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2017
TRILATERAL ECONOMIC REPORT

The Economic Impacts of the Olympic Games

Trilateral Cooperation Secretariat

2017
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Statement

This report was outsourced to Mr. CHEN Jian, Vice President of the China Society of Economic Reform and Director of the Beijing-Zhangjiakou Winter Olympic Games Research Institute for China; Professor SAITO Jun, Visiting Professor at International Christian University and Senior Research Fellow of the Japan Center for Economic Research for Japan; Dr. JOO Won, Deputy Director of the Economic Research Department of the Hyundai Research Institute, and Mr. OH Jun-beom, Senior Researcher of the Hyundai Research Institute for ROK.

Due to differences in statistical standards among countries, results may vary. Each author's analysis may not necessarily reflect the positions of the other authors.

The contents of this report (including policy recommendations) do not necessarily reflect the positions of the Trilateral Cooperation Secretariat.

Foreword

I am pleased to introduce the 2017 Trilateral Economic Report, which is an annual flagship report of the Trilateral Cooperation Secretariat (TCS). With the aim of following up and gaining a comprehensive understanding on the economic development and integration among China, Japan, and the Republic of Korea (ROK), the 2017 Trilateral Economic Report was outsourced to four prominent scholars of the three countries: Mr. CHEN Jian, Vice President of the China Society of Economic Reform (CSER) and Director of the Beijing-Zhangjiakou Winter Olympic Games Research Institute for China; Professor SAITO Jun, Visiting Professor at International Christian University and Senior Research Fellow of the Japan Center for Economic Research for Japan; Dr. JOO Won, Deputy Director of the Economic Research Department of the Hyundai Research Institute, and Mr. OH Junbeom, Senior Researcher of the Hyundai Research Institute for ROK.

Since 1999, China, Japan, and ROK have made remarkable progress on trilateral economic cooperation. I hope the 2017 Trilateral Economic Report will provide useful information to help you better understand the economic development, Olympic economy, and trilateral cooperation between the three countries.

LEE Jong-heon
Secretary-General
Trilateral Cooperation Secretariat

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Abbreviations

ABMI	Asian Bond Markets Initiative
AMRO	ASEAN+3 Macroeconomic Research Office
APEC	Asia–Pacific Economic Cooperation
ASEAN	Association of South-East Asian Nations
CJK	China, Japan, and Republic of Korea
CMIM	Chiang Mai Initiative Multilateralization
CNY	Chinese yuan
CPI	Consumer price index
DTI	Debt to income
EPA	Economic Partnership Agreement
EU	European Union
FDI	Foreign direct investment
FTA	Free trade area/free trade agreement
FTAAP	Free Trade Area of Asia-Pacific
FY	Fiscal year
GATT	General Agreement on Tariffs and Trade
GCC	Gulf Cooperation Council
GDP	Gross domestic product
ICT	Information and communication technology
IoT	Internet of things
IPC	International Paralympic Committee
I&S industry	Ice and snow industry
IMF	International Monetary Fund
IOC	International Olympic Committee
IP	Intellectual property
JETRO	Japan External Trade Organization
JOC	Japanese Olympic Committee
JPY	Japanese yen
KRW	Korean won
LTV	Loan to value
MC industry	Materials and components industry
MERCOSUR	Southern Common Market
NCCPC	National Congress of the Communist Party of China
NTCT	Network of Trilateral Cooperation Think-Tanks
OECD	Organization for Economic Co-operation and Development
QQE	Quantitative and Qualitative Monetary Easing
RCEP	Regional Comprehensive Economic Partnership
RMB	Renminbi
ROK	Republic of Korea
SOC	Social overhead capital
SMEs	Small and medium-sized enterprises
TCS	Trilateral Cooperation Secretariat
TPP	Trans-Pacific Partnership
US	United States
USD	US dollar
WTO	World Trade Organization
YOY	Year over year/year on year

Executive Summary

The year 2017 marks the 45th anniversary of the normalization of diplomatic relations between China and Japan, and bilateral political relations are being promoted and improved. In November, China–ROK relations found a breakthrough in the conflicts over THAAD, providing an opportunity to improve bilateral relations. The recovery of the US economy has directly contributed to the recovery of the world economy. The external environment is getting better and becoming more conducive to the improvement of economic and trade cooperation between China, Japan, and ROK, and further progress is possible.

The 19th National Congress of the Communist Party of China (NCCPC) has led to a sustained development of the national economy. The supply-side structural reform of China's economy is being promoted. The current high-speed growth of about 6.7% will likely be maintained. For Japan's economy, the basic pattern of relying on external demand has not changed. Weak domestic demand and an aging and shrinking population have been the main factors restricting Japan's economic recovery. However, the export growth brought about by the global economic recovery will provide support to the Japanese economy. The International Monetary Fund (IMF) predicted that Japan's real growth rate in 2017 would be 1.5%. ROK's economy is also clearly export-oriented. Since September 2017, ROK's exports to developed and emerging markets have both increased. Of the 13 major export categories, 10 categories, including steel and petrochemicals, have achieved double-digit growth. Its annual growth is sure to reach the predicted 3%.

The economic and trade cooperation between China, Japan, and ROK (CJK) is of great significance to all three countries. This cooperation is the stabilizer of inter-country relations. The gradual improvement of the relations between the three countries has also positively influenced the bilateral economic and trade relations, created the conditions for the establishment of a China–Japan–ROK Free Trade Area (FTA), and restored the confidence of Japanese and ROK businesses in China's market. In January 2017, for example, CJK FTA started the third round of tax cuts. China and ROK enjoy strong economic complementarity and great potential for development. According to Chinese statistics, from January to September 2017, the trade volume between China and ROK reached 202.2 billion USD, an increase of 11.4% YoY. The cooperation among China, Japan, and ROK has vast room for development. Concerning China and Japan, for example, Japan has extensive experience and technological advantages in the control of air and environmental pollution; China, as a country with a rapidly aging population, can learn from Japan's rich experience in meeting this challenge. The cooperation between China and Japan in these fields should easily achieve win–win results.

In the next four years, from February 2018 to February 2022, all three countries will host the Olympic Games. Japan's Sapporo intends to apply for the 2026 Winter Olympics and is likely to become the first city in Japan to host the Olympic Winter Games twice. Hosting the Olympic Games has played a very positive role in expanding consumer spending and investment, thus fostering economic growth. This provides room for platform cooperation for economic and trade exchanges between the three countries. Whether in Olympic-related industries, experience-sharing, urban infrastructure, information and communication technology (ICT), or the promotion of tourism among the three countries, we can find room for cooperation in and around the great events of the Olympic Games.

CHEN Jian

November 7, 2017

Chapter I

Economic Profile

Chapter I **Economic Profile**

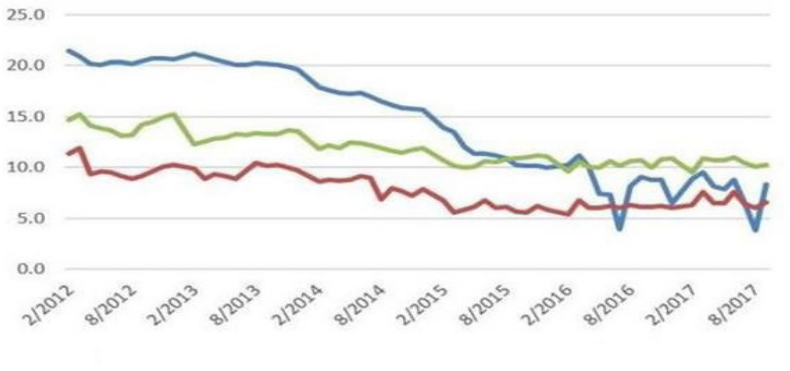
I. Macroeconomic Performance of China, Japan, and ROK

1. China (Mr. CHEN)

In 2016, China's gross domestic product (GDP) increased 6.7% over the previous year (YoY) as calculated using comparable prices. The first three quarters saw a 6.7% increase YoY, and Q4 saw 6.8% growth YoY. Annual investment in fixed assets grew by 8.1% YoY, a drop of 0.1% over the previous three quarters. The total retail sales of consumer goods had a nominal increase of 10.4% YoY, and the growth rate remained flat as compared to the first three quarters.

In the first three quarters of 2017, China's economy maintained a growth rate of 6.8%. Investment in fixed assets was still an important driver. The growth rate of monthly fixed asset investment rebounded sharply from 3.8% in August to 6.9% in September. The growth rate of industrial added value increased significantly from 6.0% in August to 6.6% in September. In September, total retail sales increased slightly, reaching 10.3% YoY, continuing its double-digit growth and indicating that consumer spending remains the stabilizer of economic growth.

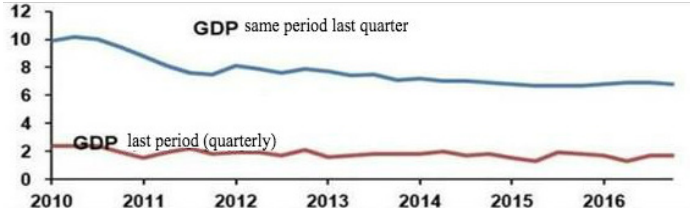
Figure I-1 September 2017, investment, industrial added value, and retail consumption recovered significantly, % monthly YoY



Data source: *Institute of Economic Policy, Peking University*
Notes: *Green line- fixed asset investment; red line- industrial added value; yellow line- retail sales.*

Foreign demand may slow moderately in Q4 due to the strong Renminbi (RMB) exchange rate. Domestic manufacturing investment is expected to maintain relatively strong growth. Infrastructure investment will maintain medium to high growth. Towards the end of the year, the growth rate of retail sales is expected to increase to over 10.5%.

Figure I-2 Q4 GDP growth is still strong (quarter %)



Data source: *Institute of Economic Policy, Peking University*

China's National Bureau of Statistics released September's real economy and third-quarter GDP figures. GDP growth slowed slightly to 6.8 % in the third quarter but remained high, consistent with expectations and significantly surpassing annual growth targets, showing that China's economic growth momentum remains strong.

2. Japan (Prof. SAITO)

Japan was deeply affected by the global financial and economic crisis that broke out in 2008. Real GDP fell by more than that in the United States (US), where the crisis originated.

Recovery from the crisis was also slow. Both private consumption and business investment showed only modest growth. Exports were depressed by the slow recovery in foreign markets and the negative impact from the appreciation of the Japanese yen (JPY). Fiscal stimulus packages were introduced but were able to bring only a modest recovery to the Japanese economy.

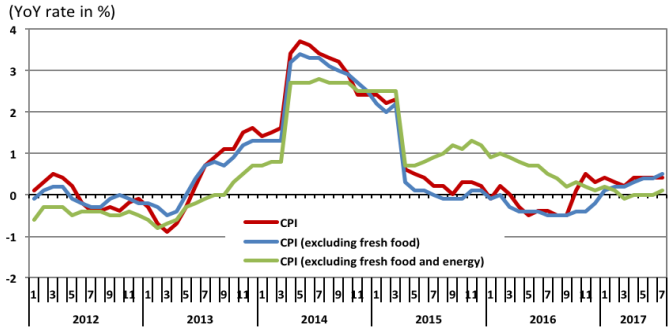
The slow recovery also faced periodic external shocks, which exerted a negative influence on growth. The European sovereign debt crisis that broke out in 2010 affected the Japanese economy through trade, stock market volatility, and exchange rate fluctuations. The Great East-Japan earthquake in 2011 destroyed the Tohoku area and also damaged Japanese industries in other areas because of its impact on the electricity supply and the link with Tohoku through supply chains.

As a result, the negative output gap remained large and continued to provide significant downward pressure on prices. Deflation had returned to Japan by the end of 2009.

Abenomics came into play in late 2012. Its main purpose was to contain deflation and achieve sustained economic growth. To that end, a set of polices, the "three arrows," was introduced. It consisted of bold monetary policy (the first arrow), flexible fiscal policy (the second arrow), and a growth strategy to promote investment (the third arrow).

In the area of monetary policy, inflation targeting was introduced in January 2013, followed by the introduction of an unconventional monetary policy framework called "quantitative and qualitative monetary easing" (QQE). The significance of QQE was its change of operational target from the uncollateralized overnight call rate to the monetary base and the commitment to double the monetary base within two years in order to achieve consumer price index (CPI) inflation of 2% within two years (see Figure I-3).

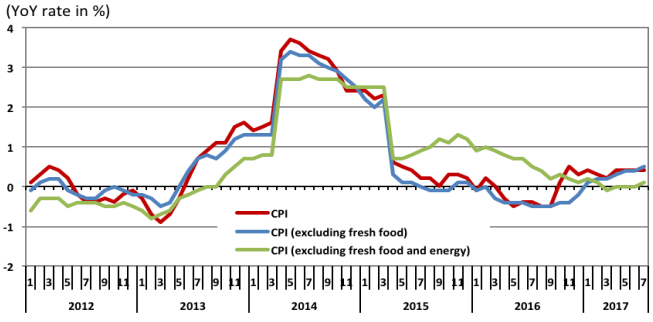
Figure I-3 Monetary Policy Indicators



Data Source: *Bank of Japan*

These actions helped improve households' and firms' expectations. It led to a correction of the overvalued exchange rate, a steady rise in stock prices, and a gradual increase in private consumption. Reflecting these positive developments, inflation started to rise, and, by early 2014, the YoY rate of CPI had reached as high as 1.5% (see Figure I-4).

Figure I-4 Consumer Price Index

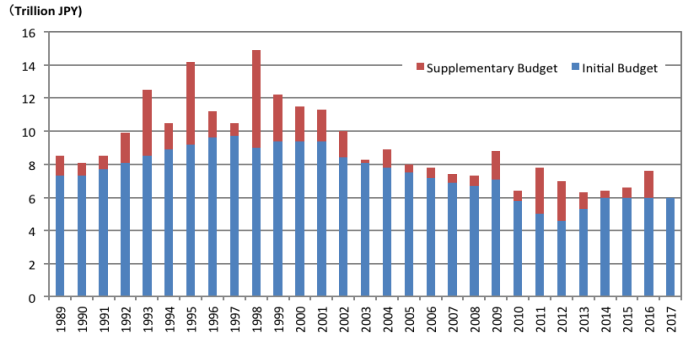


Data source: *Ministry of Internal Affairs and Communications of Japan*

However, the negative shock of a consumption tax rate hike in April 2014 and a decline in oil prices led to a moderation of the inflation rate to almost zero in 2015. The widening of the gap between the target and actual inflation rate was addressed by the Bank of Japan through a series of new initiatives: the expansion of the QQE (October 2014), the introduction of QQE with a negative interest rate (January 2016), and the introduction of QQE with yield curve control (September 2016).

During this period, fiscal policy was less restrictive than before. It was intended to support the economy until the impact of the monetary policy started to show. The initial budgetary allocation for public works programs, for instance, which had been cut since the early 2000s, was reversed after 2012 (see Figure I-5). With additional appropriation made through supplementary budgets, public investment made a positive contribution to GDP growth, particularly in the early years of Abenomics.

Figure I-5 Budget Allocation for Public Works



Data source: *Ministry of Finance of Japan*

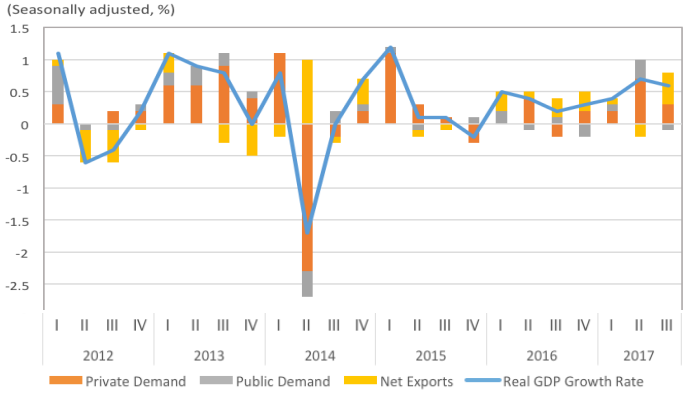
To avoid the negative impact on the economy that it may have had, the government postponed the consumption tax rate hike from 8% to 10% twice; it is now planned for October 2019.

The active use of fiscal policy, however, had an adverse effect on the fiscal situation, which already required close attention. The government had committed itself to a medium-term fiscal consolidation strategy with a target of achieving a primary surplus by fiscal year (FY) 2020 and lowering the government debt to GDP ratio steadily thereafter. However, the government's own projection for the medium-term fiscal situation showed that, without additional policy initiatives, the primary balance would not improve or meet the target by FY2020.

As a result of the active macroeconomic policies and a steady recovery in the global economy, the real GDP growth rate has been positive since the first quarter of 2016.

The real GDP growth rate in the third quarter of 2017 was 0.6%, or 2.5% in annualized terms (see Figure I-6). With the GDP deflator also showing an increase, the seasonally adjusted nominal GDP in annualized terms reached a record high of 549.2 trillion JPY in the quarter.

