs to increase investment and their competitiveness.

With the increase in the number of FTAs signed, the inward and outward FDI with Korea are taking on greater importance in terms of its total transnational investment. As shown in Figure 8, the outward FDI to its FTA partners have increased from 0.2% in 2004 to more than half of the total volume; the inward FDI from its FTA partners also increased, from 0.003% to almost three fourth

of its total inward FDI. In 2014, Korea had an inward FDI of $19.0 billion and an outward FDI of $26.8 billion. The FDI from Korea's FTA partners accounted for $14.9 billion, or 72.2% of all its inward FDI. Korean enterprises invested $17.6 billion in its FTA partner countries in 2014, 54.3% of its total outward FDI. Actually, the FTA partners of Korea contributed more, taking up a larger share of the domestic market. The benefits to Korea increased, especially after the year 2011 when the FTA with the EU went into force, and continued to improve as the agreement with the US came into force.

Figure 8. Percentage of Inward and Outward FDI with its FTA partners in Korea's Total FDI



Source: Korea Ministry of Trade, Industry and Energy (MOTIE); Korea Exim bank.

When we check the effects on the bilateral investments of all its FTAs, things are uncertain as to specific impacts to its partners. However, there was indeed shock connected with inward FDI. As shown in Table 4, prominent increases are apparent regarding inward FDI from India, EFTA, EU, US and Singapore with 10912.0%, 199.8%, 57.4%, 54.9% and 43.2%, respectively, while only the companies from ASEAN and Turkey reduced their FDIs in Korea when the FTA came into force. While with compound analysis separated by the year of FTA effectiveness, it seems that only the FDI from ASEAN maintained quicker growth in connection

with the effectuation of the FTA.

Korea's companies were also encouraged by the FTAs. But it seems that companies that acted early had better results. The outward FDI to Chile and Singapore increased by 109.3% and 141.1%, respectively when the FTA came into force, while the outward FDI in the effective year of most of the latter FTAs decreased or increased slightly. When considering the period effect of FTAs, the Korean enterprises grasped the opportunity of FTAs and invested more after Korea's FTAs with EFTA, ASEAN, India, and Peru coming into force.

Table 4. Annual growth rates of Korea's inward and outward FDI with its FTA partners

	Inward FDI			Outward FDI		
	Year	Before	After	Year	Before	After
Chile	NA	NA	16.9%	109.3%	27.4%	13.6%
Singapore	43.2%	28.1%	14.7%	141.1%	18.7%	14.8%
EFTA	199.8%	5.0%	-6.5%	4.7%	0.8%	42.0%
ASEAN	-41.6%	-1.7%	25.4%	-42.5%	12.5%	14.5%
India	10912.0%	63.7%	-74.6%	-18.2%	2.0%	13.2%
EU	57.4%	12.2%	9.0%	-35.2%	14.0%	-6.8%
Peru	-100.0%	NA	NA	6.4%	-0.4%	98.9%
United States	54.9%	9.4%	-0.9%	-23.0%	8.3%	-0.4%
Turkey	5.1%	23.3%	-27.9%	-48.0%	10.1%	5.5%

Note: Calculated in the period from 1996 to 2014. The Year means the annual growth rate in the year FTA came into force. The Before means average annual growth rate in the time span from 1996 to the year FTA came into force and the After means the average annual growth rate in the time span from the year the FTA came into force to 2014. The average annual growth rate is calculated as the compound increase rates. As the China-Korea FTA had not come into force at the time, the data is for the past 18 years. NA are for years with actual investment volume of 0.

Source: Calculation based on the data from Korea Ministry of Trade, Industry and Energy (MOTIE) and Korea Exim bank.

(2-3) INTEGRATION OF FACTOR MARKET

Korea's FTAs promotes better conditions for the enterprises in the partner countries regarding acquisition of the factors they want and concomitantly, make profits from the better assembly. The factor markets of goods, financial resources and people have been better integrated as a result of Korea's FTA agreements, which can improve the efficiency of cooperation and benefit the Korean companies as well as the consumers of Korea.

With lower tariffs, the goods can be bought at lower cost and the time needed to make it work for remote cooperation among the global network can be saved. Korean consumers will have more choices of agricultural and manufactured goods, which puts greater pressure on Korean providers to safeguard its market by increasing efficiency through better R&D inputs or invest in a wider range. With competition, the manufacturers will be offered better prices for purchase of its fuels, ores, raw materials or parts for the manufactured products.

More options of financial resources of loans or commercial credits will be available for access by Korea's domestic companies. Given the variation in stages of recovery from the crisis, even the developed countries are implementing different Monetary Policies, which can provide the Korean companies more opportunities for comparatively lower cost of borrowing money to expand. With better protection of foreign investors' assets and rights to remit back to home country, the investors can be more relaxed when making decisions on FDI. And the outward FDI of financial service industry itself is developing quickly, which would attract even more investments to better support the other industries in Korea.

Although the FTA itself may not include many standards for helping people cross borders with less restrictions, it provides more opportunities for the service suppliers in Mode 4 as Natural Movement in trade-in-services. The Korea-New Zealand FTA gives the Korean Food Chefs and Taekwondo Coaches' easier access to work in New Zealand. Although the FTAs do not necessarily mean that the Korean workers can go and be automatically employed in its FTA partner countries, it does provide better access for the businessmen to pursue investigations or negotiate

in much bigger market space.

(2-4) IMPROVEMENT OF GOVERNANCE ABILITY

Under FTAs, both parties should try to adjust its trade and investment-related management to meet the requirements on opening up. There are different standards, measures and procedures on sanitation, inspection and quarantine for different countries. Korea also had its own system of market management before the negotiations of FTAs. But to make it better and easier for trade, Korea is trying to respond to the opening up of its domestic market and has made some changes accordingly with its accession to FTAs, to increase ease of trade while protecting its domestic consumers and companies at the same time.

With many FTAs, there will inevitably arise Spaghetti Bowl effects, and different standards and requirements created simultaneously with quick increase of economic activities may lead to trouble without good management, where coordination is of great importance. For instance, the US and the EU are the biggest economies in the world while both of them have significant experience and a complete system regarding the security of food, consumption goods and endurable goods. Their systems are independent and are incompatible in many areas. Signing FTAs with both partners has given Korea quite a bit of challenge in terms of adapting. In the negotiation of TTIP, both party of US and EU are not prepared for change of their own specifications or requirements, which means that for Korean companies, trade with these two partners will still need be dealt with separately. There are still much room for improvement for the Korean government. Nevertheless, the consumer can benefit from the competition of products with different but strict requirements, while companies can also improve their competitiveness with intense competition.

(3) KOREA'S EXPERIENCES ON FTA

Korea has gained much experience on the FTA negotiations, with the effectuation of so many FTAs in just over 10 years. These achievements come from its strategy,

careful design and learning ability, gradual accumulation of which provides Korea with sufficient resources for its FTA network.

CLEARLY PREDEFINED GOAL

Korea is trying to use FTAs as its platform and window to the world. As a comparatively small economy, Korea does not intend to control or dominate the future international trade and investment, but actually aims to benefit from the opening up and better access of consumers, markets and cooperation opportunities, which is much more market-driven and would help Korea negotiate easier without making too many demands. The roadmap of FTA figured out the goal of Korea's FTA negotiations. With the roadmap, Korea can organize its negotiating resources in a more effective way. The plan also shows the priority regarding the FTAs. Korea can maximize the usage of its research and evaluation resources to understand the systems, regulation and criteria better and utilize its negotiation resources for better bargaining power. After better preparation, the negotiations can be carried out more efficiently and the related parties can derive maximum benefits from that. With the path and tempo of negotiation, Korea actually improved its understanding and learning ability in the area of FTA.

(3-2) PRACTICAL PATH OF NEGOTIATION: THE EASIER THE EARLIER

Strategies in terms of laying out the development path of the FTA network represents the starting point. At the beginning of negotiation, Korea chose to start from a comparatively small economy with complementary industry structures. This defensive strategy of cost minimization would help reduce the impact of opening its weak industries and make it easier to reach agreements with each other. Korea-Chile FTA is an example of this strategy. Chile is a relatively small economy which has some advantages in resources like copper. With the agreement signed in 2004, the Korean enterprises can benefit from lower-cost supply of ore, as from other goods like agricultural products that have relatively low impact on Korea's domestic market. When the producers and consumers benefited and the agricultural sector became accustomed to foreign products, Korea managed to initiate negotiations with much bigger partners like the EU and US. One of the more interesting phenomena

is that Korea seems to be meshed with both the big and small economies for FTAs (Figure 4 and Figure 7).

(3-3) CHOOSE FROM THE POTENTIAL VALUE: THE FARTHER IT IS, LESS CONFLICTS THERE ARE

When considering the distances between FTA partners, Korea started from those that are far away. Maybe one reason for this is that Korea has lingering disputes with the countries that are closer, like territorial disputes, or there are differences in the opening of weak and sensitive industries to each other. Regarding order of negotiation, Korea did not start negotiating with its adjacent countries until it had concluded agreements with countries further away. When there are opposing opinions on the opening negotiations with a certain country, one solution was to extend its duration to give both parties more time to balance or reach a much lower-level agreements with less pressure opening up pressures. As establishing FTAs would be good for all the parties involved, although it is not easy to identify possible benefits or loss when the negotiation began, Korea knew clearly that they will benefit from them in some degree.

(3-4) IMPORTANT ANCHORS: SPREAD THE INFLUENCE

Not all the countries are in equal position, it may be not necessary to sign FTA with all the countries. But, if there are several ones in an area, it will create a better environment for economic cooperation and tighten the link between Korea and that region. Korea always attempts to consider the FTA issues in whole and design the path accordingly. The most important countries could be chosen with higher priority with consideration of their economic, political or even diplomatic importance. These countries act as anchors, which not only have close trade and economic relations with Korea, but also are key players in its region. From these countries, Korea would extend its FTAs to others in that region and gradually connect them together with its global FTA network. For example, Korea chose Chile to be the first FTA in South America and then started FTA negotiations with Peru and Columbia. In North America, the FTA between Korea and the US stopped the FTA negotiation between Korea and Canada. In Asia, Singapore was

the anchor, after which Korea promoted its FTA negotiation with ASEAN.

(3-5) DIFFERENT ACHIEVEMENTS DEPENDING ON THE COUNTRY'S CONDITIONS

Although some of the sensitive goods are in the exception list, Korea has different arrangements with different partners to maximize the benefits.

As for the Korea-New Zealand FTA, Korea has benefited nearly double in terms of quota, which rose from 1800 to 3000 in the category of Working Holiday Students (WHS), in addition to 200 temporary 1-year working visa for Korean teachers, Taekwondo instructors and other 8 industries. As for trade, tariff on 92% of Korean goods are exempted immediately and reached 100% in 7 years, while 48.3% goods from New Zealand were made tariff-free after the agreement come into force and 96.4% of all goods will be exempted from all tariff in 15 years.

(3-6) MANPOWER IMPROVED TO SUPPORT

Korea was not always good at negotiating FTAs. In 1998, there were only a handful of officials involved with FTAs. In 1999, however, 50 officials from related ministries, including 10 core staffs, were tasked with FTAs. In 2004, an FTA Bureau was organized in the MOFAT while other ministries were required to deal with the policies related to their respective provinces. Practice makes perfect and after several negotiations, Korea had in its fold FTA negotiators with much expertise, who could facilitate quicker and better negotiations. And more, as FTA negotiations inspired many individuals, the related positions are attracting more people, which means a sustainable supply of manpower in the FTA area. In 2006, negotiation group for FTAs had more than 300 officials.[5)]

(4) CHALLENGES KOREA FACING REGARDING FTAs

Korea is also facing quite some challenges especially on coordination, between

5) Inkyo Cheong, Inha University, www.FTAinfo.net/eng.

FTAs, levels of trade systems, traditional and future, and related stakeholders, etc.

(4-1) COORDINATION WITH DIFFERENT FTAS

Korea needs to coordinate and manage the different standards of many FTA partners, which is quite a challenge to not only the government but also the enterprises. To some degree, FTA has given some of the governing power to the other party, meaning attempts to cleave to one's own criteria and principles are not easy. Sometimes when there are conflicts between different FTA partners, Korea must have a coordinating system to decide what to do and not to do. For instance, as the US and the EU have different opinions on Transgenic Food, café should be taken in management of food production in Korea, who is required to inform its exporter to be aware of these difference and not offend the regulations. As for the management of FDI, the US is using the negative list while the EU uses a positive one; and other FTA partners may also be different. To reduce the complexity and make it easy for bilateral investments, Korea needs coordinate and better switch among the different management mode of FDI.

The enterprises need to update their knowledge and increase the ability to respond to this large economic territory since it is not only different duty rates that are applied in different FTA platforms. The adjustments will also change the conditions they are facing, which means attaining favorable conditions on using cheap resources are not easy, especially for the manufacturers who need some time for adjustments or finding more suitable partners for cooperation in advance.

(4-2) AVOID THE ADVERSE EFFECTS OF INTEGRATION

With more FTAs signed, Korea needs to adjust its own management system and mode of economic operation to meet the requirements of different partners. It is not easy to maintain its own characteristics, as FTAs will not only influence the economy but also gradually impact the cultural and consumer habits as well. Loss of independence on development will become more obvious when integration occurs with a larger and more advanced economy. It happens that Korea has signed FTA with the US, the EU and China, all countries with much power to influence. Trade and investment activities will inevitably reshape an economy, proving the

fact that it is not easy to be the hub among huge economies and maintain its identity at the same time.

Lack of innovation orientation ability constitutes another important adverse effects Korea may encounter. When the market can provide the consumers what they need, it is not easy for the companies to spend money and time for R&D on their own. As imports increase, the market can also work well in normal conditions. But this will increase the dependence of Korea on other countries and situations will become complicated when emergency arises that threaten to sever the normal trade relationships. What is more serious is that the companies may lose their innovation incentives, which will harm the quality of development. With less competitiveness, the country will have less exports, which in turn will limit the ability of import.

(4-3) DEALING WITH AGREEMENTS IN DIFFERENT LEVELS

Korea is also a member of different agreements from multilateral, regional to bilateral level, which increase the complexity of trade issues. To deal with those agreement includes not only coordinating the existed ones but also choosing and arranging the bids and offers for the coming ones.

Although DDA has been suspended for most of its topics, WTO is still the most important platform for global trade and the most important mechanism to avoid trade wars through preset principles. The dispute settlement mechanism is the most widely used method for the members to pursue fair trade. Due to the principle of consensus, it was not easy to make further commitments after its effectuation 20 years ago.

Korea is also active in regional and sub-regional cooperation including the northeast Asia cooperation and Tumen River cooperation, etc. While it is important for Japan to cooperate in the region's activities, Prime Minister Abe's disrespectful attitudes on Japanese aggression in World War II and his actions strengthening the offensive capabilities of the Japanese military force along with attempts to modify Japan's Constitution have hurt feelings and touched raw nerves of this sub-region. Level of trust in the region as suffered as a result, and it would be

quite difficult to promote regional cooperation without mutual trust.

For Korea, bilateral cooperation is the most important foundation. After having signed FTAs with the main partners on the FTA Roadmap, Korea is still trying to improve bilateral relations with other partners like GCC and Russia, for whom the standards and requirements could be quite different. Korea may need to offer them more favorable terms for the FTAs. The other parties will also feel more pressure from an FTA with Korea, a manufacturing power much like Japan, and China/Taiwan.

(4-4) COORDINATION BETWEEN TRADITIONAL AND NEW EMERGING INTERNATIONAL AGREEMENTS

Although most of FTAs Korea signed have a history no longer than 10 years, there are still some needs to review and coordinate the different agreements. The topics and progress of the new emerging agreements will change people's perceptions of the agreements.

The US has proposed the so-called "agreement for the 21st century," TPP, which require the members to eliminate most tariffs and include more issues like labor, environment and SOE, etc. Korea has expressed its interests in joining this agreement. Although it may be not quite difficult since Korea has signed FTAs with most of the TPP members, without enough time to finish all the bilateral negotiations before its conclusion, Korea has to accept all the predefined rules as a late comer.

A new agreement on trade-in-services (TISA) was also proposed by the US, which require its members to open their market widely. Not only will new industries or areas be covered, but also new definitions and management concepts may appear, which will require the members to change their modus operandi in terms of domestic administration. These new agreements will present new challenges for Korea. How to make the better use of this agreement, again, would be a daunting challenge.

(4-5) UPDATE OF NOWADAYS FTAS

Like living organisms, agreements have a life cycle with distinct phases. Before the signing of FTAs, anticipation and expectations encourage companies to carry

out some actions. After the signing and conclusion, a certain amount of time is required for people to understand its impact and learn how to utilize them. In the maturation phase, the efficiency of economic activities are improved by better arrangement of related resources. When there are more and more FTAs and with some of them having progressively greater level of openness, FTAs will have decreasing impact on the promotion of trade and investment, which means the arrival of a Recession period.

Korea needs to update its signed FTAs by promoting tighter commitments by both parties and include new concepts and practices appeared in the latest agreements. Such continuous updating will help revive the FTAs and provide better support for trade and investment. Since an FTA is a rather flexible platform, new and updated versions of agreements can be reached with consensus even on different commitments. But since these new principles have never been used, it is not easy to decide and evaluate their impacts on economy, which entails some risks with respect to the update. Even if it satisfies Korea's interests and follows the global trends, it would be impossible without agreement of the other parties. How to persuade the other partners to continue negotiating for an updated version is quite challenging.

(4-6) BALANCE INTERESTS OF THE DIFFERENT DOMESTIC STAKEHOLDERS

Korea's domestic interest groups are strong and have substantial power to influence FTAs. In most cases, the differences of gains or losses will make the related stakeholders react accordingly. The collective willingness can influence or even decide the development direction of agreements, when the demonstration of farmers drew attention from around the world. If not considered and well dealt with, it will increase the difficulties of negotiations, harness the opening up process and worsen the development environment for attracting potential investors.

The people who object to FTAs are mainly those who are forced to change their competition status and will experience net loss. The trade groups and industrial groups have obviously different opinions on the FTAs. Since they cannot reorganize resources in other countries to benefit from optimization, the farmers face direct competitions from their foreign competitors. Nationalism is also a big challenge

for the FTA supporters. They cite Korea's history and culture and believe the foreigner companies' competition will lead to the death of traditional brands. It is true that in the comparatively more closed economy, the enterprises evolve much slower and may have less competitiveness compared with those in Korea's FTA partners. Different Ministries may have different views on the directions of FTAs, meaning achieving compromise is no easy task. And since the partners have different conditions, sometimes the negotiations are not replicable and different offer may be prepared even for the same industries or areas. Also, coordination between the central and local governments is not simple and straightforward. Due to different considerations, local governments may also have different opinions on opening up, which may restrain the FDI activities in the country.

III. CONCLUSIONS

Korea has operated a quite successful strategy on FTAs and has accumulated substantial experience. Korea benefitted from these agreements through improvement of the trade and investment activities, better integration on the factor market and improvement of governance ability. Although conditions in China and Korea are different, it is helpful to learn experiences in trying to avoid the same problems in FTA-related issues.

Firstly, a country should have clear strategy on what to gain from FTA before it carries out negotiations. The goal may be different for different countries and it will help a country to make better use of its resources to more effectively cope, especially in post-crisis periods when protectionism prevails. For Korea, it would offer the enterprises more opportunities to invest abroad and consumers can have more diversified choices. For China, FTAs may be even more significant, given its large domestic market with so many possibilities for combining different resources,

replete with huge demands and also undergoing development and change. Also, it would lend support to the One Belt One Road strategy, allowing China to do more amidst the new rules in the international trade system.

Secondly, order of the negotiating partners is important for the goal of FTA strategy. Korea's FTAs were signed at a steady pace with interchange of big and small economies, which gave its domestic market some time to get used to the new FTAs. And the competition were accompanied by opportunities. China has since signed FTAs with many partners including few bigger ones like Australia and Korea. But it has still long way to go for the FTA with the EU, not mention the US. The new order will gradually come into form during the negotiations. The path for China should be to negotiate the Bilateral Investment Treaty with the EU and the US first. With consensus on the investment issues, an FTA will be much easier to promote.

Thirdly, the related mechanism and human resources are important for better position in the negotiations. Korea started from lack of related experience but gradually improved its ability related to FTA negotiations through repeated practice and experience. And with a better mechanism, more and more researchers will become interested in this area, providing more expertise to support its negotiations. Such expertise can also be extended to other fields concerning bilateral, regional or multinational trade agreement fields. As it stands now, China lacks experts and negotiators to meet the increased demand of FTA negotiations. This means that coordination among the different Ministries and cooperation between the country-specific affair officials and the negotiators should be strengthened. It will be much easier if the commitments to different FTA partners have some degree of logical connection. And it is quite important to listen to the enterprises' demands and let them participate more actively in the negotiating process, who are the final users and affected directly by the said FTAs.

Fourthly, the adjustments of the domestic management system is complex and need to be handled with much care and thorough preparation. Korea, which was initially facing different administrative procedures from the US and the EU,

and managed to update itself to adapt for the different requirements. Likewise, China is facing the problem of coordination also. Since the context and coverage are quite different, it may need renegotiations for already existing treaties. As for the negative list mode, the FDI management system is undergoing change. It is quite a challenge to deal with this problem of 100+ signed BIT and 10+ FTAs. The standards and criteria' compatibility are of greater importance and should be negotiated in advance.

In the future, it is expected there will emerge greater challenges both from the global economy and the domestic demands, in areas where more cooperation possibilities exist for China and Korea, such as the cooperation on technology, brand, capital, industry chain and information. And these 2 countries can both benefit from the cooperation.

On June 1st 2015, China signed the FTA with Korea. This agreement is the first high-level FTA for China, in which both parties not only reduce tariffs, take care of the other's core concerns, but also include some new topics. Although negotiations for the China-Korea FTA only took 3 years, it was actually preceded by long preparation for integration attempts among China, Korea and Japan and there were strong willingness on the part of the leaders in both party, which helped facilitate the agreement. This provides a platform from which the factors can move and integrate better with the support from this platform. The investment rules can be negotiated and developed in the next stage to meet the needs of both parties' companies and even individuals.

With further development, the so-called 21st-century topics like e-commerce, government procurement, intellectual property rights and competition will have substantial impacts on trade and economic cooperation. China and Korea can try to carry out related experiments at the bilateral level.

While there have not been sound and common principles on this area, it may be important to develop the new ones which can reflect the interests of both the developed countries and the developing ones, to create an environment for fair competition for the enterprises from China and Korea with better protection and

consideration of their characteristics in this stage of development.

There are also some cooperation opportunities under the regional level. Korea has strong willingness to develop the trade and economic cooperation with Russia and Mongolia and proposed 3 Silk Road cooperation on iron and steel, energy and green development, respectively, which is good for the regional cooperation. The One Belt One Road strategy has the same goal of promoting regional cooperation. Both China and Korea can work together on the trade platform building by related agreement negotiations and benefit from its process and progress.

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5

Are China's Exports Crowding Out or Coexisting with Korea's Exports in the Arab Region?

*Nashwa Mostafa Ali Mohamed**

Abstract

This research is aimed to analyzing the impact of China on Korean exports to the Arab region, by trying to answer four questions: First, what are the import demand factors in the Arab region and the determinants of its preferences? Second, to what extent are components, of Chinese and Korean exports to the Arab region, similar or different? Third, does the market share of Chinese exports threaten Korean exports? Fourth, what are the opportunities for promoting Korean exports to the Arab region? The methodology to answer these questions depend on data analysis

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and econometric models to estimate demand for imports functions and the long-run relationship between the Chinese and Korean exports. The cointegration approach was used for finding out this relationship, including both FMOLS and DOLS methods to estimate the coefficients, and the Similarity Index. The results showed that the demand for imports from China was determined by the real income and relative prices, while the gross capital formation (as an indicator for investment) was the most important for imports demand from Korea, as well as the Arab revolution being a significant variable in both functions for China and Korea. The Similarity index revealed that the whole exports structure of both China and Korea was similar in less than 50% of their exported products. The estimation results indicated to the positive significant relationship between Chinese and Korean exports to the Arab region. The main conclusion was that there is no crowding out effect between the imports of both countries towards Arab Countries and that they can coexist with each other.

JEL Classification: F1, F5, F19
Keywords: Imports Demand Function, Similarity index, Cointegration approach, Korea, China, Arab Region

I. Introduction

The growth of China over the past three decades has led to concerns that Chinese exports would "crowd out" those from other developed or developing countries, particularly after China joined the WTO in 2001. There is a considerable amount of literature trying to identify the countries that were most threatened by Chinese exports and estimate the impact that China has had on the market shares of other countries. Most of this literature focused on the exports of Asia, particularly

East Asia (Athukorola 2009; Greenaway *et al*. 2008; Lall and Albaladejo 2004), or the trade in parts and components amongst the East Asian countries (Athukorala 2009). While little of the economic literature has focused on Africa (Goldstein *et al*. 2006; Broadman 2007; Zafar 2007; Brautigam 2009; Schiere *et al*. 2011; Edwards and Jenkins 2013), no attention has been given to the impact of Chinese competition on Korean exports to the Arab region, which may be asserted as the contribution of this research.

In analyzing the impact of China on Korea exports to the Arab region, we consider four related research questions, which constitute the aims of this research. First, what are the import demand factors in the Arab region and the determinants of its preferences? Second, to what extent are the components, of Chinese and Korean exports to the Arab region, similar or different? Third, does the market share of Chinese exports threaten the Korean exports? Fourth, what are the opportunities for promoting the Korean exports to the Arab region?

The Methodology will depend, in answering these questions, on data analysis and econometric models based on the Cointegration approach and Fully Modified Ordinary Least Squares (FMOLS) to estimate the demand functions for exports by formulating three models: (a) Aggregated Imports Function of the Arab region, (b)Arab Imports Function from China, and (c) Arab Imports Function from Korea. The Similarity index will be used as an indicator for the Similarity between Chinese and Korean Exports. Testing the long-run relationship between Chinese and Korean exports will depend on the Pedroni Residual Cointegration test as well as FMOLS and Dynamic Ordinary Least Squares (DOLS) in estimating the coefficients. Also, this estimation will be based on panel data of main products that imported from both countries during the period 1995-2013. The discussions on the conclusion and results will be beneficial toward suggesting policy implications for promoting the Korean exports so that they would stay ahead of Chinese exports.

The rest of the research is organized as follows. The next section describes performance and structure of Arab imports, estimates aggregate imports function of the Arab region, and move forward to estimate the functions for Chinese and

Korean exports, while Section 3 analyzes the relationship between Chinese and Korean Exports toward the Arab region. Section 4 tries to conclude the results and give a vision for promoting Korean exports to the Arab region.

II. The Performance of Arab Imports:

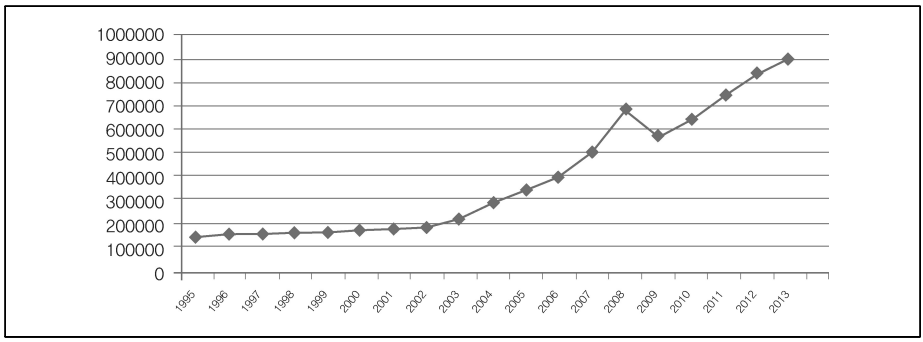
The high revenues from oil exports is considered the main force in driving the imports in the Arab region. This does not apply only to the Gulf countries but also others in the region because of the economic linkages among them. On the other hand, many Arab countries have a weak productive capacity and a shortage in production factors (Metwally 1993). The trade policy of Arab region has constituted new forms of relations in and among countries. It has changed market shares of the trade partners. Arab countries have been increasingly signing liberal bilateral, regional, and multilateral trade agreements with economically and politically more powerful developed countries, mainly the US, Japan, Australia, and the EU. Since the imports are growing rapidly, market shares of trade partner change over time, and some countries have gained market share at the expense of others.

The performance of imports value of Arab countries, during the period 1995-2013, can be followed in figure1. That indicates that imports to the Arab region increased from about 150 billion USD in 1995 to about 900 billion USD in 2013. This reveals that the Arab region Market is a market showing accelerating growth; therefore, there is a good chance for exporters can expand their exports towards Arab region without crowding each other out. This also may represent a positive sign in terms of the increasing ability of Korean exports to penetrate the Arab market with no fear of aggressive competition from Chinese exports. It is an expansion involving many products that constitute the important components of the Arab imports structure, which are Machinery, transport equipment, and manufactured goods, which exceeds

50% of the total imports, as shown in figure2. The growth in Arab imports can be assessed by estimating the imports demand function in the following point.

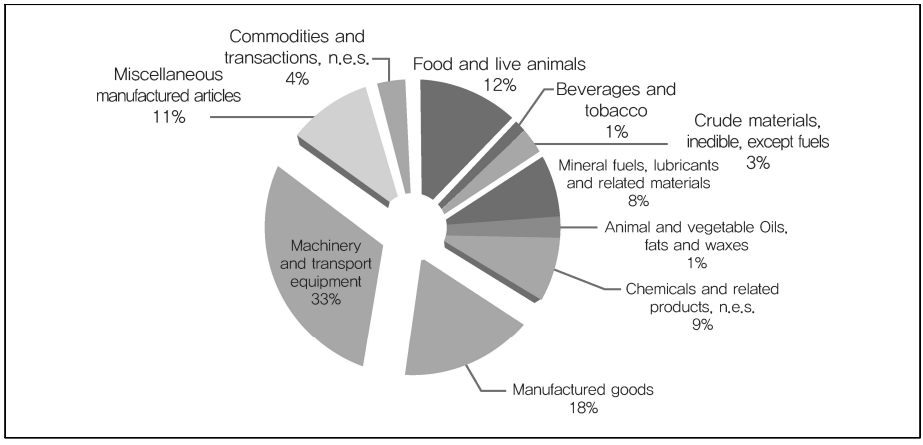
Figure 1. Imports value of Arab States during 1995-2013

(Unit: million USD)



Source: UNCTAD Statistics Database online.

Figure 2. Arab imports structure by product group in 2013



Source: UNCTAD Statistics Database online, Calculation by the Author.

III. Determinants of Arab Imports Demand Function:

Imports may be final consumption goods, intermediate or capital products. The factors that determine each one may differ, while level of income, prices and tastes are more important for final consumption goods; levels of development and investment are important for intermediate or capital goods. Many empirical studies have tried to estimate the import function in developed and developing countries, based on the traditional demand for imports function that can be written as follows:

$$M = F(Y, P) \quad (1)$$

Where M is the real quantity of imports, Y is the real domestic income, and P is relative prices where the expected sign of the first variable is positive while it is expected to be negative for the second, where the increase in income causes an increase in the demand capability for domestic and imported goods. While the sign of GDP are negative in some cases, this can be interpreted as: supposing that the imports represent the difference between domestic consumption and domestic production of importable goods, the rise in production may be greater than the rise in consumption in response to rise in income (Mohammad and ELSaka). As for the negative sign of relative prices, it can explained that when the imported goods decreased relative to domestic prices so the indicator value decreases, this makes the imported goods look cheaper, so the demand for them increases.

Some previous studies have expanded the above model to include more variables, which are investment expenditure, managerial expenditure, and population (Metwally 1993), private consumption, government consumption, international reserves gross capital formation and Export (Erlat and Erlat 1999; Mohamed and Tang 2000; Aljebrin and Ibrahim 2012; Ibrahim 2015) inflation rate, and nominal depreciation rate (Kotan and Saygili 1999).

According to the previous studies, the econometric model of estimating the imports demand function should be divided into three: (a) Aggregated Imports

Function of Arab region, (b) Arab Imports Function from China, and (c) Arab Imports Function from Korea. The aim for estimating these three models is to highlight the main determinants of the aggregated imports of Arab countries and investigate the most important ones for Chinese and Korean exports as a guide for economic policy makers in their strategy for promoting the Korean exports.

3.1) The econometric models:

$$Log(ArabIM)_i = \beta_0 + \beta_1 Log(GDP)_i + \beta_2 Log(G)_i + \beta_3 Log(HC)_i + \beta_4 Log(LNV)_i + \beta_5 Log(EX)_i + \beta_6 (CPI)_i + \mu_i \quad (2)$$

Where $\beta_0, ..., \beta_6$ coefficients needed to be estimated, i refers to time series, ArabIM refers to the ratio of the aggregated imports of goods and services to real GDP in the Arab region, GDP is the real gross domestic product per capita which reflects the economic development level, G is the government spending to real GDP, HC the household consumption, INV the gross capital formation as indicators of investment, EX refers to exports of goods and services, and CPI is the growth rate in consumption price index based on year 2000. Ratios were calculated depending on values in US Dollars at constant prices (2005) and constant exchange rates (2005) in millions.

$$Log(Ch\_IM)_i = \alpha_0 + \alpha_1 Log(GDP)_i + \alpha_2 Log(G)_i + \alpha_3 Log(HC)_i + \alpha_4 Log(P_{ch})_i + \alpha_5 Log(INV)_i + \alpha_6 Log(EX)_i + \alpha_7 Dummy_i + \pi_1 \quad (3)$$

Formulating this model and the next one adopts a perspective that in estimating the import-income relationship in the oil producers, where many Arab countries are so, one must take into account the real gains from trade that a country enjoys when its export prices increase faster than its import prices. Therefore, using a deflated income in estimating the import function may not be the most accurate in the case of these countries. (Metwally 1993). In addition to the suitability of results, the value of variables in this model will be in current prices in thousands USD. Where $\alpha_0, ..., \alpha_7$ coefficients to be estimated, Ch_IM refers to the Imports

directed from China towards the Arab region. P_{ch} is the relative price variable proxied by consumer price index of China to consumer price index of the Arab region. Dummy expressed the Arab spring revolution, which equals to zero for years before and one for years after. G, HC, INV and EX were expressed before.

$$Log(Ko\_IM)_i = \delta_0 + \delta_1 Log(GDP)_i + \delta_2 Log(G)_i + \delta_3 Log(HC)_i + \delta_4 Log(P_{ko})_i + \delta_5 Log(INV)_i + \delta_6 Log(EX)_i + \delta_7 Dummy_i + \epsilon_i \quad (4)$$

Where $\delta_0, ..., \delta_{67}$ coefficients to be estimated, Ko_IM refers to the Imports directed from Korea towards the Arab region. P_{ko} is the relative price variable proxied by consumer price index of Korea to consumer price index of the Arab region. However, there are no changes for the rest variables.

For the three models, all variables were transformed into natural logarithm to avoid the heteroscedasticity problem. The data source was the United Nations Conference of Trade and Development (UNCTAD), during the period (1980-2013) for the first model, and (1995-2013) for second and third ones, according to data availability.

To choose the method of estimation more appropriate to the econometric models, unit root tests must be done to ascertain if the series are stationary or not and determine the order of stationary when it is proved to avoid a spurious regression. There are three cases of stationarity: the first case, if the time series of variables are stationary in level I(0), Ordinary Least Squares (OLS) can be the appropriate method for estimation, otherwise, the second case: the co-integration method should be used if the series are not stationary in level but in the 1st difference; it could be in the 2nd difference but they must be in the same order I(1) or I(2). The third case, Autoregressive Distributed Lag Model (ARDL), which was introduced by Pesaran *et al*. (2001), must be suitable in order to incorporate I(0) and I(1) variables in same estimation, but variables must not be stationary in 2nd difference.

3.2) Results:

a- Aggregated Imports Function of Arab region:

Depending on the Augmented Dickey-Fuller (ADF) test, table1 shows the results of stationary.

Table 1. The Stationary test for the time series of variables (in constant prices)

Variable	Level		1st difference		2nd difference	
	intercept	Intercept and Trend	intercept	Intercept and Trend	intercept	Intercept and Trend
Arab_IM	-1.1241	-1.3486	-5.2913*	-5.2233*	-9.022*	-8.906*
G	-2.1799	-2.0769	-7.2328*	-7.229*	-6.1559*	-6.067*
HC	-1.4534	-1.4463	-5.311*	-5.3182*	-9.925*	-9.8108*
INV	-1.5987	-1.5947	-6.9802*	-4.061**	-12.442*	-12.282*
GDP	0.0791	-1.3208	-4.3107*	-2.1002	-5.4329*	-5.5549*
Ex	-1.5124	-1.9412	-7.6446*	-7.5586*	-12.647*	-12.494*
CPI	2.7787**	-0.7981	-4.2853*	-5.2437*	-8.600*	-8.4485*

*significant at 1%, ** significant at 5%, *** significant at 10% Lag Length: 3 (Automatic - based on SIC, maxlag=3)

The results indicate that the variables are stationary in the 2nd difference, so the ARDL approach couldn't be applied. Also, not all variables are stationary in level I(0), meaning the OLS is not possible. Accordingly, the most appropriate method is the cointegration approach as all variables are I(1) in case of intercept and trend. This test permits more than one cointegrating relationship, and so, is much more generally applicable than the Engle–Granger test which is based on the Dickey–Fuller (or the augmented) test for unit roots in the residuals from a single (estimated) cointegrating relationship. There are two types of Johansen test, either with trace or with eigenvalue. The null hypothesis for the trace test is the number of cointegration vectors $r \leq ?$, while the null hypothesis for the eigenvalue

test is r = ?

Investigating the estimators in long-run can be achieved by using modern econometric techniques. The Fully Modified Ordinary Least Squares (FMOLS) approach produces reliable estimates for small sample size and provides a check for robustness of the results. The FMOLS method was originally introduced and developed by Philips and Hansen (1990) for estimating a single co-integrating relationship that has a combination of I(1). FMOLS modifies least squares to account for serial correlation effects and test for the endogeneity in the estimators that result from the existence of Co-integrating Relationships, in order to achieve asymptotic efficiency (Bashier and Siam 2014)

The results of Johansen cointegration tests are shown in table 1 and table 2. These results declare that there are 6 cointegration equations among the variables. This means that cointegration vectors of trace test are $r \leq 2$, while cointegration vectors of the eigenvalue test are r = 2. While the long-run equilibrium is proved, we can move step forward by estimating the long run elasticities using FMOLS method.

Table 2. Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.998658	439.1555	125.6154	0.0001
At most 1*	0.950127	234.1241	95.75366	0.0000
At most 2*	0.879307	141.1777	69.81889	0.0000
At most 3*	0.620842	75.62807	47.85613	0.0000
At most 4*	0.548124	45.56418	29.79707	0.0004
At most 5*	0.425297	20.93943	15.49471	0.0068
At most 6	0.114466	3.768487	3.841466	0.0522

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

Table 3. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.998658	205.0314	46.23142	0.0000
At most 1*	0.950127	92.94641	40.07757	0.0000
At most 2*	0.879307	65.54958	33.87687	0.0000
At most 3*	0.620842	30.06389	27.58434	0.0235
At most 4*	0.548124	24.62475	21.13162	0.0154
At most 5*	0.425297	17.17094	14.26460	0.0169
At most 6	0.114466	3.768487	3.841466	0.0522

Max-eigenvalue test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

Table 4. Fully modified Ordinary Least Squares (FMOLS) of Arab_IM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(GDP)	0.688442	0.125143	5.501254	0.0000
LOG(G)	0.553624	0.043424	12.74927	0.0000
LOG(HC)	1.491880	0.115797	12.88358	0.0000
LOG(EX)	0.843399	0.081818	10.30823	0.0000
LOG(INV)	0.496758	0.056936	8.724846	0.0000
LOG(CPI)	-0.127715	0.034508	-3.701008	0.0010
C	-2.576535	0.931929	-2.764731	0.0103
R-squared.	0.989316	Adjusted R-squared		0.986850

Regarding the FMOLS results, all variables have a significant positive effect on the demand for the imports, except for the CPI which refer to a significant negative effect, where the increase in domestic prices causes an increase in the demand for imports. The results agree with economic theory and the findings of most previous studies. The value of coefficient expresses the elasticity of demand

for imports to these variables, where it exceeds one (1) in case of householding consumption, while is near one (1) for exports and real GDP and government consumption, respectively, and near zero (0) in case of gross capital formation as a proxy of investment and consumer price index.

b-Arab Imports Function from China

The results of the Augmented Dickey-Fuller test are clarified in the following table:

Table 5. The Stationary test for the time series of variables (in current prices)

Variable	Level		1st difference		2nd difference	
	intercept	Intercept and Trend	intercept	Intercept and Trend	intercept	Intercept and Trend
Ch_IM	2.442	-0.7991	-2.927***	-4.5177*	-6.596*	-6.3697*
Kor_IM	0.9797	-1.4967	-3.197**	-3.761**	-4.6222*	-4.355**
G	4.7318*	0.281	-1.629	-3.709***	-4.864*	-4.772*
HC	0.649	-1.166	-1.885	-2.583	5.0136*	-4.827*
INV	0.905	-1.737	-3.378**	-3.692***	-6.699*	-6.474*
GDP	1.1603	-1.586	-3.912*	-4.793*	-4.291*	-4.004*
Export	0.266	-2.209	-4.581*	-4.426**	-4.336*	-4.059**
PCh	-0.5072	-2.555	-4.227*	-4.069**	-6.245	-6.158*
Pko	-0.2714	2.1280	-3.75**	-4.221**	-6.703*	-6.464*

* significant at 1%, ** significant at 5%, *** significant at 10% Lag Length: 3 (Automatic - based on SIC, maxlag=3)

The results shown above show that variables are stationary in the first difference, so they may cointegrated in the first order I(1) in case of intercept and intercept & trend; this applies to all variables except for G (Government Consumption) and HC (Household Consumption), thus these two variables will be omitted in proceeding the Johansen cointegration test for this model and the third one, as well as, the short time series omitting the EX variable for estimation purpose.

Table 6. Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.995032	145.9419	69.81889	0.0000
At most 1*	0.829234	55.76265	47.85613	0.0076
At most 2	0.605925	25.71577	29.79707	0.1374
At most 3	0.408130	9.885114	15.49471	0.2897
At most 4	0.055415	0.969162	3.841466	0.3249

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

Table 7. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.995032	90.17924	33.87687	0.0000
At most 1*	0.829234	30.04688	27.58434	0.0236
At most 2	0.605925	15.83065	21.13162	0.2349
At most 3	0.408130	8.915953	14.26460	0.2932
At most 4	0.055415	0.969162	3.841466	0.3249

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

The results of Johansen co-integration tests supported the existence of long-run equilibrium relationships among the variables. Where cointegration vectors of trace test are $r \leq 2$, cointegration vectors of the eigenvalue test are $r = 2$. Hence, the next step is to estimate the long run elasticities using FMOLS method.

Table 8. Fully modified Ordinary Least Squares (FMOLS) of Ch_IM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(PCH)	-1.916303	0.327638	-5.848840	0.0001
LOG(GDP)	2.102749	0.339064	6.201632	0.0000
LOG(INV)	-0.313430	0.284005	-1.103607	0.2898
REVOLUTION	-0.286087	0.068077	-4.202412	0.0010
C	-15.41873	1.487279	-10.36708	0.0000
R-squared	0.995743	Adjusted R-squared		0.994433

The FMOLS results reveal a significant positive effect of GDP on the Chinese exports where a 1% increase in GDP causes a 2% increase in Chinese exports where signs of other variables are negative, indicating that a significant negative effect of relative prices on the imports, where a 1% decrease in China price relative to price in the Arab region will lead to about a 2% increase in the Chinese exports. In addition, the results proved that revolution and political changes have a significant negative effect on Chinese exports but with an elasticity less than one. However, INV gross capital formation as proxy of investment is not significant in terms of affecting Chinese exports in the Arab region.

c-Arab Imports Function from Korea

The results of Johansen co-integration tests, in table 9 and 10, supported the existence of long-run equilibrium relationships among the variables. Where cointegration vectors of trace test are $r \leq 3$, while cointegration vectors of the eigenvalue test are $r = 2$.

Table 9. Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.980557	131.8669	69.81889	0.0000
At most 1*	0.830411	64.88226	47.85613	0.0006

At most 2*	0.694519	34.71786	29.79707	0.0125
At most 3	0.575283	14.55810	15.49471	0.0688
At most 4	2.74E-05	0.000466	3.841466	0.9844

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

Table 10. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.980557	66.98461	33.87687	0.0000
At most 1*	0.830411	30.16439	27.58434	0.0228
At most 2	0.694519	20.15977	21.13162	0.0679
At most 3*	0.575283	14.55763	14.26460	0.0449
At most 4	2.74E-05	0.000466	3.841466	0.9844

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

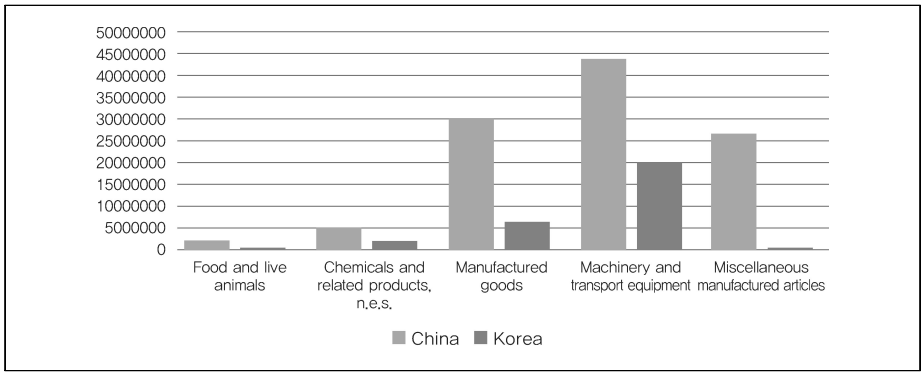
FMOLS estimates the long run elasticities of independent variables related to Korean exports in table 10, where the results reveal that relative prices and GDP variables are not significant, contrary to the case of Chinese exports. In addition, INV gross capital formation, as a proxy of investment in the Arab region, has a significant positive effect on the demand for the Korean exports. Since a 1 % increase in gross capital formation causes a 1.2% increase in the Korean exports, revolution has almost the same effect as in the case of Chinese exports.

Table 11. Fully modified Ordinary Least Squares (FMOLS) of Ko_IM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(PKo)	-0.174638	0.415423	-0.420386	0.6811
LOG(GDP)	-0.181860	0.302301	-0.601586	0.5578
LOG(INV)	1.184155	0.265234	4.464574	0.0006
REVOLUTION	0.187719	0.068975	2.721549	0.0175
C	-3.116097	1.025646	-3.038181	0.0095
R-squared	0.994545	Adjusted R-squared		0.992867

Given the above results of the three models, we can conclude that demand for the aggregated imports in the Arab region is significant to all independent variables which agree with economic literature. The Chinese exports are determined by GDP and relative prices while gross capital formation is more important in determining the demand for Korean exports in Arab region. Both of them are affected by the revolution and political changes. The interpretations of these results require moving step forward in identifying the structure of Chinese and Korean Exports.

Figure 3. Most important Chinese and Korean exports to the Arab region in 2013



Source: UNCTAD Statistics Database online.

It is obvious from figure 3 that China has superiority in all products. The comparative superiority of China to Korea is the highest in miscellaneous manufactured articles, followed by manufactured goods, machinery and transport equipment, in order. This arrangement highlights the importance of real GDP and relative prices as determinants of the demand for Chinese exports, as some of these exports consist of consumption goods that are sensitive to changes in prices and income. However, it is machinery and transport equipment that are most important products that imported from Korea to Arab region, as they used mostly in construction that is vital for expanding the investment projects. This concords with the estimation results of the previous model which referred that gross capital formation (investment) is the more important variable in determining the demand for Korean exports.

IV. Relationship between Chinese and Korean Exports towards Arab Region:

This section tries to answer the question, "To what extent are the components, of Chinese and Korean exports to the Arab region, similar or different?" The answer hinges on how important it is in recognizing whether the market share of Chinese exports threatens the Korean exports to the Arab region, or not. The objective of this section can be realized through the Similarity index, and tracking of the comparative values of the Chinese and Korean exports towards the Arab region and their growth. Lastly, test for the equilibrium long-run relationship between them using Cointegration approach, as well as (FMOLS) and (DOLS) to estimate the coefficients.

4.1 The Similarity Index:

The Similarity Index was introduced by Grubel-Lloyd (1975), to help determine whether the trade structures of two economies are similar or not. The index is calculated at the three-digit level of the SITC Revision 3 and ranges from 0 to 1. Value closer to 1 reveals the greater similarity of the trade structure between two countries or two groups of countries, while values closer to 0 reveals the least similarity (UNCTAD). The indicator is computed as follows:

$$S_{jk} = 1 - \frac{1}{2}\sum_{t} |h_{ij} - h_{ik}|$$

where

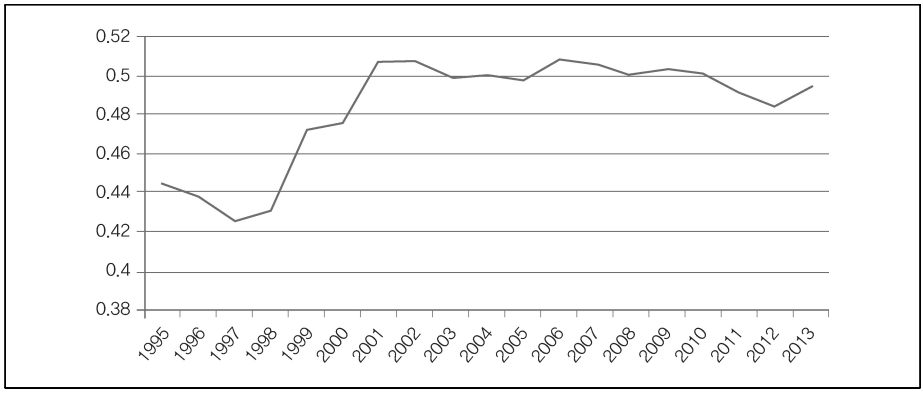
S_{jk} = Indicator of similarity in merchandise trade structures

h_{ij} = Share in total merchandise exports or imports of product i of China(j)

h_{ik} = Share in total merchandise exports or imports of product i in Korea(k)

UNCTAD secretariat calculations introduced this index for the whole exports of China and Korea to the world, which can be used as an indicator to gauge the similarity between the two countries' exports towards the Arab region. Figure 4 reveals that the exports structure of both China and Korea is similar in less than 50% of their exported products while it is different in more than 50% of exports, as the value of index does not exceed 0.5 in most years, where the average value of the index was 0.48 during the whole period. This result agrees with the conclusion of the last section, regarding the diversification of China exports.

Figure 4. Similarity Index between China and Korea (1995-2013)

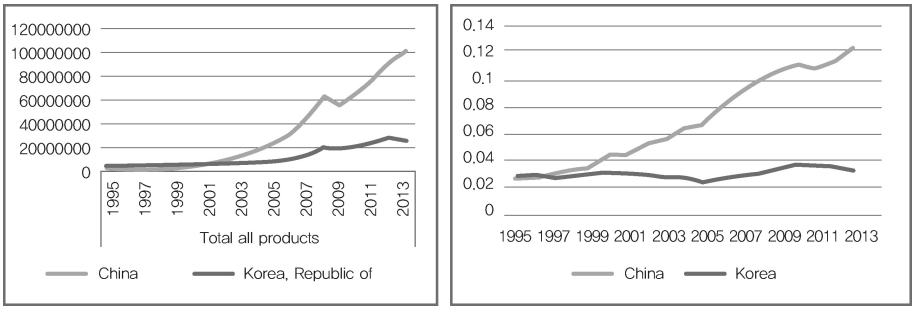


Source: UNCTAD Statistics Database online.

4.2 The Comparative values and growth:

As it is remarkable from figure 5 that there was a growing trend in Chinese exports although the Korean exports show less growth. The progress in China's exports may be supported by accelerating China's GPD growth rate and the low wages; on the other hand, it reflects the importance of the Arab market for China.

Figure 5. Value and Growth of Chinese and Korean exports to the Arab Region



Source: UNCTAD Statistics Database online.

4.3 Cointegration test:

Proving that there is a relationship between the Korean and Chinese exports is important in terms of finding out if there is any threat from the Chinese exports to Korean exports and whether Korean exports are being crowded out or coexisting with exports from China. To estimate the relationship between Korean and Chinese exports, Pedroni Residual Cointegration test can be implemented to find out the equilibrium relationship in the long run. Estimating this test based on panel data for the main products that were exported from both countries towards Arab region during the period 1995-2013 was taken from UNCTAD database online. The methodology of Cointergration requires testing firstly for the stationarity of the pooled data, so the pooled unit root test can be executed. The Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Squares (DOLS) will be used to estimate the coefficient according to formulation of simple regression models:

$$KO\_IM_{i,t} = \alpha_0 + \alpha_1 Ch\_IM_{i,t} + \pi_i \quad (4)$$

$$Ch\_IM_{i,t} = \delta_0 + \delta_1 KO\_IM_{i,t} + \epsilon_i \quad (5)$$

where KO_IM refers to the Imports from Korea towards Arab region. Ch_IM refers to the Imports from China towards Arab region. i and t are time series and products categories while α and δ are the required coefficients to be estimated.