Figure I-6 Real GDP growth rate

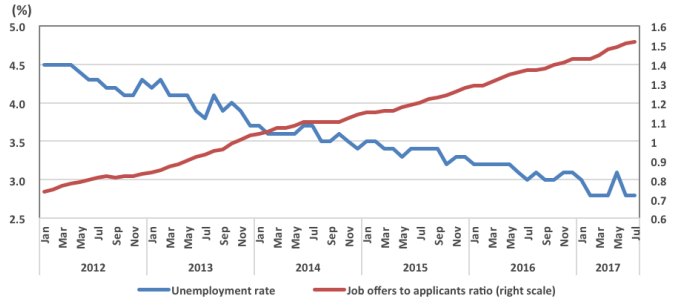


Data source: *Cabinet Office of Japan*

During this period, the main positive contribution came from an increase in net exports, supported by a steady recovery of the global economy. However, private demand, such as private consumption and business investment, has shown an increase that also supported growth. This shows that improvement is gradually being felt in wider areas of the economy.

Reflecting the sustained growth of the economy, the negative output gap, which had widened in 2014 and 2015, steadily narrowed during the period, and has even turned positive since early 2017. In the labor market, this corresponded to a tightening of the labor market. The job offers-to-applicants ratio has risen to a record high, and the unemployment rate has fallen to below 3% (see Figure I-7). Since the 3% unemployment rate roughly corresponds to the structural unemployment rate, the labor market can be judged as being significantly tight.

Figure I-7 Labor market indicators



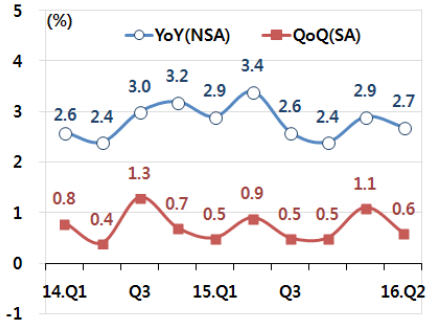
Data source: *Ministry of Internal Affairs and Communication, and Ministry of Health, Labor and Welfare of Japan*

3. ROK (Dr. JOO and Mr. OH)

The Republic of Korea (ROK) has been continuing its unstable economic growth in 2017. The economic growth rate (quarter-on-quarter percentage change) in the second quarter of 2017 was 0.6% (2.7% YoY percentage change), 0.5%p (percentage point) lower than 1.1% in the first quarter. The export growth in the second quarter was -2.9%, and construction investment growth slowed to 0.3% from 6.8% in the first quarter. Both sectors were leading to a decline in economic growth. However, one positive sign was that the private consumption growth, which accounts for about half of GDP in ROK, improved from 0.4% in the first quarter to 1.0% (see Figure I-8).

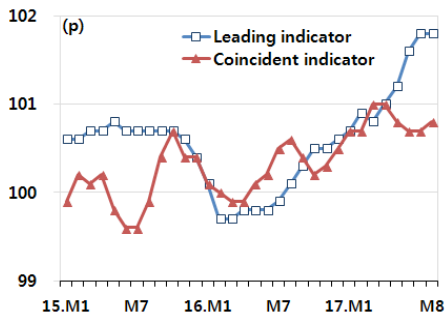
The coincident indicator, which shows the current economic situation, has been on a downward trend after peaking in April 2017. On the other hand, the leading indicator, which predicts the direction of the economy, has been on an upward trend, and it is expected to improve the economy (see Figure I-9).

Figure I-8 Real GDP growth (year on year and quarter on quarter)



Data source: *Bank of Korea*

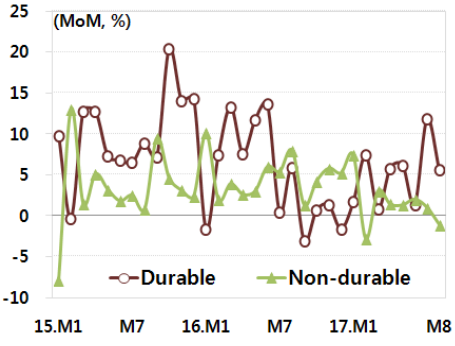
Figure I-9 Coincident and leading indicator



Data source: *Statistics Korea*

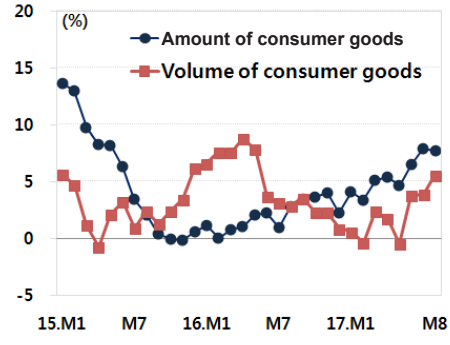
Recently, private consumption has been improving gradually. In particular, the increase in the consumption of durable goods, which can be regarded as a leading indicator of consumption, has been a positive sign (see Figure I-10). However, although the value of consumer goods imports has continued to increase recently, the volume of consumer goods imports has been on the decline (see Figure I-11). Therefore, the recovery of private consumption is facing difficulty.

Figure I-10 Retail sales growth by product



Data source: *Statistics Korea*

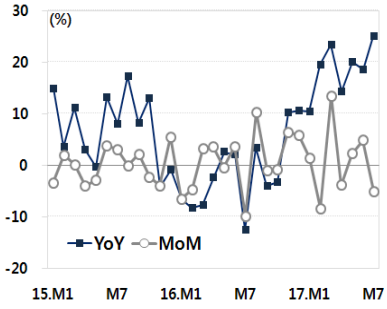
Figure I-11 Amount and volume of the imported consumer goods growth



Data source: *Korea Customs Service*
Note: *Six-month moving average*

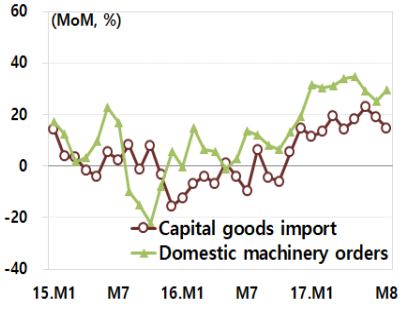
Facilities investment has been recovering in 2017 due to growing demand for more investment due to increased market demand (see Figure I-12). Facilities investment improvement is being helped by the fact that domestic machinery orders and capital goods import growth, which are leading indicators of facilities investment, are continuing to rise (see Figure I-13). However, the fact that it is showing a decline from the previous quarter makes it likely that the surging facilities investment growth may change (see Figure I-12).

Figure I-12 Facilities investment growth



Data source: *Statistics Korea*

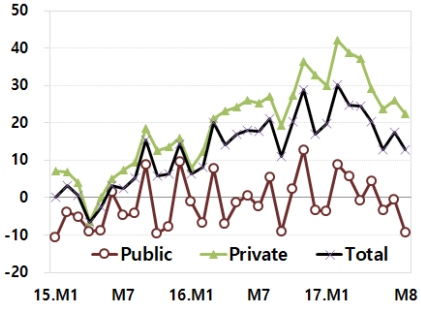
Figure I-13 Domestic machinery order and capital goods import growth



Data source: *Statistics Korea, Ministry of Trade, Industry and Energy*
Note: *Domestic machinery orders growth was driven by three-month moving average*

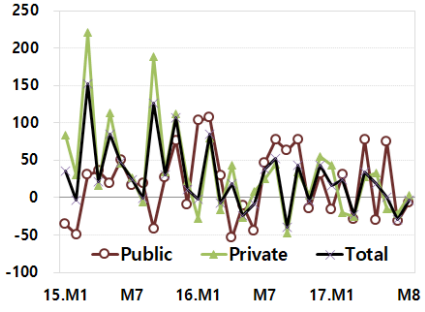
Construction investment has been on the rise in the private sector, but the public sector is sluggish (Figure I-14); this is because the real estate market has been booming since 2014, which is attributable to the expansion of housing demand due to the alleviation of loan to value (LTV) and debt to income (DTI). The public sector situation is not mainly due to a reduction in the social overhead capital (SOC) budget. Construction orders, a leading indicator of construction investment, fell sharply in both the private and public sectors, implying that the construction market is likely to weaken (see Figure I-15).

Figure I-14 Construction establishment growth



Data source: *Statistics Korea*

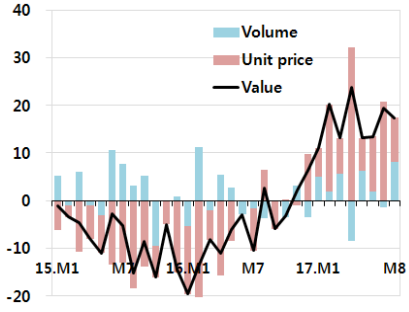
Figure I-15 Construction order growth



Data source: *Statistics Korea*

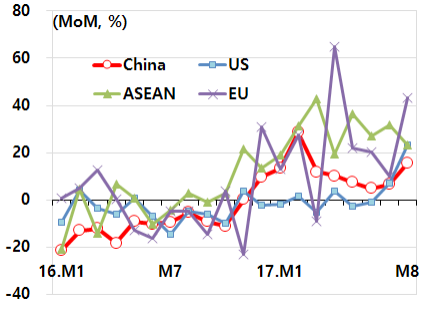
Exports have been recovering the fastest among domestic demand. By August 2017, exports had been on the rise for 10 consecutive months since November 2016 and enjoyed double-digit growth for the eighth month (see Figure I-16). In particular, export volume, which has been sluggish in recent years, has been steadily increasing due to the recent recovery of the global economy. Exports to China, which account for about 25% of ROK's exports, continued to grow weakly but recorded double-digit growth in August 2017. Meanwhile, exports to major export markets such as the European Union (EU) and Association of South-East Asian Nations (ASEAN) were on the rise in 2017 (see Figure I-17).

Figure I-16 Export growth



Data source: *Korea Customs Service, Ministry of Trade, Industry and Energy*

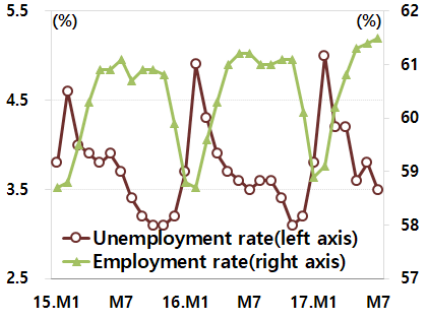
Figure I-17 Export growth by region



Data source: *Ministry of Trade, Industry and Energy*

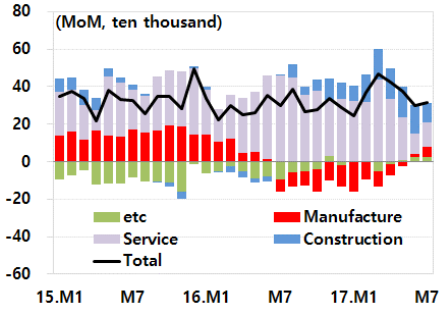
The employment sector has been experiencing difficulties even though the economy has been improving. In August 2017, the unemployment rate was similar to that of the previous year, but the number of new employees decreased to 200,000, mainly due to the decrease in new employees in the service and construction industries (see Figures I-18 and I-19). In 2016, the number of new employees in ROK surpassed 300,000, but there is concern that it will stay at the 200,000 level in 2017.

Figure I-18 Unemployment and employment rates



Data source: *Statistics Korea*

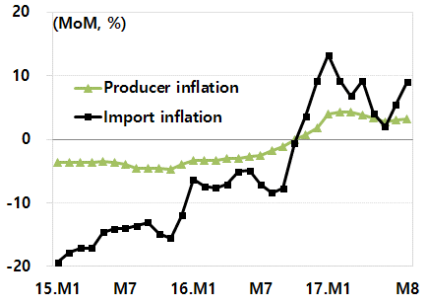
Figure I-19 Increase/decrease of employees in major industries



Data source: *Statistics Korea*

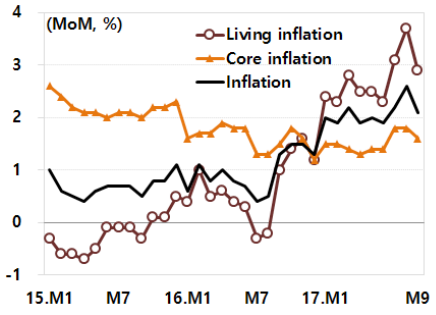
Although headline inflation has not been a deflationary concern in the third quarter of 2017, the sharp increase in the prices of necessities of life has been a major cause of a deterioration in economic sentiment. Import and producers' prices, which have been high since the fourth quarter of 2016, have slightly declined due to the adjustment of commodity prices and the base effect (see Figure I-20). On the other hand, headline inflation was high due to supply-side factors such as the climatic factor and the egg crisis. The prices of necessities have been surging since the first quarter of 2017 (see Figure I-21).

Figure I-20 Producer and import inflation



Data source: *Bank of Korea*

Figure I-21 Core and living inflation



Data source: *Statistics Korea*

II. Economic Adjustment of China, Japan, and ROK

1. China (Mr. CHEN)

In 2017, the basic trend of China's macroeconomic policy is to stick to a base tone of seeking advancement in stability, placing risk prevention in an important position, and striving to make progress in supply-side structural reform, state-owned enterprise reform, and fiscal/tax/financial sector reforms.

(i) Continue to implement proactive fiscal policy and prudent monetary policy

Fiscal policy should be more proactive and effective. In 2017, the deficit is projected to be 3%, with a fiscal deficit of 2.38 trillion Chinese yuan (CNY), an increase of 200 billion CNY over last year. The year will witness a reduction in the corporate tax burden of about 350 billion CNY and a reduction in corporate fees of about 200 billion CNY. Monetary policy should remain steady and neutral. The scales of both the broad money M2 and total social financing in 2017 are expected to grow by about 12%.

(ii) Continue to promote supply-side structural reforms

Supply-side structural reforms include the following basic elements. (1) Cutting overcapacity: in 2017 steel and iron production capacity will be reduced by 50 million tons; coal production capacity will be cut by at least 150 million tons, and overcapacity cutting will be expanded to fields like shipbuilding, nonferrous metals, building materials, and other industries. (2) Cutting inventory: to accelerate the establishment and perfection of the long-term mechanism that promotes a steady and healthy development of the real estate market; to let the market play the dominant role in meeting multi-level demands while letting the government dominate in meeting the basic demands. (3) De-leveraging: It will be a top priority to lower the leverage ratio of enterprises, to help enterprises mobilize existing assets, and promote asset securitization. (4) Reducing costs: to extend the scope of small and micro enterprises that enjoy preferential half-rate income tax; to comprehensively clean up and standardize government funds, to reduce government-priced for-profit fees and charges to enterprises, and continue to lower the proportion of the "five insurances and one

fund" contribution. (5) Improving weak links: to accelerate the upgrading of support capabilities, including public services, infrastructure, innovation and development, resources, and the environment. This year, the rural poor population will be reduced by at least 10 million, and 3.4 million people will be relocated to help alleviate poverty.

(iii) To deepen reform in key areas

China will continue to push forward the transformation of government functions, to expand pilot programs for the negative listing of market access, to reduce the government's discretion, and increase the market's right to choose. China will deepen the reform of mixed ownership and take substantive steps in areas such as electricity, petroleum, natural gas, railways, civil aviation, telecommunications, and the military industry.

(iv) To further release the potential of demand

To promote the steady growth of consumption and to help the private sector provide education, elderly care, medical care, and other services. To promote the new urbanization in a pragmatic manner and settle more than 13 million people in cities in 2017.

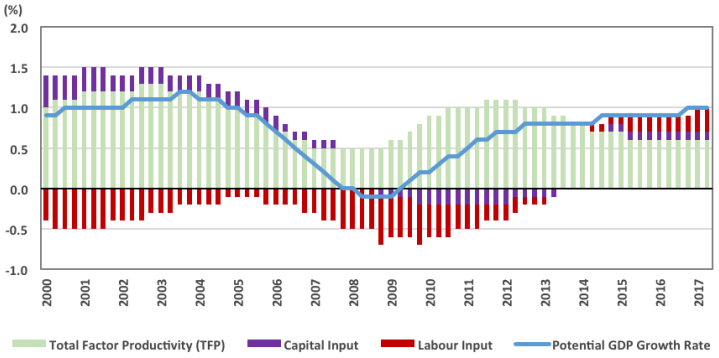
2. Japan (Prof. SAITO)

A necessary condition for the achievement of fiscal consolidation is higher and sustained growth. Structural policies designed to raise the potential GDP growth rate are essential.

In terms of structural polices, recent initiatives include raising the labor force participation rate of females and the elderly; shortening working hours; promoting equal pay for equal work; reducing the corporate tax rate; introducing corporate governance and stewardship codes; increasing Free Trade Agreements (FTA) and promoting inward foreign direct investment (FDI); reforming agricultural cooperatives; liberalizing electricity and city gas retail markets; and introducing national strategic special zones.