Panel models present more information about the sample, because the time series information is enhanced by that contained in the cross-section data (Osbat 2004).

Levin, Lin and Chu (2002) and Im, Pesaran and Shin (2003) have developed panel-based unit root tests which lead to statistics with a normal distribution in the limit, unlike individual unit root tests that have complicated limiting distributions (Baltagi 2001).

The test by Levin, Lin and Chu assumes that there is a common unit root process across the cross-sections, referred to pooling the residuals along the within-dimension. The test by Im, Pesaran and Shin assumes that there is an individual unit root process across the cross-sections allowing for a heterogeneous coefficient, where ρ may vary across cross sections, known as pooling residuals along the

between-dimension. Maddala and Wu [1999] and Choi [1999a] proposed a Fisher test, which has the advantage over the test by Im, Pesaran and Shin test in that it does not require a balanced panel and can use different lag lengths in the individual ADF regressions.

Pedroni (1999, 2000) suggests two types of residual-based tests for the test of the null of no cointegration in heterogeneous panels. For the first type, four tests are based on pooling the residuals of the regression along the within-dimension of the panel (panel tests); for the second type, three tests are based on pooling the residuals of the regression along the between-dimension of the panel (group tests).

In both cases, the hypothesized cointegrating relationship is estimated separately for each panel member and the resulting residuals are then pooled together in order to conduct the panel tests. In the case of panel tests, the first-order autoregressive term is assumed to be the same across all the cross sections, while in the case of group tests the parameter is allowed to vary over the cross sections. The seven statistics test the null hypothesis of no cointegration against the alternative of cointegration. Rejection of the null hypothesis means that the variables are cointegrated. (Breitung and Pesaran 2005; Ramirez 2006; Costantini and Martini 2009).

Estimating the impact of Chinese exports on Korean exports in the Arab region and vice-versa, can be based on the two methods: the Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS) that may be more promising in Cointegrated panel regressions.

The Results:

1. Pooled Unit Root Tests

Table 12. Pooled Unit root test for the China Exports

Method	level Statistic	Prob.**	1st difference Statistic	Prob.**
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	2.18969	0.9857	-7.41466	0.0000
Breitung t-stat	7.91741	1.0000	-2.44415	0.0073
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	5.64828	1.0000	-8.08551	0.0000
ADF - Fisher Chi-square	3.69512	0.9999	86.4265	0.0000
PP - Fisher Chi-square	9.81153	0.9379	139.632	0.0000

Table 13. Pooled Unit root test for the Korean Exports

Method	level Statistic	Prob.**	1st difference Statistic	Prob.**
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.03192	0.5127	-5.19759	0.0000
Breitung t-stat	5.10376	1.0000	-1.28902	0.0987
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.37939	0.9161	-6.92507	0.0000
ADF - Fisher Chi-square	15.8092	0.6059	79.9971	0.0000
PP - Fisher Chi-square	17.5271	0.4872	110.710	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi-Square distribution. All other tests assume asymptotic normality.

According to the results of all the pooled unit root tests, shown in table 12 and 13, both variables are not stationary in the level but it so in the first difference, this means that both of them are stationary in the same order. So, we can move one step forward to test for the equilibrium long –run relationship by depending on Pedroni Residual Cointegration Test for pooled data.

2. Pedroni tests:

Table 14. Pedroni Residual Cointegration Test

Alternative hypothesis: common AR coefs. (within-dimension)				
	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	8.178693	0.0000	1.170860	0.1208
Panel rho-Statistic	-4.163043	0.0000	-2.624758	0.0043
Panel PP-Statistic	-5.547719	0.0000	-3.245725	0.0006
Panel ADF-Statistic	-3.852980	0.0001	-3.158073	0.0008
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	-1.296610	0.0974		
Group PP-Statistic	-3.061900	0.0011		
Group ADF-Statistic	-2.253021	0.0121		

The above results proved that there is an equilibrium relationship in the long run between the Chinese exports and Korean exports to the Arab region because p values of most tests of Cointegration are significant at 5% level.

3. FMOLS and DOLS:

Dependent Variable	FMOLS			DOLS		
	coefficients	Prob.	R^2	coefficients	Prob.	R^2
KO_IM	0.315532	0.0000	0.893875	0.355276	0.0000	0.979612
CH_IM	2.461393	0.0000	0.856379	2.276977	0.0000	0.978787

The results of the FOLS and DOLS proved that Chinese exports positively and significantly impacted Korean exports to the Arab region. The results show that Chinese exports are important in interpreting the changes in Korean exports to the Arab region; the increase in the first variable is followed by an increase in the last one, and vice versa. The same is proved for the impact of Korean exports on Chinese exports, but the value of the coefficient is higher, showing that the increase in Korean exports has a higher positive impact on Chinese exports that the latter has on the former. So, we can conclude that there is no crowding out relationship between the exports of both countries towards Arab Countries but they can coexist with each other.

4. Conclusion and a vision for promoting Korean exports to the Arab region:

This research tried to explore the relationship between Chinese exports and Korean exports to the Arab region, to investigate whether Chinses exports, which have the largest share in the Arab market, were crowding out or coexisting with Korean Exports in the Arab region. This required following the performance of Arab region exports value, during the period 1995-2013 to identify the growth in the said period, which has an increasing tendency. In addition, the analysis have shown that the most important components among Arab imports are Machinery, transport equipment, and manufactured goods, which exceeds 50% of the total imports. The growth in Arab imports were analyzed by estimating the imports

demand function, which included many independent variables which were real GDP per capita, government spending, household consumption, gross capital formation, exports of goods and services, and the growth rate in consumption price index. The results showed that all variables were positively significant in their impact on Arab imports.

Identifying the determinants of Chinese and Korean imports fell well within the concern of this research. So, the demand for both imports were estimated, based on the cooperation approach and FMOLD, to find out that the demand for Chinese imports was determined by the real income and relative prices, while gross capital formation (as indicator to investment) was the most important for Korean imports demand. The Arab revolution was also a significant variable in both functions. Interpreting these results required analyzing the structure of these imports to the Arab region, where China, relative to Korea had the highest in miscellaneous manufactured articles, then manufactured goods, next, machinery and transport equipment. This arrangement highlights the importance of real GDP and relative prices as determinants of the demand for Chinese imports as some of these imports consist of consumption goods that is sensitive to changes in prices and income. However, machinery and transport equipment are perhaps the most important products that imported from Korea to Arab region, where they are used mostly in construction and building that are important for expansion of investment projects.

The answer the question, "To what extent are the components, of Chinese and Korean exports to the Arab region, similar or different, complementary or substitutes?", was important to identifying whether the market share of Chinese imports threatens the Korean imports to the Arab region, or not. The Similarity index which was used as an indicator to the similarity between the two countries' exports towards the Arab region revealed that the whole exports structure of both China and Korea was similar in less than 50% of their exported products while it was different in more than 50%; this result highlighted the diversification of Chinese exports. Then another step forward was taken in terms of analyzing the relationship between Chinese and Korea imports to Arab region, specifically, through

tracking of the comparative values of the Chinese and Korean imports towards the Arab region and their growth. The analysis proved that there was a growing trend in the Chinese imports although the Korean imports had relatively less growth, where the progress of China's imports was supported by China's accelerating GPD growth rate which reached about 7% in the Fourth quarter of the year 2015, exceeding previous expectations.

Proving that there was a relationship between the Korean and Chinese exports is important to ascertaining if there was any threat from Chinese imports to the Korean ones and recognize whether they are competing or coexisting. The Pedroni Residual Cointegration test is implemented to find out the equilibrium relationship in the long-run. Also, the FMOLS and Dynamic Ordinary Least Squares (DOLS) are implemented to estimate the coefficients. Panel data of main products imported from the two countries was used for the period 1995-2013. The estimation results show that Chinese imports was important in interpreting the changes in Korean imports to the Arab region. In addition, the impact of Korean imports was proven in connection with Chinese imports, but the value of coefficient is higher, showing that the increase of Korean import has a higher positive impact on the Chinese imports that the latter has on the former. Therefore, the conclusion of this research reveals that there is no crowding out relationship between the exports of both countries towards Arab Countries but they can, in fact, coexist with each other.

Despite there being no evidence of a negative relationship between Chinese and Korean imports to the Arab region, the Arab Korean trade is very limited given the relative weight of Arab and Korean economies in the global economy. Therefore, it is necessary for Korea to conclude free trade agreements with Arab countries, which could be beneficial for both sides, and enable them to open the market of all parties involved.

According to the result of this research, expansion of investment is the most important determinant in demands in the Arab region for Korean Imports. So, increasing the Korean investments in the Arab region may benefit in terms of facilitating local investments in the Arab region. This may compensate for the

shortage in Korean imports and lead to many advantages: first, it will enhance Arab demand for Korean imports. Second, it will enable Korea to compete with Chinese imports to the Arab region by relying on the low cost production factors in the Arab region especially, the energy resources and labor force, in addition to saving the high transportation costs associated with the long geographical distance. Third, it can be a good platform for monitoring the Arab market and its preferences, and help in overcoming cultural differences.

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6

Free Trade between Korea and Mexico: Obstacles and Advantages

Adolfo Laborde

Summary

South Korean investment in Mexico has grown exponentially in recent years. Today there are more than 1,500 businesses with Korean capital in the country, and they account for approximately 50,000 jobs, mainly in electronics, automotive, energy, and mining industries. Many of these companies contribute to total exports of Mexico (9.8 million dollars in 2014), mainly electronics companies. Therefore, South Korean businesses play an important role in the country's economy and continue to be on the rise. In 2014 alone, more than 10 new Korean companies came to Mexico, and that number is expected to increase in 2015 and 2016, due to the effects of the structural reforms. Recently, the governments of both countries have expressed an interest in reopening talks on establishing a free trade agreement, with the goal of easing the exchange of goods with Mexico's 6th trading partner, and thereby reduce the 11,753.6 million dollar deficit at the end of 2014, according to data from Mexico's Ministry of the Economy.

Key words: agreement, free trade, Mexico, Korea, AAP, future

Introduction

For some years now, the Mexican and South Korean governments have worked hard on a satisfactory Free Trade Agreement (FTA) between the two countries. For one reason or another, a final agreement has not been reached and, considering the spectrum of economic relations of the two countries and taking into account what has been negotiated so far, everything seems to indicate that more time will be needed to come to a final agreement, unless the essence of the agreement were to change. An Economic Complementation Agreement could unblock this and lead to a future signing of the FTA. We affirm this in view of the theory of base economic interdependence of sectors that Mario Blakutt covers in his work "Complementary Local Development."[1] In this sense, according to Juan Felipe López (2010), reaching a bilateral agreement would benefit South Korean businesses by making it easier for them to import products used in the production of goods to be exported to the United States from Mexico. The author also points out that it is not a negotiation of the treaty that is in question, but rather negotiation of commitments that must be undertaken with South Korean businesses to increase Mexican participation in production processes. With the understanding that no treaty

1) Complementary local development consists of one of the operational models of the Vital Economy and is designed to be a guideline to allow for the creation of the state–business–civil society trilogy and the implementation of actions necessary for "down-up" development within municipal autonomy. It is a synthesis of the best traits of development theories, among them the one referring to Endogenous Development. The basis is the principle of Complementarity, and its unit of analysis is "Population-Territory" instead of the homo economicus; it also includes the concept of Cluster proposed by Harry Potter, the concept of Industrial District, conceived by Alfred Marshall, and the concept of Flexible Production. For more information, please see http://www.eumed.net/libros-gratis/2013/1252/index.htm (retrieved July 6, 2015).

would be effective unless it had its own technology and infrastructures, the question should be about how Mexican businesses could be better integrated into the value chain of South Korean businesses.

In the context of the 2006 global economic crisis, apparently caused by poor handling of financial instruments in the United States, the Mexican government agreed to negotiate the Free Trade Agreement with the Republic of Korea after South Korea insisted on how mutually beneficial it would be to design and sign the agreement. However, just one year later, when Felipe Calderón (2006–2012) was president of Mexico, the negotiations were halted. According to Felipe López (2010), it was mainly due to the approach each of the countries had taken during the economic crisis of the time.

> "…whereas the Korean government and Korean businesses chose to expand institutional networks to finance access to markets in Asia and other regions (foreseeing possible unilateral protectionism, even with marginally important economies), Mexican leaders decided not to support the negotiation of any new trade agreements beyond those that were already in force, so the government decided to bet on unilateral opening up" (López 2010, p. 12).

This process may also appear to reflect apparent pressure from the South Korean government to strengthen its position as a market leader over Japan, which maintained a greater presence in the U.S. market. Considering these points, the purpose of this article is to analyze current bilateral relations between the two countries, emphasizing the potential to deepen them through a Free Trade Agreement or, in absence of one, through an Agreement for Strategic Association or Economic Complementation where there would be fees on products in strategic or sensitive sectors, helping to unblock the negotiations begun in 2006. The first section offers historical background of bilateral relations between the two countries as a general frame of reference. Next, the economic development of the countries will be analyzed so that we can respond to the research question: Why have negotiations for a trade agreement between Mexico and Korea not been fruitful? We shall attempt

to answer this question through different aspects, such as the complementarity between the two economies, their trade relations, and foreign direct investment. This section covers the factors that hinder the development of the trade agreement, taking into account domestic policies. Finally, an analysis of the return to negotiations between the two countries in 2015 will be considered, as well as the possibility for a better scenario with the goal of developing the specific ideas as to how they may be carried out.

Mexico–South Korea Bilateral Relations (1960–2014)

Mexico and South Korea established diplomatic relations 52 years ago. Both nations have worked hard to claim a place as global actors with a constantly growing presence in international trade (Comunicado Conjunto Secretaría de Relaciones Exteriores de México 2015). The first contact between Mexico and Korea took place more than a century ago, when Mexicans from religious orders traveled to Korea to promote evangelization missions. Meanwhile, in approximately 1905, a group of Koreans immigrated to the state of Yucatan and set up the first colonies in the country (Licona and Rangel 1991, p. 3). In 1962, the governments of the two countries established diplomatic relations, giving them strategic importance and increasing trade and movement of people (Secretaría de Relaciones Exteriores de México 2011). They were also very interested in promoting cultural, economic, trade, and investment relations.

Today, the office of the chancellor has 11 agreements registered with the South Korean government, in culture; trade; air services; economic, scientific, and technical cooperation; taxes and tax evasion; extradition; tourist cooperation; promotion and reciprocal protection of investments; mutual judicial assistance on penal matters; and mutual judicial assistance in customs (Romero 2007, p. 20).

Today, the Republic of Korea is one of Mexico's most relevant economic and political partners in the Asia–Pacific, yet the relationship was not always so important for either country. However, bilateral relations between the two have grown stronger, beyond the agreements signed, with multiple state visits between the governments. The first was in 1991, by then-South Korean president Roh Tae-woo. This was also the first time that a Korean head of state visited Latin America (Licona and Rangel 1991, p. 5). On the Mexican side, in 1996 Ernesto Zedillo was the first president to land on South Korean soil, kicking off a tradition of concordant state visits, which continues today. In 2005, Vicente Fox attended the 13th Summit of APEC Leaders, held in South Korea, and during that same year, negotiations were once again taken up to establish a free trade agreement. However, by 2010, there had been no progress, and in an attempt to favor more the exchange of goods and services, at the 5th Leaders' Summit of the G-20, Felipe Calderón and Lee Myung-bak again brought up the bilateral agenda (Secretaría de Relaciones Exteriores de México 2011). During these negotiations, Mexico's demands were concentrated on "creating conditions to increase commercial trade and investment, through a greater opening up of their economies" (Nam-Kwon and Quintana 2003, p. 1154). However, today these meetings have not yielded results. Still, this does not affect the exchange of exports and imports, which is increasingly favorable for South Korea.

South Korea kicked off the 21st century with an open trade policy, negotiating free trade agreements with Chile, Singapore, the European Free Trade Association (EFTA) member states, the United States, and the Southeast Asian nations. Negotiations have begun to establish an FTA with several countries, including Mexico, to increase its exports of goods and services and to have several suppliers to its market (Comunicado Conjunto Secretaría de Relaciones Exteriores de México 2015). Despite their geographic distance, Mexico and South Korea share key traits as independent states. For example, in the 1960s, when diplomatic relations formally began, the two countries set up the Import Substitution Industrialization model (ISI), because they both depended heavily on the United States for their technological

development. During that time, this system became popular in Latin America and Asia, although few countries saw favorable results. Due to its limited production of raw materials, South Korea was forced to encourage manufacturing exports to meet the basic needs of the domestic market.

Today, South Korea's economy is constantly involved in a competition to gain markets. Unlike some other countries, South Korea entered into international competition with a solid economic base created by the government and its businesses because, before opening up to world competition, it invested in creating infrastructure to advance the steel, chemical, automotive, and electronics industries. It therefore achieved much in terms of global competitiveness by taking advantage of the country's strong points. It also had the critical mass required to keep its businesses going and follow a competitive path, increasing value added in its productive sectors and its economic growth rates. On the other hand, Mexico at that time concentrated its exports toward the north, reaching an agreement with the United States, which boosted the maquiladoras. At that time, Mexico's wealth doubled South Korea's, but it did not foresee the possible advantages of diversifying trade, and now the roles have been reversed (López 2010). The two countries share similarities in their respective development processes. Both societies undertook efforts to fight against poverty, to change production capabilities, and to present themselves as emerging powers on terms of relevance in the world economy. They also take on global agenda topics, such as the reform of the United Nations and the Security Council, climate change, international cooperation for the development of and search for peace, and international security (Bernal 2014).

In diplomatic relations, the Mexican Foreign Service usually kept a friendly distance from South Korea, especially during the conflict between the two Koreas. Mexico remained faithful to the principle of autonomy regarding U.S. policy, which at times kept it from tending to important negotiations, as an approach to Korea has been. Some scholars on the topic consider that diplomacy with Korea was one of indifference (Romero 2007). However, the recent increase in exchanges is due to the increase of South Korean investment in Mexico, which contributes to the implementation of value chains in key economic sectors for the creation of

jobs, the absorption of technologies and foreign trade—with more than 1,700 companies. South Korea has thus fostered the development of the electric and electronics, auto parts, iron and steel, mining, and other industries (Bernal 2014). Over the last few years, there has been an increase in the importance and intensity in the relationship between the two countries. However, to reach optimal strategic association, these efforts must be carried out with a creative focus; an efficient strategy, total cooperation, and public and parliamentary diplomacy are needed (Secretaría de Relaciones Exteriores de México 2015). Then the links with the main actors could be increased optimally; however, it is imperative that the government receive support from businesspeople, universities, research centers, and governments (Comunicado Conjunto de Secretaría de Relaciones Exteriores de México 2015).

The governments of Enrique Peña Nieto—in Mexico—and Park Geun-HYE—in South Korea—have agreed that they must give this relationship the importance it deserves. We must remember that, in 2013, bilateral contact was reinitiated when both presidents' administrations began. The two leaders have gotten together at the G20, in St. Petersburg, Russia, in September 2014; and in October for the Summit of the Asia-Pacific Economic Cooperation Forum, in Bali, Indonesia. At both meetings the presidents promised to keep strengthening the strategic association in trade, investment, tourism, culture, education, and cooperation for development. South Korean Minister Yun Byung-se and Mexican Minister José Antonio Meade have met several times to go over the bilateral agenda and to design new formulas for action in the multilateral arena.

The Strategic Trans-Pacific Partnership Agreement is a proposal for the expansion of multilateral free trade among the economies of the Asia-Pacific region. The purpose of the initial agreement was to eliminate 90% of the tariffs among member countries. Despite the cultural and geographic differences among the nations that take part, they share traits in common, such as being relatively small countries; having open, dynamic economies; following unilateral policies for opening up, and membership in APEC. The FTA negotiations are based on more than 20 months of work on topics including agriculture, customs, industrial goods, rules of origin,

textiles, services, financial services, movement of businesspeople, investment, telecommunications, competition/state commercial businesses, trade and the environment, government purchases, intellectual property rights, trade and work, health and pesticide measures, technical obstacles to trade, trade remedies, and legal/constitutional issues. South Korea became interested in joining in November 2010. The United States officially invited South Korea, so the country could later attend the successful negotiations for a free trade agreement between the two in 2012. The Republic of Korea has bilateral agreements with some members, but some areas must still be agreed upon, such as vehicle manufacturing and agriculture (Secretaría de Economía 2006). Both ministries have decided to encourage a conciliation group that would seek to improve the role of medium powers in international governability and work more efficiently in areas of common interest. This is how the multilateral dialogue and negotiation group "MIKTA"—made up of Mexico, Indonesia, South Korea, Turkey, and Australia—came about (Secretaría de Relaciones Exteriores de México 2015). MIKTA is an informal group of the five countries that consider themselves "medium powers," working together to contribute to the development of the international community. The member states share several common traits: democracy, rapid growth of the market economy, a constructive attitude in their approach to international topics, and the propensity to create "bridges" or links between countries with different points of view on the global arena. All of the participants are members of the G20 that intend to create a platform for cooperation and commitment to a respected global actor (Rizal Sukma, Jakarta 2013).

In compliance with what is established in the Development Plan and the 2007–2012 Foreign Affairs Sectorial Program, one of the main objectives is to increase Mexico–Asia-Pacific relations. The relationship with the Asia-Pacific countries works like a motor that drives trade, financing, innovation, and technological development. For this reason, Mexico would like to strengthen links with countries such as South Korea, China, Japan, India, and others (Dirección General Asia-Pacífico 2006). The Mechanism for Bilateral Policy Consultations was created as a forum

for dialog that was ideal for sharing opinions and viewpoints on several aspects of the bilateral agenda and to agree on positions on topics of common interest from the international agenda. The Strategic Association for Mutual Prosperity in the 21st century had previously established dialogue between Mexico and South Korea (Dirección General Asia-Pacífico 2006). The countries share a high level of political dialogue, which sets the foundation to push for more contact between the governments of the two countries and confirms a new era of understanding, whose end goal is to lead the bilateral relations toward a new horizon: the signing of a free trade agreement.

For Mexico, South Korea represents several options for trade exchange and investment because of its industrial base, its technological progress, and its free market economic system. Several times the opportunity to improve economic relations between the two countries has been recognized. President Felipe Calderón and President Lee Muyng-bak (2008) agreed on the importance of strengthening the strategic association and emphasized the priority of negotiations to establish a Mexico–South Korea Free Trade Agreement. This would mean a sustained increase in bilateral trade and in investment opportunities in the automobile, electronics, textile, footwear, aeronautics, tourism, and information technology sectors (Dirección General Asia-Pacífico 2006). The two heads of state shared the idea that a Free Trade Agreement between Mexico and South Korea would promote trade and bilateral investment, built on the foundation of complementarity between the two economies. President Calderón confirmed that Mexico was still interested and would continue working to seek out the necessary internal consensus to move forward (Comunicado Conjunto de Secretaría de Relaciones Exteriores de México 2015). In June 2009, the vice ministers met at the Mechanism for Bilateral Policies to follow-up in this forum that has become the ideal place to share opinions and viewpoints on the many aspects of the relationship such as the FTA, the Cross Commission on Educational and Cultural Cooperation, and the Cross Commission for Economic, Scientific, and Technical Cooperation (Dirección General Asia-Pacífico 2006). The South Korean president's visit in 2010 intensified the political dialogue and established

the lines of action to move forward in deepening trade exchanges, investment, and cooperation in science and technology to boost the country's technological innovation, as well as human resource training (Comunicado Conjunto de SRE 2015). Minister Patricia Espinosa got together with the Foreign Affairs and Trade Minister of the Republic of Korea, Song Min-sun, in 2007, during the APEC minister meetings. Later, she met with the new minister, Kim Sung-hawn, in 2011, with the goal of establishing the viability of a Korean Cultural Center in Mexico to contribute to the strengthening of bilateral diplomatic and cultural ties and so that the Korean diplomat could strengthen his country's interest in returning to the negotiations for the signing of the FTA (Dirección General Asia-Pacífico 2006).

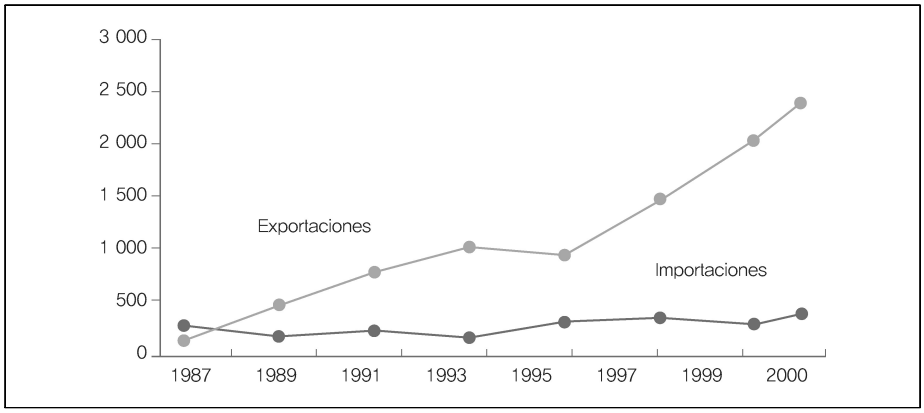
Economic Relations between Mexico and South Korea

Mexico and South Korea can be understood as similar economies that are both competitive and complementary (México is the 14th largest economy in the world and South Korea is 15th), due to the size of their economies and the type of industries they have. Both economies have been labeled as emerging and are members of international organizations such as the G-20, OECD, APEC, and MIKITA; they have a high level of industrialization (the industrial sector holds more weight in South Korea than in Mexico, and the service sector is more important in Mexico than in South Korea), and strong foreign trade (Secretaría de Relaciones Exteriores de México 2015). South Korea is Mexico's 6th trading partner in the world. Bilateral trade has increased approximately 286% over the last 12 years. Mexican exports to South Korea have grown 392% over the last 12 years. In 2011, South Korea was 8th in the world as an importer country and 7th as an importer of agricultural products (Secretaría de Relaciones Exteriores de México 2015).

In Mexico, there are more than 1,600 companies with South Korean capital, including Samsung, LG, KORES, and Posco. It is estimated that between 1999 and June 2012, Mexico received US$1.3 billion in investment. South Korea is Mexico's 14th source of investment in the world and third in the region, after Japan and Singapore (Secretaría de Relaciones Exteriores de México 2015).

Figuer 1. COREA: COMERCIO EXTERIOR CON MÉXICO, 1987-2000

(Unit: MILLONES DE DÓLARES)



Source: http://revistas.bancomext.gob.mx/rce/magazines/60/9/Nam-Kwon_Quintana.pdf.