The impacts of the structural policies are gradually being felt. The potential GDP growth rate recovered to 1% by mid-2017, mainly due to the recovery of labor and capital inputs; both are now contributing positively to the potential growth rate (see Figure I-22).

Figure I-22 Potential GDP growth rate



Data source: *Cabinet Office of Japan*

The tightening of the labor market has been partially alleviated by the rise in the labor force participation rate of females, particularly in their 30s and 40s. It also contributed in improving the low participation that led to the M-shaped labor participation rate curve for Japanese females. What is most promising is that this has been accompanied by a recovery of the fertility rate, which was 1.44 in 2016. This is still far away from the 2.1 that we need in order to stabilize the population in the long term, but it does show that the work–life balance is gradually making progress.

3. ROK (Dr. JOO and Mr. OH)

The new government, launched in 2017, has been implementing a new economic strategy called "income-led growth." The vision of the economic sector is the construction of a growing economy with the creation of new jobs, economic growth engines, and balanced regional development. The main economic pledges are described below.

Regarding growth, the government emphasized the establishment of a growth foundation based on the expansion of jobs and income, an escape from low growth through the fostering of potential and core industries, and social integration and welfare equality.

Regarding industry, the government accentuated the preparation of the "Fourth Industrial Revolution" in order to secure future growth engines and a leap into a strong economy by strengthening the competitiveness of the manufacturing industry and the main industry.

For the commercial trade sector, the government announced policies designed to enhance export competitiveness through the advancement of the export structure, the promotion of Korean-style hidden championships for Small and medium-sized enterprises (SMEs), and the strengthening of trade organizational capabilities.

For the employment sector, the government introduced comprehensive labor market measures such as expanding jobs in the public sector, new job creation through job sharing, and improvement of job quality by shortening working hours, and improving minimum wage and the labor market structure.

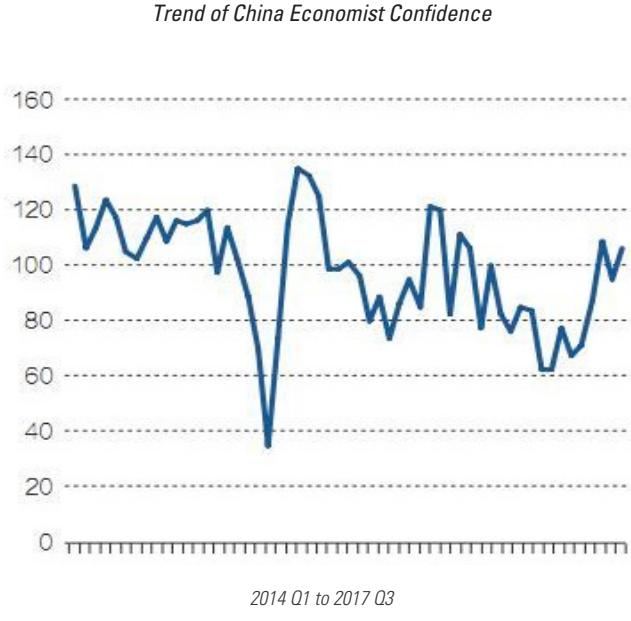
For the corporate sector, the government announced a policy of "chaebol" reform, which emphasized a loosening of economic concentration, the improvement of corporate governance, and an increase of corporate taxes. Policies for solving the problem of polarization and inequality were also included to strengthen the competitiveness of SMEs and protect small business owners and the self-employed.

III. Economic Prospects for China, Japan, and ROK

1. China (Mr. CHEN)

In September 2017, a confidence survey of the top 100 economists in China showed that, in Q3 2017, the economist confidence index was 106.4 (on a range from 0 to 200), up 10.9 points from the previous quarter (see Figure I-23).

Figure I-23 Confidence index chart for China's economists



Data source: *National Statistics Bureau; Charting: Zongwen Yu*

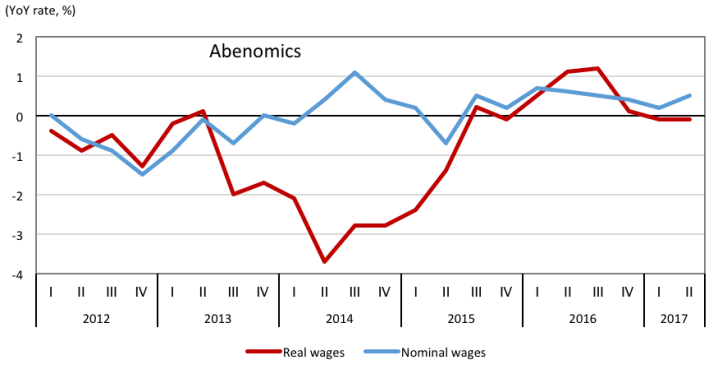
With the successful convening of the 19th National Congress of the Communist Party of China (NCCPC), China's economic growth has entered a new cycle. It is estimated that GDP growth in Q4 2015 and FY2017 will remain around 6.8%. This will be the first time since 2009 that economic growth over the entire year has been higher than that of the previous year, which changes the momentum of economic slowdown which has been ongoing for years. Strong foreign demand, robust domestic investment and consumer demand, as well as accurate and timely policy support will maintain China's economic growth.

2. Japan (Prof. SAITO)

The consensus forecast expects that the real GDP growth rate, which was 1.2% in FY2016, will be 1.6% in FY2017, and 1.2% in FY2018.[1)] Growth will be supported by a steady increase in private demand.

The price prospects will depend on how wages develop. Despite the tight labor market situation, average wages have showed only a modest increase (see Figure I-24). The weak average wages have failed to provide an upward pressure on prices. Unless wages start to rise more strongly, inflation will not reach the target rate of 2%.

Figure I-24 Wages per worker



Data source: *Ministry of Health, Labor and Welfare of Japan*

However, the average wage masks the difference between regular and non-regular workers. The job-offers-to-applicant ratio is much higher for part-time workers, a significant portion of non-regular workers that now accounts for about 40% of total workers. Hence, hourly earnings are rising quickly for part-time workers. By contrast, the job offers-to-applicants ratio for regular workers (about 60% of total workers) is lagging behind that for the non-regular workers. Therefore, wage increases for new entrants to regular workers have stayed relatively low. In addition, the wages of already employed regular workers are facing downward pressure, as can be seen in the flattening of the wage profile, because their wages have been determined under the seniority-based wage system, which meant that the wages of the senior workers had been set higher than their productivity.

Unless a negative external shock shakes the Japanese economy, the tightening of the labor market will eventually lead to an increase in wages and a higher inflation rate. However, due to the downward pressure on wages, the average wage increase and inflation rate are expected to stay modest.

Looking to the medium- to long-term, whether stronger real growth is possible or not depends on the performance of the potential growth rate, which depends in turn on the implementation of the important reforms. The crucial tasks are reforming the outdated economic system to match the recent underlying conditions, accelerating inward globalization, and coping with the negative impact coming from an aging and shrinking population.

1) The consensus forecast is taken from the Japan Center for Economic Research, ESP Forecast: Monthly Survey of Professional Forecasters in Japan, November 2017.

3. ROK (Dr. JOO and Mr. OH)

The ROK's economic growth rate in 2018 is expected to be lower than the growth rate in 2017.[2] Despite the improvement in external conditions, the domestic economy is expected to show a mid-2% economic growth rate, mainly due to the downside risks of construction investment.

Private consumption in 2018 is expected to improve slightly over 2017. Improving consumer sentiment and the government's income-led policies will help improve private consumption, but several factors will limit consumption growth, such as an increase in household debt and a reduction of asset effects due to the cooling of the real estate market.

Construction investment growth is expected to fall sharply. The construction business cycle is expected to enter a downward phase due to a decrease in the orders, permits, and launches of new buildings. Government policies such as for stabilizing the real estate market, reducing the SOC budget, and the possibility of raising the policy rate of the Bank of Korea may restrict new construction demand.

Facilities investment growth is expected to slow slightly. Facilities investment will continue to expand as the global economy improves and the ROK's exports continue to grow, but the base effect may be restricted the high growth of facilities investment.

On the other hand, exports will be positively influenced by global demand growth due to the recovery of the global economy and expected increases in oil prices. However, export growth will slow slightly in 2018 due to uncertainties such as monetary tightening in the advanced economies in the US and Europe and a deterioration of trade with China.

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2) Hyundai research institute forecast. In the International Monetary Fund (IMF)'s economic outlook, the ROK's economy will grow at 3% in 2018, which was the forecasted growth rate for 2017.

Chapter II

Trade (Mr. CHEN)

Chapter II **Trade (Mr. CHEN)**

I. Trade in Goods

1. Status and Development Trend of Goods Trade of China, Japan, and ROK

World Trade Organization (WTO) statistics indicate that, in 2016, the world's merchandise trade exports totaled 15.46 trillion US dollars (USD). Of these, the total value of US imports and exports reached 3.7 trillion USD and China's reached 3.68 trillion USD, ranking second. In 2016, China exported 2.1 trillion USD, accounting for 13.2% of the world's total, and China imported 1.6 trillion USD. Although China ranks second in terms of total trade volume, China maintained its status as the world's largest goods-exporting country and the second-largest goods importing country eight years in a row.

As the share of China's trade volume has risen, the trade volume share of China-Japan-ROK (CJK) of total world trade has been rising over the past 20 years. By the end of 2016, the goods export volume of the three countries accounted for more than 20.3% of the world total.

In 2016, Japan's exports were 0.62 trillion USD, accounting for 4.04% of the world total, making it the fourth-largest exporter of goods. In 2016, ROK's exports were 0.49 trillion USD, accounting for 3.11% of the world total and ranking it the seventh-largest goods exporter.

2. Intra-regional trade

Since China acceded to the WTO in 2001, it has continuously increased its openness to the outside world, and bilateral trade between China and Japan/ROK has entered a stage of rapid development.

(i) China–Japan trade

In 2016, bilateral import and export of goods between Japan and China amounted to 270.5 billion USD, up 0.2%. Of this, Japan's exports to China totaled 113.89 billion USD, up 4.3%, accounting for 17.7% of Japan's total exports, up 0.2%; Japan's imports from China reached 156.61 billion USD, down 2.5%, accounting for 25.8% of Japan's total imports, up 1.0%. Japan's trade deficit with China was 42.71 billion USD, down 16.9%.

In 2017, from January to August, Sino–Japan trade amounted to 192.17 billion USD, up 10.1% YoY, of which China's exports to Japan totaled 87.54 billion USD, up 5.4% YoY.

(ii) China–ROK trade

When diplomatic relations were established between China and ROK in 1992, the trade volume between the two countries was less than 6.37 billion USD (about 42.74 billion CNY). Since then, the trade volume between the two countries has had an average annual increase of 15.7% and reached 211.4 billion USD by 2016, 33-fold the rate in 1992. In 2003, China overtook the US and become ROK's largest export market, and ROK has also become one of China's four major export markets.

In 2016, China was ROK's primary export destination, accounting for 124.43 billion USD, or 25.1% of ROK's total exports, down 9.3% YoY. In 2016, China was also ROK's primary import source country, representing 86.96 billion USD, or 21.4% of ROK's total imports, down 3.6% YoY. ROK's trade surplus with China was 37.47 billion USD.

According to data released by the WTO on September 19, 2017, the total volume of ROK exports for the January–July period of 2017 was up by 16.3% YoY, reaching 328 billion USD. The growth rate of its exports was the highest among the top 10 exporters in the world and was twice that of China. According to an analysis by ROK's Ministry of Trade, Industry, and Energy, the main factors in the increase of ROK exports are the global economic recovery, the rise in the unit prices of major export products, and the increase in added value of the export products.

(iii) Japan–ROK trade

In 2015, ROK's exports to Japan reached 25.6 billion USD, down 20.5% YoY. ROK's exports to Japan make up only 4.9% of ROK's total exports. This is the first time since 1969 that this share has fallen below 5%.

After 2011, the share of ROK's exports to Japan out of total Korean exports showed a downward trend for four consecutive years, mainly due to the continuous expansion of ROK's exports to China and the continued weakening of the JPY.

(iv) The structure of CJK trilateral trade

The two countries are very similar in terms of resource endowment and technical level, and there is a large amount of intra-industry trade between them. The level of intra-industry trade among China, ROK, and Japan forms a ladder-like distribution. The scale of intra-industry trade between Japan and ROK, as measured by the intra-industry trade index, is as high as 87.35; meanwhile, it is 66.23 for trade between China and ROK. At 61.66, that of China–Japan intra-industry trade is the lowest.

In terms of trade structure, there have been great similarities between Japan and ROK, who have since 2015 been in the list of the top ten nations by bilateral trade volume. This trade involves mechanical equipment and parts, motors, electrical equipment, recorders and reproducers, television images, sound recording equipment and spare parts, optical, photographic, medical equipment, and accessories (e.g., steel, organic chemicals, and plastic and its products). The difference is that Japanese exports to ROK comprise miscellaneous chemicals, vehicles, and accessories, while ROK exports to Japan comprise mineral fuels, mineral oils and products, fish and shellfish, and steel products.

The materials and components (MC) industry can be categorized into common basic materials and high-tech materials, including components made of these two types of materials. The high-tech part of the industry (which has great added value) decides the competitiveness of the MC industry. High-tech MC that contain "core technologies" constitute the most profitable part, and have become increasingly important in the world industrial chain.

The MC industry is the primary reason for the Korean trade deficit with Japan. This stems from differences in the quality of Japanese and Korean MC industry products. Generally speaking, the reliability of Korean parts is often lower than that of their Japanese counterparts; thus, many of the major large enterprises in the ROK – such as Samsung, LG, and other large enterprises – have chosen high-quality Japanese material components over less-reliable Korean products, to achieve a competitive advantage in the international market.

Both Japan and ROK are important trade partners with China. An analysis of Japan's and the ROK's trade

structure reveals that China has imported from the two countries a large quantity of the equipment and core components needed to develop its manufacturing industry.

According to data from the Japan External Trade Organization (JETRO), in 2016, the value of all goods imported to China from Japan reached 144.996 billion USD. The main products Japan exported to China were electromechanical products, chemical products, and transportation equipment; in 2016, exports of these products totaled 46.98 billion USD, 11.5495 billion USD, and 11.44 billion USD, respectively; these numbers represent increases of 6.4%, 1.8%, and 17.4% YoY, and account for 41.3%, 10.1%, and 10.1% of Japan's total exports to China. Among the exports, precious metals and products made from them saw the largest decrease, of 27.6%.

The total value of these goods totaled 116.5 billion USD, accounting for 80% of the total value of China's imports from Japan. Most of these goods comprise equipment and parts needed in China's manufacturing industry.

The main products that Japan imports from China are electromechanical products, textiles and raw materials, furniture, and toys. In the Japanese market, China's labor-intensive products – such as textiles and raw materials, shoes, umbrellas, luggage, and other light industrial products – still enjoy a great advantage. These products account for more than 60% of the Japanese import market.

Most of the products China imports from ROK are equipment and parts for the manufacturing industry. According to Chinese statistics, in 2015, China imported from ROK 174.5 billion USD of goods, with mechanical electrical products, optical medical equipment, and chemical products predominating; in 2016, the value of these exports was 59.22 billion USD, 16.65 billion USD, and 15.91 billion USD, respectively. The three categories of goods together account for 73.8% of all ROK exports to China.

In 2015, China exported to Japan goods with a total value of 135.6 billion USD. China's imports from Japan are less substitutable than are the goods that Japan imports from China. In other words, the goods imported from Japan are of greater importance to China's economic development.

The comparative advantages of China's export products manifest in labor-intensive products, while the comparative disadvantages manifest in capital-intensive and resource-intensive products. The comparative advantages of Japan, a developed country, and of ROK, a newly industrializing country, are in resource-intensive and technology-intensive products. Most of the trade among China, ROK, and Japan is still based on the resource endowments and comparative advantages of each; it does not represent intra-industry trade due to economies of scale and product differentiation.

Table II-1 Statistics on CJK economic and trade relations

Unit: 100 million USD

Year	China-Japan Trade		China-ROK Trade		China-Japan Investment		China-ROK Investment	
	China imported	China exported	China imported	China exported	China invested	Japan invested	China invested	ROK invested
2001	428	450	234	125	0.19	43.5	0.15	21.5
2003	742	594	431	201	0.075	50.5	1.95	44.9
2005	1,005	840	768	351	0.12	65.3	0.13	51.7
2006	1,157	916	898	445	0.39	46.0	0.27	38.9
2007	1,340	1,021	1,038	561	0.39	35.9	0.57	36.8
2008	1,507	1,161	1,122	740	0.59	36.5	0.97	31.4
2009					0.84		2.65	
2010	1,767	1,211	1,384	688	3.38	40.8	-7.21	26.9
2011	1,946	1,483	1,627	829	1.49	63.3	3.42	25.5
2012	1,778	1,516	1,687	877	2.1	73.52	9.42	30.38
2013	1,623	1,503	1,831	912	4.34	70.58	2.69	30.54
2014	1,630	1,494	1,902	1,003	3.94	43.25	5.49	39.66
2015	1,429	1,356	1,745	1,013	2.4	31.95	13.2	40.34
2016	1139	1566	1244	869	4.71	31.1	20.5	47.5

Data source: *Annual China Commerce Yearbook*

Unit: Million USD (% of total exports or imports of Japan)

	Japan Export to		Japan Import from		Japan Total	
	China	ROK	China	ROK	Exports	Imports
2001	30,994 (7.7)	25,297 (6.3)	57,865 (16.6)	17,198 (4.9)	403,344	349,292
2002	39,825 (9.6)	28,570 (6.9)	61,784 (18.3)	15,485 (4.6)	416,729	337,613
2003	57,417 (12.2)	34,806 (7.4)	75,472 (19.7)	17,903 (4.7)	472,007	383,465
2004	73,939 (13.1)	44,257 (7.9)	94,340 (20.7)	22,046 (4.8)	565,761	455,254
2005	80,074 (13.5)	46,630 (7.9)	108,478 (21.0)	24,415 (4.7)	594,941	515,866
2006	92,770 (14.3)	50,270 (7.8)	118,526 (20.5)	27,328 (4.7)	646,725	579,064
2007	109,271 (15.3)	54,333 (7.6)	127,922 (20.6)	27,307 (4.4)	714,327	622,243
2008	124,901 (16.0)	54,493 (7.6)	143,230 (18.8)	29,475 (3.9)	781,412	762,534
2009	109,727 (18.9)	42,273 (8.1)	122,574 (22.2)	21,984 (4.0)	580,719	551,985
2010	149,451 (19.4)	62,361 (8.1)	153,203 (22.1)	28,601 (4.1)	769,774	694,059
2011	162,035 (19.7)	66,174 (8.0)	183,882 (21.5)	39,811 (4.7)	823,184	855,380
2012	144,208 (18.1)	61,538 (7.7)	188,435 (21.3)	40,593 (4.6)	798,568	885,843
2013	129,401 (18.1)	56,513 (7.9)	180,978 (21.7)	35,822 (4.3)	715,097	833,166
2014	126,361 (18.3)	51,520 (7.5)	181,294 (22.3)	33,385 (4.1)	690,217	812,185
2015	109,327 (17.5)	44,053 (7.1)	160,506 (25.6)	26,808 (4.3)	625,025	626,083
2016	113,830 (17.7)	46,235 (7.2)	156,553 (25.8)	25,020 (4.1)	644,932	606,924

Data source: *World Integrated Trade Solution*

Unit: Million USD (% of total exports or imports of ROK)

	ROK Export to		ROK Import from		ROK Total	
	China	Japan	China	Japan	Exports	Imports
2001	18,187 (12.1)	16,502 (11.0)	13,303 (9.4)	26,633 (18.9)	150,431	141,097
2002	23,753 (14.6)	15,140 (9.3)	17,400 (11.4)	29,855 (19.6)	162,466	152,124
2003	35,110 (18.1)	17,276 (8.9)	21,909 (12.3)	36,313 (20.3)	193,817	178,826
2004	49,763 (19.6)	21,701 (8.6)	29,585 (13.2)	46,144 (20.6)	253,845	224,461
2005	61,915 (21.8)	24,027 (8.5)	38,648 (14.8)	48,403 (18.5)	284,418	261,236
2006	69,459 (21.3)	26,534 (8.2)	48,557 (15.7)	51,926 (16.8)	325,457	309,379
2007	81,985 (22.1)	26,370 (7.1)	63,025 (17.7)	56,250 (15.8)	371,477	356,841
2008	91,389 (21.7)	28,252 (6.7)	76,927 (17.7)	60,956 (14.0)	422,003	435,271
2009	86,703 (23.9)	21,771 (6.0)	54,246 (16.8)	49,427 (15.3)	363,531	323,082
2010	116,838 (25.1)	28,176 (6.0)	71,573 (16.8)	64,296 (15.1)	466,381	425,208
2011	134,185 (24.2)	39,679 (7.2)	86,431 (16.5)	68,320 (13.0)	555,209	524,405
2012	134,322 (24.5)	38,796 (7.1)	80,782 (15.6)	64,363 (12.4)	547,854	519,576
2013	145,869 (26.1)	34,662 (6.2)	83,051 (16.1)	60,029 (11.6)	559,619	515,573
2014	145,328 (25.4)	32,248 (5.7)	90,071 (17.1)	53,776 (10.2)	573,075	525,557
2015	137,123 (26.0)	25,576 (4.9)	90,249 (20.7)	45,853 (10.5)	526,753	436,487
2016	124,433 (25.1)	24,354 (4.9)	86,979 (21.4)	47,466 (11.7)	495,418	406,182

Data source: *World Integrated Trade Solution*

3. Prospects and Forecasts for CJK Trade

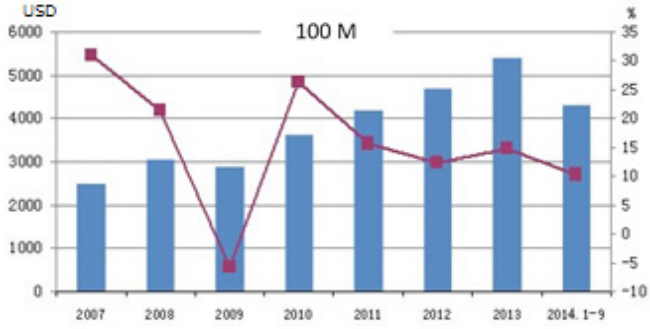
In China–Japan trade, between 2000 and 2016, China has almost always had a trade deficit. One important reason is that China's rapid economic growth has brought about a rapid increase in the demand for high-tech products from Japan and has also increased Japanese investment in China. As a result, China's imports from Japan have soared.

In China–ROK trade, China has also always been on the deficit side, and the trade deficit is growing, reaching its highest level of 91.98 billion USD in 2013. One important cause of the serious trade deficit between China and ROK is that, with the rapid economic development of China, ROK's investment in China has been expanding. Many Korean enterprises have shifted their production and processing trade to China, leading to the import of raw materials and parts from ROK for processing in China, but only part of the resulting goods are returned to ROK, causing the trade imbalance. China is in a period of rapid economic growth with relatively high demand for ROK's high-tech and capital, which is one of the reasons why China's deficit has been steadily widening.

II. Trade in Service

From 2010 to 2015, China's service import and export volume grew at an average annual rate of more than 15%.

Figure II-1 2007–2014 total amount and growth of China's service imports and exports



Data source: *Service Trade Division, Ministry of Commerce, People's Republic of China*
Note: *Green indicates the total amount and red the growth rate.*

In 2016, China's total service imports and exports increased by 7.9%. This growth is higher than that of the global service trade and goods trade. At the same time, exports in emerging services have grown rapidly. Emerging service industries account for 56.3% of service exports, up 2.4% from 2015. Exports of high value-added services, represented by maintenance and repair services, advertising services, and financial services, increased rapidly by 54%, 48% and 45%, respectively. In 2016, China Hong Kong, the US, China Macao, Japan and ROK were the top five service trade partners of mainland China, accounting for 55.7% of China's total service imports and exports. In 2016, China's total trade services reached 657.5 billion USD, ranking second-largest in the world.

From January to September 2017, China's total service imports and exports grew by 8.8% YoY, with trade in emerging services showing a high-growth trend since early this year. For example, from January to September, the import and export of royalties for intellectual property (IP) reached 168 billion CNY, up 38.8% YoY. Tourism continues to be China's largest services import and export sector, with growth in imports and exports dropping back to 5%. In terms of exports, high value-added services such as financial services have enjoyed rapid growth. From January to September, financial service and IP royalty exports totaled 17.18 billion CNY and 23.41 billion CNY, up by 16.7% and 493% respectively YoY. The rapid growth in the exports of high value-added services is a collective showcase of the competitiveness of China's professional services sector. Concerning imports, the growth in telecommunications, computers, and information services continued to remain high. From January to September, imports of telecommunications, computer, and information services totaled 94.68 billion RMB, an increase of 73.5% YoY; the increase has been in the range of 47% to 90% for nine consecutive months.

The trade deficit in services is an interim phenomenon during China's economic restructuring and upgrading.

Imports of certain industries such as technology and intellectual property have played a positive role in promoting the development of the national economy and the adjustment of the industrial structure. With the deepening of supply-side structural reform in China, the potential for the development of service industries will continue to be released. China will gradually attain a competitive advantage in service trade.

1. Service Trade within CJK

In 2000, the service trade volume between China and ROK was 4.26 billion USD. In 2014, the total service trade between China and ROK reached 36.16 billion USD, 7.8 times greater than the 2000 total. The bilateral service trade between China and ROK is dominated by industries such as transportation, tourism, and other commercial services, which account for more than 90% of all service trade. In the service trade for which China imports from ROK, transportation services are dominant, accounting for more than half of the total, reaching 63.32% in 2010.

In service trade between China and ROK, China has a strong competitive advantage in other commercial services. ROK has a strong competitive advantage in transportation services. The two can achieve trade complementarity based on comparative advantages. Tourism services is the most competitive industry sector in China. However, with the policy support given by the ROK government to its tourism industry, the gap between China and ROK in the tourism service industry is gradually narrowing. The communications services and government services sectors of both countries are developing slowly.

In 2008, Japan's service imports and exports totaled 318.17 billion USD, while China's totaled 306.06 billion USD. However, by 2012, China's service trade reached 472.63 billion USD, while Japan's reached only 322.13 billion USD. In 2015, the service trade was 332 billion USD for Japan but 713 billion USD for China. The gap in service imports and exports has widened between China and Japan, which was related to the sharp decline in the global service trade.

Chapter III

Investment (Mr. CHEN)

Chapter III **Investment (Mr. CHEN)**

I. Inward FDIs of China, Japan and ROK

1. China

In 2016, the actual foreign investment China utilized totaled 118.46 billion USD, accounting for 94% of the total amount of foreign investment actually utilized in the country, an increase of 0.4% YoY. The top 10 countries/regions that have invested in mainland China are, in descending order, China Hong Kong (87.7 billion USD), Singapore (6.18 billion USD), ROK (4.75 billion USD), the US (3.83 billion USD), China Taiwan (3.62 billion USD), China Macau (3.48 billion USD), Japan (3.31 billion USD), Germany (2.71 billion USD), the United Kingdom (2.21 billion USD), and Luxembourg (1.39 billion USD).

From January to September 2017, the actual utilized foreign investment in China totaled 618.57 billion CNY, up 1.6% YoY. In September, the actually utilized foreign capital totaled 70.63 billion CNY, up 17.3% YoY. From January to September, the main features of foreign investment absorption were as follows: the absorption of foreign investment by manufacturing industries resumed its growth, and the high-tech manufacturing and high-tech service industries maintained their strong growth momentum. From January to September, the actually utilized foreign capital in high-tech manufacturing totaled 52.98 billion CNY, up 27.5% YoY. The actually utilized foreign capital in the high-tech service industry totaled 91.59 billion CNY, up 24% YoY.

Among the major investment sources, China Hong Kong, China Taiwan, Japan, and other economies had higher investment growth rates. From January to September, the actual investment from the three sources increased by 8.8%, 44.2% and 7.9% YoY, respectively.

2. Japan

Since 2013, inward FDI in Japan has continued to increase, according to statistics released by Japan's Ministry of Finance. In 2016, FDI in Japan was twice that in the previous year: that figure, in the amount of 3.1 trillion JPY (30 billion USD), easily surpasses that in 2007, which was the highest investment level to that time. Reinvestment by foreign enterprises has since 2014 retained a high value (1.3 trillion JPY). The total amount of FDI introduced in Japan at the end of 2016 amounted to 27.8 trillion JPY (270 billion USD), with the largest investment being from the EU (13.5 trillion JPY [130 billion USD]). In this respect, the EU is followed by an investment of about 7.2 trillion JPY (70 billion USD) from North America, and an investment of about 5 trillion JPY (50 billion USD) from the region.

The increase in foreign investment in Japan is inseparable from the Japanese government's policies towards improving the operating environment. For example, the government's effective tax rate on corporate enterprises has been reduced from 37% in 2013 to 29.97% in 2016. The reduction in the enterprise tax burden has benefited Japan by attracting more foreign capital.

While there has been large growth in foreign enterprises' direct investment in Japan, that level of investment is only one-sixth that of Japan's direct investment overseas.

3. ROK

FDI in ROK reached 21.3 billion USD in 2016, up 1.9% YoY and another record high. The EU has invested 7.4 billion USD in ROK, up from three times the previous year. China has invested 2.05 billion USD in ROK, with an annual ratio of 3.6% and a total investment of more than 10 billion USD. 3.88 billion USD, down from 54.8% last year. Japan invested 1.25 billion USD for four years. In the first half of 2017, Japan's investment in ROK increased 18.3% YoY to 820 million USD, while the actual investment in place increased 33.4% to 570 million USD.

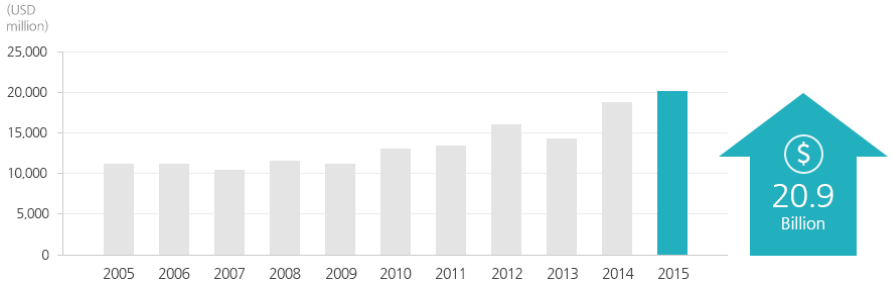
Meanwhile, ROK attracted 9.6 billion USD in FDI in the first half of 2017, down 9.1% YoY. FDI in place totaled 4.96 billion USD, down 4.4% YoY. According to the analysis, due to US interest rate hikes, the rise in trade protectionism, and Brexit, global economic instability continues to increase, causing ROK to attract less foreign investment in the first half of 2017. In fact, foreign investment in Asia has fallen sharply, but ROK's is still rising in the long term. In the first quarter of this year, China and Japan reduced their foreign investment by 4.5% and 67.9% respectively.

The number of FDI in ROK has been increasing recently because ROK signed an FTA with China.

In 2016, South Korea actually utilized 9.76 billion USD in foreign capital, and the annual ratio decreased by 40.9%. ROK's Ministry of Trade, Industry and Energy explains that the main reason for the sharp drop in foreign investment in mergers and acquisitions is the fact that foreign investment is actually in place.

ROK continues to adopt various policies designed to strengthen economic cooperation, attract capital investment from emerging countries such as China and the Middle East, and increase investment in services such as logistics and cultural content. Investment in high value-added sectors such as global corporate headquarters, R&D centers, and cutting-edge materials is also expanding. So far, 16,000 foreign investment enterprises have entered into various fields such as finance, technology, automobile, spare parts, and the medical market in ROK. Of these companies, 223 have entered the Fortune 500.

Figure III-1 ROK FDI status



Data source: *Jinsematou*

II. Outward FDI of China, Japan and ROK

1. China

China's outbound direct investment reached an all-time high of 145.67 billion USD in 2015, with the share of global traffic rising from 0.4% in 2002 to 9.9% in 2015. China's outbound investment volume reached 170.1 billion USD in 2016, more than doubling in five years, from 87.8 billion USD in 2012. China's outbound investment flows have been the second-highest in the world for two consecutive years, second only to the US. China's outbound direct investment increased by 35.9% annually from 2002 to 2015.

At the beginning of this century, the investment by Chinese enterprises in Japan and ROK was negligible. As of 2001, Chinese enterprises have made an accumulated total investment of 19 million USD in Japan and only 15 million USD in ROK. Since the international financial crisis of 2008, the investments of Chinese enterprises in Japan and ROK have increased markedly. In 2015, Chinese enterprises invested 240 million USD in Japan and 1.32 billion USD in ROK. In the past 15 years, China's investment in Japan and ROK has been growing steadily.

In 2015, China's non-financial investment in ROK was 502 million USD, increasing by 21.4% YoY. By the end of 2015, China had made 3.28 billion USD in direct investment in ROK. In 2016, China's investment in ROK reached 2.05 billion USD, up 3.6% YoY and maintained a growth momentum for three consecutive years. China's total accumulated investment in ROK has surpassed 10 billion USD. In the first half of 2017, the investment of the Greater China region in ROK increased 0.3% YoY to 2.87 billion USD, and the actual investment in place increased 15.6% to 1.59 billion USD. The number of Chinese companies investing in ROK now outnumbers that of Japanese companies.