Mexico's relations with South Korea are considered very relevant because, through Korea, Mexico could seek new plans for links with Asia-Pacific and Southeast Asia, at a critical moment when international economic dynamics are turning toward this region (Secretaría de Relaciones Exteriores de México 2015). Below is a table of some trade indicators between the two countries, where a brief analysis is done to understand the nature and depth of the economic relations between Mexico and South Korea.

Table 1. Mexico's Trade Balance with South Korea

(Unit: Amounts in Thousands of Dollars)

Year	Exports	Imports	Total Trade	Trade Balance
2010	943.483	12,776.546	13,720.029	-11,833.063
2011	1,523.360	13,690.347	15,213.07	-12,166.987
2012	1,728.265	13,350.053	15,078.318	-11,621.788
2013	1,526.888	13,507.399	15,034.287	-11,980.511
2014	2,028.326	13,781.931	15,810.257	-11,753.605

Source: Data from Secretaría de Economía.

The trade balance between Mexico and South Korea has shown a deficit for Mexico at least over the last twenty years. Total trade between the two reached its highest point last year, which shows that both countries have shown an interest in the closer economic relations they are having, as well as the benefits to both resulting from such close economic relations. Though the trade deficit that Mexico has with South Korea is quite large, given the nature of the products that South Korea exports to Mexico, it does makes sense; as electronics and technology, products with a significantly higher trade value stand out among exports.

Table 2. The Main Products Mexico Imports from South Korea

(Unit: Amounts in Thousands of Dollars)

Product	2010	2011	2012	2013	2014
Flat Screen Assembly	3,411.184	2,799.905	2,266.739	2,520.151	2,178.990
Integrated Electronic Circuits	275.717	1,248.507	932.085	784.222	527.848
Vehicles	127.704	162.072	305.570	362.041	455.281
Cellular Phones	219.339	260.958	116.185	316.890	263.557
Auto Parts	143.425	252.440	140.379	256.573	207.337

Source: Data obtained from Secretaría de Economía.

The table above shows the main products that Mexico imports from South Korea. The main import product is flat screen assembly, which makes sense, because today Mexico is one of the leading nations in terms of flat screen exports. South Korea's technological industry is in high demand in Mexican markets, and that is why cell phones and integrated electric circuits are high on the list of Mexico's imports from South Korea. Finally, vehicles and auto parts make up the most important products Mexico imports. The Mexican automobile industry is growing quickly, and it receives much of South Korea's foreign direct investment. Many parts of the vehicles assembled in Mexico come from South Korea.

Table 3. The Main Products Mexico Exports to South Korea

(Unit: Amounts in Thousands of Dollars)

Product	2010	2011	2012	2013	2014
Lead Minerals	53.597	270.090	522.711	435.262	580.725
Zinc Minerals	170.223	241.195	283.325	196.698	287.182
Vehicles	13.269	37.651	64.791	88.094	121.106
Intermediate Iron or Steel Products	149.401	217.003	77.883	82.024	21.529
Silver Minerals	7.270	2.397	78.757	80.565	121.849

Source: Data obtained from Secretaría de Economía.

The products that Mexico exports to South Korea are mostly raw materials such as lead, zinc, iron, and steel, vital to South Korea's industry, which transforms these materials into more elaborate products, usually in the technology sector which is the focal point of South Korean industry. Automobiles assembled in Mexico are also an important product in the trade between the two countries.

The trade relations between the two countries are fruitful in that the trade is complementary; Mexico exports raw materials that are processed and changed in South Korea and then returned as products, ready for the Mexican market to

buy. Mexico also actively imports flat screen assembly parts because, as was mentioned earlier, they are indispensable for Mexico in continuing to be one of the leading flat screen exporters in the world. The Mexican technology sector has gotten a boost from the active economic relations between the two countries. South Korean companies have large investments in Mexico that undoubtedly boost use and innovation of the country's telecommunications sector.

Conclusions

The structural reforms recently approved in Mexico will facilitate the strengthening of Mexico–South Korea relations, opening up new opportunities for investment and trade associations, technological development, and training of personnel in sectors that are a priority for national development. Mexico seeks to take advantage of several coincidences and the renewed drive of its bilateral relations to create new synergies, through the exchange of successful experiences in economic and social development, which lead to benefits for both countries.

President Felipe Calderón and President Lee Myung-bak agreed that it is important to strengthen the strategic association and have emphasized the priority of the negotiations for setting up a Mexico-South Korea Free Trade Agreement. This means a sustained increase in bilateral trade and in investment opportunities in the automobile, electronics, textile, footwear, aeronautical, tourism, and information technology sectors.

There are plans to expand the Strategic Association established in 2005 through the creation of a binational commission to respond to the current situation of growing bilateral links. There are also plans to keep up the active political dialogue, taking advantage of the mutual participation on international and regional forums to promote meetings between leaders or ministers (Dirección General Asia-Pacífico 2006).

Although bilateral relations between South Korea and Mexico have started to grow closer beginning in the 1990s, as this text has shown, we can still pursue relations that is more in-depth, not only in trade and investment but also in technical and agricultural cooperation and cultural exchange. So far this potential has not been fully tapped, so the governments have attempted to meet through MIKTA. South Korea will continue to seek to strengthen links with partners from this group. Mexico offers much more than a wide range of raw materials and competitive workers, and the country is attractive because of its productive structure, as is Korea. Increasing foreign direct investment would bring with it a better use of techniques that allow for innovation in our products. In this way, the links in terms of foreign trade would grow closer, allowing us to reduce the levels of trade deficits in Mexico. Still, beyond South Korea's clear intention to grow closer to Mexico economically, the future of a Free Trade Agreement will continue to be uncertain as long as the two countries do not manage to agree on the pure benefits to their economies. Until this happens, an Economic Association Agreement of the type that Japan has had with Mexico since 2005, where steps are taken toward planning bilateral trade through import fees, could be a strategy for unlocking the negotiations and drive for the signing of a Free Trade Agreement soon, one that takes into account all sectors, including those that both countries consider sensitive. Another option would be to explore the possibility of strengthening the co-investment links between businesspeople in both countries. The petrochemical sector (basic and secondary) could be a good start, especially since this sector has been liberalized with the recent structural reforms, and especially President Enrique Peña Nieto's energy reforms. Another option is the automobile sector, where there are some places with experience in the area (Puebla, Guanajuato, Morelos) and can assemble Korean autos and create ecosystems and binational business clusters based on Mario Blacutt's theory of base economic interdependence of sectors. Thus, the advantages of economic complementarity between Mexico and South Korea would be seen, giving way to the creation of favorable conditions for the eventual signing of a Free Trade Agreement between Mexico and South Korea.

Considering this logic, there are more positive than negative aspects to a strategic association with South Korea that go beyond free trade.

Appendix

Treaties signed between the Mexican and South Korean governments

- Agreement between the Government of the United States of Mexico and the Government of the Republic of Korea on Mutual Administrative Assistance on Customs Matters (Seoul, Korea, August 21, 2012).
- Agreement for Cooperation on the Peaceful Uses of Nuclear Energy between Mexico and the Republic of Korea (Los Cabos, Baja California Sur, June 17, 2012).
- Credit Line Contract between the National Foreign Trade Bank S.N.C (BANCOMEXT) and The Export–Import Bank of Korea (KEXIM).
- Educational and Cultural Cooperation Agreement between Mexico and the Republic of Korea (Mexico City, April 14, 2008).
- Instruments endorsed in the State Visit to Mexico by the president of the Republic of Korea, Lee Myung-bak (Mexico City, June 30, 2010).
- Memorandum of Understanding between the National Science and Technology Council (CONACYT) and the Science and Technology Policy Institute (STEPI) of Korea (Mexico City, February 19, 2010).
- Memorandum of Understanding between the Ministry of Communications and Transportation and the Ministry of Land, Transportation, and Maritime Affairs of the Republic of Korea to analyze and go over some topics of the Agreement on Air Services (Mexico City, April 9, 2010).

- Memorandum of Understanding between the Mexican Ministry of Communications and Transportation and Korean National Agency of the Information Society for Cooperation in the Field of Information Society and Knowledge (Mexico City, September 8, 2007).
- Memorandum of Understanding between the Finance Ministry of the United States of Mexico and the Finance Ministry of the Republic of Korea on the "Program for Knowledge Sharing" (Mexico City, February 27, 2012).
- Memorandum of Understanding between the Mexican Ministry of Public Safety, through its non-concentrated administrative body of Federal Police, and the National Police of Korea on Fighting Transnational Crime and on Police Cooperation (Mexico City, March 25, 2010).
- Memorandum of Understanding between Pro-Mexico and the Korean Agency for the Promotion of Trade and Investment (KOTRA) (Mexico City, December 8, 2009).
- Memorandum of Understanding for the Strengthening of Cooperation in the Textile and Clothing Industries between the National Chamber of the Clothing Industry (CNIV) and the Korea Federation of Textile Industries (KOFOTI).
- Memorandum of Understanding for the Extension of Business Exchange between the COMCE and the Korean Chamber of Commerce and Industry (KCCI).
- Memorandum of Understanding on Cooperation on Saving Energy, between the Commission for Saving Electric Energy (FIDE) and The Korea Energy Management Corporation (KEMCO).
- Memorandum of Understanding on Cooperation in Trade Promotion between PROMEXICO and the Korea Importers Association (KOIMA).
- Memorandum of Understanding on Cooperation in Industrial Property between the Mexican Institute of Industrial Property and the Korean Office of Intellectual Property (Mexico City, March 23, 2012).

- Memorandum of Understanding on Cooperation in Environmental Protection between the Mexican Ministry of the Environment and Natural Resources and the Korean Ministry of the Environment (Durban, South Africa, December 7, 2011).

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Mexican Figures

Main Products Exported from Mexico to South Korea

Table 4. based on data from Trade Map (July 14, 2015)

Tariff Fraction	Product	2013 Value (Thousands of U.S.$)	Annual Growth 2009–2013 (%)
TOTAL	All products	1560	-11
’21	Miscellaneous edible preparations	1154	-
’85	Electrical, electronic equipment	184	56
’30	Pharmaceutical products	120	-
’84	Machinery, nuclear reactors, boilers, etc.	45	-3
’39	Plastics and articles thereof	44	135

Main Products Imported from South Korea to Mexico

1. 8529 – ANTENNAS AND ANTENNA REFLECTORS OF EVERY TYPE; PARTS FOR USE WITH THESE ITEMS

FRACTION 85291001 – Antennas for radio receivers, except what is covered in fractions 8529.10.02 and 8529.10.08

FRACTION 85291002 – Satellite dishes for transmitting and/or receiving microwaves (of more than 1 GHz), up to 9m in diameter.

FRACTION85291003 – Rod antennas for incorporated antennas.

FRACTION 85291004 – Flexible or rigid open waveguides, with their hook-up and connecting devices.

FRACTION 85291005 – Electric operation antennas recognizable for exclusive use in the automobile industry.

FRACTION 85291006 – Component parts of antennas, except those covered in fractions 8529.10.03 and 8529.10.04

FRACTION 85291007 – Antennas, except those covered in fractions 8529.10.01, 8529.10.02 and 8529.10.08

FRACTION 85291008 – Rabbit-ear antennas for TV receivers.

FRACCIÓN 85291099 – Others.

UNIT OF MEASUREMENT KILO	RATE	VAT	VAT RF	DTA
IMPORTS	EXEMPT	16	16	X
EXPORTS	EXEMPT	-	-	-

• DTA

DTA	SUBJECT TO PAYMENT	PUBLICATION
8.00 to 1,000	Art. 49 FRACTION I of the Federal Law (0.8% of the value of the goods)	12/29/2011
1.76 to 1,000	Art. 49 FRACTION II of the Federal Law (0.176% on the value of the goods, covering temporary imports of goods)	12/29/2011
$249.89	Art. 49 Fractions III, IV, V, VII subsection a, c and d of the Federal Law and 5.1.4 of the RCGMCE (Covering temporary imports of IMMEX companies (Manufacturing industry, maquiladoras, and export services, merchandise in transit, and removal of tax warehouses).	12/29/2011
Exempt	Merchandise classified by origin, description, or tariff FRACTION of General Rules on Foreign Trade 5.1.1, 5.1.3 Y 5.1.5	07/29/2011

2. 8414 – AIR PUMPS, VACUUM PUMPS, AIR COMPRESSORS OR OTHER GASES AND VENTILATORS; EXTRACTOR HOODS, WITH A VENTILATOR INCLUDED, AND WITH A FILTER

SUBHEADING 841410 – Vacuum pumps.

SUBHEADING 841420 – Hand or pedal air pumps.

SUBHEADING 841430 – Compressors like those used in refrigerating

equipment.

SUBHEADING 841440 – Air compressors mounted on wheeled towable chassis.

SUBHEADING 841450 – Ventilators: Table, foot, wall, ceiling, roof or window, with electric motor of less than or equal to 125 W included.

SUBHEADING 841460 – Ventilators – other.

SUBHEADING 841470 – Extractor hoods where the longest horizontal side is less than or equal to 120 cm.

SUBHEADING 841480 – Others

SUBHEADING 841490 – Parts.

UNIT OF MEASUREMENT OF PART	RATE	VAT	VAT RF	DTA
IMPORTS	EXEMPT	16	16	X
EXPORTS	EXEMPT			

• DTA

DTA	SUBJECT TO PAYMENT	PUBLICATION
8.00 to 1,000	Art. 49 Fraction I of the Federal Law (0.8% on the value of the goods)	12/292011
1.76 to 1,000	Art. 49 Fraction II of the Federal Law (0.176% on the value of the goods, when referring to temporary imports of goods)	12/292011
$249.89	Art. 49 Fractions III, IV, V, VII sections a, c and d of the Federal Law and 5.1.4 of the RCGMCE laws (On temporary imports from IMMEX companies (Manufacturing Industry, Maquiladora, and Export Services) merchandise in transit and removal from the tax warehouse.	12/29/2011
Exempt	Merchandise classified by origin, description, or tariff fraction under General Laws on Foreign Trade 5.1.1, 5.1.3 Y 5.1.5	07/29/2011

3. 8414 – CAR PARTS AND ACCESORIES FROM HEADINGS 87.01 TO 87.05

SUBHEADING 870810 – Bumpers and fenders and their parts.

SUBHEADING 870820 – Other car parts and accessories—seatbelts.

SUBHEADING 870830 – Other car parts and accessories—other.

SUBHEADING 870840 – Brakes and power brakes and their parts

SUBHEADING 870850 – Gearshift boxes.

SUBHEADING 870870 – Wheels, their parts and accessories.

SUBHEADING 870880 – Suspension systems and their parts (including shock absorbers).

SUBHEADING 870891 – Radiators and their parts.

SUBHEADING 870892 – Mufflers and exhaust pipes; their parts.

SUBHEADING 870893 – Other parts and accessories—Clutches and their parts.

SUBHEADING 870894 – Steering wheels, steering columns; their parts.

SUBHEADING 870895 – Safety airbags with inflation system; their parts. SUBHEADING 870899 – Other parts and accessories—others.

UNIT OF MEASUREMENT OF PART	RATE	VAT	VAT RF	DTA
IMPORTS	EXEMPT	16	16	X
EXPORTS	EXEMPT			

• DTA

DTA	SUBJECT TO PAYMENT	PUBLICACATION
8.00 to 1,000	Art. 49 Fraction I of the Federal Law (0.8% on the value of the goods)	12/29/2011
1.76 to 1,000	Art. 49 Fraction II of the Federal Law (0.176% on the value of the goods, referring to the temporary importing of goods)	12/29/2011

$249.89	Art. 49 Fractions III, IV, V, VII sections a, c and d of the Federal Law and 5.1.4 of the RCGMCE (On temporary imports from IMMEX companies (Manufacturing Industry, Maquiladora, and Export Services) merchandise in transit, and removal from the tax warehouse.	12/29/2011
Exempt	Merchandise classified by origin, description, or tariff fraction under the General Type in Foreign Trade Rules 5.1.1, 5.1.3 and 5.1.5	07/29/2011

4. 8414 – AUTO PARTS AND ACCESSORIES FROM HEADINGS 87.01 TO 87.05

SUBHEADING 392010 – From ethylene polymers

SUBHEADING 392020 – From propylene polymers

SUBHEADING 392030 – From styrene polymers

SUBHEADING 392043 –From vinyl chloride polymers – With a plasticizing content greater than or equal to 6% of weight.

SUBHEADING392049 – From vinyl chloride polymers – Other.

SUBHEADING 392051 – From acrylic polymers -- From poly(methyl methacrylate)

SUBHEADING 392059 – From acrylic polymers -- Other.

SUBHEADING 392061 – From polycarbonates, alkyd resins, alkyd polyester, or other polyesters — From polycarbonates.

SUBHEADING 392062 – From polycarbonates, alkyd resins, alkyd polyesters or other polyesters — From poly(ethylene terephthalate).

SUBHEADING 392063 – From polycarbonates, alkyd resins, alkyd polyesters or other polyesters—From unsaturated polyesters.

SUBHEADING 392069 – From polycarbonates, alkyd resins, alkyd polyesters, or other polyesters— From other polyesters.

SUBHEADING 392071 – From cellulose or its chemical derivatives —From

regenerated cellulose.

SUBHEADING 392073 – From cellulose or its chemical derivatives —From cellulose acetate.

SUBHEADING 392079 – From cellulose or its chemical derivatives— From other derivatives of cellulose.

SUBHEADING 392091 – From other plastics —From poly(vinyl butyral).

SUBHEADING 392092 – From other plastics —From polyamides.

SUBHEADING 392093 – From other plastics —From aminic resins

SUBHEADING 392094 – From other plastics — From phenolic resins

SUBHEADING 392099 – From other plastics—From other plastics

UNIT OF MEASUREMENT BY PART	RATE	VAT	VAT RF	DTA
IMPORTS	EXEMPT	16	16	X
EXPORTS	EXEMPT			

• DTA

DTA	SUBJECT TO PAYMENT	PUBLICACATION
8.00 to 1,000	Art. 49 Fraction I of the Federal Law (0.8% on the value of the goods)	12/29/2011
1.76 to 1,000	Art. 49 Fraction II of the Federal Law (0.176% on the value of the goods, for temporary imports)	12/29/2011
$249.89	Art. 49 Fractions III, IV, V, VII sections a, c and d of the Federal Law and 5.1.4 of the RCGMCE (For temporary imports from IMMEX companies (Manufacturing Industry, Maquiladora, and Export Services) merchandise in transit, and removal from the tax warehouse.	12/29/2011
Exempt	Merchandise classified by origin, description, or tariff fraction under the General Type in Foreign Trade Rules 5.1.1, 5.1.3 and 5.1.5	07/29/2011

5. 9999 – MATERIALS NOT SPECIFIED ANYWHERE ELSE

THIS CODE IS NOT IN THE TARIFF FRACTIONS OBTAINED FROM TRADE MAP AND TARIFF ACCESS.

What Mexico Imports from South Korea

HS4	Product Code	Product Label	Mexico's imports from Korea, Republic of			
			Value in 2013, thousand USD	Annual growth in value between 2009-2013, %, p.a.	Share in Mexico's imports, %	Equivalent ad valorem tariff applied by Mexico to Korea, Republic of
	TOTAL	All products	13,492.971	5	3.5	
⊞	85	Electrical, electronic equipment	7,028.567	-2	8.4	4.6
⊞	84	Machinery, nuclear reactors, boilers, etc	1,559.624	11	2.5	4.5
⊞	87	Vehicles other than railway, tramway	1,191.578	35	3.6	25.6
⊞	39	Plastics and articles thereof	881.971	23	4.2	7.8
⊞	99	Commodities not elsewhere specified	750.859	21	8.7	
⊞	72	Iron and steel	555.421	19	6.4	5.3
⊞	73	Articles of iron or steel	265.547	17	3	5.7
⊞	40	Rubber and articles thereof	237.493	49	3.8	10.4
⊞	90	Optical, photo, technical, medical, etc apparatus	196.424	-27	1.6	5.9
⊞	83	Miscellaneous articles of base metal	89.103	30	3.9	15.4

What Mexico Exports to South Korea

HS4	Product Code	Product Label	Mexico's imports from Korea, Republic of			
			Value in 2013, thousand USD	Annual growth in value between 2009-2013, %, p.a.	Share in Mexico's imports, %	Equivalent ad valorem tariff applied by Mexico to Korea, Republic of
	TOTAL	All products	1,525.326	33	0.4	
⊞	26	Ores, slag and ash	755.474	62	18.8	0.1
⊞	87	Vehicles other than railway, tramway	173.787	87	0.2	8.1
⊞	85	Electrical, electronic equipment	144.227	26	0.2	3
⊞	72	Iron and steel	113.029	17	3.1	0.4
⊞	84	Machinery, nuclear reactors, boilers, etc	63.940	31	0.1	4.6
⊞	74	Copper and articles thereof	63.581	9	2.9	4.3
⊞	40	Rubber and articles thereof	51.313	163	2.1	6.4
⊞	02	Meat and edible meat offal	20.893	7	1.8	27.6
⊞	90	Optical, photo, technical, medical, etc apparatus	19.956	20	0.2	5.8
⊞	76	Aluminium and articles thereof	13.338	-21	1.2	4.

7

The Role of MKTA: Understanding Korean and Turkish Perspectives

Dr. Selçuk ÇOLAKOĞLU*

I. Introduction

Turkey and the Republic of Korea (ROK) are located in very different geostrategic positions in Asia's eastern and western ends. Turkey and Korea had unique development and democratization experiences after the Second World War. Yet Ankara and Seoul have different foreign policy priorities. Although Ankara and Seoul's security and foreign policy relations intersect from time to time as it did in the Korean War, the national priorities have often developed in different directions.

Nevertheless, in recent years it has been observed that Turkey and Korea have been trying to act together in international arena and and under the rooves

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of international organizations. In this context, the G20 and MIKTA grouping which emerged recently are examples of such coordinated policies. From this perspective, to know the foreign policy priorities of Turkey and Korea will provide us a road map of possible cooperation within both the G20 and MIKTA intiative formed in that forum.

1. Turkish Foreign Policy in a Difficult Neighborhood

The discourse of 'strategic importance' which has been always in circulation concerning Turkey makes multi-vector policy compulsory for Turkish foreign policy. It can be said that a sui generis country like Turkey which is located at the intersection of three continents (Asia, Europe, Africa) and five sea basins (Mediterranean, Black Sea, Caspian Sea, the Red Sea and the Persian Gulf), encounters both political-economic opportunities and security risks at the same time. Turkey's history, culture and values shared with many regions offer Ankara the opportunity to be influential beyond its real power in the international arena. On the other hand, in the neighborhood of Turkey are the world's three most unstable regions (the Balkans, the Caucasus, the Middle East), meaning Turkey is faced with with many security issues which Ankara is not directly part of. Especially in the post-1990 period when the bipolar (US-Soviet Union) order ended and the discipline within blocs disappeared, the fundamental dynamics on which foreign policy of Turkey was based upon profoundly changed.

With the dissolution of the Warsaw Pact and the disintegration of Yugoslavia and the Soviet Union, Turkey was given a historical opportunity to politically and economically open up towards its ethnically related communities in the Balkans, the Caucasus and the Central Asia. On the other hand, those weak states which emerged in the Balkans and the Caucasus became the places of the ethno-religious conflicts. These conflicts have politically affected Ankara and led to more concrete security problems such as border security and refugees as well.

Turkish Foreign Policy which was focused on the US and Western Europe during the Cold War, has found new directions of activism in the 1990s especially in the Balkans, the Caucasus, in Central Asia and the Middle East. Russia, successor to the Soviet Union, became a country with whom Turkey established friendly relations. At the same time Turkey's economic relations with Japan, China and South Korea began to develop rapidly. The neighboring Middle Eastern region, following the Gulf Wars and the Arab Spring, became a region which poses a serious security risk for Turkey and a place where Turkey's interests clash with those of different great powers and regional neighbors.

1.1 The EU Membership Process

With the end of the Cold War, the idea of abolition of borders in Europe and of creating a united Europe became a topic of discussion. As a result of these developments, there was an attempt to redefine the concept of 'Europeanness' in Europe with the purpose of establishing internal and external balances. In this context, the question of whether Turkey is within this concept or not has been on the agenda. In this respect, the EU needed to redefine its relations with Turkey.[1)]

The European Union in its decision announced in 1989 stated that, in principle, Turkey's membership can be realized one day; but at the moment Turkey is not yet at the level to meet the obligations of membership, and a Customs Union was recommended instead.[2)] Under these circumstances, Turkey's priority was to enter the Customs Union and to achieve the vision of membership in the EU. The Customs Union agreement was signed in 1995 and entered into force on 1 January 1996. Thus the EU-Turkey relations have gained momentum again. 1999

1) Atila Eralp (1997), "Soğuk Savaş'tan Günümüze Türkiye-Avrupa Birliği İlişkileri," Atila Eralp (der.), Türkiye ve Avrupa, Ankara: İmge Kitapevi, s.108.

2) Kemal Kirişci (2004), "Accessing the 16-17 December 2004 European Council Decision on Turkey: Is it an Historic Turning Point?" http://www.ces.boun.edu.tr/kiriscitusiad17decpaperfinal.pdf.

Helsinki summit in which Turkey was given a candidate state status was the historical turning point.

In October 2004 the European Parliament has decided to recommend opening of accession negotiations with Turkey. According to the progress report released by the EU Commission, it was emphasized that Turkey had met the political criteria and it was recommended that the accession negotiations be opened.[3)]

In the European Council Summit held in December 2004 in Brussels, a decision was made to start accession negotiations with Turkey in October 2005.[4)] Thus, Turkey, by moving forward in the accession process, was elevated from a status of candidate country to one of the participating countries.

The Cyprus issue has become one of the obstacles in the accession negotiations of Turkey. Southern Cyprus, which is not recognized by Turkey as an independent state had became the EU member state in 2004 and has halted some negotiation chapters. On the other hand, the fact that the EU continued to impose a trade embargo against Northern Cyprus, making the solution of the Cyprus issue difficult.

Turkey is one of the few countries whose population is predominantly Muslim, and has democratic and secular structure and has good political relations with the Western world. If Turkey becomes member of the EU, it will lead to development of more multiculturalism, and reduction of the social and cultural conflicts to a minimum.[5)] Turkey's vision of the EU membership will also lead to realization of many reforms in the country. The EU process is expected to result in institutions of Turkey being more open to the world, transparent and efficient.

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3) Ercüment Tezcan (2005), "AB Komisyonunun Türkiye Hakkındaki 6 Ekim 2004 Tarihli İlerleme Raporu ve Tavsiyesi: 17 Aralık'a Giden Süreçte Bir Durum Değerlendirmesi," Demokrasi Platformu, Vol. 1, No. 1, (Winter), pp. 143-145.

4) A. Tekin (2004), "Future of Turkey - EU Relations: A Civilisational Discourse," Futures, Vol. 37, No: 4, p. 289.