China has made less investment in Japan than Japan has made in China. In 2015, China invested 217 million USD in Japan. From January to August 2017, China's direct investment in Japan was 188 million USD, up 15.9% YoY, mainly in the manufacturing, import and export trade, and energy and minerals sectors. As of August 2017, China's accumulated direct investment in Japan is 3.7 billion USD.

It is clear that there remains much room for improvement in Chinese enterprises investment in Japan and ROK.

2. Japan

Although China–Japan relations have returned to a steady trend in recent years, Japan's investment in China is still on the decline. According to statistics from China's Ministry of Commerce, in 2015, Japan established 643 new enterprises in China, and the actual funds in place totaled 3.19 billion USD, down 26.1% YoY. In 2016, Japan established 576 enterprises in China, down 10.4% YoY; the actual funds in place amounted to 3.1 billion USD, down 3.1% YoY, and accounting for 2.5% of the total foreign investment attracted by China. In addition to Hong Kong and free ports, it ranked third, after Singapore and ROK.

From January to August 2017, Japan established 378 enterprises in China, down 3.1% YoY; and the actual utilized capital totaled 2.04 billion USD. By August 2017, Japan had set up 50,794 enterprises in China, and the total capital utilized reached 106.96 billion USD, accounting for 5.8% of all foreign investment attracted by China, and ranking first of the countries from which China has utilized foreign capital.

From 2001 to 2015, there was a large fluctuation in Japanese companies' investment in China. After China's accession to the WTO, Japanese companies increased their investment in China, reaching 6.5 billion USD in 2005. In 2012, Japan's investment in China reached a peak of about 7.4 billion USD; afterwards, Japanese investment in China declined. In 2015, Japan's investment in China totaled only 3.5 billion USD, which dropped to 3.1 billion USD in 2016. There are multiple reasons for this drop. One important reason is that China's economy is facing an important transformation. China's economy is shifting from investment-led to consumption-led, and the role of consumption in promoting China's economic growth is increasing. China's advantage as a global processing factory has weakened, and the strength of China's domestic market is gradually increasing.

A survey conducted in September 2016 by JETRO showed that the number of Japanese enterprises that wish to expand their operations in China is on an upward trend after many years of decline. Of the enterprises that wish to expand, there are more non-manufacturing than manufacturing firms, and more domestic-oriented than export-oriented enterprises. For export-oriented enterprises, China's advantage has gradually weakened. On the other hand, domestic-oriented enterprises regard China as a potential market and are expected to continue their exploration of it. While Japanese enterprises transit from export-oriented to domestic-oriented, they also hope to become among the tertiary industries in China.

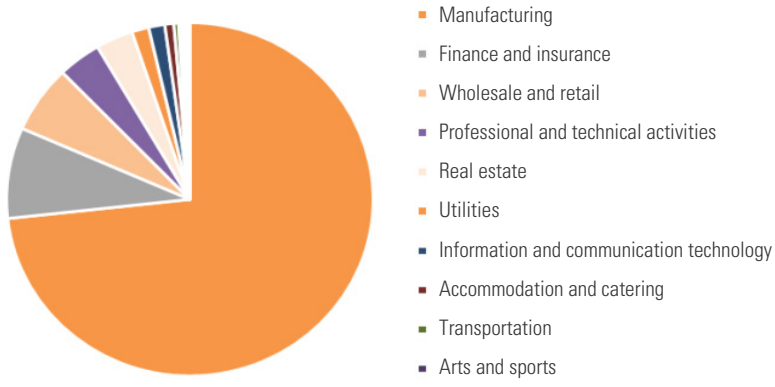
By September 2017, Japanese companies' direct investment in ROK totaled 1.68 billion USD, nearly double the 880 million USD amount in the same period last year. This is higher than the total investment amount of last year (1.25 billion USD). Japanese companies' direct investment in ROK fell for four consecutive years from 2013 to 2016, rebounding only this year. At the same time, investment in ROK from China, Europe, and the US decreased by 63%, 63%, and 41% respectively over the previous year because of tensions in the region.

3. ROK

ROK's FDI increased from 23.1 billion USD in 2007 to 35.2 billion USD in 2016, setting a record high. The ROK enterprises have maintained their investment in China at about 3 billion USD each year. Since 2015, the conflict between China and ROK over the intensification of THAAD has affected the investment by Korean companies in China. ROK has reduced its investment in China and greatly increased its investment in the US and Vietnam. ROK's direct investment in China dropped from 5.7 billion USD in 2007 to 4.75 billion USD in 2016, ranking next to China Hong Kong and Singapore. In 2013, it was 5.2 billion USD. ROK enterprises have been facing frictions due to relations between China and ROK, causing ROK to reduce or cease its investments in China and turn its attention to Vietnam and the US.

In 2015, ROK invested in 1,958 projects in China, and the ROK's utilized capital totaled 4.03 billion USD. By the end of 2015, Korean companies accumulated 59,740 projects in China, and the actual investment totaled 63.946 billion USD. ROK is China's second-largest source of foreign investment.

Figure III-2 Industry ratio in ROK's investment in China, 2016



Data source: *Korea Exim Bank website, Tianfeng Securities Institute*

South Korean investment in Japan was just 75 million USD in 2001, 850 million USD in 2013 and 1.47 billion USD in 2015.

Table III-1: Investment between Japan and ROK

Unit: Million USD

Year	Japan -Korea	Korea-Japan
2001	559.745	75
2002	609.158	..
2003	276.876	49.9
2004	839.599	288.7
2005	1785.696	..
2006	1519.553	192.285
2007	1301.816	485.857
2008	2366.767	365.894
2009	1083.681	340.113
2010	1066.538	251.454
2011	2434.778	130.498
2012	4005.613	-130.272
2013	3299.245	850.37808
2014	3450.2468	506.12179
2015	1599.9696	1469.2937

Data source: *OECD 2016 Report*

Chapter IV

FTA (Mr. CHEN)

Chapter IV **FTA (Mr. CHEN)**

I. Current Status of FTAs of China, Japan, and ROK

The CJK FTA negotiations started in November 2012 and have now proceeded to the twelfth round. China, Japan, and ROK are among the world's major economies. The establishment of the CJK FTA will help bring into full play the industrial complementarities between the three countries, tap the potential for boosting the level of trade and investment in the three countries, and promote the further integration of regional value chains.

In the promotion of regional trade integration, two regional trade arrangements are affecting trade between the three countries. One is the Trans-Pacific Partnership (TPP) (Japan is still vigorously promoting a "TPP without the US"); the other is the institutional arrangement to participate in the Regional Comprehensive Economic Partnership (RCEP) and strive to establish a high-level liberalization in trade and investment. Japan attaches great importance to the development potential of Northeast Asia, especially China's market.

Bilateral trade between China and Japan/ROK is concentrated in finished products. In the past 10 years, the structures of China–Japan trade and China–ROK trade have gradually converged. The proportion of China's exports to Japan in machinery and electronic products has increased markedly, of which a large proportion is processing trade. Most of the exports are from Japanese enterprises in China and belong to intra-industry or intra-corporation trade. Meanwhile, the goods imported from China by ROK have also gradually shifted from primary products to semi-finished or finished products, and intra-industry trade has also become increasingly common.

In the negotiation of the CJK FTA, agricultural products have always been a focus and a difficulty. Agriculture is an area of advantage for China, while it is a highly sensitive industry in Japan and ROK. The average tariffs on agricultural products in the two countries once reached 753% and 887% respectively. Agriculture in both Japan and ROK has been highly protected, and it is very difficult to open up. The question of how to rationally arrange tariff concessions in the agricultural sector and manage the transition of agricultural products poses a huge challenge to the CJK FTA negotiations.

In manufacturing, Japan and ROK have marked advantages in high-end products such as machinery, chemicals, and information technology, while they are at a comparative disadvantage in areas such as textile and clothing; China is just the opposite. Therefore, it will also be a challenge to rationally arrange the progress of liberalization in the manufacturing sector, so as to not threaten the safety of the relevant industries in the three countries.

1. China

As of October 2017, China had signed 15 FTA agreements involving 23 countries or regions. Agreements have been signed with Georgia, ROK, Iceland, Peru, New Zealand, Pakistan, Australia, Singapore, Switzerland, Costa Rica, Chile, and ASEAN. As of July 2017, Beijing had hosted the 2nd round of China–Israel FTA negotiation, the 2nd round of upgrading negotiations for the China–New Zealand FTA, and the 2nd round of upgrading negotiations for the China–Chile FTA.[3)]

3) As of the date of publication, the 3rd round of China–Israel FTA negotiations had been held (in Israel, in December 2017), as had the 3rd round of upgrading negotiations for the China–New Zealand FTA (in New Zealand, in December 2017); additionally, the upgrading negotiations for the China–Chile FTA had been concluded and the agreement was signed (in November 2017).

Other FTAs under negotiations are China - the Gulf Cooperation Council (GCC), China –Japan-ROK, China-Sri Lanka, China-the Maldives, China-Israel, China-Norway, and China - Pakistan FTA Negotiations Phase II.

FTAs under study are China-Colombia, China-Moldova, China-Fiji, China-Nepal, China-Papua New Guinea, China- Canada, China-Bangladesh, China- Mauritius, China-Mongolia, China-Peru upgrade FTA joint feasibility study, China-Switzerland upgrade FTA joint feasibility study. The development of China's free trade zone should accelerate the negotiations between China and Pakistan, Israel, and Norway and lead to the conclusion of a free trade agreement as soon as possible. China will speed up the negotiations on upgrading the FTA with Singapore, New Zealand, and Chile in order to provide a repeatable and scalable experience for China's foreign economic and trade development. China will also step up research on issues related to the establishment of free trade zones in countries such as Canada, Mongolia, and Colombia, and launch bilateral formal negotiations as soon as possible.

2. Japan

In December 2017, Japan concluded an Economic Partnership Agreement (EPA) with the EU. Previously, one focus of Japan's foreign economic and trade cooperation has been the Asia–Pacific region. The Japanese FTA strategy initially focused on countries with significant political and economic interests in the Asia–Pacific region and Japan. Japan has stepped up FTA negotiations with its main trade partners, after ROK and the US negotiated a free trade zone in 2007. Current FTA negotiations cover the major economies of the world, and the global layout of Japan's FTA strategy has gradually taken shape. As of June 2016, Japan had signed separate FTAs with Singapore, Chile, Mexico, Malaysia, Thailand, Indonesia, Vietnam, Brunei, ASEAN, the Philippines, Switzerland, India, Peru, Australia, and Mongolia. Negotiations on RCEP, and on FTAs with China and ROK, the GCC, Colombia, Turkey, Canada, and ROK, are ongoing. Some substantial progress has been made. In October 2015, the TPP negotiations resulted in an agreement, and in November 2017, negotiations in the area of service and investment for the Japan–ASEAN FTA were concluded.

3. ROK

ROK has so far signed free trade agreements with 57 countries and regions. The FTA signatories accounted for 73.5% of global GDP, including the US, the EU, and China – the three largest economies. ROK has established 14 free trade zones. By region, Asia mainly includes China, the ASEAN, Singapore, India, Vietnam, and the GCC. America mainly includes the US, Chile, Canada, and Peru; Oceania mainly includes New Zealand and Australia; Europe is mainly the European Union. At present, ROK and Japan are ready to restart negotiations on the ROK–Japan FTA, which were suspended in 2004, and the FTA is gradually advancing. In addition, ROK is considering launching FTA negotiations with countries such as the Russian Federation, Turkey, MERCOSUR, Israel, and the Southern African Customs Union.

II. Economic Prospects of CJK FTA

Japan and ROK hope the CJK FTA will be built into a high-standard, wide-ranging free-trade area that

encompasses not only WTO areas such as goods, services, and investment but also non-WTO areas such as intellectual property, government procurement, environmental protection, and technical standards. Meanwhile, as a developing country, and despite the great strides it has made in recent years in market openness and legal and institutional development, China still faces difficulties in reaching the level expected by Japan and ROK. Therefore, negotiations on the degree of openness in non-WTO areas may be an obstacle to building the CJK FTA.

The differences in industrial advantages between China, Japan, and ROK are the foundation for the establishment of an FTA. Relatively developed Japan and ROK have significant competitive advantages in capital and technology-intensive industries, while China's competitive advantages are concentrated in resource- and labor-intensive products. Each party has its own advantages in import and export commodities, and their economies are highly complementary.

It will require a specific process to negotiate and set up the CJK FTA. The difficulties in this process mainly involve the balance of economic and trade interests between the three countries. In other words, the three parties need to properly handle the sensitive issues in their trade relationships.

III. CJK FTA and other Mega FTAs in the Asia-Pacific Region

Since the Free Trade Area of Asia-Pacific (FTAAP) initiative was proposed in 2004 by the Asia-Pacific Economic Cooperation (APEC) Business Advisory Council, the research and planning for FTAAP has gradually entered the agenda of APEC. In 2014, the APEC Beijing Summit set forth a concrete roadmap for building the FTAAP and provided a framework for action and planning to implement the FTAAP initiative. At present, four major policy approaches are being explored for setting up the FTAAP, including promoting the APEC mechanism, relying solely on the RCEP or TPP, integrating the RCEP and TPP, and achieving the trade goals. All the approaches face challenges. Setting up the FTAAP is being integrated into the agenda and issue implementation of APEC and is been placed into more specific policy practices along with the continuous advancement of APEC.

However, there are difficulties and challenges. There are numerous free trade zones in the Asia-Pacific region, which have attracted the enthusiasm and attention of various economies. Even economies that actively promote the FTAAP are busy negotiating and implementing bilateral and multilateral FTAs, including the CJK FTA. Moreover, it is difficult to maintain a strong and sustained focus on this issue because of complicated political considerations and concerns regarding different levels of economic development. Therefore, promoting the FTAAP requires economies to strengthen coordination and collaborate. Although the "Beijing Roadmap" has seen some consensus among various economies about the future direction of the FTAAP, there is still a great deal of uncertainty.

The Chinese government has a clear-cut attitude of support for the multilateral trade system and for upholding open regionalism. China will comprehensively and thoroughly implement the "APEC Roadmap for Promoting the Implementation of the FTAAP, Beijing" and steadily advance toward the goal of setting up the FTAAP.

Chapter V

Olympic Economy

Chapter V **Olympic Economy**

I. Economic Impact of the Previous Olympic Games

1. China (Mr. CHEN)

In the process of hosting the Olympic Games, Beijing strived to extend the role of the Olympic economy to its maximum. For example, it tried to allow more cities to participate in the Olympic Games. In addition to the host city of Beijing, there were two project cities, Qingdao of Shandong province (sailing) and Hong Kong (equestrian), and four soccer preliminary match cities, Shanghai, Tianjin, Shenyang of Liaoning province, and Qinhuangdao of Hebei province. The Beijing Olympic Games involved seven cities, and organizing the Olympic Games promoted the development of these cities and regions.

The first promotion is improving urban infrastructure. Take Beijing for example. In 2001, Beijing only had about 54 km of subway lines, which took only 10% of the share of passenger traffic in the entire public transport system. Over the seven years of Olympic preparations, the construction of Beijing's rail transit accelerated greatly. By July 2008, the total mileage of the rail transit reached 200 km.

The second promotion is upgrading regional industrial structure. The Olympic Games brought business opportunities to the construction and building materials industry, environmental protection industry, information industry, cultural industry, sports industry, and media and advertising industry within the region, thus providing an opportunity for industrial structure adjustment for the Olympic Games host city and region.

The third promotion is promoting regional economic cooperation. The Olympic Games brought development opportunities for regions on the periphery of the host cities and other non-Olympic cities, thereby promoting exchanges and cooperation among regions.

At the beginning of the preparations for the Olympic Games, Beijing already showed a clear understanding of the economic risks of the post-Olympic period and took a series of measures to mitigate those risks. From the beginning, Beijing has taken into consideration the use of venues after the Games when carrying out venue site selection, planning, and design. For example, temporary venues were increased; some venues were built on university campuses, so that these venues would become facilities for college sports activities after the Olympics. In addition, private investment and financing mechanisms were established to ease the financial pressure and the risk of resource idling. In the construction of Beijing Olympic Games venues, private investment accounted for more than half of the total investment, which greatly lowered the pressure on government investment, and private enterprises also found development opportunities. For most other projects, investment was decided by open and competitive joint bidding, and the winner group enterprises then started investing and operations. This mechanism is effective for controlling the scale of investment and enabling post-Games utilization.

From 2001 to 2008, during the seven years of preparation for the Olympic Games, the average annual economic growth rate of Beijing reached 12.4%, and local fiscal revenue increased by 2.3. During this period, the per capita GDP in Beijing increased from over 2,700 USD in 2001 to above 6,000 USD. The Beijing Olympic Games have greatly enhanced the overall development level of Beijing and have brought Beijing's urban development to a new level.

Table V-1 Impact of hosting the Olympics on Beijing's GDP growth

ITEM \ YEAR		2001	2002	2003	2004	2005	2006	2007	2008
Estimation per medium and long-term plan of the city	GDP (RMB 100 million yuan)	2846	3159	3506	3892	4320	4795	5323	5908
	GDP growth (on inflation-adjusted basis) (%)		9	9	9	9	9	9	9
	GDP per capita (USD)		3371	3716	4098	4518	4981	5494	6058
Measurement after adding the Olympic Games factor	GDP increment promoted by Olympic investment (RMB 100 million yuan)		34	125	271	408	435	416	300
	GDP increment promoted by Olympic consumption (RMB 100 million yuan)		12	45	98	151	164	158	247
	GDP (RMB 100 million yuan)	2846	3205	3676	4261	4879	5394	5897	6455
	GDP growth (on inflation-adjusted basis) (%)		10.6	12.7	13.9	12.5	8.6	7.3	7.5
	Registered population (ten thousand people)	1125	1133	1141	1149	1156	1164	1172	1179
	GDP per capita (USD)		3421	3896	4486	5103	5603	6086	6619

Data source: *Qi LIU edit, Beijing Olympic Economic Research, page 8. Beijing Publishing House, 2003 version 1.*

2. Japan (Prof. SAITO)

Japan has hosted three Olympic Games: the 1964 Tokyo Olympic Games, 1972 Sapporo Olympic Winter Games, and 1998 Nagano Olympic and Paralympic Winter Games. All three Games differed in their economic environment. The 1964 Tokyo Games were held during the high-growth period (1954 to 1970), just after Japan accepted Article 8 of the IMF Treaty and joined the Organization for Economic Cooperation and Development (OECD): The Sapporo Games were held during the unstable external environment period (1970 to 1986), between the collapse of the Bretton-Woods system (1971) and the first oil crisis (1973); the Nagano Games were held during the "Lost Decade" of the 1990s, amidst the financial crisis that broke out in 1997.[4)]

(i) 1964 Tokyo Olympic Games

The first Olympic Games Japan hosted was the XVIII Olympic Games held in Tokyo in 1964.[5)] It was the first Olympic Games ever to be held in an Asian country.

The Games took place between October 10 and 24. A total of 5,152 athletes from 93 countries and regions took part in 163 events for 20 sports.[6)] This size made the 1964 Tokyo Olympics the largest Games ever to be

4) For a broad overview of the economic implication of the Olympic Games hosted by Japan, see Yoshiyuki Mano and Mitsubishi Research Institute, *Olinpikku Regashii: 2020-Nen Tokyo Wo Kou Kaeru* [Olympic *Legacy: How it is going to change Tokyo in 2020?*], and Sakamoto Kazumitsu, "Olinpikku To Keizai" ["Olympics and the Economy"].

5) The 13th International Stoke Mandeville Wheelchair Games was held in Tokyo in the following month (November 8 to 13). It was the second time the Stoke Mandeville Games were held in the city that hosted the Olympic Games, and it is now recognized as the 2nd Paralympic Games. However, the rule of hosting the two Games back-to-back was not officially established until the 1988 Seoul Olympic Games.

6) Numbers are from the Japanese Olympic Committee (JOC) website.

held at that time.

(1) Direct and indirect costs

According to the Organizing Committee for the 1964 Tokyo Olympic Games, the cost of administration and operations, including expenses for personnel, facilities, sports equipment and apparatus, Olympic villages, transportation, and others, totaled 10 billion JPY.

The Games took place mainly in venues in the Tokyo metropolitan area: the main venues were the National Stadium (extended), National Gymnasium (newly constructed), Komazawa Gymnasium (newly constructed), and Nippon Budokan Hall (newly constructed). In addition, facilities in Kanagawa, Saitama, and Nagano prefectures were used. The cost of constructing the new venues and renovating the existing facilities (direct capital costs) totaled 17 billion JPY.

Furthermore, hosting the Olympic Games required investment in infrastructure. Such investments included the construction of the Tokaido-Shinkansen (the "Bullet train"), the extension of the underground railways, extensions of the Metropolitan Expressway, extensions of the underground railways, and improvements in sewage and water works. The total cost of infrastructure investment (indirect capital cost) was 961 billion JPY.

The grand total was 987 billion JPY, equivalent to about 3.1% of the nominal GDP in FY1964 (see Table V-2).[7)]

Table V-2 Direct and indirect costs of the Olympic Games

(billion JPY)

	Tokyo 1964	Sapporo 1972	Nagano 1998
Direct cost	27	17	250
(Ratio to nominal GDP)	(0.1)	(0.0)	(0.0)
Administration and operation	10	8	114
Construction and renovation of venues	17	9	136
Others	0	0	0
Indirect cost	961	202	1291
(Ratio to nominal GDP)	(3.0)	(0.2)	(0.2)
Construction/upgrading of infrastructure	961	202	1291
Total	987	219	1541
(Ratio to nominal GDP)	(3.1)	(0.3)	(0.3)
Nominal GDP	31,567 (FY1964)	86,083 (FY1971)	533,149 (FY1997)

Data sources:
For Tokyo 1964: Organizing Committee for the XCIII Olympiad (1966)
For Sapporo 1972: Organizing Committee for the XI Olympic Winter Games (1973)
For Nagano 1999: Organizing Committee for the XVIII Olympic Winter Games (1998), Nagano (1999)
For the GDPs: Cabinet Office (2017a)
Notes:
1. The table is an expanded version of the table in Sakamoto (2016).
2. Sums do not add up due to rounding.

7) According to Flyvbjerg, Stewart, and Budzier (2016), the direct cost of the Tokyo 1964 Olympic Games (cost of administration and operation plus cost of construction and renovation of venues) is among the lowest within the sample of Summer and Winter Games held between 1960 and 2016 in terms of the total cost as well as cost per event and cost per athlete. See Bent Flyvbjerg, Allison Stewart, and Alexander Budzier, "The Oxford Olympics Study 2016: Cost and Cost Overrun at the Games."

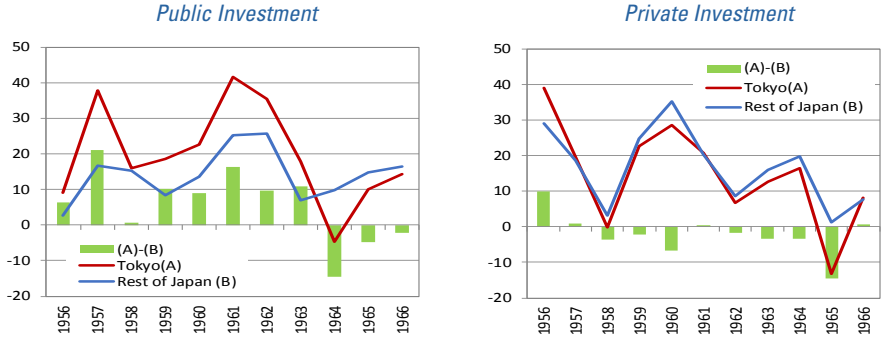
(2) Economic and social impacts

While they are not included in the official reports of the Organizing Committee, investments were also made by the private sector to make the most of the business opportunities the Games provided. For example, a number of international-standard hotels were constructed in Tokyo for the Games to accommodate the tourists.

The increase in domestic demand brought about by the Olympic Games assisted the economic growth taking place at the time.

The Tokyo Olympic Games were held in the midst of the high-growth period (1954 to 1970), when the real economic growth rate averaged about 10%. The first half of the period (1954 to 1964) was led by a rapid growth in business investment. The extra spending made to host the Games as well as the infrastructure investment helped to further support the economic growth during the period.

Figure V-1 Investment in Tokyo (FY1956–FY1966)



Data source: *Cabinet Office*
Note: *Data are based on 1973 System of National Account (base year = CY1980)*

The Olympic Games also helped the Japanese people become more open to the world.

The first half of the 1960s was a period of internationalization. Building on the high economic growth achieved since the mid-1950s, Japan began to open up its economy to the world and made efforts to become a responsible member of the international community. A major promotion of trade liberalization was initiated in 1960, which led to the acceptance of Article XI of the General Agreement on Tariffs and Trade (GATT) in 1963 and of Article VIII of the IMF Treaty in 1964. Japan also became a member of the OECD in 1964. Restrictions on overseas travel by ordinary citizens were also removed this year.

While the economy was opening up to the rest of the world, people still felt remote from foreign countries and foreigners. The Olympic Games, in this regard, provided an excellent opportunity for the people to feel closer to, and become intimate with, the rest of the world.

(3) Some caveats in considering economic impacts

While Olympic Games can be considered to provide positive impacts on the economy and society, some

caveats are warranted so as not to overestimate them.

First, while the additional spending for the Olympic Games assisted the economic growth during the period in advance of the Games, it may have crowded out other expenditures that may have been made otherwise, particularly because of the low foreign reserves that were held by the government at that time. Under the fixed exchange rate regime of the Bretton-Woods system, the Bank of Japan often had to tighten its monetary policy and prevent the boom from depleting its limited foreign reserves.

Second, the public and private investments and other expenditure that were made to prepare for the Games fulfilled their purposes and disappeared after the Games. This can be confirmed by the large decline in public and private investment after the Games in 1964 and 1965, respectively (see Figure V-1).

The decline in domestic demand was part of the reason why the Japanese economy slid into a recession in late 1964. The recession, which was later named the "structural recession," was the most serious recession experienced during the high-growth period. It led the government to issue government bonds for the first time since the enactment of the 1947 Public Finance Act and led the Bank of Japan to engage in an emergency liquidity operation.

Third, some of the expenditures such as the infrastructure investment, particularly in railways and highways, may have been made in the long term, even without the Games. In this respect, the Olympic Games can be regarded as having the effect of bringing forward investments that may have taken place later, rather than creating an entirely new investment opportunity.

(ii) 1972 Sapporo Olympic Winter Games

The second Olympic Games hosted by Japan was the XI Olympic Winter Games held in Sapporo, Hokkaido in 1972. It was the first winter Olympic Games held in Asia. The Games opened on February 3 and closed on February 13. A total of 1,006 athletes from 35 countries and regions participated in 35 events for six sports.

According to the Organizing Committee for the 1972 Olympic Games, the cost of administration and operation for the Games, including expenses for personnel, facilities, press and publicity, Olympic Village, and others, totaled 8 billion JPY.

The venues of the Games were prepared within the vicinity of Sapporo. Newly constructed venues included the Makomanai Indoor skating rink, Makomanai speed skating rink, Tsukisamu indoor skating rink, Mt. Eniwa downhill events site, and Okurayama jump hill. The cost of constructing and renovating the venues totaled 9 billion JPY.

Infrastructure was also constructed around Sapporo. For example, the Sapporo City Subway and Hokkaido Expressway were both opened before the Games. The cost of preparing the infrastructure totaled 202 billion JPY.

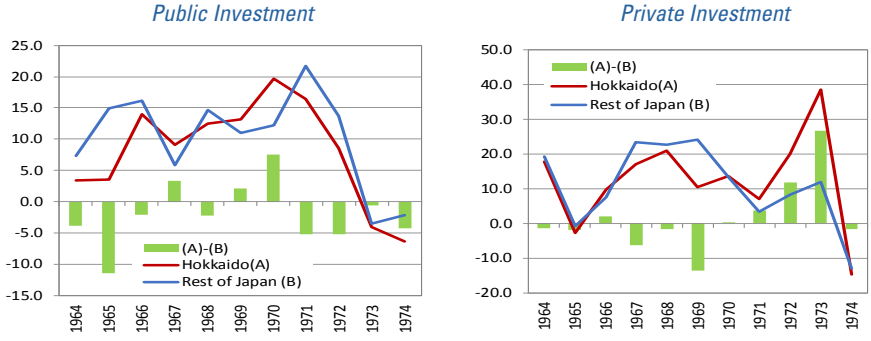
The grand total of the above costs is 219 billion JPY, equivalent to about 0.3% of the nominal GDP in FY1971 (see Table III-J1).[8)]

8) According to Flyvbjerg, Stewart, and Budzier (2016), the direct cost of the Sapporo 1972 Olympic Games (cost of administration and operation plus cost of construction and renovation of venues) is among the lowest of the sample of Summer and Winter Games held between 1960 and 2016 in terms of the total cost as well as cost per event and cost per athlete.

Investments by the private sector were also made, such as the construction of new hotels and additional rooms at existing hotels, and a new underground shopping arcade.

Since it was a Winter Olympics, the overall cost was relatively limited compared to the Summer Games held in Tokyo in 1964. The impact on the regional economy was also relatively small: As Figure V-2 shows, there had been a modest acceleration in public investment since 1966 (Sapporo was voted the host of the 1972 Winter Olympic Games in April 1966), but private investment did not accelerate until 1971.

Figure V-2 Investment in Hokkaido (FY1964–FY1974)



Data source: *Cabinet Office*
Note: *Data are based on 1973 System of National Account (base year = CY1980)*

On the other hand, whatever its impact, it should not have crowded out other investments because, while Japan was still under a fixed exchange regime (at that time, the Smithsonian Agreement was in effect), foreign reserves had been accumulated, so that the constraint of low foreign reserves was no longer applicable. Moreover, the money supply was consistently growing by around 20% during the period.

A decline in investment took place after the Games, as Figure III-J2 shows. However, the long-term decline may be exaggerated by the negative impact of the first oil crisis that broke out in 1973 and the restrictive macroeconomic policies taken thereafter.

(iii) 1998 Nagano Olympic and Paralympic Winter Games

The third Olympic Games that Japan hosted took place in Nagano, when it hosted the XVIII Winter Olympic Games in 1998.

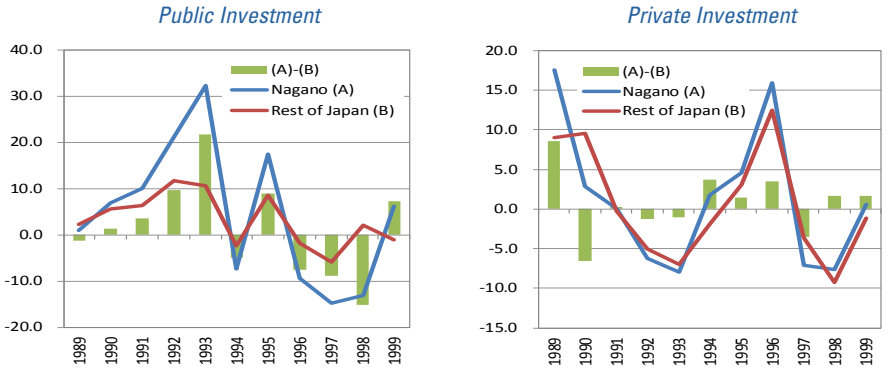
It took place between February 7 and 22 in Nagano city and other municipalities in the Nagano prefecture. A total of 2,176 athletes gathered from 72 countries and regions to participate in 68 events for seven sports. The Olympic Winter Games were followed by the VII Paralympic Winter Games, which took place between March 5 and 4. It was the first Paralympic Winter Games to be held in Asia. A total of 571 athletes from 31 countries competed in 34 events for five sports. It remains the Paralympic Games with the largest number of athletes.

According to the Organizing Committee for the XVIII Olympic Winter Games, the cost of administration and operation for the Games, including expenses for personnel, public relations and media support, equipment, and information and telecommunications systems, totaled 114 billion JPY.

The venues were located in Nagano and its vicinities including Yamanouchi (Shiga Kogen), Hakuba, Karuizawa, and Nozawa Onsen. The main venues in Nagano were M-Wave (newly constructed), Big Hat (newly constructed), White ring (newly constructed), and Minami Nagano Sports Park (converted). The cost of constructing and renovating the venues for the Games totaled 136 billion JPY. The cost of infrastructure investment totaled 1,291 billion JPY, including improvements to infrastructure such as the upgrading of Hokuriku Shinkansen and the construction of highways and other roads related to the Games. The grand total of the above is 1,541 billion JPY, equivalent to about 0.3% of GDP in FY1997 (see Table V-2)[9].

The private sector also made investments. As Figure V-3 shows, public investment increased after 1991 (Nagano was voted to host the 1998 Games in June 1991). However, it also shows that both public and private investment dropped steeply in FY1997 which was before the Games. This partly reflects the completion of the construction works ahead of the Games but also the downturn of the Japanese economy that started in 1997 as a result of the consumption tax rate hike in April, the outbreak of the Asian financial crisis in July, and the collapse of several major financial institutions in November.[10]

Figure V-3 Investment in Nagano (FY1989–FY1999)



Data source: *Cabinet Office*
Note: *Data are based on 1973 System of National Account (base year = CY1990)*

9) According to Flyvbjerg, Stewart, and Budzier (2016), the direct cost of the Nagano 1998 Olympic Winter Games (cost of administration and operation plus cost of construction and renovation of venues) is roughly around the median among the sample of Winter Games held between 1960 and 2016 in terms of the total cost as well as cost per event and cost per athlete.