5) Sacit Hadi Akdede and Selçuk Çolakoğlu (2006), "Increasing returns to diversity and public goods: contribution of Turkey's accession to the EU," Studia Regionalia, Vol. 18, pp. 21-28.

1.2. Relations with the United States

During the Cold War, Turkey was an indispensable ally against the Warsaw Pact in the southeastern flank of NATO. Although there were ups and downs in Turkish-American relations in the 1960s and 1970s because of the Cyprus problem, the basic expectations of both allies of each other is clear. In the post-Cold War period the traditional perception of security of the two allies in the region began to change.

When Turkish-American relations is viewed from a regional perspective, it is observed that bilateral relations tend to be cooperative in the Balkans and the Caucasus-Central Asia, but prone to conflict in the Middle East. Indeed, Turkey actively supported US policies in the Balkans on the issues of Bosnia, Macedonia and Kosovo and Turkey even participated in NATO operations in Bosnia and Kosovo. Except the Armenian problem, Turkey's policies towards Russia, the Caucasus and the Central Asia are almost similar with those of the United States. On the issue of opening up Caspian oil to the world market, Washington has given great support to Ankara's Baku-Tbilisi-Ceyhan pipeline project. But the situation is changing regarding the Middle East. Especially the crisis that began with the invasion of Kuwait by Iraq in 1990 led to the break in the Turkish-American relations. And when the US occupied Iraq in 2003, the bilateral relations was confronted with the biggest crisis since 1950.

In 2008, when Barack Obama came to power as US President, Ankara-Washington relations began to improve rapidly. Significant developments occurred in bilateral relations and in cooperation on regional topics. The allies in NATO Turkey and the United States deepened their cooperation in security and defense during the Ukraine-Russia crisis and recent developments in the Middle East. Recently two states have cooperated against ISIS in Syria and American warplanes have begun to use the military bases in Turkey.

1.3. Developing Partnership with Russia

Turkey-Russia relations since 1990 evolved amidst the dilemma of distrust and cooperation. After the dissolution of the Soviet Union, although the threat of communism from Moscow perceived by Ankara has completely disappeared, new competition areas have emerged. The struggle for influence over the new independent republics in the Black Sea region, the Caucasus and Central Asia was seen in the first half of the 1990s. Moscow, on occasion, even accused Ankara of secretly supporting the Chechen independence war in Russian territory. In contrast, Ankara accused Moscow of allowing the PKK activities in Russian territory.

Since the second half of the 1990s, both Turkey and Russia has begun to understand that bilateral competition is harmful, and not beneficial. After this point, Ankara and Moscow have begun to seek cooperation gradually. Moreover, Turkey and Russia chose the ways of developing the effective cooperation in the fight against religious extremism, international terrorism, ethnic separatism and illicit networks which became important issues after September 11.[6)]

Some circles in the discussions on Turkish foreign policy describe Russia as a country which can provide a counterbalance against the US and the EU. Accordingly, Ankara instead of the EU and the US, should participate in the Eurasian bloc formed by Russia and even by China.[7)] However, from Turkey's perspective, the establishment of alliance relations with Russia alone at least in the short term does not seem to compensate for the EU and the United States.[8)]

The ever-increasing intensity of economic relations between Turkey and Russia makes bilateral cooperation almost inevitable. Turkey and Russia have reciprocal complementary economies. While Turkish construction sector and consumption goods

6) Hüseyin Bağcı (2006), "11 Eylül Sonrası Türk Dış ve Güvenlik Politikalarındaki Gelişmeler ve Yeni Parametreler," İdris Bal (der.), 21. Yüzyılda Türk Dış Politikası, Ankara: Ankara Global Araştırmalar Merkezi, p. 944.

7) Erel Tellal (2006), "Avrasya'da Türkiye-Rusya İlişkileri," Mustafa Aydın ve Çağrı Erhan (der.), Beş Deniz Havzasında Türkiye, Ankara: Siyasal Kitapevi, p. 41.

8) Ahmet Davutoğlu, Stratejik Derinlik (2001), İstanbul: Küre Yayınları, pp. 209-213.

achieved a significant share in the Russian market, Russia provides energy and especially natural gas needs of Turkey and offers opportunities to improve the Turkish arms industry.

Turkish-Russian relations have made advances and deepened in the last 15 years. Turkey's first nuclear power plant tender in Mersin is being built by a Russian company. Despite their completely different positions on conflicts in Georgia in 2008 and Ukraine in 2014 and in the Syrian crisis after the 2012, Ankara and Moscow are carrying out bilateral relations on solid ground.

1.4. The Problematic Neighborhood with the Middle East

From 2000 to 2010, Turkey had developed its relations with all states of the entire Middle East. But the Arab Spring caused a radical transformation in Turkish foreign policy towards the region. While Ankara's relations with Israel, Egypt, Libya, Iraq and Syria after 2010 are experiencing the lowest levels in the history, in its relations with Saudi Arabia and Iran also began to experience a distinct coolness. The instability caused by the civil war in Iraq and Syria, led to increasing security risks in Turkey's southern border and forced more than 2 million refugees to seek shelter in Turkey. The fact that Syria and Iraq became the base for ethnic and religious extremist organizations such as ISIS poses a threat to Turkey. To reduce these security risks, Turkey needs the support of international organizations, particularly NATO.

2. Dynamics of Korean Foreign Policy: Korean Unification and Great Power Politics

The Northeast Asia region largely reflects the balance of the world. Four great Powers (the US, Japan, China and Russia) that guide the current system

have a complex relationship with conflicting interests. There are two big problems that are closely related to the balance between the regional great powers. Among them, the Taiwan issue primarily China and the US, and to some extent Japan; while the Korean division draws deep interest from four big states in the region. From this point, it can be said that the course of the Korean problem, by itself, reflects the balance of Northeast Asia.

2.1. Northeast Asian Regional System

From this perspective, it seems that Korea's division and Mainland China / Taiwan issue, based on regional balance established at the beginning of the Cold War, persisted. However, after 1990 there were a number of fundamental changes in the regional balance. During the Cold War period, there was a balance between the axis of communist North (Pyongyang-Moscow-Beijing) and that of capitalist South (Seoul-Washington-Tokyo even Taipei). After the post-Cold War, as ideological polarization ended and after considering their national interests, many countries in the region tried to create balanced relations with Pyongyang and Seoul. So the 'one Korea policy' pursued by the great powers was replaced by the two-Korea policy.[9] In 1990, the fact that two Koreas simultaneously became members of the UN is the best indication of this policy.

Today, in order to protect their vital interests in Northeast Asia, USA, China, Japan and Russia are trying to redirect the Korean issue, or at least they are engaged to prevent united Korea which can be hostile to them. Beijing, on the one hand, while getting closer to Seoul, continued its support to Pyongyang.[10]

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9) Nicholas Eberstadtve Richard Ellings (2001), *Korea's Future and the Great Powers*, University of Washington Press, London: p. 321.

10) John B. Kotch (2000), "Korea's Multinational Diplomacy and US-Korea Relations: The Challenge of Change in the 21stCentury," *The Journal of East Asian Affairs*, Vol. 14, No. 1, Spring/Summer, p. 149.

Conciliatory or confrontational trend in the region will be reflected in the international system at the same rate. Under present circumstances, a conciliatory trend is observed. All the major powers agree on the peaceful resolution of the North Korean nuclear weapons issue.[11] Another issue agreed on by other countries is to avoid a sudden Korean unification which can destabilize the region. In this respect, all states are pursuing a balanced Korea policy to prevent a sudden collapse of weak North Korea.

2.2. Korean Unification Policies

It is very understandable that Pyongyang is against sudden unification. It is because under the present circumstances, North Korean will essentially be annexed. No state wants to realize its own end with its own hands. From this point of view, the ballistic missiles and nuclear weapons that Pyongyang is developing are to assure of existence of North Korea. Thus, Pyongyang is trying to balance a politically and economically weak position with its military capacity.

The cost of the unification is of great importance for Seoul. The lessons learnt from German unification were also influential in the formation of attitudes in Seoul against a sudden unification. The previously defended claims based on emotional and political reasons, that South will annex the North, have left been superseded by concepts of inter-Korean rapprochement and peaceful coexistence.

China, for its part, absolutely opposes unification where North Korea will be annexed. Although China states that it is in favor of peaceful unification, China does not lean towards the developments in Northeast Asia that may cause a threat to its own security. In terms of its own safety, China wants continued existence of a socialist buffer state against the United States and Japan. Besides, the potential rise of nationalist movements after a Seoul-led unification may negatively affect

11) “Country Profiles,” The Nuclear Threat Initiative, http://www.nti.org/country-profiles.

the two million ethnic Korean minority in China, and it may pose a threat to China's territorial integrity.[12)]

The scenarios which predicted a sudden collapse of North Korea figured prominently on agendas in the US in the early 1990s. But later, it was understood that North Korea would not collapse immediately, and therefore the necessity for the development of a more comprehensive strategies emerged.[13)] Moreover, after the unification of Korea, US military bases in South Korea, and even in Japan would become a controversial issue, and this is among the issues that Washington is focusing on. Though uncomfortable with the missile and nuclear weapons technology owned by North Korea, Japan is also quite weary of the possibility of unified Korea entering into the Chinese orbit.[14)]

For Russia, it is important to protect their interests in Northeast Asia. Especially in the second half of 1990s, after the Russian-American relations soured, Russia elected to support moves for a neutral unified Korea instead of an ally of the United States. The important thing for Moscow is to protect its historical gains in the Korean Peninsula. From this point, recently Russia developed its relations with North Korea and revived its "two Koreas" policy.[15)] Nevertheless the state, which will be least affected from the unification in military, political and economic terms, is Russia. In the current situation, the establishment of any kinds of bilateral cooperation between a United Korea and Russia will be relatively easy.

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12) ShipingTang (1999), "A Neutral Reunified Korea: A Chinese View," *The Journal of East Asian Affairs*, Vol. 13, No. 2, Fall/Winter, p. 466.

13) Ralph M.Wrobel (2007), "North Korea after the Nuclear Crisis: the Future of the Economic Reforms," *Post-Communist Economies*, Vol. 19, No. 4, (December), pp. 500-501.

14) Okazaki Hisahiko (2001), "Seeking Ties with Pyongyang: Where Tokyo Must not Yield," *Japan Echo*, (February), p. 29.

15) Seung-Ho Joo (2001), "The New Friendship Treaty between Moscow and Pyongyang," *Comparative Strategy*, Vol. 20, s.480.

2.3. The Future of Taiwan

A similar compromise in favor of continuing the status quo is also available with respect to the Taiwan problem. As Taiwan, during period (2000-2008) of the government of pro-independence Democratic Progressive Party (DPP), did not declare its independence; China also did not attempt to annex the island by force. The Kuomintang government which came to power in 2008 has been following a policy of rapprochement with China.[16] Accordingly, in order not to escalate tension in the region, China, Taiwan, the US and Japan are trying not to jolt the existing balance.[17] When all these factors are taken into consideration, it is observed that the political future of the Korean Peninsula and Taiwan is closely connected with developments in the world and especially the Northeast Asian regional system.[18]

2.4. Unification Scenarios

There are various scenarios for possible unification of Korea and the future of Taiwan. Korean unification will pose no threat to neighboring countries as German reunification. It is because there was no expansionist past in Korea's history. On the contrary, it was constantly threatened by the great powers. However, the point more important than unification itself is the strategic choices Korea will make after the unification. There are four basic scenarios related to the foreign policy strategy that would be followed by a prospective unified Korea.[19]

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16) Jinn-Guey Lay, Ko-Hua Yap ve Yu-Wen Chen (2008), "The Transition of Taiwan's Political Geography," *Asian Survey*, Vol. 48, Issue 5, s.778.

17) Gregory C. May (2001), "Taiwan's Role in the China-Japan-U.S. Trilateral Relationship," David M. Lampton eds., *Major Power Relations in Norteast Asia*. Tokyo: JCIE, p. 45.

18) David M. Lampton (2001), *Major Power Relations in Northeast Asia: Win-Win or Zero-Sum Game*. Tokyo: Japan Center for International Exchange, p. 14.

19) Michael McDevitt (2001), "The Post-Korean Unification Security Landscape and U.S. Security Policy in Northeast Asia," N. Eberstadtve R. J. Ellings eds., *Korea's Future and the Great Powers*. London: University of Washington Press, p. 256.

The first option for the united (unified) Korea is to maintain the alliance relationship with the United States. This scenario is mostly supported by the US and Japan. South Korea is willing to continue the existing alliance with the United States even after the unification. However, this is the worst option for China, Russia and North Korea.

The second scenario is the situation where the united Korea became a China-led state. This option, while dovetailing with China's national interests at the highest level, is a complete disaster for Japan and the US. For Russia, this option is also negative as Russia is unwilling to see a single power which has the absolute influence on Korean Peninsula. In addition, knowing very well of the disadvantage of relying on a single power, both North Korea and South Korea would not want such a situation to happen.

According to the third scenario, strategically, a United Korea will have a nonaligned foreign policy. A nonaligned Korea will follow an independent foreign policy in accordance with its own interests. Strategically, nonaligned Korea will be in good relations with all its neighbors, at the same time, it will have a deterrent military capacity.

And the fourth option is that where the United Korea is neutral. In the neutrality which is similar to the nonaligned unification, there will be no bilateral alliance relationship, it will remain passive, and the neutrality will be carefully maintained. In case of neutrality, Korea will have a weak military capacity, and all regional states will provide guarantee for the security of Korea.

The first option of a United Korea scenario, which is based on the American alliance, can only be the result of the collapse of North Korea and sudden unification. In this case, if China does not interfere, North Korea will have no chance for bargaining, and South Korea will literally annex North Korea by replacing its own system with all external links.[20)]

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20) Kak-Soo Shin (1999), "A Redrawn Roadmap toward One Korea," *Korea and World Affairs*, Fall, p. 367.

From this perspective, nonaligned option seems to be a reasonable solution in terms of regional stability. A nonaligned and strong United Korea will be appreciated by neighbors as long as it facilitates an atmosphere of trust. A strong and nonaligned Korea amidst great states will be able to play a mediator's role in solving the regional problems.[21] A weak, neutral united Korea, however, as it happened in the past, will never be left alone by powerful neighbors.

There are also three basic scenarios for the future of Taiwan. According to the first scenario, Taiwan will join China, based on the "one country two systems" model offered by Beijing, just like Hong Kong and Macao. It is clear that this model is not welcomed by the US, Japan and even the neighboring ASEAN countries. The second scenario is that where Taiwan declares its independence and continues to exist as a separate state. This option is strongly opposed by China, which regards as a reason for war (casus belli). The third scenario foresees the continuation of the status quo. The US, Japan and the other countries in the region see Taiwan as an integral part of China, at the same time; they are in favor of maintaining Taiwan's de facto independence. The 2014 protests in Hong Kong have been dealt a serious blow on China's reunion model with Taiwan.[22]

3. Turkey and Korea's need for multilateral engagements

As it can be seen, Turkey and Korea are trying to protect their interests in the context of very complicated regional equations, respectively. Areas in close proximity to Turkey, which includes the Balkans, the Black Sea, the Caucasus, the Middle East and the Mediterranean region; has seen many hot conflicts and unstable development in the last 25 years, and this also has affected Turkey directly. Turkey also has such obligations as developing a country with a population of

21) Sang-Woo Rhee (1999), "Four Normative Promises: The Guide to Korean Unification Policy," *Korea and World Affairs*, (Winter), p. 516.

22) Joseph Sternberk (2014), "The Waning Beijing Consensus," *The Wall Street Journal*. (25 June)

80 million, and ensuring economic prosperity for itself. In order to combat the regional instability and to ensure economic prosperity, Turkey needs strong international partnerships, and also needs to cooperate with international organizations.

ROK, for its part, is trying to protect its vital interests in a challenging geography in Northeast Asia. As the state of division that began in Korea in 1945 still continues, a hostile communist regime still rules the North. North Korea, which owns nuclear weapons and whose actions cannot be predicted beforehand, poses a serious security risk for Seoul. In addition, Korea is pursuing its foreign policy among four great powers such as China, Japan, Russia, and the USA and trying to protect its national interests.[23] On the other hand, Korea must continue its drive for economic prosperity and stability. In this regard, Seoul also needs strong international partnerships.

II. MIKTA: A New Global Initiative

Summit diplomacy is among the conventional methods employed in searching for the resolution of a variety of pressing international problems. In this vein, a new process in global governance - one through which a number of countries come together on a regular basis - has begun since the 1970s. The most salient feature of this new model of diplomacy that is commonly referred as "Global Summitry" is the accompanying "rise of the informal". The G5/6/7 processes, which were initially launched in 1975, constitute a perfect example of the informal summitry model as described here.[24]

The 'emerging' powers have become more influential in global politics since

23) Scott A. Synder (2015), "Three Geopolitical Constraints on South Korea's Foreign Policy," Council on Foreign Relations, (31 July), http://blogs.cfr.org/asia/2015/07/31/three-geopolitical-constraints-on-south-koreas-foreign-policy.

24) Alan S. Alexandroff and Donald Brean (2015), "Global Summitry: Its Meaning and Scope Part One," *Global Summitry*, Vol. 1, No: 1, p. 19.

the 1990s. Before then, the global economy could be conceived of as consisting of two parts: the rich north and the poor south. Yet as a result of the successful development of the so-called "Asian Tigers" (South Korea, Taiwan, Singapore and Hong Kong) and members of the Association of Southeast Asian Nations (ASEAN) in the 1980s and 1990s, as well as China's move towards the center of the world economy, the structure of the global economy has undergone a profound transformation. In this respect, the G7, which is widely known as a club of the world's richest countries, does not represent the true center of the global economy.

The establishment of the G20 in 1999 can be seen as a concrete display of this change in the global economy's center. Here, the G7, which represented only the world's greatest economies, gradually lost its influence, thus making way for the emergence of the G20. Additionally, as the BRIC constellation (consisting of Brazil, Russia, India and China) became more and more prominent on the world stage, it even began to surpass the economic performances of some G7 countries. These different groupings within the G20, including BRICS as well as IBSA (India, Brazil, and South Africa) later came to the stage.

For the past few years, there has been growing emphasis on middle powers and the roles they can play on the global stage. Investment banks and consultancy firms, with Goldman Sachs first and foremost, began to point at various promising groupings of middle powers that are not included in the BRIC. Listed among these groupings are MIST (Mexico, Indonesia, Nigeria, and Turkey), CIVETS (Colombia, Indonesia, Vietnam, Egypt, Turkey, and South Africa), and the Next 11 (Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, Turkey, South Korea, and Vietnam). What is being emphasized here is the expectation that drawing on the potential of the individual countries they band together, these groupings will be able play an equally important role for the functioning of the global economic system in the future.[25] Likewise, references to a 'hybrid' constellation termed

25) Belma Engin and Gurol Baba (2015), "MIKTA: A Functioning of New Middle Power-ism," *Review of International Law & Politics*, Vol. 11, No. 2, p. 19.

"the Global Swing States" (Brazil, Turkey, India, and Indonesia) that includes certain BRIC countries along with a number of middle powers recently began to gain currency.[26] At the center of discussions is the crucial role that these four countries, all of which combine developing democracy with an emerging economy, can possibly play in "bridging the gap" between the West and the East.

The importance of middle powers in global governance soared post-2008, i.e. in the aftermath of the global financial crisis. G20 summits, which initially began to convene following the global financial crisis of 2008, have been increasingly overwhelmed by those member countries that are left outside the scope of the G7 and the BRICS since 2010. The yearly G20 summit was hosted by Korea in 2010, by Mexico in 2012, by Australia in 2014, and by Turkey in 2015.

In addition, another grouping dubbed "the G12" (consisting of the G7 and BRICS) also took shape within the G20. From a global perspective, this G12 grouping aimed to form a more concrete platform of the 12 countries that had become great economic powers by today's standards in order to handle global problems, and to guide the world economy.

Nonetheless, countries that could be considered middle powers such as Turkey, South Korea, Australia, Indonesia, Mexico, Argentina and Saudi Arabia, which are included in the G20, have been excluded from the G12. Such a reality has led to a concern that these countries, which can be perceived of as strategically important powers in their respective regions and as rising economies overall, may be excluded from the newly emerging global economic and security structures. Such circumstances have forced these middle powers to act in unison with the G20, the UN, and other international organizations and formations.[27]

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26) Daniel M. Kliman and Richard Fontaine (2012), Global Swing States: Brazil, Indiea, Indonesia, Turkey and the Future of International Order, The German Marshall Fund of United States, (November), pp. 5-7.

27) Kevin Rudd, "G-20 and the importance of mid-size states in global economic governance," *The Journal of Turkish Weekly*, (7 January 2015), http://turkishweekly.net/2015/01/06/news/g-20-and-the-importance-of-mid-size-states-in-global-economic-governance.

Within this context, in September 2013 at the 68th meeting of the UN General Assembly, five of the G20's middle powers declared their participation in a new formation termed MIKTA, which is the English acronym for its constituent members, namely Mexico, Indonesia, South Korea, Turkey and Australia. Largely considered to be an informal and low-profile forum, MIKTA primarily aims to serve and protect the interests of its five members in the global arena. Although all countries of MIKTA are members of the G20 major economies, none are part of the G10 and it seems that this will remain so for the foreseeable future, despite their rapid economic growth rates, though Australian Prime Minister Kevin Rudd and Korean President Lee Myung-bak once made ambitious claims over the role that middle powers can play in global governance.[28)]

MIKTA members belong to the caterogy of second-tier countries. That means while they lack the capacity to compete for leadership on a global scale in contrast to the G7 and the BRIC countries, they are nevertheless included among the 20 largest economies of the world. In that regard, MIKTA can be expected to bridge the diplomatic gap within the G20 that seperates the G7 from the BRIC.[29)]

The five members of MIKTA found themselves on a collision course also in their shared opposition against proposals led by France to trim down the G20 into G12/13/14. The U.S. backed MIKTA's stance in this matter. A binary scheme of "us" vs. "them" could possibly emerge between the G7 and the BRIC should the grouping had been confined to 12-14 members. In this respect, second-tier countries that comprise MIKTA should do well to prevent such polarization from gaining ground.[30)]

We can talk of a dual structure also within the BRICS itself. On the one hand, there is China (with a one-party state) and Russia (with its increasingly authoritarian regime). On the other, there is the democratic trio of India, Brazil,

28) Myong-bak Lee and Kevin Rudd, "The G20 Can Lead the Way to Balanced Growth," *Financial Times*. (2 September 2009)

29) Melissa Conley Tyler and McDonald-Seaton, Doris, "Mixing with the MIKTAS," http://www.internationalaffairs.org.au/australian_outlook/mixing-with-the-miktas.

30) Andrew F. Cooper (2015), "MIKTA and the Global Projection of Middle Powers: Toward a Summit of Their Own?" *Global Summitry*, Vol. 1, No: 1, p. 103.

and South Africa. This latter "subgroup", which actually came to the fore with the creation of IBSA in 2003 and held its first official summit in 2006, was willing to be included in the BRICS as well. As a matter of fact, IBSA has not convened even once since its leaders' level summit in 2011. South Africa's accession to the BRIC in 2010, which turned the grouping into today's BRICS, may have played a role in that. Unlike IBSA countries, none of MIKTA's constitutive members have the chance to be included in the G7 or the BRICS; therefore each of them needs to capitalize on group solidarity in order to secure its own national interests.[31)]

No doubt MIKTA countries are faced with certain constraints in their potential contribution to the management of the international system when compared with the members of the G7 and the BRICS. In addition to the fact that none of the MIKTA countries are currently included in the P5 of the UNSC, thre is no chance that any of them would join the UNSC after the Council's anticipated expansion through reform, in a way that would include either India or Brazil instead.[32)] The failure of Turkey's bid to gain a non-permanent seat on the UNSC in 2014 is also indicative of the limited capacity of MIKTA countries.[33)]

There are also those "missing" middle powers, which are included in the G20 but not in MIKTA. Thus, the exclusion of Argentina and Saudi Arabia from MIKTA is proof to the distinctiveness of the membership criteria applied by the forum. Neither Argentina nor Saudi Arabia showed any inclination to assume issue-specific leadership under the G20, which may have had an impact on MIKTA's choice of members. From this perspective, these two countries can be regarded as the least assertive members of the G20.[34)] Besides, due to the non-democratic nature

31) Melissa Conley Tyler and Doris McDonald-Seaton, "MIKTA: The Middle Child of International Cooperation," http://www.internationalaffairs.org.au/mikta-the-middle-child-of-international-cooperation.

32) Barbara Rosen Jacopson, "The MIKTA way forward: The potential, risk, and future of MIKTA diplomacy," *DiploFoundation Policy Brief*, p. 2.

33) Benny Avni, "Turkey Loses U.N. Security Council Seat in Huge Upset," Newsweek. (16 October 2014)

34) Francis A. Kornegay (2013), "Move over BRICS and IBSA - MIKTA's here!" South African Foreign Policy Initiative (SFPI), October 17, http://www.safpi.org/worldview/francis-kornegay-jr-move-over-brics-and-ibsa-mikta-s-here.

of its government, Saudi Arabia cannot satisfy a fundamental criterion set by MIKTA.

1. MIKTA: Concept and Developing Process

1.1. Formation of the Group

MIKTA was declared an unofficial grouping in 2013. The MIKTA Vision Statement was issued during the Foreign Ministers Meeting that was held in Seoul in 2015. According to the document, despite having diverse cultures and lying in distant regions; being endowed with democratic regimes, open markets, and fast-growing economies allow MIKTA countries to converge around certain similarities and common values that transcend these divisions. Moreover, the MIKTA members are like-minded on a majority of global issues. MIKTA, as a cross-cultural consultative platform, aims to enhance information-sharing and exchanges. In this vein, the forum wishes to play a bridging role between developed and developing countries to promote coherence and effectiveness in global governance. Gaining agenda-setting power is also among the primary components of MIKTA's stated vision.[35] As is seen, the MIKTA Vision Statement bears the distinctive characteristics of middle power diplomacy to a considerable extent with its emphasis on moving first, bridging gaps, coordinating coalitions, and diffusing norms.[36]

MIKTA countries are more self-confident than other middle powers when it comes to issues of global governance, thanks to their membership to the G20.[37] In that regard, they occupy a more decisive position in comparison to the Global

35) MIKTA Vision Statement, http://mikta.org/about/vision.php.

36) Sook-Jong Lee, Chaesung Chun, HyeeJung Suh, and Patrick Thomsen (2015), "Middle Power in Action: The Evolving Nature of Diplomacy in the Age of Multilateralism," *EAI Asia Security Initiative*, (April), p. 5.

37) Marty Natalegawa, Byung-se Yun, Ahmed Davutoglu, Julie Bishop, "MIKTA as a Force for Good," *The Huffington Post*, (15 April 2014), http://www.huffingtonpost.com/jose-antonio-meade/post_7360_b_5152411.html.