10) Miyoshi and Sasaki (2016) assess the long-term effects of the 1998 Nagano Winter Olympic Games on economic and labor market outcomes by comparing the actual data with counterfactual dynamics. See Koyo Miyoshi and Masaru Sasaki, "The Long-Term Impacts of the 1998 Nagano Winter Olympic Games in Economic and Labor Market Outcomes".

3. ROK (Dr. JOO and Mr. OH)

The Seoul Summer Olympic Games in 1988 was the first large-scale international sports event held in ROK. In 1981, Seoul was designated as the host of the 1988 Summer Olympic Games at the 84th general meeting of the International Olympic Committee. Seoul, ROK and Nagoya, Japan, were the candidates for the 1988 Olympic Games, and Seoul won 52 out of 79 votes. The ROK became the second country in Asia and the 16th in the world to host the Olympic Games.

The significance of holding the Olympic Games in Seoul was that the Olympics, a symbol of peace, was held in a country divided into South and North during the deepening Cold War between East and West. During the Moscow Olympic Games in 1980, more than 60 Western countries, including the US, did not participate due to the Soviet invasion of Afghanistan in 1979. Even though it was the first Olympic Games held in the Communist Bloc, 67 countries, including the US, West Germany, Japan, and Korea, did not participate due to the Soviet invasion of Afghanistan in 1979. During the opening ceremony, the chairman of the International Olympic Committee (IOC) emphasized that the Moscow Olympic Games was an international event hosted by the IOC and should be beyond politics, religion, or race. During the Los Angeles Olympic Games in 1984, the US hosted the Games for the first time since 1932 and became the third country to hold the Olympic Games twice. Eleven countries, including the Soviet Union, Eastern European nations, North Korea, and Cuba, did not participate because the US had not taken part in the 1980 Moscow Olympic Games (only Romania participated of the Eastern Bloc nations). Nonetheless, 140 countries participated in the Olympic Games (the largest number in Olympics history), and more than 5.8 million people visited the sites.

After the 1988 Seoul Olympic Games were announced in 1981, the total projected cost for various facilities and infrastructure over seven years was 2,382.6 billion Korean won (KRW). Expenses directly related to the Olympic Games were projected at 1,108.4 billion KRW, and establishing other affiliated facilities was projected to cost 1,244.2 trillion KRW. This includes stadium facilities, the construction of the Olympic Expressway, the development of the Han River, the expansion of Gimpo Airport, road maintenance, and infrastructure investment. According to the Korean Studies Central Research Institute, the production-inducing effect of the investment of 2,382.6 billion KRW was 4,750.4 billion KRW, and the income-inducing effect was estimated to be 1,846.2 billion KRW.

From September 17 to October 2, 1988, expenditure on the Olympic Games totaled 589 billion KRW, and revenue totaled 841 billion KRW. The Seoul Olympic Games had a 252 billion KRW surplus. However, this surplus declared by the Seoul Olympic Organizing Committee included 37.1 billion KRW in donations from the government, 131.5 billion KRW in donations from the sales of the athlete and press village, 56.5 billion KRW in national donations, and 9 billion KRW from contributions to the art works of the Olympic Park. Therefore, the net profit of the Seoul Olympic Games was just 17.9 billion KRW.

The economic benefits of the Seoul Olympic Games were that, first, it had no deficits during the operation of the competition. In general, the Summer Olympic Games, unlike the Winter Olympic Games, are held around large cities, which is favorable to investments in social overhead capital and tourism. However, several Olympic Games have not recorded surpluses, even excluding SOC investments.

Second, the adverse effects of large-scale SOC investments were suppressed by holding a convention in

Seoul, which was a growing city. After the Seoul Olympic Games were held in 1988, the amount invested was 2,382.6 billion KRW, which was a huge amount considering the size of Korea's economy at the time. However, when considering the increasing population of Seoul and the congestion of central Seoul and sub-centers like Yeongdeungpo, the development of eastern Seoul and the construction of high-speed roads in the city played a major role in laying the foundation for further growth in the city.

Finally, the effect of raising the national brand was huge. Before the Olympic Games, ROK was only a developing country with light industry exports, but the Games were an opportunity to show the development of ROK to the world. The 160 countries participating in the Seoul Olympic Games included countries from the Communist Bloc that did not have diplomatic relations with ROK, which provided a new opportunity for international peace.

II. Economic Prospects of Future Olympic Games

1. China (Mr. CHEN)

In 2022, Beijing and Zhangjiakou will jointly host the Olympic Winter Games. The game venues will be located in three places: Beijing City, Yanqing County of Beijing, and Chongli County of Zhangjiakou City. To ensure transportation services between the three venue sites, Beijing will build high-speed railways and expressways connecting Beijing to Yanqing and Zhangjiakou. The Beijing–Zhangjiakou intercity railway is about to start construction. Its total length is to be about 174 km, with about 10 stations along the main line. The design speed will reach 350 km per hour; from Beijing North Station, it will take 20 minutes to reach Yanqing station and 52.5 minutes to reach Zhangjiakou station. To help spectators get to Chongli, a Chongli Branch of the Beijing–Jingzhang Intercity Railway will be built as well. The Olympic Village and the surrounding venues will then be within 10 minutes' walk from the branch line.

For the 2022 Olympic Winter Games, there will be 25 venues located in the three sites of Beijing, Yanqing, and Zhangjiakou. There will be 12 competition venues and 13 non-competition venues. Of the 25 venues, 10 already exist, six are planned, four will be built for the Olympic Winter Games, and five will be temporary constructions. Beijing will have five competition venues and seven non-competition venues, while Yanqing County will have two competition venues and three non-competition venues. Direct investment for the Olympic Games has two targets. One is the construction of Olympic venues and non-competition venues; in 2014 monetary value, this part of the investment totals 1.51 billion USD, equivalent to 92.86 billion CNY. The direct investment of the Olympic Winter Games and investment of the Olympic Games Organizing Committee will be mainly distributed in the rental of venues, temporary facilities, and the trial operation of the venues. The specific breakdown is as follows.

Table V-3 2022 Winter Olympics Venue Investment Details

Unit: 100 million CNY

Venue type	Venue name	Location	Current situation of the venue	Events	Public funding	Private funding	Total
Competition venues (56.1)	National Aquatics Center	B	Existing	Curling	0.73		0.73
	National Stadium	B	Existing	Men's Ice Hockey	1.25		1.25
	National Speed Skating Stadium	B	Newly built	Speed Skating	5.31	6.5	11.81
	Capital Stadium	B	Existing	Short Track Speed Skating/Figure Skating	0.433		0.433
	Wukesong Stadium	B	Existing	Women's Ice Hockey	0.579		0.579
	National Alpine Skiing Center	Y	Newly built	Alpine Skiing	10.04		10.04
	National Ski Center	Y	Newly built	Bobsled/Luge	9.92		9.92
	Biathlon Center	Z	Newly built	Biathlon		4.39	4.39
	Nordic Center Venue for Cross-Country Skiing	Z	Newly built	Cross-Country Skiing		5.83	5.83
	Nordic Center Ski Field	Z	Newly built	Ski Flying Hill		3.72	3.72
	Yunding Snow Field A	Z	Existing	Freestyle Skiing/ Snowboard Skiing		5.17	5.17
	Yunding Snow Field B	Z	Existing	Freestyle Skiing/ Snowboard Skiing		2.23	2.23
Training venues (3.00)	Capital Stadium for Short Track Speed Skating	B	Existing		2.61		2.61
	Capital Skating Rink	B	Existing		0.33		0.33
	Training Venue of Capital Stadium	B	Existing		0.06		0.06
Olympic village (32.20)	Beijing Olympic Village		Newly built			18.21	18.21
	Yanqing Olympic Village		Newly built			6.92	6.92
	Zhangjiakou Olympic Village		Newly built			7.07	7.07
Main press center	China National Convention Center	B	Existing		0.572		0.572
Other non-competition venues	National Stadium	B	Existing		0.973		0.973
Total					32.81	60.06	92.86

Data source: *Chen Jian, ed., Beijing-Zhangjiakou Winter Olympics Development Report 2016, page 216, Chinese Culture and History Press, December 2016, first edition*

The impact of the Winter Olympics on the economy of Beijing and Zhangjiakou can be divided into three stages. (1) Before the Olympics, the investment in various venues and supporting infrastructure will gradually increase, which will lead to a gradual expansion of the local GDP growth. (2) In the Olympic year, games operation will drive GDP growth to a high point. (3) After 2022, the long-term promotion of the Olympic Games of the ski industry in the two places will gradually bear fruit.

2. Japan (Prof. SAITO)

(i) 2020 Tokyo Olympic and Paralympic Games

Tokyo is to host the XXXII Olympic Games in 2020. It will be the fourth Games to be held in Japan, and Tokyo will be the first city to host the Games twice in Japan. It is expected to open on July 24 and to close on August 9. Competition is planned to take place in 339 events for 33 sports, and the upper limit of the number of athletes is 11,090.[11] It will be followed by the XVI Paralympic Games that is expected to take place between August 25 and September 6. There will be 537 events for 22 sports, and the upper limit of the number of athletes is 4,400.[12]

(1) Direct and indirect costs

According to the latest budgetary forecast by the Tokyo Olympic and Paralympic Games Organizing Committee, the cost of administration and operation is estimated to be about 820 billion JPY.

The venues are planned to be in Tokyo and nearby prefectures and in Fukushima. The venues in Tokyo include the Olympic Stadium (reconstructed), Ariake Arena (newly constructed), and Olympic Gymnastic Centre (newly constructed). The cost of the construction and renovation of the venues is expected to be about 680 billion JPY. In addition, a reserve fund of 100 to 200 billion JPY has been set aside for unexpected expenses.

The Games will also be supported by investments intended to improve the infrastructure. Improvement in the transportation infrastructure includes renewal and repairs of the Metropolitan Expressway, the construction of new railway lines and extension of existing lines, and an expansion of Narita and Haneda international airports. The total cost of infrastructure investment is estimated by a private think-tank at about 2 to 3 trillion JPY.

The grand total of the above is 3600 to 4800 billion JPY, or 0.6 to 0.8% of nominal GDP in FY2020 (see Table V-4).[13] On one hand, it is larger than the 1972 Sapporo and 1998 Nagano Olympic Games, which were both Winter Games. On the other hand, it is, at this stage, much smaller than the 1964 Tokyo Olympic Games, which was a summer Games but did not include the cost of the Paralympic Games. It should be noted, however, that past experience dictates that the final settled account will exceed the original budget by a considerable margin.

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11) Decision by the IOC in June 9, 2017.

12) Decision by the International Paralympic Committee (IPC) on September 4, 2017.

13) Projection for FY2020 is taken from the economic revitalization case in the Cabinet Office, *Chu-Chouki No Keizai Zaisei Ni Kansuru Shisan [Medium- and Long-Term Projections of the Economy and Public Finance]*.

Table V-4 Direct and indirect costs of future Olympic Games

(billion JPY)

	Tokyo 2020	Sapporo 2026
Direct cost	1,600-1,800	433-457
(Ratio to nominal GDP)	(0.3)	(0.1)
Administration and operation	820	246-249
Construction and renovation of venues	680	184-210
Others	100~300	109
Indirect cost	2,000-3,000	N.A.
(Ratio to nominal GDP)	(0.3-0.5)	N.A.
Construction/upgrading of infrastructure	2,000-3,000	N.A.
Total	3,600-4,800	N.A.
(Ratio to nominal GDP)	(0.6-0.8)	N.A.
Nominal GDP	607,600 (FY2020)	733,200 (FY2025)

Data sources:

For Tokyo 2020: Tokyo Organising Committee for the Olympic and Paralympic Games (2016), Tokyo Metropolitan Government (2017), Mizuho Research Institute (2017)

For Sapporo 2026: Sapporo (2016a): Sapporo (2016c)

For the GDPs: Cabinet Office (2017b)

Notes:

1. The table is an expanded version of the table in Sakamoto (2016).

2. Sums do not add up due to rounding.

(2) Induced expenditures

Some institutions have estimated the additional investment that may be made by the private sector in response to the Olympic and Paralympic Games. The Bank of Japan, for instance, list projects related to hotel construction and renovation totaling 0.8 trillion JPY and urban renewal totaling 4.8 trillion JPY. The total investment amounts to 5 to 6 trillion JPY.[14)]

Some institutions have estimated the additional spending that may be made in response to the Olympic and Paralympic Games that would contribute to the Japanese economy. The first is the increase in the number of visitors from abroad and their spending per head.

The number of foreign tourists to Japan has increased rapidly since 2015. Recent projections show that the number of foreign tourists will reach 33 to 36 million by 2020.15) If the Games could attract additional tourists on top of this trend, the government's target of 40 million will be well within reach.

Not only an increase in the number of tourists but also in their spending per head is expected. The spending ability per head depends greatly on factors such as income growth in their country of origin and the exchange rate changes between the yen and their currencies. However, the quality and safety of Japanese goods

14) At an earlier stage, the Institute for Urban Strategies (2014) estimated that the cost of hotel construction will be 395 billion yen, and the cost of urban renewal to be 450 billion JPY. See Institute of Urban Strategies, "2020-Nen Tokyo Olinpikku Paralinpikku Kaisai Ni Tomonau Wagakuni Eno Keizai Hakyu Kouka" ["Economic Impacts of Hosting 2020 Tokyo Olympic and Paralympic Games"]. A more recent estimate by the Mizuho Research Institute (2017) estimated that the cost of the urban renewal that is expected to take place after 2017 amounts to about 3560 billion yen. It should be noted that this includes projects that are expected to be completed after 2020.

15) Bank of Japan (2015) projected that foreign tourists will reach 33 million by 2020, while Mizuho Research Institute (2017) projected it to be 36 million.

and sightseeing attractions are also important elements in deciding where to spend their budget. Thus the spending per head of foreign tourists to Japan can increase through the combined efforts of the government and the private sector in providing more opportunities to the tourists in enjoying their stay in Japan.

The second is the increase in private investment to capture the new demand created by the Games. In addition to hotel construction and renovations and urban renovation, the Paralympic Games taking place together with the Olympic Games should accelerate the improvement of public and transportation facilities so as to be more accessible to the handicapped. A private think-tank projects that introducing universal design will increase investment by about 0.8 trillion JPY.

(3) Macroeconomic impact

In view of the above, the 2020 Tokyo Olympic and Paralympic Games could provide a significant impact on macroeconomic activity in Japan. One of two approaches can be taken to estimate the macroeconomic impact of these Olympic and Paralympic Games-related expenditures.

One approach is to estimate their impact on total production. The estimate published by the Tokyo Metropolitan Government using an input–output table takes that approach. According to their estimate, the increase in direct expenditures of about 2.0 trillion JPY (including increases in expenditures by the participants and the spectators and by international broadcasting as well as direct management costs and the cost of constructing and renovating the venues) will induce an additional production of 3.4 trillion JPY within Tokyo and 5.2 trillion JPY nationwide. An increase in legacy-related expenditures of 12.2 trillion JPY (including expenditure related to the use of the venues after the Games and increases in sport activities and in tourism) is expected to induce an additional production of about 17.0 trillion JPY within Tokyo and about 27.1 trillion JPY nationwide.

The other approach is to consider the impact on GDP. An example is the estimate by the Bank of Japan. It estimates that increase in demand by foreign visitors (in terms of their numbers but also in terms of per capita spending) and the increase in investment by the public and private sectors (for the venues and infrastructure) will lead to an upward shift of the real GDP growth rate from 2015 to 2018 by about 0.2 to 0.3 percentage points, equivalent to an increase of the real GDP in 2018 by about 1%.

(4) Some caveats in considering the economic impact

However, with regards to the economic impact, there are some caveats. In particular, crowding-out may occur if the current economic situation continues.

The crowding-out effect through an increase in the long-term interest rate is not of a concern here because, with the QQE with yield curve control in place, long-term interest rates will be kept low (zero under the current commitment). Private investment would not be affected by the increase in economic activity under such monetary conditions.

What may be of a concern is the crowding-out effect through competition for workers and consequent wage increases. The labor market is already significantly tight (please refer to the discussion in Part I). If the construction projects for the Olympic Games take place as expected, other projects may find it difficult to

secure a workforce. The resulting constraint on other projects could partly offset the positive impact of the Games on economic activity.

Another reservation is the possibility of a decline in economic activity after the Games. In order to make up for this drop, measures to stimulate private domestic demand need to be taken. In addition to the implementation of structural policies to remove obstacle to growth, promoting innovation and creating new growing industries will be essential.

(5) Social impacts

It is also important to note the social impact that Olympic and Paralympic Games may provide.

The first is the further integration to the globalized world. Compared to outward globalization, inward globalization has been relatively slow to take place in Japan, particularly in the area of inward FDI and the intake of foreign workers. That has led to a limited exposure to foreigners and foreign companies in Japan, especially in rural areas. An increase in inbound tourists will provide an excellent opportunity to meet and understand foreign athletes and visitors, to change mindsets, and promote inward globalization.