Governance Group (3G) which has a rather consultative status within the G20 in relevant decision-making processes.

For instance, the 2010 G20 Seoul Summit raised important agenda items. Self-sustaining growth through capacity development, sustainable and balanced development, and global economic equality were among such crucial agenda items brought into question during the 2010 G20 Seoul Summit. Mexico raised the issues of green growth and youth employment at the 2012 Las Cabos Summit. Australia set the agenda of the 2014 Brisbane Summit to include a wide variety of items from climate change to the status of Russia. Turkey is bringing forward the issue of "inclusiveness" at the 2015 Antalya Summit.[38]

1.2. Organizational Bodies

So far, three bodies were formed in order to facilitate decision-making and implementation by MIKTA, which qualifies as an unofficial grouping. These are the Foreign Ministers' Meeting (FMM), the Speakers' Consultation, and the Senior Officials' Meeting (SOM).

1.2.1. Foreign Ministers' Meeting

Most of the important decisions concerning MIKTA, including the group's foundation in the first place, are made by the FMM. MIKTA has refrained from raising anticipation too rapidly since its foundation, therefore it only held ministerial-level meetings rather than leaders summits. It is possible to consider MIKTA as an organization at its initial stage of development in terms of global summitry.

It was first Mexico (2013-2014) and then Korea (2015) that assumed the coordinatorship of MIKTA, which was oficially introduced in September 2013 at

38) Andrew F. Cooper (2015), "MIKTA and the Global Projection of Middle Powers: Toward a Summit of Their Own?" *Global Summitry*, Vol. 1, No: 1, p. 100.

a UN General Assambly session. Australia will assume the forum's coordinatorship in 2016.[39] One of the greatest advantages of MIKTA is its members, which share a great deal of common interests, being located at the far ends of the globe. The genuine combination of such geographical diversity with an abundance of common interests enables member countries to build cultural, social, geographical, and economic bridges in multilateral debates.

Thus far, a total of five FMMs were held. The first ministerial meeting was held in New York on September 25, 2013, at the 68th Session of the UN General Assembly. The Second FMM was held in Mexico City on April 13, 2014, with solely the MIKTA members gathering on the special occasion of the meeting in question. The Third FMM convened in New York on September 25, 2014, at the 69th Session of the UN General Assembly. The Fourth FMM was held in Brisbane on November 15, 2014, this time on the sidelines of the G20 Summit. And finally, the Fifth FMM was separately held in Seoul on May 22, 2015. Apparently, after MIKTA was founded, member countries consistently held two FMMs each year, which shows the importance they attach to the forum.

Consensus was reached on a series of bottom-up activities during the ministerial meeting held on the sidelines of the G20 Brisbane Summit in November 2014. The member countries adopted a course of action to pave the way for student exchange programs, reciprocal academic seminars, joint projects including those between think-tanks, and other cultural activities.

1.2.2. Speakers' Consultation

The Speakers' Consultation mechanism is a recently founded body which held its initial meeting on July 1-5, 2015, in Seoul. The main objective behind launching the Speakers' Consultation mechanism is the incorporation of national parliaments

39) Brendan Forde (2015), "MIKTA: Anew Global Partnership," Australian Institute of International Affairs, (August 12), http://www.internationalaffairs.org.au/australian_outlook/mikta-a-new-global-partnership.

in MIKTA's development and agenda-setting processes. At the initial meeting in Seoul; the role of the parliaments of middle powers in implementing the Sustainable Development Goals, regional issues facing the MIKTA countries, and the 70th anniversary of the national division and the peaceful reunification of the Korean Peninsula were discussed.[40]

1.2.3. Senior Officals' Meeting

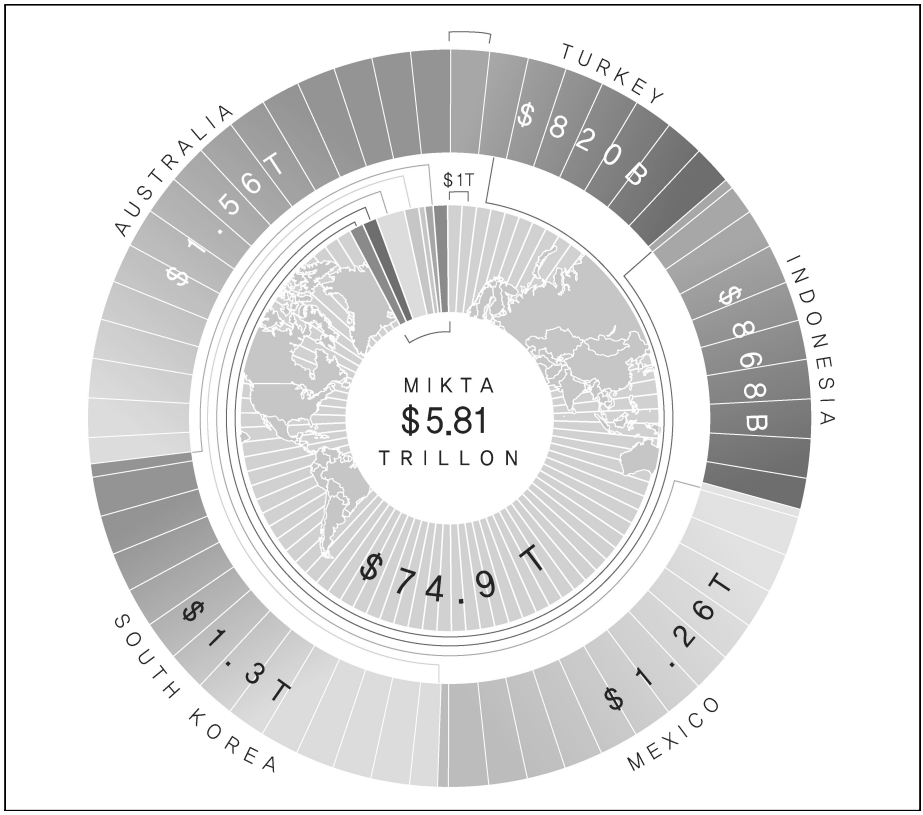
Another newly-established body, the Senior Officials' Meeting (SOM), held its first meeting in Seoul on February 27, 2015. The participants at the meeting sought ways to further cooperation on a range of bilateral and multilateral issues, as well as to establish networks between the academia and think tanks of MIKTA countries.

2. Members of the Grouping and Their Roles

MIKTA can be regarded as a platform that is much more homogenous than the BRICS and the G20. It is impossible for one or more countries to dominate MIKTA as a whole by virtue of the juxtaposition of its members' nominal GDPs; thus giving the forum a head start on the BRICs as the individual weight of China's economy can also be seen as a handicap for the latter (See Diagram-1 and Diagram-2).

40) Pitan Daslani, "DPD Speaker Irman Gusman Attends Mikta Meeting in S. Korea," The Jakarta Globe, (5 July 2015), http://thejakartaglobe.beritasatu.com/news/dpd-speaker-irman-gusman-attends-mikta-meeting-s-korea.

Figure 1. Nominal GDP of MIKTA Countrie



Source: Elena Douglas (2014), "MIKTA Narritives: Prosperity, Persuation and Projection," Smart Power, Vol. 2, p. 7.

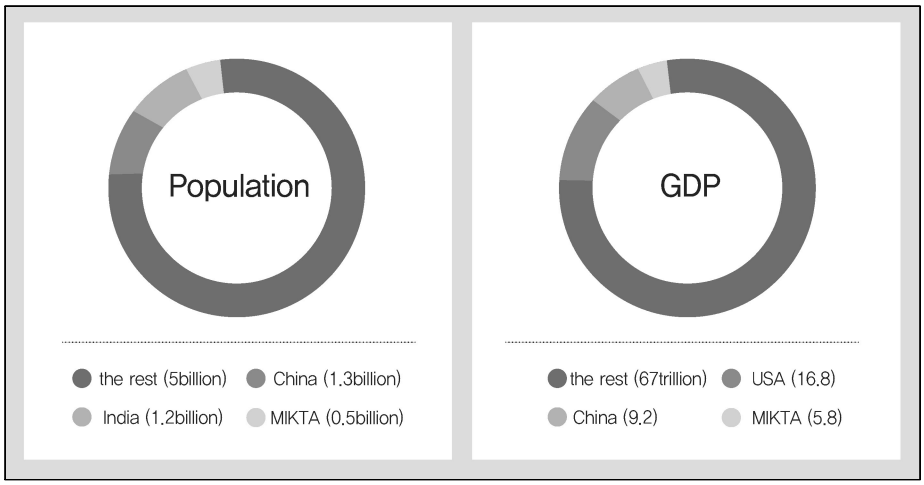
Furthermore, none of the MIKTA countries harbour the capacity to prevail over global politics by itself as the group consists solely of middle powers. Again, none of them is a permanent member of the UNSC.[41] The fact that no MIKTA

41) Ali Unal, "MIKTA provides fresh impetus to global governance, says South Korean FM," *Daily Sabah*, (26 May 2015), http://www.dailysabah.com/diplomacy/2015/05/26/mikta-provides-fresh-impetus-to-global-governance-says-south-korean-fm.

country is a nuclear power also allows the group to undertake initiatives on nuclear non-proliferation without much hesitation.

Even though each and every MIKTA country is categorized as a "middle power," it doesn't mean they are all identical. Mexico and Turkey are situated in between the Global North and South by virtue of their geostrategic location. Korea and Indonesia fall under the category of North within the context of Asia thanks to their promising developmental models. Finally, Australia is a perfect example of a traditional middle power, which located in the Global North due to its developed country status and democratic maturity.

Figure 2. MIKTA's Population and GDP



Source: mikta.org.

Moreover, there are some cultural diversities among MIKTA countries.[42] Indonesia and Turkey are widely regarded as leading Muslim countries. Again, Australia can be considered as possessing a largely Protestant social structure, while

42) Hale Yildiz (2014), "How to Explain MIKTA," Australian Institute of International Affairs, (September 29), http://www.internationalaffairs.org.au/australian_outlook/how-to-explain-mikta.

Mexico is predominantly Catholic. In South Korea, Buddhism and Christianity (both Protestant and Catholic) are believed to be ubiquitous. In this respect, MIKTA can be seen as a microcosm of the globe, representing a diverse geography and exemplifying a multi-cultural character. Despite all their differences, the countries of MIKTA share a common commitment to democracy, the free market economy and fair global governance.

MIKTA has an extensive geographic reach, with its members coming from the Asia-Pacific, the Americas and Eurasia. Australia represents the Pacific, Indonesia represents Southeast Asia, and South Korea represents North East Asia. Turkey is both a European and Asian country, while Mexico is a Latin American county. Besides, MIKTA countries have long-established ties with both the East and the West. While Turkey is a NATO member, Korea and Australia have bilateral military alliances with the U.S. On the other hand, Mexico traditionally shies away from any sort of military alliance, and Indonesia is a leading member of the Non-Aligned Movement.

Table 1. MIKTA's Participation to International Organizations & Forums

Countries	International Organizations & Forums
Mexico	UN, G20, WTO, APEC, OECD, NAFTA, CELAC
Indonesia	UN, G20, WTO, APEC, ASEAN, EAS, ARF, OIC, NAM
Korea	UN, G20, WTO, APEC, OECD, EAS, ARF
Turkey	UN, G20, WTO, NATO, OECD, Council of Europe, OSCE, OIC, Turkic Council,
Australia	UN, G20, WTO, APEC, OECD, EAS, ARF

Abbreviations: APEC: Asia-Pacific Economic Cooperation, ARF: ASEAN Regional Forum, ASEAN: Association of Southeast Asian Nations, CELAC: Community of Latin American and Caribbean States, EAS: East Asian Summit, NAFTA: North American Free Trade Agreement, NAM: Non-Aligned Movement, NATO: North Atlantic Treaty Organization, OIC: Organization of Islamic Cooperation, OSCE: Organization for Security and Cooperation in Europe, UN:United Nations, WTO: World Trade Organizations.

Thanks to the group's geographical diversity, each MIKTA member enjoys considerable influence on key organizations that operate within the respective regions they belong to. Mexico exerts influence on the NAFTA (North American Free Trade Agreement), the CELAC (Community of Latin American and Caribbean States), and the Pacific Alliance (which includes Chile, Colombia, and Peru). Korea is influential over APEC, the ASEAN+3, the ASEAN Regional Forum (ARF), the East Asian Summit (EAS), and the Northeast Asia Peace and Cooperation Initiative. Australia is also a weighty member of APEC, the EAS, and the ARF. Likewise, Indonesia exercises influence over the ASEAN, APEC, the EAS, the ARF, and the OIC (Organization of Islamic Cooperation). Finally, Turkey is an active member of NATO, the Council of Europe, the OSCE (Organization for Security and Cooperation in Europe), and the OIC (See Table-1).

MIKTA countries are willing to play an important role on a global scale as well. Each country has an area of expertise in accordance with its peculiar historical experience.[43] Mexico resorts to a distinctive set of policies on migration, while the same sort of specialization applies to Turkey concerning security-related issues and asylum seekers. Indonesia is a veteran member of ASEAN, and has consistently defined and redefined the community's shared values since its foundation. Australia is experienced at balancing the relationship between China and the U.S., while we can talk of a similar expertise in diplomatic fine-tuning on Korea's part in the case of dealing with peninsular issues in Northeast Asia.

2.1. Mexico

Mexico is troubled with extreme economic dependence on the US on the one hand, and Brazilian leadership in Latin America on the other. Yet, one of the biggest challenges that Mexico is facing is that it cannot properly defend its

43) Sarah Kim, "Envoys from five middle-power nations tout Mikta forum," *Korea Joongang Daily*, (19 May 2015), http://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=3004345.

interests within NAFTA or the Trans-Pacific Partnership (TPP). From this perspective, MIKTA, which has the potential to exert influence from diverse corners of the world, can provide an opening for Mexican foreign policy.[44)]

President Enrique Peno Nieto hinted at Mexico's intention to play a more active role in global governance with the slogan "Mexican Moment" which he helped popularize following his accession to power in 2012. From this perspective, Mexico City's unprecedented policy of proactivism that is clearly demonstrated by its assumption of MIKTA's coordinatorship during both the group's founding stage and in the subsequent period of 2013-2014 cannot be overlooked.[45)]

Mexico's attention was largely fixed on initiatives dealing with financial inclusion as well as the formulation of a green growth agenda at the 2012 Los Cabos G20 Summit. It further prioritized contributions to the G20 by non-member states by extending an invitation to Spain and Chile, two countries it has deep-rooted bilateral relations with, to the Los Cabos Summit.[46)] Mexico prefers to center its relevant diplomatic discourse on bridging analogies rather than middle power terminology.

2.2. Indonesia

Indonesia has been the most reluctant party to MIKTA. Here, Indonesia is experiencing greater difficulty in defining itself as a great or middle power. Although Indonesia is one of the world's most important countries in terms of its geographical location and large population, its political influence and economic capability remain questionable. Yet, MIKTA's common approach to the governance of global and

44) Ministry of Foreign Affairs of the United Mexican States, "Mexico Has Worked To Strengthen MIKTA," (21 May 2015), http://en.sre.gob.mx/index.php/archived-press-releases/3170–mexico-has-worked-to-strengthen-mikta.

45) Fernado De la Mora (2015), "Keeping the Mexican Moment Alive: A Case for Public Diplomacy," *Exchnage: The Journal of Public Diplomacy*, Vol. 5, No. 1, p. 31.

46) Andrew F. Cooper (2015), "MIKTA and the Global Projection of Middle Powers: Toward a Summit of Their Own?" *Global Summitry*, Vol. 1, No: 1, p. 106.

regional issues is one of the main pull factors that draws Indonesia to the newly emerging constellation.[47]

It is important for MIKTA to secure Indonesia's membership despite the government reshuffle in the country that took place in 2014. Under Former President Susilo Bambang Yudhoyono, Indonesia sought a more active role as far as global issues are concerned. On the contrary, the country's current President Joko Widodo lays more emphasis on the pursuit of national interests. The Widodo administration considers MIKTA as an opportunity in terms of intensifying economic diplomacy and financial cooperation. However, Indonesia wishes to maintain its membership status provided that its traditional policy of neutrality remains fully intact.[48]

2.3. Korea

Another enthusiastic defender of MIKTA is South Korea. For Seoul, which is caught between China, the US, Japan, and Russia when it comes to the North Korea dilemma and other regional problems, it is believed that MIKTA can provide it with new opportunities in foreign policy.[49] As a matter of fact, Seoul has consistently managed to bring up problems related to North Korea to the agenda and secure the support of its partners in various MIKTA meetings.

Korea is one of the countries which employ the concept of "middle power" most frequently in defining their foreign policy. Since the moment he came to office, President Lee Myung-bak has been trying to take part in global governance

47) Rizal Sukma, "MIKTA: What does it want?" *The Jakarta Post*, (24 October 2013), http://www.thejakartapost.com/news/2013/10/24/mikta-what-does-it-want.html.

48) Aryati Dewi Hadin, "Indonesia and MIKTA: The Relevance of National Interests from an Economic Perspective," *The Journal of Turkish Weekly*, (24 April 2015), http://turkishweekly.net/2015/04/24/op-ed/indonesia-and-mikta-the-relevance-of-national-interests-from-an-economic-perspective.

49) Scott A. Synder, "Korean Middle Power Diplomacy: The Establisment of MIKTA," Council on Foreign Relations, (1 October 2013), http://blogs.cfr.org/asia/2013/10/01/korean-middle-power-diplomacy-the-establishment-of-mikta.

much more actively than his predecessors with a policy summarized by the slogan "Global Korea".[50]

The deep commitment manifested by Korea under the G20 in the aftermath of the global financial crisis of 2008 provides a leading indicator as to the relevent roles that other middle powers can assume in global governance. Korea has also viewed the G20 as a platform that can facilitate further opening of the group to the larger world since the beginning. Korea sparked no negative reaction on the part of the G20 nor the BRICs, with the moderate policies it pursues. It succeeded in setting an extensive agenda at the 2010 G20 Summit. Moreover, Korea believes it can gain substantial leverage in network diplomacy and take advantage of the polycentric trends in the global system through the instrumentalization of its middle power status. In this respect, President Lee Myung-bak placed the language of middle power at the heart of Korean diplomacy.

2.4. Turkey

Turkey, which is largely regarded as a cultural, geographic and historical bridge between Asia and Europe, has eagerly promoted the workings of MIKTA. With MIKTA as a foreign policy instrument, Ankara will be able to gain greater maneuverability in its relations with the EU, Russia and the Middle East. Most importantly for Turkey, the formation would help the country on its mission to define itself as a middle power by aiding it in the formulation of more realistic and reasonable goals.[51]

Besides acknowledging the potential contribution of MIKTA to Turkey's global governance capacity, Ankara also views the forum as an opportunity to extend its economic reach.[52] MIKTA membership will lend impetus to efforts aimed at

50) Sook-Jong Lee (2012), "South Korea as New Middle Power Seeking Complex Diplomcay," *EAI Asia Security Initiative Working Paper*, (September), p. 14.

51) Selçuk Çolakoğlu, "MIKTA: A global vision of middle powers," *The Journal of Turkish Weekly*, (24 March 2015), http://turkishweekly.net/2015/03/24/comment/mikta-a-global-vision-of-middle-powers.

extending the limited trade volume and invigorating the weak commercial links between Turkey and its MIKTA partners other than Korea, i.e. the only one which already has solid economic ties with Turkey.[53]

2.5. Australia

One of the most ambitious countries of MIKTA is Australia. Even more, its former prime minister and foreign minister, Kevin Rudd, can be considered as one of the founders of MIKTA. According to Australia, the entire world is paying for the mistakes made by the great powers in their attempts to solve global economic and political problems. From this perspective, Australia contends that a system of global governance that protects the interests of middle and small states needs to be developed.

Although Rudd's Labor Party government has now been replaced by that of a center-right coalition under Prime Minister Tony Abbott which happens to prioritize Japan and India over China, there is a general consensus among the Australian ruling elite that MIKTA is a beneficial instrument for Australian foreign policy.[54] Julie Bishop, the liberal Foreign Minister of Australia, objects to Australia's representation as solely a "middle power"; instead, she prefers the "top 20 nation" tag.[55]

52) Ali Unal, "MIKTA: A new model of partnership for a global future," *Daily Sabah*, (24 June 2015), http://www.dailysabah.com/politics/2015/06/24/mikta-a-new-model-of-partnership-for-a-global-future.

53) Erdal Tanas Karagöl (2014), "Kitalar Arasi Ekonomik Isbirligi: MIKTA," *SETA Perspektif*, Vol. 12, (August), p. 4.

54) Helen Clark, "Australia, MIKTA and the Middle Power Question," *The Diplomat*, (20 April 2015)

55) Julie Bishop, "Address to MIKTA outreach event," Minister for Foreign Affairs, (24 June 2015), http://foreignminister.gov.au/speeches/Pages/2015/jb_sp_150624.aspx.

3. Future Perspective of MIKTA: Global or Regional Actor

MIKTA is unwilling to raise public expectations beyond measure by holding ministerial level meetings on the sidelines of UN General Assembly sessions or G20 summits. Meanwhile, it is rather working hard to generate a shared "club culture" through the gradual maximization of commonalities and minimization of differences among member countries. Preserving its internal coherence and prioritising issues on which national interests of individual members already converge looms large among MIKTA's current ambitions. Nevertheless, time is ripe for MIKTA to set a common agenda and begin to take real action. MIKTA seems to be caught up in the brainstorming stage at the moment; but its agenda needs to crystallize into visible steps. Among the agenda items identified for cooperation in November 2014 are infrastructure promotion, health governance, disaster risk management, and humanitarian assistance.

Infrastructure promotion initially came forth as a Korean initiative at the 2010 G20 Seoul Summit. That said, to what extent MIKTA countries will be able to put a genuine effort vis-a-vis the BRICS, which is endowed with a larger capacity in this field, remains largely uncertain. When they met in September 2014 at a UN General Assembly session, MIKTA foreign ministers decided to lie heavy on health governance due to the widespread epidemic of Ebola virus disease.[56] That said, there is already a health governance initiative in place, which is led by the G7.

As to disaster risk management and humanitarian assistance, MIKTA countries are experienced enough to intervene efficiently in disasters that take place both within their own national borders and much beyond. MIKTA can also fill an ample gap in international security by focusing on cybersecurity issues.[57]

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56) Andrew F. Cooper (2015), "MIKTA and the Global Projection of Middle Powers: Toward a Summit of Their Own?" *Global Summitry*, Vol. 1, No: 1, p. 107.

57) Barbara Rosen Jacopson, "The MIKTA way forward: The potential, risk, and future of MIKTA diplomacy," *DiploFoundation Policy Brief*, p. 4.

It is possible as well for MIKTA to identify a single, specific target, like IBSA did. IBSA countries set their sights on UNSC membership.[58] MIKTA also needs to set certain targets apart from the general topics of global governance. For anything, it is not that MIKTA countries lag behind IBSA in terms of democratic maturity and their flourishing civil society. Remaining a purely middle power forum may not be sufficient for MIKTA in the medium run. In this respect, even the G20 may lose its currently-valid role as a diplomatic hub in time. MIKTA assuming a complementary rather than a substituting role vis-a-vis the G20 may bolster the status of both groupings concerned.

MIKTA being perceived as an exclusive group by non-members may bring about the risk of regional partners joining forces through alternative groupings. On the other hand, if MIKTA becomes too inclusive, the forum may lose its efficiency and cohesion.

Another common feature of these five countries is that they have difficulties in making the West recognize their priorities, although they all share close strategic ties with the US and/or EU countries. Considering this, MIKTA stands as an independent conduit through which these countries can safeguard their global interests and priorities while also remaining a part of the global order that is determined by the West.[59] MIKTA countries believe that they will be able to act as a unified mediator in global and regional disputes if they build the capability to act independently, especially from the US. In this regard, MIKTA countries take special care to develop their relations with non-Western countries, especially Russia and China.

To what degree the MIKTA countries will be successful in establishing a shared vision and strategic position based on their common interests will determine the future of this formation. If these countries can cooperate and act in solidarity,

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58) India-Brazil-South Africa Dialogue Forum, http://www.ibsa-trilateral.org.

59) Byung-se Yun, Jose Antonio Meade Kuribrena, Retno L.P. Marsudi, Mevlut Cavusoglu, "21st Century Global Governance: Rise of the Rest -- Cross-regional Networks," *The World Post*, (1 June 2015), http://www.huffingtonpost.com/he-yun-byungse/21st-century-global-gover_b_6422328.html?utm_hp_ref=tw.

MIKTA's prestige in the international arena will rise, and subsequently, if new members are added to the formation, MIKTA could come to represent a solid platform from which middle powers may protect their interests.

III. Conclusion

For the first time, MIKTA countries have begun to take part in global governance in a systematic and effective manner, working eagerly to make room for themselves as middle powers. While the G20 offers each MIKTA country a unique opportunity, their individual efforts are nevertheless overshadowed by the G7 and the BRICs: Being second-tier countries, they find themselves unable to exert sufficient influence under the G20. Therefore it is possible to suggest that the establishment of MIKTA boosted the effectiveness and prestige of its five members under the G20.

Another major contribution by MIKTA to its members would be its facilitation of joint efforts by five countries, each from a distinct socio-economic background and geographical region, that are aimed at setting and implementing a common agenda for middle powers and the international community at large. Before MIKTA was founded, all these five countries used to identify policy goals in accordance with their own particular priorities or those of their allies and partners. Therefore their experience in carving out a global vision on their own had been extremely limited. Thanks to MIKTA, these five middle powers, which were included in the decision-making processes concerning global financial management for the first time through the G20, gained a chance to reinforce their efforts at more active participation in global governance.

One of the major uncertainties that face the five parties to MIKTA is the issue of enlargement. A possible decision to broaden the membership base of MIKTA, and whether the scope of the group's enlargement efforts in the future will be

limited to or exceed beyond G20 members, will certainly have tremendous repercussions. There will be four potential members should a future decision for enlargement be limited to the G20. These are Canada, South Africa, Saudi Arabia, and Argentina. Among these four countries, Canada and South Africa already belong to other sub-constellations within the G20 as a member of the G7 and the BRICS respectively. As for Saudi Arabia, it doesn't meet a fundamental criterion set by MIKTA as it lacks a democratic regime. Therefore within the G20, Argentina shines out as the only potential candidate for MIKTA membership. However, it is yet to demonstrate serious willingness to join MIKTA.

Besides its obvious benefits, MIKTA's opening up beyond the narrow boundaries of the G20 to embrace new members bears certain risks as well. Firstly, a non-G20 member's accession to MIKTA will result in several operational difficulties. Various ministries of MIKTA members are already in contact with each other through the mechanisms provided by the G20. Therefore the ministries concerned are able to handle MIKTA's particular agenda alongside that of the G20 in an uncomplicated manner. Various opportunities resulting from the utilization of such a shared platform will not be available to the fullest extent in case a new member that is outside the G20 is admitted the group. Moreover, MIKTA's premature incorporation of new members before its institutional identity and concrete agenda fall into place bears the risk of rendering the group ineffective.

Even if MIKTA cannot manage to achieve any remarkable success on a global scale, its contribution to the relations between the five member countries will by itself result in incredible gains. Not all these five countries had in-depth relations between them in the past. These five emerging countries, which are among the 20 largest economies in the world, gained the opportunity to intensify their diplomatic relations not only on a bilateral but also on a multilateral level first through the G20 and then through MIKTA. It is a fact that focusing on bilateral relations is considered much easier by each of these five countries. That said, multilateral cooperation will certainly have a larger contribution to their relations. In that regard, MIKTA countries can make significant gains in improving their political, economic,

and socio-cultural relations at both the bilateral and the group levels. In addition to similar contacts facilitated by the G20, an increasing number of exchanges between the decision-makers, parliamentarians, business people, experts, and academics of these five countries are already under way thanks to MIKTA.

This is also the case for the bilateral relationship between Turkey and Korea. The essential drawback of Turkish-Korean relations has always been the lack of a shared global vision, notwithstanding their outstanding outlook at the bilateral level as far as the intensity of political and economic ties between Ankara and Seoul is concerned. Until recently, the two capitals were unable to support each other sufficiently when confronted with regional problems, and they used to run into severe difficulties in coordinating their efforts on the international stage. But now, it is possible to suggest that Ankara and Seoul began to close the diplomatic deficit caused by their previous lack of a well-defined global vision in common; thanks to the G20 and MIKTA. Thus, they are currently better at assessing and comprehending each other's concerns and priorities.

For the most part of its diplomatic history; Turkey has been unable to spend much time focusing on the subject of global governance due to the endless row of pressing problems that continue to haunt its immediate neighborhood. With the G20, it gained the chance to have a better grasp of the global agenda and its underlying trends. However, Ankara couldn't achieve much success in developing a global vision that matches its capacity as a middle power. It is currently striving to foster its own global vision by keeping a close watch on the experiences of other countries and through MIKTA. Besides, Turkey has considerably benefited from sharing the experiences of its MIKTA partners - Korea first and foremost - in terms of economic development strategies. As a result, Ankara was able to acquire a more accurate perspective as to which group of countries its performace can be compared with, and what sort of targets it can deem feasible concerning issues of economic development and global governance.

Korea, like Turkey, also lies in an extremely turbulent region. In Northeast Asia, it has to live among four great powers like the U.S., China, Japan, and

Russia; while the only country with which it shares land borders, i.e. North Korea, is governed by the most secretive regime in the entire globe. Therefore Seoul's capacity to steer regional developments, have any remarkable impact on regional balances, or advance its national interests within the neighborhood is extremely limited. Seoul has to open up to other regions and form new partnerships in order to pursue its political and economic interests in a meaningful way. With MIKTA, Korea has eventually obtained an instrument by way of which it can aspire to play the role of a middle power. Thereby Korea can seize on its inherent capacity as a middle power and obtain fruitful results beyond its own neighborhood where efforts in this direction are apparently doomed vis-a-vis the dominant powers. From Seoul's perspective, MIKTA can allow it to set and implement a global agenda in a manner that would take Korea's priorities into account.

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8

China-US Bilateral Investment Treaty (BIT)

*Xu Man**

I. Introduction

The Bilateral Investment Treaty (BIT) offers an important tool to reduce policy barriers limiting foreign direct investment (FDI) and to enhance the investment climate between two countries. The United States has 42 BITs in force, the majority of which are with developing countries, while China has more than 100, a quarter of which are with developed countries including Canada and Germany. The United States and China are the two largest economies in the world. They are among the world's largest trading nations, and they serve as both the destination and the source of the world's largest flows of FDI. Given the large economic footprint of both economies, the size of cross-border investment in each other's markets is surprisingly small. The U.S. FDI stock in China by the end of 2014, valued around $75.4 billion, represented only about 5 percent of the $1.5 trillion of total FDI in China. And China accounted for less than 1% share of FDI in the United

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States in the same year. That situation could change with the successful conclusion of the negotiation of a China-US bilateral investment treaty (BIT).

Talks on China-US Bilateral Investment Treaty began in 2008 as both countries sought to increase mutual investment, which only accounted for a tiny share of their respective overseas investment. But it was not until the fifth round of the China-US Strategic and Economic Dialogue (S&ED) meetings in 2013 that the talks entered a substantial phase after the two countries agreed to conduct negotiations on the basis of pre-establishment national treatment with a negative list approach. In 2014, the two countries tried to reach consensus on the language regarding the core issues of the BIT negotiations. Chinese President Xi Jinping and the U.S. President Obama gave clear instructions to negotiating teams of both sides that it was time to exchange negative lists to speed up BIT talks when they met last November, as the investment treaty has become a top priority for bilateral economic relations. Both sides have demonstrated strong political will and pledged to start the second phase of negotiations in 2015 over the negative list, which specifies bans and restrictions on certain types of foreign investment. The treaty is expected to cement the foundation of China-US economic ties and significantly benefit the global economy. Removing discriminatory investment restrictions via a China-US BIT could yield a significant results, not simply as a means of encouraging two-way investment but also as a means of helping resolve investment-related disputes. However, considering the complexity of the issues involved in negotiations, China and the U.S. still need to brace for mounting challenges.

This paper analyzes the status of and barriers to FDI between China and the U.S. and their respective interest demand from the BIT, focuses specifically on the negative list as the core issue and sticking point. It makes suggestions on the goal and principle of the BIT negotiation and the main negotiation strategies on the Chinese side. This paper also examines issues that pose challenges to successful negotiation and the prospects for a China-US BIT.

II. The Interest Demands of the U.S. from the China-US BIT

2.1. Status and trends of FDI from the U.S. to China

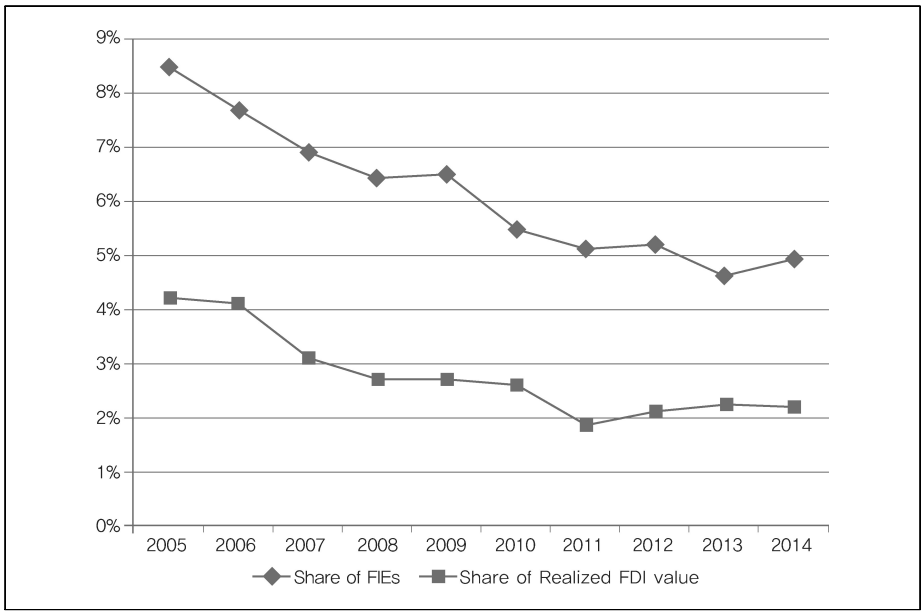
Investment between China and the United States is much smaller than it should be considering the economic and even geographic fundamentals. According to United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2015, China became the world's largest recipient of FDI in 2014, with inflows reaching $129 billion. However, the figure from the U.S. Bureau of Economic Analysis (BEA) shows that the total U.S. FDI abroad in 2014 was more than US$ 4.9 trillion, but US investment in China was less than 1.4 percent of that amount.

2.1.1. As one of the largest source of FDI in China

Although the investment growth in China has slowed due to the financial crisis in the past few years, the U.S. remains one of the largest sources of FDI in China. According to China's ministry of commerce statistics, in 2014, China's realized FDI value was $119.56 billion. Among them, $2.67 billion was from the U.S., accounting for 2.23% of the total foreign investment, ranked sixth in the foreign direct investment in China. The United States set up 1176 enterprises in China, which represents a 10.8% increase in number compared with previous year, and accounts for 5% of overall foreign investment enterprises (FIEs) in China.

Figure 1. Share of Foreign Direct Investment (FDI) flow from the U.S. (2005-2014)

(Unit: %)

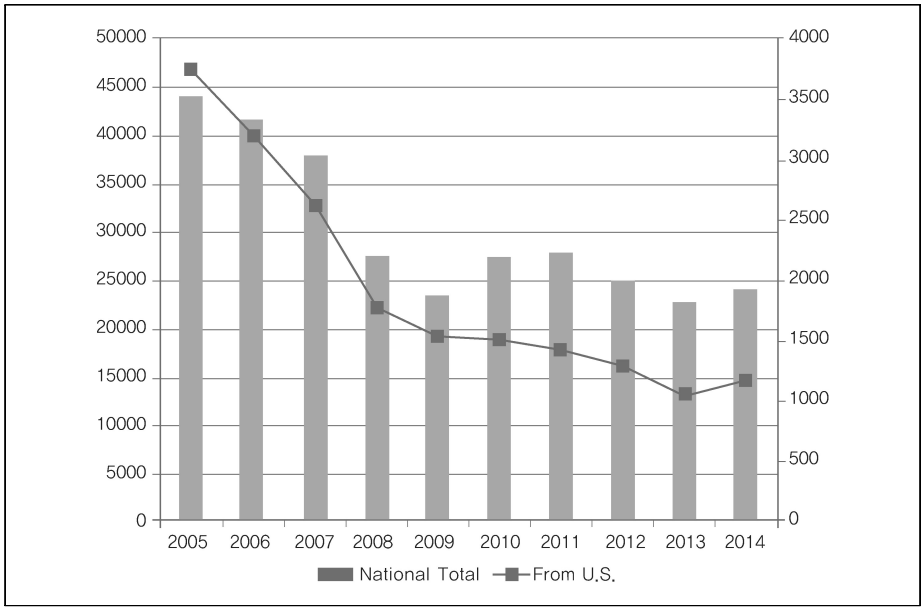


Source: Statistics on FDI in China 2014, MOFCOM.

2.1.2. Decline of the number of FIEs from the U.S.

From 2005 to 2014, the number of FIEs from the U.S. into China decreased quickly. In 2005, there were more than 3700 American enterprises in China, whereas in 2014, the number of FIEs from the U.S. declined to 1176, a decrease of 69% in 10 years.

Figure 2. No. of Foreign Investment Enterprises (FIEs) from U.S. (2005-2014)



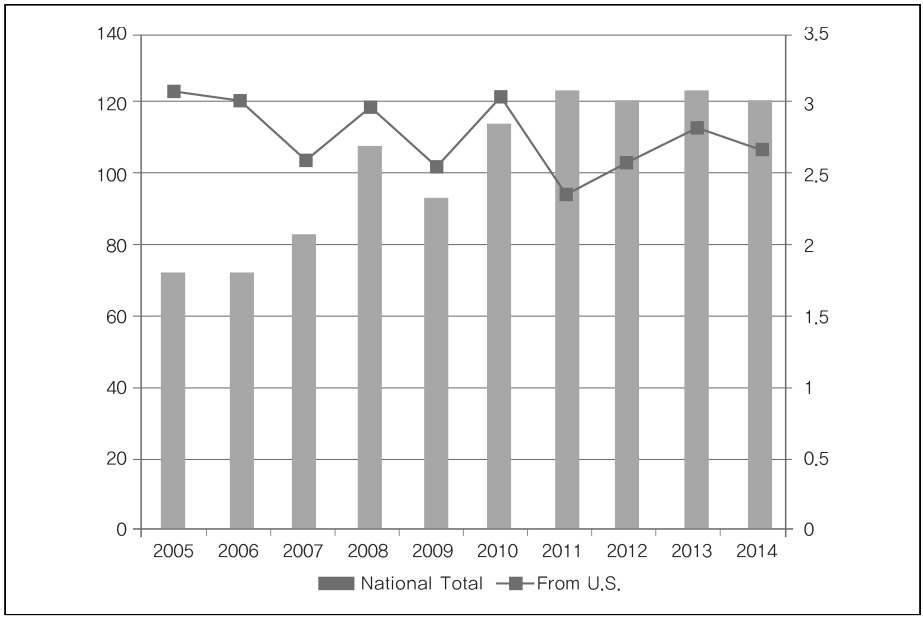
Source: Statistics on FDI in China 2014, MOFCOM.

2.2.3. Volatility of FDI flow from the U.S.

The impact of the financial crisis on FDI flow from the U.S. into China showed increasing instability, and the volatility of the FDI flow reflected economic developments in the U.S. In 2008, the FDI flow from the U.S. increased to $2.94 billion, largely due to the $4 trillion economic stimulus plan of China. The FDI flow decreased sharply in 2009 and 2011 when the U.S. economy fell into recession, whereas it increased to $2.37 billion in 2012 when the American economy recovered.

Figure 3. Foreign Direct Investment (FDI) flow from the U.S. (2005-2014)

(Unit: US$ billion)



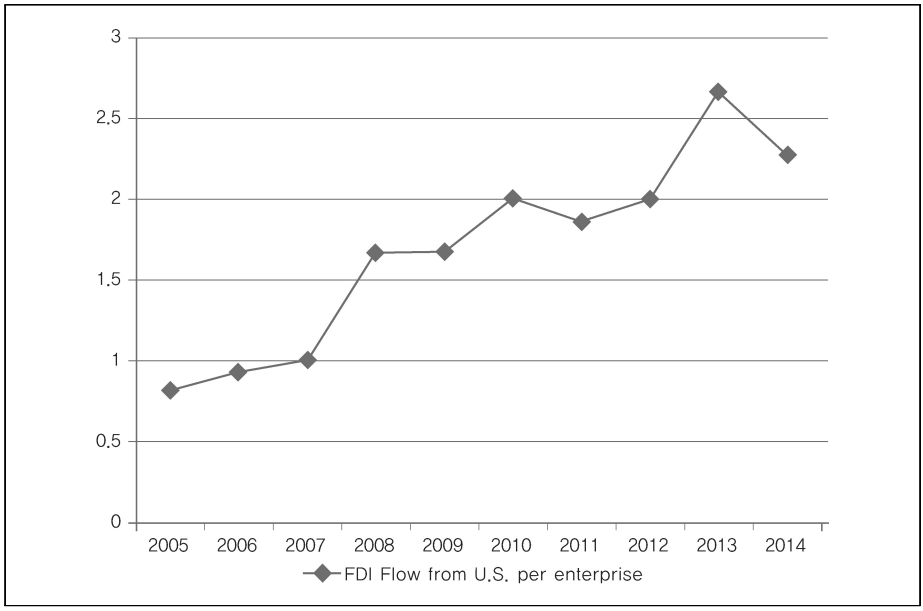
Source: Statistics on FDI in China 2014, MOFCOM.

2.2.4. Increase of average FDI per enterprise from the U.S.

The amount of average FDI per U.S. enterprise to China has increased rapidly. In 2005, the average FDI flow from the U.S. was $0.82 million; it increased to $2.27 million in 2014. The average FDI increased by 177% during the past 10 years.

Figure 4. Foreign Direct Investment (FDI) flow per enterprise from the U.S. (2005-2014)

(Unit: US$ million/enterprise)



Source: Statistics on FDI in China 2014, MOFCOM.

2.2. The present agreements regarding bilateral investment protection between China and the U.S.

"The Encouraging Investment Agreement Exchange of Note on Investment Insurance and Guarantee between the People's Republic of China and the U.S of America" signed as early as October 30, 1980, was China's first ever bilateral treaty for international foreign investment protection. Counting protocols, the Agreement and Exchange of Note includes only eight terms, basically no more than official acknowledgement of the investment insurance and guarantee for private American overseas investment companies that would apply to American companies' investments in China. Obviously, the agreement can no longer effectively regulate and protect mutual investment between the two countries.

2.3. The interest demands of U.S. investors

2.3.1. The U.S. Model BIT

The United States has 42 BITs in force, the majority of which are with developing countries. Only two of the BITs (the US-Rwanda BIT and the US-Uruguay BIT) have entered into force in the past decade. This limited harvest reflects the challenge that partner countries face in meeting the terms of the U.S. model BIT.

After extensive review, the Obama administration issued a revised U.S. model BIT[1] in early 2012, which calls for tougher standards. These revisions will undoubtedly complicate ongoing discussions between the United States and China and other emerging markets. The major changes in the latest revision include: strong transparency obligations on regulations and other matters affecting investment and commitments to increase stakeholder and public participation; expanded labor and environmental standards with commitments not to "waive or derogate" from domestic labor and

1) USTR, "Fact Sheet on Model Bilateral Investment Treaty," www.ustr.gov/about-us/press-office/fact-sheets/2012/april/model-bilateral-investment-treaty.

environmental laws, to "effectively enforce" such laws, and to recognize international commitments under the International Labor Organization and other multilateral agreements; and clearer specifications for state-owned enterprises (SOEs) and commitments not to impose technology transfer requirements and to encourage investor participation in the development of standards and regulations.

For the United States, the 2012 revision of the U.S. model BIT sets out a detailed and broad-ranging template for treaty rights and obligations that US officials expect their partners to undertake and enforce in all bilateral investment pacts. The U.S. model BIT sets a high bar in requiring extensive obligations on investment policies, investor rights and protections that open up meaningful new market access opportunities, and a robust investor-state dispute settlement (ISDS) mechanism.

To briefly summarize, according to the Office of the US Trade Representative (USTR), the US BIT is designed to provide US investors with six benefits:

1) National treatment ("treated as favorably as the host party treats its own investors and their investments") and most-favored nation (MFN) treatment ("treated as favorably as investors and investments from any third country") for investors and "covered investments" for the "full life-cycle of investment," including establishment or acquisition, management, operation, expansion, and disposition;
2) Limits on direct and indirect expropriation and procedures for the payment of "prompt, adequate, and effective compensation" when expropriation occurs;
3) Ability to transfer investment-related funds across borders "without delay and using a market rate of exchange";
4) Restriction of the use of performance requirements;
5) Right to employ senior managerial personnel, regardless of nationality;
6) Right to international arbitration for an investment dispute with the host country government, with no requirement to resort to domestic courts.

2.3.2. Better access to China's market

The United States would also like to see China adopt and issue a short negative list as opposed to the foreign investment catalogue that it issues every several years. Such negative lists, which spell out the encouraged, restricted, and prohibited industries for foreign investment, are currently being revised. For the United States, in order to significantly increase market access, the negative list, which lists only the industries that are off limits to foreign investment, must be relatively short.

2.3.3. Reform the state-owned enterprises (SOEs)

The U.S. officials have numerous concerns about Chinese policies that impede investment by US firms. Advantages provided to Chinese state-owned enterprises (SOEs) via subsidies and discriminatory regulations and other measures restrict competition in the Chinese market and discourage U.S. investments in China. These practices weigh on both manufacturing firms and service providers. The latter are particularly constrained because many service activities require the firm to be established in the market where the service is provided.

2.3.4. "One-stop" shop for regulatory agencies

The United States would like to see a push toward a "one-stop" shop for regulatory agencies, rather than having foreign firms obtain permits and licenses from several Chinese agencies for a single investment. In addition, the increasing application of China's anti-monopoly law in a strict fashion, since the ascension of President Xi Jinping, has become a major issue for large foreign firms in China, even if enforcement would be to China's benefit and aid global investors.

III. The Interest Demands of China from China-US BIT

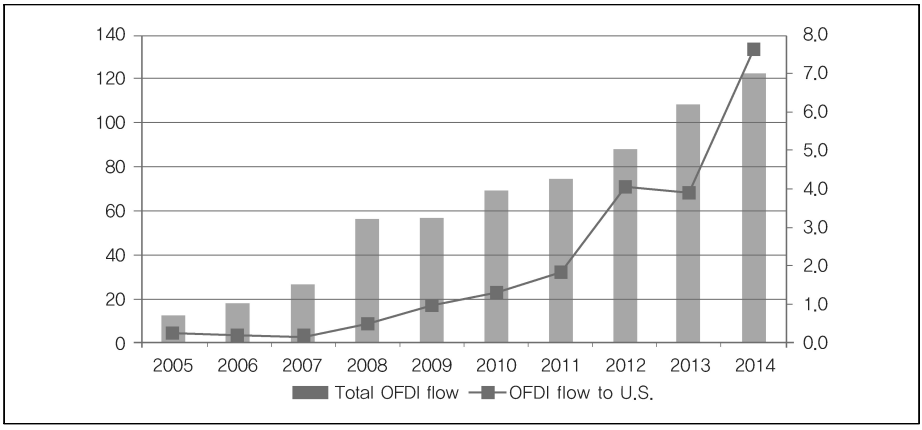
3.1. Status and trends of FDI from China to the U.S.

3.1.1. Annual Chinese FDI flows into the U.S. exceed the U.S. flows to China

According to Chinese statistics, China has become one of the fastest growing sources of FDI for the United States, as Chinese companies have begun to expand into the US market in the past few years. Chinese FDI flow in the U.S. was around $7.6 billion in 2014, which increased 95% relative to the previous year and far exceeded American FDI flows to China in the same year. The U.S. remains the third biggest target for Chinese outbound FDI, after Hong Kong and Australia, beating other Asian countries and major resource exporters. This trend has been driven by a more open and supportive policy environment for outbound FDI in China, and its increasing appetite for advanced economy technology, brands and consumer capabilities.

Figure 5. Outward Foreign Direct Investment (OFDI) flow from China to the U.S. (2005-2014)

(Unit: US$ billion)



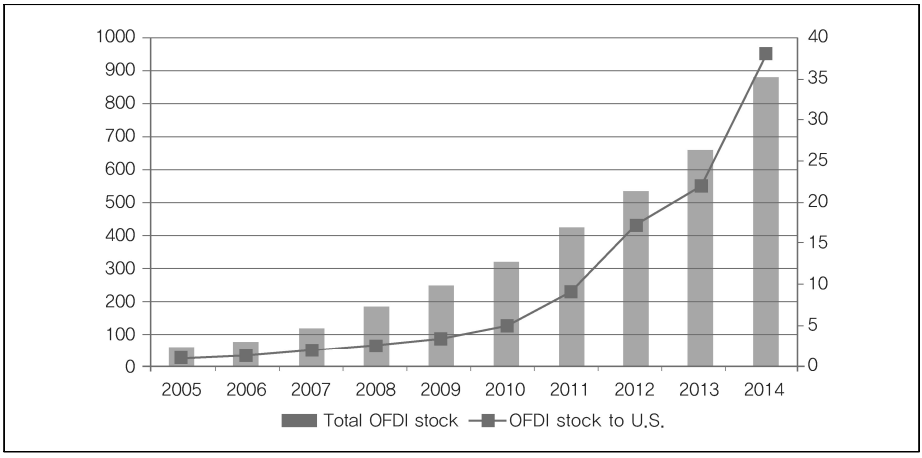
Source: MOFCOM, National Bureau of Statistics of China and State Administration of Foreign Exchange, 2013 Statistical Bulletin of China's Outward Foreign Direct Investment.

3.1.2. An rapid increase of Chinese OFDI into the U.S. in recent year

By the end of 2014, China accounted for less than 1% of the US FDI stock, vastly underperforming compared to its role in the global economy and the size of bilateral trade flows. However, China is currently the fastest growing source of foreign direct investment (FDI) in the U.S. and total Chinese FDI stock in the U.S increased 45 times from 2005 to 2014. According to Chinese statistics, China's outward FDI stock placed in the United States is approximately $38.0 billion at the end of 2014, and nearly one third of that arrived in the last two years.

Figure 6. Outward Foreign Direct Investment (OFDI) stock from China to U.S. (2005-2014)

(Unit: US$ billion)



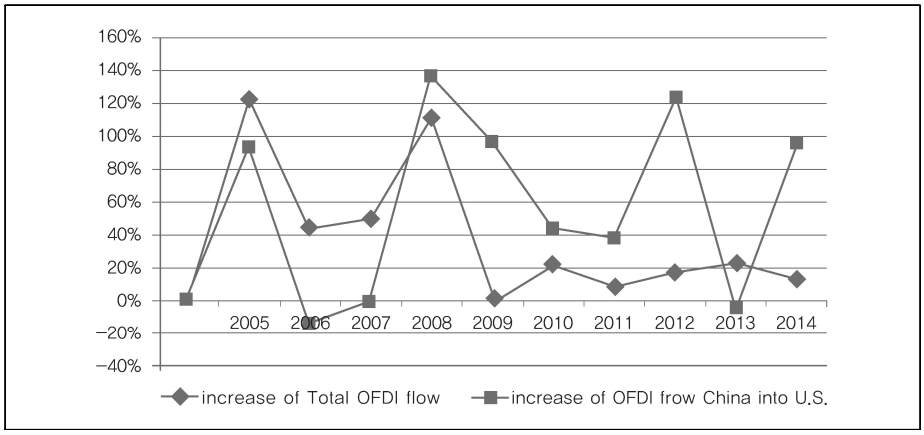
Source: MOFCOM, National Bureau of Statistics of China and State Administration of Foreign Exchange, 2014 Statistical Bulletin of China's Outward Foreign Direct Investment.

3.1.3. Volatility of FDI flow from China

China's investment in the United States has grown rapidly with the "going global" strategy of Chinese enterprises. However, its rate of increase rate dropped drastically from 2009 to 2011 due to the global financial crisis, but still with an annual growth rate of above 40%. Chinese enterprises' investment in the United States increased by 123% in 2012 compared to the previous year, when the American economy recovered.

Figure 7. Increase of Outward Foreign Direct Investment (OFDI) Flow from China into U.S. (2005-2014)

(Unit: %)



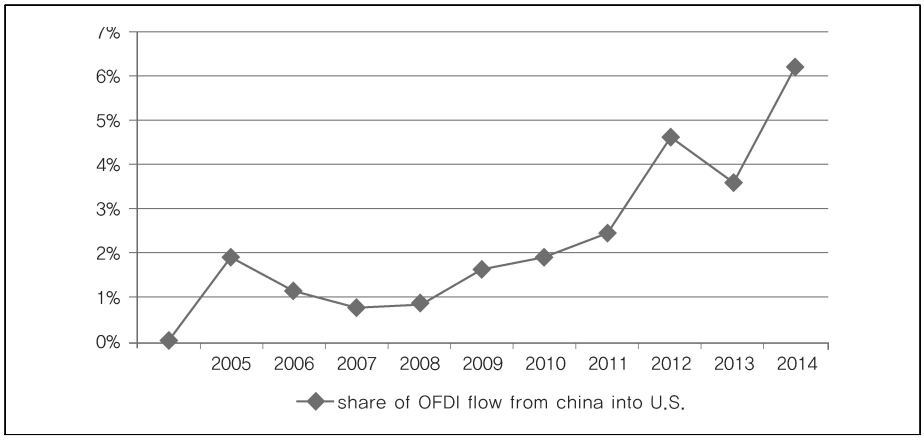
Source: MOFCOM, National Bureau of Statistics of China and State Administration of Foreign Exchange, 2014 Statistical Bulletin of China's Outward Foreign Direct Investment.

3.1.4. Share of FDI flows from China

Although Chinese FDI in the U.S. has grown rapidly, the share of FDI flow from China to the U.S. is still comparatively low given the size and scope of their bilateral trade. China's outward FDI in 2014 was US$ 123 billion, only 6.2 percent of the total FDI inflow to the United States. However, from 2005 to 2014, the share of Chinese OFDI flows in the U.S. increased by more than 2 times within this 10 years.

Figure 8. Share of Outward Foreign Direct Investment (OFDI) Flow from China into U.S. (2008-2014)

(Unit: %)



Source: MOFCOM, National Bureau of Statistics of China and State Administration of Foreign Exchange, 2014 Statistical Bulletin of China's Outward Foreign Direct Investment.

3.2. The investment barriers in the U.S. for Chinese investors

Although extensive opportunities abound for Chinese participation in the U.S., investment barriers indeed exist, particularly in areas of information, legislation and regulations.

3.2.1. Information issues

Since the establishment of diplomatic ties, the exchange between China and the United States have become increasingly close, and the two countries carried out frequent dialogues of various forms at all levels. However, as the world's two largest economies, there is still need to further strengthen ties in various areas in information communication between China and the United States.

Compared with their American counterparts, Chinese enterprises are at initial stages of "going aboard". Any decisions made on investment based on incomplete or untrue information would, therefore, lead to unpredictable and unexpected risks.

On the other hand, American people also need more accurate information and knowledge about Chinese enterprises. Although there are a number of China-related research institutes in the United States, and many government officials with abundant knowledge of China, the level of understanding of China of most scholars, communities and government officials is very limited. Political concerns and opposition engendered by particular interest groups or a misleading media report may lead to investment failure to Chinese investors. Nevertheless, many of the misunderstandings can be cleared up through greater knowledge and more effective communication.

3.2.2. National Security Concerns

While the United States has a longstanding policy of openness to foreign investment, certain proposed transactions that result in Chinese ownership of existing infrastructure projects or businesses may raise national security concerns and face scrutiny from

the Committee on Foreign Investment in the United States (CFIUS). The CFIUS reviews prospective FDI that has the potential to impair US national security and has the ability to block foreign acquisitions of US firms if it concludes that specific purchases would do so. Due to differences in political systems and cultural traditions, the United States is still worried that China may use its investment to seek control of certain sectors of the US economy and threaten US national security.

Over the past decade, several planned Chinese investments have been canceled to avoid CFIUS reviews or denied after CFIUS decisions. For example, the CNOOC's bid for Unocal in 2005, the Huawei's bid for 3 Com in 2007, the NWII's bid for Firstgold in 2009, Huawei's bid for the assets of 3 Leaf Systems in 2011, and Sany Heavy Industry's wind farm purchase, all failed due to intervention on the grounds of national security.

3.2.3. Export control concerns

In the U.S, export controls exist to ensure high-tech trade with foreign countries can only be expanded in the context of a secure trading environment, where risk of proliferation and diversion of dual-use goods and technologies is minimized to the greatest extent possible. However, overly restrictive regulations and policies result in ineffective controls and unintended consequences, such as lost export opportunities and diminished revenues for companies that can harm the U.S. economy.

Many Chinese investors regard the U.S. export control policy against China as a policy singling out China for additional restrictions, which is not founded on global market realities. Since China was excluded from the list of license exception in 2011, Chinese FDI enterprises cannot export controlled products and technology to China to move up the value chain and enhance their global competitiveness. Without taking concrete measures to relax or lift its restrictions on high-tech exports to China, it will be difficult not only to improve Chinese investment sharply, but also to better address the imbalances of the China-US trade.

3.3. The interest demands of Chinese investors

3.3.1. Reduce the uncertainty of national security review

China has long complained that the U.S. national security review for foreign investments stifles Chinese investment. Therefore, Chinese FDI enterprises would like to see some enhanced investor protections when its businesses go into the United States. A US-China BIT is unlikely to effect major changes to the CFIUS review process, but it might push for more transparency and possibly some clarity of the criteria needed to pass a CFIUS investigation for not only private Chinese enterprises, but also for state-owned enterprise.

The rejections of proposed deals by Chinese firms is deterring the growth of FDI to the United States, as well as souring economic relations in general. Moreover, Chinese enterprises are not seeing any greater transparency with regard to national security review procedures. After a court ruling found that the Obama administration denied Sany Heavy Industry its constitutional right to due process in 2012, the CFIUS delivered a cache of unclassified documents to this Chinese FDI company in 2014. While this was an unprecedented win for Sany, its impact on future Chinese investments will be limited, as the court did not question the authority of the President or CFIUS to block foreign investment on national security grounds. China may seek greater transparency in the criteria applied by the CFIUS in its reviews and a commitment that Chinese firms will receive the same treatment as other foreign investors.

China expects that a China-US BIT could foster greater disclosure of unclassified evidence, arguments, and allegations considered in CFIUS deliberations. Since according to the decision of the Court of Appeals for the Federal Circuit, parties to transactions under CFIUS review should be offered the opportunity to review, respond to, and rebut any unclassified evidence or reasoning upon which a presidential order depriving them of property is based. For increased transparency, Chinese firms that hire an experienced lawyer could come to find out any objections by the committee. What's more, the U.S. shall provide specific definitions over its

restrictions such as sectors, locations, investment patterns or other reasons while retaining the rights to suspend the projects invested or operated by Chinese investors, instead of just inserting national security into its negative list.

3.2.2. Negotiate the new topic on a "fair and equitable" basis

A China-US BIT shall be carried out on a fair and equitable basis, which suggests that the two countries should commit to treating each other in accordance with their respective economic development status and business power as they participate in negotiation. Those new topics expand obligations in areas of labor protection and environment standards, which means higher standards for developing countries. A China-US BIT shall facilitate for Chinese enterprises less stringent conditions on implementation with a relatively long transition period, if these topics need to be involved.

The United States began to put environment protection clause into its BITs recently, which represents a new issue for China, as it is rarely contained or mentioned in Chinese BITs. With the environmental problems becoming a worldwide concern, China's attitude toward environmental protection issues in BITs have changed. Although it will increase the costs for Chinese enterprises to enter the U.S., it also can regulate the performance of foreign enterprises with respect to China's environmental protection obligations. Comprehensively speaking, the advantages of including environment protection clause into the China-US BIT, will outweigh the disadvantages.

3.3.3. Manage with other trade and investment arrangements

The BIT negotiation process, like other international trade and investment negotiation, is a two-level game that involves both countries' domestic interest groups as well as negotiation teams. The China-U.S. BIT may face the problems of whether or not changes in the political environment will influence the future of BITs with other counties, and whether or not other regional trade arrangement

negotiations will affect the China-US BIT negotiations.

Since 2010, the U.S. has been promoting the Trans-Pacific Partnership Agreement (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). Both are efforts to reverse the negative effects of the financial crisis and globalization and to reinvent international trade and investment rules to impose higher standards more in line with American interests. China, which is excluded from the both arrangements, seems to be facing a challenge similar to that of 2001 when it sought to join the WTO. China also has been proactively promoting Regional Comprehensive Economic Partnership (RCEP) and the Free Trade Area of the Asia Pacific (FTAAP). Those trade treaties being moved forward by both countries are competing with each other to some extent.

The China-US BIT offers a way of managing the two countries' trade and investment strategies and contributes to building new major-country relations. After all, both countries need to expand cooperation in order to strengthen their economic strength and influence and maintain the role of trade and economy in stabilizing the bilateral relations under such mounting economic and trade frictions.

IV. Negative List as the Core Issue and Sticking Point: from the Perspective of Reform and Opening Up

4.1. The length and quality of the negative list

As the first U.S. FTA with an Asian partner in the past 10 years, the Korea-United States Free Trade Agreement (KORUS FTA) is regarded by the U.S. as a model for trade agreements for the Asia-Pacific region. In the KORUS, the U.S. listed 36 types of foreign investment projects in which Korean investment is either restricted or prohibited whereas the Republic of Korea listed 108 items in its negative list. Therefore, in the China-US BIT negotiation, we can speculate that the U.S. would

like to see a negative list offered by China with a similar length as that of Korea.

However, the negotiations between the U.S. and China over a bilateral investment agreement have entered a difficult phase as the initial negative lists of exempted sectors were exchanged in June 2015. China's initial offer would be longer than the U.S. expected if it is based on the 2014 negative list of off-limit areas for foreign investment in the Shanghai Free Trade Zone. The 2014 negative list was essentially a condensed version of the Guidance Catalogue for Foreign Investment with 139 types of foreign investment projects. China's General Office of the State Council released a new "Negative List" in April 2015 that further relaxes foreign investment sectors. The 2015 Negative List reduces the number of restrictive measures from 139 to 122, indicating that the government, generally, is expanding foreign access.

While the U.S. complains that China's negative list offer should be shorter, the negative list itself is already a huge progress for China as it represents a new challenge and will fundamentally change foreign investment administration. For the China-US BIT negotiation, China need to review its domestic laws, regulations and rules, which governed foreign investment in China with the positive list approach, to develop a negative list.

The second exchange of negative list offers in early September would be very important because it is in conjunction with Chinese President Xi Jinping's state visit to the United States in the same month. The objective of concluding the China-U.S. BIT negotiations under Obama administration would be likely if President Xi and his counterpart Obama could confirm "major progress"h made in BIT talks when they meet and give more clear instructions to both negotiating teams for concluding the talks.

4.2. Experiment of Chinese pilot free trade zones

For Chinese policy-makers, any fundamental reform shall not be put into practice nationally without experiment and exercise, including the reform in the area of

foreign investment. The State Council approved the China (Shanghai) Pilot Free Trade Zone (SHFTZ) in 2013 as the first pilot free trade zone in China. Since it was established, the SFTZ has carried out institutional reform and innovation in areas of investment, foreign trade, finance and post-filing supervision to form a legal framework for investment and trade within the zone. It has adopted the negative list for investment management, simplified foreign trade supervision procedures, promoted financial system reform to realize RMB capital account convertibility, and advocated post-filing supervision as a way to transform government functions. The Shanghai free trade zone will open the service sector wider to foreign investors by launching reforms catered to the needs of enterprises, and make policies more transparent. The Shanghai FTZ has unveiled 37 measures to widen access for foreign investment in services such as finance, shipping, commerce and culture.

In April 2015, the State Council approved the establishment of three more pilot free trade zones in Guangdong, Tianjin, and Fujian. This was under the stipulation that all four free trade zones would adopt the management mode of pre-establishment national treatment plus negative list. Like the special economic zones of the 1980s, these pilot free trade zones will undoubtedly play an experimental role in the new round of reforms, which would help China to further integrate into the world economy and access high-standard international trade and investment practice.

4.3. Manufacture areas

There is very few manufacture sectors listed in the negative list of the U.S., which includes only nuclear energy and mining industry. However, there were 46 restrictive measures in this area in the 2014 Chinese negative list for the SHFTZ, much more than that of the U.S. It should be noticed that in the 2015 negative list, a number of restrictions in the manufacturing industry have been lifted, including those on the processing of rice, corn, edible oils, tea, alcohol, tobacco and chemicals (now fully allowed). In the area of pharmaceuticals and health care, anesthesia

and blood products are now allowed. These improvements may help to bring the Chinese negative list offer closer to the expectations of the U.S.

The manufacturing of motorized vehicles remains sensitive, accounting for the most restrictions in the manufacturing industry. The restriction on construction vehicles, motorcycles and new energy vehicle batteries has, however, been lifted:

(1) Aircraft, unmanned aerial vehicles and helicopters, Ships, ship engines and marine engineering equipment, and satellites for civilian use require Chinese controlling interest.

(2) Rail transport equipment, processing and smelting of rare earths, tungsten, molybdenum, tin and antimony are limited to a contractual or equity joint venture.

(3) Processing radioactive material, Chinese herbal medicine, and ivory, tiger bones and traditional Chinese handicrafts are prohibited.

4.4. Pre-establishment national treatment

Pre-establishment national treatment refers to allowing the investments and investors of one country into the territory of another country on terms no less favorable than those do that apply to domestic investors or investors from third countries at all stages of investment, that is, including both establishment and development. It is a priority concern of the U.S. as a basis of the China-US BIT negotiation.

China has long operated the examination and approval system of managing foreign capital whereby it awards post-establishment national treatment. Since the strategic deployment of comprehensive, in-depth reform agreed at the Third Plenary Session of the 18th Central Committee of the Communist Party of China, however, China has adopted the principle of "pre-establishment national treatment plus negative list" to push forward BIT negotiations with the United States.

Pre-establishment national treatment and negative list signifies that foreign investment projects will switch from the approval system to the filing system. This will simplify examination and approval procedures for foreign investment

into China, and make the admission of foreign capital more transparent and efficient. By streamlining administration and delegating power to lower levels, China expects to promote its reform of domestic capital management on the same basis as reforms to the foreign capital management system.

4.5. Transparency

4.5.1. Problems in the transparency rules of China

As one of the top concerns in the China-US BIT, transparency means the openness of government decision-making, the public availability of information, and the solicitation of broad public feedback during the drafting of new laws and regulation. However, among all Chinese bilateral investment treaties, there are less than 10 of them that truly include transparency rules. Compared with the transparency rules in the United States, some problems exist with the transparency rules of the Chinese investment treaties in the following two aspects:

Firstly, the core of the transparency rules of Chinese BITs in the past was the obligation to publish, while lack of enforcement mechanism and transparency requirements in the administrative procedure, meant the transparency rules remained as declaration only. The reason behind this is besides lack of transparency mechanism in the legislation and administrative procedure system, China used to treat BIT as an investment protection mechanism only, and overlooked its importance in investment facilitation and liberalization.

Secondly, it was not clear whether the transparency rules should be incorporated into the investment arbitration in Chinese previous BITs. For example, in the China-Finland BIT 2004, act of violating the transparency rule falls within the scope of investment arbitration. However, it is clear that the entire transparency provisions are not subject to the scope of investment arbitration in the China-Canada BIT in 2012.

Overall, because of its imperfect transparency rules, China will be in an

unfavorable position with its negotiations on this issue with the U.S., and it will be very difficult to achieve a fair and reasonable conclusion.

4.5.2. Urgency of developing transparency rules

It is very urgent to develop transparency rules in line with China's actual investment system. China's FDI and OFDI flows are gradually increasing, and its large overseas investment need protection of strong investment treaties. Therefore, the function and policy orientation of the previous investment treaties should be adjusted. The transparency rule is an important measure to regulate investment and improve the overall investment environment. Transparency can help investors to understand the investment access and activities of the conditions, to obtain information on the activities necessary to engage in business activities, and to clarify their rights and obligations in the investment process, to improve the stability and predictability of investment. The effective implementation of China's "going aboard" strategy also requires the transparency rules in order to avoid risk.

China has achieved a number of important achievements with respect to legislation, judicial openness, government information, and public surveys; its overall transparency has continued to improve in the past few years. The fourth plenum communique issued in October 2014 suggests that the legislative process may be more open to public participation in the future. The communique states that citizen participation, expert research and verification, risk evaluation, legitimacy review, and collective discussion will become part of the legislative process for major administrative policy decisions. With common interest, China and the U.S. can cooperate in the area of transparency improvement. In December 2014, China and the United States agreed on a comment period of at least 60 days for all draft pharmaceutical and medical device rules and regulations, which represents a step forward toward cooperation in transparency.

V. Suggestions on BIT Negotiation Strategy

5.1. The goal and principle

5.1.1. Deal with the relationship between an emerging country and a developed country

The China-US BIT, as another important agreement after the Permanent Normal Trade Relations (PNTR) between China and the United States, will play a role just like China's accession to the WTO, to further integrate China into the world economy and access high-standard international trade and investment rules and practice. The China-US BIT should take into full consideration the wide difference between the two countries, and explore a development path for both China as an emerging country and the U.S. as a developed country, to avoid conflicts and reduce social welfare losses.

5.1.2. Create a sound environment for Chinese FIEs in the United States

China's foreign investment maintains a rapid growth momentum and its FDI into the U.S. showed a surprising increase in recent years. Influenced by some failure of the previous cases, many Chinese enterprises in the United States may lack confidence. It is hoped that the China-US BIT can provide a better environment for Chinese enterprises to invest in the United States, enhance the confidence of enterprises, reduce the negative impact of the uncertain environment, and provide solutions to enterprises in the United States through the investment dispute settlement mechanism.

5.1.3. Promote policy reform and avoid over-impact

It is necessary for China to learn the advanced international trade and investment practices, but China shall also take the possibility of unprecedented challenges raised by China-US BIT on foreign investment administration seriously. The China-US BIT may promote the relevant administrative structure reform, and give a fuller

play to the basic role of the market in the allocation of resources. However, China should also analyze and limit the impact of the BIT on the domestic market and the enterprises effectively, to avoid the pressure, which is difficult to bear at the present stage, and even affect the smooth development of the market.

5.1.4. Accumulate experiences from the negotiation for future talks

The China-US BIT is the first time that China has agreed to negotiate a BIT that is on the basis of pre-establishment national treatment with a negative list approach. The new generation of BIT, promoted by the United States, is getting a wide range of recognition on the platform of TPP and TTIP, which may represent the future trend of trade and investment arrangement. Through the negotiation with the U.S., China can accumulate experiences, comprehensively review the existing bilateral investment agreements, and perform more actively in the future negotiations in investment agreements or investment related agreements, for example, on China-EU BIT.

5.2. The main negotiation strategy

5.2.1. Make the accurate assessment and full preparation for negotiations

China-US BIT negotiations are not only related to the level of investment in the two countries, but also the collision between the two countries, their legal concepts and national interests, hence China should have a full understanding of the difficulty and complexity of the negotiations. Although the Sino-US BIT will proceed as an equal negotiation, in reality, there is a lot of imbalance between the two countries. As the biggest developed country, the United States has a relatively advanced market system. Whereas in China, an emerging economy, the market system is far from perfect and is compounded by an under-performing administrative mechanism.

In terms of mutual investment, the United States has more than 30 years of investment experience in China, has a relatively complete understanding on Chinese market environment and administrative management. Therefore, American bids in the negotiation can fully reflect the demands of U.S. Investors. However, the FDI from China to the United States is still in the initial stages and Chinese investors have very limited knowledge of the legislation and supervision in the U.S. compared with their American counterparts. They have even less understanding on the future investment environment based on negative lists, which affected the negotiation with the U.S. with respect to demands.

The United States has conducted more thorough research on the BIT text and possesses more abundant experience and skill in BIT negotiations. These factors will increase the difficulty of the negotiations, which China should fully assess.

In addition, China should change its attitude towards the function of the BIT, since China has become a both capital importing and exporting country from a net capital importing country. In the BIT negotiations, China should not only pay attention to the protection of domestic interests, but also to investors entering or planning to enter the United States. It is very important to make an accurate assessment and full preparation on the negotiation process, outcome and impact of the China-US BIT, because it should not only give greater access to the Chinese market for American firms, but also provide a fair and transparent competition environment for Chinese investors at the same time.

5.2.2. Accelerate outbound foreign investment policy reform

China has demonstrated much willingness to accelerate policy reform to open the doors to foreign investment in the past couple years. The Third Plenum reform program and the recent work report by Premier Li Keqiang acknowledged the importance of reforming China's inward FDI regime, and new rules for the four free trade zones represent a gradual step toward equal treatment for foreign firms in China. In addition, China's expressed interest in joining the Trade in Services

Agreement (TISA) negotiations may signal a greater willingness to liberalize inward investment in services industries. All of these measures are aimed at increasing the role of the market in the economy and to pursue inclusive reforms that allow foreign companies to play a greater role in helping China achieve its goals as a prosperous and innovative economy.

Besides encouraging inward FDI, China also continues to push forward the liberalization of outward FDI approvals. China would also like to see an increase of OFDI driven by deepening the reform of foreign investment management, which is to facilitate Chinese enterprises to invest in a foreign country. The reforms suggest aggressive changes to benefit outbound investors as follows:

In October 2014, The Ministry of Commerce promulgated new regulation Measures on the administration of overseas investment, which would simplify the administrative verification procedure required for establishment of enterprises with respect to overseas investments and facilitate the overseas investment procedure. With this new approach, the overseas investments by domestic enterprises, which are can be in any sensitive country and region or could involve any sensitive industries, are subject to the verification procedure; other overseas investments by domestic enterprises are subject to the filing procedure. The Measures also shorten the time limit of verification for overseas investments by five business days, and provides that the filings for overseas investments subject to filing administrations shall be completed within three business days.

In November 2014, the State Council published a new Catalog of Investment Projects Subject to Governmental Approvals, which abolished National Development and Reform Commission (NDRC) approval requirements for projects of $1 billion or more.

In December 2014, the State Council announced several measures aimed at providing stronger financial support for outbound investment, including lifting the OFDI foreign exchange pre-registration requirement with the State Administration of Foreign Exchange (SAFE). With this relaxation of foreign exchange rules for OFDI, inventors no longer have to apply at the SAFE for approval of foreign

exchange transactions related to outbound FDI, instead, they can do so at their local banks.

China implemented far-reaching reforms of its outbound FDI policy framework in late 2014 that abolished regulatory approvals for most outbound investment transactions and relaxed foreign exchange rules. Official statistics and proxies for overseas investment activity suggested that these steps have contributed to a significant rebound in outbound deal flow. Official figures from MOFCOM show a 47% year-on-year growth for China's global OFDI in January-May 2015. The number of newly approved and registered overseas subsidiaries has grown markedly as well. More than 800 foreign subsidiaries and acquisitions are now approved or registered by MOFCOM every month, compared to just 300 less than two years ago.

5.2.3. Continue state-owned enterprises reform

China's state-owned enterprises (SOEs) always been criticized by the U.S, as enjoying unfair advantages at home and acting on behalf of Chinese government with some political purpose when going aboard. Moreover, it remains one of the top concerns to the U.S. in the China-US BIT. However, China recently unveiled broad reform guidelines for state-owned companies aimed at making them more globally competitive and increasing transparency in a powerful sector of the world's second-largest economy.

State-owned firms are the pillar of the economy in China, and dominate key sectors such as oil and telecommunications. While the management system and operation mechanisms of State-owned companies have undergone significant changes after three decades of reform, there are still some deep-rooted problems that fall short of the demands of economic development. In order to compete with western multinationals at home and abroad, State-owned companies have to deepen reforms, get familiar with the international market environment, and adapt to global rules; thus forming their own competitive edges.

The relationship between state-owned and the private sector is pivotal for future direction of China's economic reform. China needs to break the monopoly held by SOEs, encourage private capital into certain areas and create fair competition for all types of enterprises. After the Third Plenum of the Communist Party of China's 18th Central Committee, major steps to reform state-owned enterprises have been taken and private companies and investors are now welcome to acquire larger shares in SOEs so they can have a bigger say in decision-making. These measures suggested China's efforts to reform its state-owned sector to make them more competitive in the global arena, and provide more opportunities for competition on the part of private firms.

VI. Conclusion

A BIT would increase FDI between China and the United States. The economic benefits from increased FDI would flow both ways and encourage needed structural reforms in both countries. The United States needs more investment throughout its economy, especially in infrastructure. China also has a lot to gain from a US-China BIT, the most obvious of which is a more dynamic economy. China has ambitions to move up the value chain, going from assembler of the world's cheap products to producer of complex, high-tech goods. In order to do this, China must foster a more competitive business environment, which a BIT could facilitate.

A BIT would benefit American companies and their workers by providing better access to the Chinese market, resulting in more sales and job creation. Treaty-based, enforceable rights with independent dispute settlement would provide American companies with new opportunities to expand in the world's second largest market, protect their intellectual property, and ensure their ability to compete on a level playing field.

China's perception of the investment process in the U.S. is that much of it is subject to the opaque approval process of the Committee on Foreign Investment in the U.S. Justification for the imposition of barriers to Chinese investment in the U.S. have been made on the grounds of national security. A BIT would hopefully provide more transparency in the investment process and reduce hurdles to investment.

Although China-U.S. BIT is a noble goal to pursue, the considerable differences between the two countries' political and economic systems, stage of development, degree of market openness, and enterprise competitiveness make the Chinese-U.S. BIT negotiations a difficult process. Case in point, it took six years for China and the United States to reach an agreement on core articles and main issues of the BIT text.

While there are useful signals that the BIT negotiations are moving forward, many obstacles stand in the way of an agreement. More importantly, according to the U.S. governing principle of the separation of powers, any treaty hammered out by the Trade Representative, Treasury Department and State Department need to be voted on by the Senate, and a bilateral investment treaty would need two-thirds of the votes for approval in the Senate. Given the political polarization in Washington and some concerns about national security interests and Chinese ownership in certain sectors of the economy, there is a possibility of the Senate not approving a BIT with China.

In addition, the U.S. mid-term elections in November and the 2016 presidential election could harden the attitude of politicians toward China, which often becomes a scapegoat in election years, slowing or halting the process on the American side.

China and the U.S. have been negotiating a bilateral investment treaty (BIT) for years, moving closer after exchanging revised offers just before President Xi Jinping's visit to the United States in late September. The BIT will be a priority discussion topic between the two presidents, leading some to believe that it may even be concluded.

China is the world's largest developing country, the United States the largest developed one. The importance of our relations have gone far beyond the bilateral

scope and acquired a global significance. Good cooperation between China and the United States can serve as an anchor for world peace and stability and an engine for prosperity and development. A high-standard BIT, with strong provisions for market openings and equal treatment, would greatly enhance the bilateral commercial relationship. If the world's two largest economies can successfully negotiate and complete the BIT, they will be at the forefront vis-à-vis other leading nations in setting investment standards for the 21st century.

Considering the many factors that could impede negotiations, it is necessary for both sides to make more substantial efforts to move away from the possible obstacles to the BIT. This is in the interest of both not only China and the U.S., but also it is in the interest of the world at large since a high-standard, comprehensive China-US BIT is an historic opportunity to strengthen our commercial ties, boost both our economies, and increase global stability.

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