The second is a deeper understanding of diversity. While considerable efforts have been made, gender equality is still an issue that Japan's government and society need to address. The active participation of female athletes in the Olympic Games will inspire the Japanese people to improving the situation. Similarly, hosting the Paralympic Games will provide an opportunity to think about the handicapped and recognize the need to create an economy and a society where the handicapped can enjoy life on equal terms.

The third is the positive impact on the young and the elderly. The 2020 Tokyo Olympic and Paralympic Games will be held in the most aged society in the history of the Games. Not only Japan's share of young people in the population, but also their actual number will be much lower in the 2020 Tokyo Games than in the 1964 Tokyo Games: though the population in 2020, at 125 million, will be larger than that in 1964, at 97 million, the population of those aged between 0 and 14 in 2020 (15 million, or 12% of the total population) is considerably lower than that in 1964 (25 million, or 26%). In contrast, the number and share of the elderly will be higher in 2020 than in 1964. The population of those aged 65 and over in 2020 is projected to be 36 million (29% of the total population), considerably larger than that in 1964 at 6 million (6%).

For the young, the Games will provide a rare opportunity to see with their own eyes athletes from all over the world competing with all their might. It will provide a role model that will benefit them throughout their lives.

For the elderly, the Games will provide an opportunity to think more seriously about sports and about the importance of maintaining good health. If the elderly are stimulated to make more efforts to maintain their health, it will allow them to stay fit longer. This will benefit themselves because it will enable them to delay becoming bedridden. It will also benefit the social security system because less benefit payments will be needed to support the elderly.

(ii) 2026 Sapporo Olympic and Paralympic Winter Games

Sapporo is planning to bid for a second Winter Olympic Games in 2026.[16] If successful, it would be the first city in Japan to host the Winter Games twice. It would be held by Sapporo in cooperation with other cities and towns in Hokkaido.

(1) Direct Cost

According to the plan, the Olympic Games will open on February 6 and close on February 22, holding 98 events for seven sports. It will be followed by the Paralympic Games, to be held between March 6 and March 15, featuring 72 events for five sports.

By making the most of the legacy of the 1972 Sapporo Winter Olympic Games and by fully using its potential as the center of winter sports, Sapporo intends to show to the world a model of the Games that is both financially efficient and environmentally friendly.

According to the City of Sapporo, the estimated costs of administration and operation (including the bidding costs) are 246 to 249 billion JPY, and the estimated cost of preparing the venues and the facilities (direct capital cost) is 184 to 210 billion JPY (the difference depending on the venue of the speed skating events). The grand total is 433 to 457 billion JPY (see Table V-4). In terms of its share of GDP, which is 0.1%, administration and operation costs are expected to be larger than those for the 1972 Sapporo and 1998 Nagano Games.[17]

(2) Economic Impacts

Sapporo, the capital of Hokkaido, has been enjoying a relatively high per capita income within Hokkaido. According to the Sapporo's Citizens' Account for FY2014, per capita citizen income was 2,868 thousand JPY, 2% higher than the Hokkaido average. Partly because of that, the population was also increasing in a region while others were losing population.

However, Sapporo's income level is gradually falling behind the rest of Japan: it was almost 9 % lower than the national average in FY2014. It is also expected to face a decline in population in the medium-term.

Faced with these expected difficulties Sapporo is seeking ways to attract more people and improve its economic prospects. Since Sapporo has achieved a good reputation as a ski resort, it is looking at the Olympic Games as an opportunity to repair and renew its facilities and to display its attractiveness to the world once more. If it succeeds in attracting foreign tourists as well as Japanese visitors from other areas in Japan, it should benefit not only Sapporo but also Hokkaido.

According to an estimate published by Sapporo, the number of spectators will total 1.1 million, and the consumption expenditures made by the athletes, officials, media, and spectators is expected to add up to 51 billion JPY.

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16) Sapporo has reached an agreement with the JOC to start a dialogue process with the IOC in November 2017, before submitting its proposal for candidacy to host the Olympic Games in 2016. The decision on the host is expected to take place in September 2019 at the IOC General Assembly to be held in Milan, Italy.

17) Projection for FY2025 is taken from the economic revitalization case in Cabinet Office (2017a).

Sapporo's estimate of the macroeconomic impact using an input-output table shows that the induced production resulting from the increase in total demand due to direct costs and consumption expenditures is estimated to be 645 billion JPY for Sapporo and 1,189 billion JPY for the nation as a whole. The increase in production is also expected to increase employment by 52 thousand in Sapporo, and 86 thousand in the nation.

In their preparation for the official bid for the Games in 2026, Sapporo should plan the Games in a way that provides the region with a sustained momentum to grow in the long term.

3. ROK (Dr. JOO and Mr. OH)

In 2018, ROK will host the Pyeongchang Winter Olympic Games. It will be the first Olympic Games held in ROK since the 1988 Seoul Summer Olympic Games. Pyeongchang won first place in the first vote for the 2010 Winter Olympic Games but failed to win the final vote. Vancouver, Canada, won with just a three-vote difference. Pyeongchang also failed to win the vote for the 2014 Winter Olympic Games (with Sochi, Russia, won). In its third challenge, it won the 2018 Winter Olympic Games.

With the 2018 Winter Olympic Games, the ROK is expected to become the sixth nation to land a so-called "Grand Slam" of international sporting events. The ROK has hosted major four international sporting competitions: the Summer and Winter Olympic Games, the FIFA World Cup, and the IAAF World Championships in Athletics.[18] Although this is a glorious thing for the nation and the people, there are obviously pros and cons of hosting international competitions in economic terms. Therefore, this chapter will discuss the economic effects of the Pyeongchang Winter Olympics and then consider the criteria of Olympic Games success.

(i) The economic effects of the Pyeongchang Winter Olympic Games[19]

The economic effects of international sports events can be divided into direct effects and indirect effects. First, the direct effects include investment and consumption expenditure effects. The investment effect reflects the total investment amount for hosting the Winter Olympics, such as the stadium, transportation, and accommodations. The consumption expenditure effects cover the consumption expenditures of domestic and foreign tourists and the expenses of the Olympic Games. The indirect effects include the additional tourism effect and the enhancement of the national image due to becoming a famous tourist destination after the closing ceremony.

In estimating the direct effects, the total amount invested for the Pyeongchang Winter Olympic Games by the ROK has been about 7,225.5 billion KRW.[20] About 4,742.5 billion KRW has been invested in roads and railways, 771 billion KRW in accommodation facilities, and 540.2 billion KRW in venues and stadiums. The economic effects of the total investment (production inducement amount) is estimated to be about 16.4

18) The Grand Slam of international sporting event countries are France, Germany, Italy, and Japan. Russia (2018) and the US (2021) will soon join them.

19) This chapter is written based on the working paper, Joo and Park (2011), "The *Economic Effect of Hosting Pyeongchang Winter Olympic Games", HRI 11-17.*

20) According to the Pyeongchang Winter Olympic Organizing Committee and the media, ROK is expected to spend about 13 trillion won for the Olympics so far. In this article, however, the initial budget is used for analysis.

trillion KRW when considering the production inducement coefficient of the sector using an I-O table, as announced by the Bank of Korea.

The economic effect of consumption expenditures is divided into the consumption expenditures of foreign tourists, the consumption expenditure of domestic tourists, and the expenditure of Olympic Games expenses.

The expected increase in foreign tourists visiting Korea during the Olympic Games is about 390,000. This is calculated from the fact that the number of foreign visitors during the 2002 World Cup increased about 3.9% over the previous year. Based on the average spending of foreign visitors in the ROK (about 1,600 USD) and the average exchange rate, the total consumption expenditure of foreign tourists is projected to be 721.3 billion KRW, and the production inducement amount is estimated to be about 1,254.3 billion KRW.

The expected increase in Korean tourists visiting Pyeongchang during the Olympic Games is about 2 million. Visitors to Pyeongchang are expected to increase by 30% during the Winter Olympic Games over a normal year. Given the average spending of domestic travelers (about 119,515 KRW per person), the consumption expenditure of Korean tourists due to the hosting of the Pyeongchang Winter Olympic Games is calculated to be about 239 billion KRW, and the production inducement amount is estimated to be about 415.5 billion KRW.

The Olympic Organizing Committee will spend about 1.9 trillion KRW for the Olympic Games, and the production inducement amount is estimated at about 3,755 billion KRW.

Therefore, the economic effect on total consumption expenditures (production inducement amount) is estimated to be about 4,745.3 billion KRW.

Second, in estimating the indirect effects, if Pyeongchang becomes a global winter destination, additional tourism demand is expected to occur. Therefore, assuming that about 10% of the current 10 million foreign tourists will increase each year over the next 10 years after the closing ceremony, the expenditures resulting from additional visits by foreign tourists will be about 18.46 trillion KRW over the next 10 years, and the economic effect will be about 32.2 trillion KRW.

In addition, hosting international sporting competitions will raise not only urban (regional) brands such as Pyeongchang and Gangwon Province, but also the national brand of the ROK, which will improve the nation's corporate image and improve the economic performance of the ROK's corporations over the mid to long term. In general, considering that global companies spend about 100 million USD to raise their brand awareness by 1%, Korea's top 100 companies need to spend 10 billion USD to increase their brand awareness by 1%. Assuming that the national brand recognition and the top 100 companies' brand awareness are raised by 1% due to the Olympics, the economic effect will be equivalent to 10 billion USD (11.6 trillion KRW).

Therefore, the direct economic effect is about 21.1 trillion KRW, the indirect effect is about 43.8 trillion KRW, and the total economic effect is estimated to be 64.9 trillion KRW. To achieve these economic effects, the government should focus on enhancing national brands and make the hosting of the Winter Olympic Games an opportunity to make a leap forward in the Korean economy. ROK's corporations should also focus on expanding into overseas markets and enhancing corporate brand value by maximizing the national brand image. Korean citizens should commit to active participation in and enthusiasm for the Olympic Games to bring about national integration and economic growth.

(ii) The criteria of Winter Olympic Games success[21)]

The previous chapter considered only the positive effects of the Pyeongchang Winter Olympic Games on the overall economy. This chapter will examine the costs and benefits associated with the competition, especially the Winter Olympics in Salt Lake City and Nagano, from preparation to end, and consider the criteria of Winter Olympic Games success.

Due to the nature of Winter Games sports, most of the host cities face a cost burden after the competition. Most of the host cities of the Winter Olympic Games are not in the population or economic center of the country; usually, their population is quite small. Therefore, it is costly to construct the required infrastructure. In addition, because the popularity of winter sports is relatively low and using most of the facilities is impossible during most of the year, maintenance costs are a problem after the events.

The cost, income, and economic effects before, during, and after the Games are as follows.

Prior to the Olympic Games, facilities and infrastructure investments are made. As a result, stadiums, accommodation facilities, and media villages are built, and investments are made in social infrastructure such as transportation and electricity. Investment funds are financed by the central government, local government, and private capital. At this time, bond issuance by the central government or local government may occur. Economic effects include production, value added, and the employment inducement effects of facilities and infrastructure construction. During the competition, the Organizing Committee of the Olympic Games incurs official operating expenses. These operational expenses include personnel expenses, operating costs for the facilities, and opening and closing ceremony expenses. The revenues comprise corporate sponsorships, ticket sales, trademark revenues, IOC funding, and broadcast revenue. Economic effects include production, value added, and the employment inducement effect of the consumption expenditure of the visitors and operation expenditures. Costs after the competition comprise maintenance costs for Olympic-related facilities. Income includes revenue from local residents and athletes' use of the facilities. The economic effects involve the production and the value added from the consumption expenditure of the visitors due to the increase in popularity.

For a Winter Olympic Games to be successful, the cost of preparation needs to be restrained. If cost increases are inevitable, transparency should be ensured by disclosing changes in the plan and the decision-making process to the public and media. Second, the construction costs for fixed facilities whose utilization after the event is uncertain should be minimized.

Unlike the Summer Olympics, many of the Winter Olympic Games are not publicized, and most of them occur only during the winter season. As a result, the cost of operating the fixed facilities after the competition has been the biggest financial burden for past Winter Olympic Games. In order to prevent such problems, the stadium should be constructed in such a way that it can be easily demolished, and the accommodations should be easily changeable into rental space.

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21) This chapter is written based on the working paper, Joo, Oh and Baek (2014), "T*he criteria for Pyeongchang Winter Olympic Games' success," HRI 14-08.*

Third, it is necessary to establish a dedicated agency for facility management after the competition and to construct and operate a realistic roadmap. Prior to the Olympic Games, there should be a clear plan for the facilities management agent and profitable businesses after the event. If the facilities are transferred for the use of the local residents, they must be reduced to an appropriate size in consideration of the city's population size, income level, and age distribution.

Fourth, it is necessary to maximize the economic effect of the increase in the city's popularity as host of the Winter Olympic Games through the expansion of tourism infrastructure and product development. Before the Winter Olympics, active marketing efforts are needed to attract foreign tourists. The establishment and exploration of tourism resources and the development of products related to the Winter Olympics are needed.

Chapter VI

Policy Recommendations

Chapter VI **Policy Recommendations**

I. China (Mr. CHEN)

1. Macro-economy

(1) To participate in the "Belt and Road" initiative advocated by China and promote infrastructure development

In infrastructure construction, China, Japan, and ROK could complement each other. China has competitive advantages in price and labor force, while Japan and ROK have clear advantages in engineering and technology. The three parties could form a maritime logistics system that supports economic development by participating in the construction of public facilities at all major ports along the route, and the three parties could collaborate to ensure navigation conditions at various levels, including air–sea connections and legal guarantees, so as to establish an interconnected maritime Silk Road network and help the passages operate smoothly and efficiently.

(2) To develop emerging industries and optimize the structure of service industries

When the development of service trade between China, Japan, and ROK began, service-intensive industries dominated. Japan soon went through the primary stage of service trade and quickly turned from labor-intensive industries to high-tech and high-skill industries with a rapid rise in value-added products, which laid the foundation for Japan's later service trade. For China, vigorously developing industries with high technology content and emerging industries is important for improving the added value of export products and increasing the quality of service trade. When China is actively bringing in foreign capital, they should pay attention to the quality of foreign capital and aim to bring in advanced science and technology at the same time.

(3) To gradually open up the service trade market and strengthen cooperation in service trade

Empirical analysis of the internal structure relationship of China–Japan service trade and goods trade shows that China's exporting of transportation service and computer and information services to Japan will promote the import and export of goods between the two countries, while China's importing of tourism services from Japan will promote China's export of goods to Japan, and China's importing of transportation services royalties and licensing services from Japan will promote the import and export of goods between the two countries. While the global service trade is rapidly developing, China–Japan service trade is gradually becoming a new driving force for bilateral trade. Therefore, gradually opening up the service trade market, strengthening cooperation in service trade, and relying on modern produce services trade to promote the development of high value-added and high-tech trade in goods will promote the restructuring and upgrading of China's goods trade and enhance service trade between the three countries.

(4) To set a long transition period for sensitive products of each country while advancing the CJK FTA

Agriculture is a sensitive industry in current CJK trade negotiations, and a gradual liberalization of agricultural products trade will require tremendous effort from the three parties. A flexible tax reduction model could be considered, which first allows a portion of less-sensitive agricultural products to be phased

in to zero tariffs in order to avoid the huge impact on related industries that market liberalization will bring and to ensure that member countries can fully enjoy the benefits of trade liberalization. We can learn from the "Early Harvest Plan" implemented by the China-ASEAN FTA and allow sensitive agricultural products a longer transition period. For tariff reduction on agricultural products in transition, a reasonable period of time could be granted, and the tariff rate could be gradually adjusted to zero. For highly-sensitive agricultural products, the final tariff could be set to be above zero.

(5) To make use of the RCEP promotion negotiations to advance the establishment of CJK FTA

The RCEP was initiated by the 10 ASEAN countries and invited China, Japan, ROK, Australia, New Zealand, and India to participate ("10 + 6"). If the RCEP negotiations succeed, it will cover about 3.5 billion people and GDP of 23 trillion USD, accounting for one-third of the global total. The areas covered will also become the largest free trade zone in the world. The negotiations for China, Japan, and ROK to join the RCEP have gone through multiple rounds. Promoting the RCEP would be an effective way to promote the CJK FTA. In addition, the methods used in RCEP negotiations regarding sensitive industries and trade in services could provide a valuable reference for the CJK FTA, and better methods could be devised on that basis.

2. Olympic Economy

(1) Strengthen Olympic economic cooperation

The three countries could consider the following priorities for trilateral Olympic economic cooperation. (1) Strengthen cooperation in the ice and snow (I&S) industry. The 2022 Beijing Olympic Winter Games will serve as a catalyst for the development of China's winter sports industry. Taking this opportunity, Beijing and Zhangjiakou will build a sports industry belt, cluster, or base. To expand China's I&S industry, Japan and ROK could increase their investment in China's I&S industry market, including I&S fitness and leisure industry, high-level competition show industry, and I&S tourism industry. Building a number of top-level ski equipment manufacturing enterprises so as to form a complete industrial chain together with I&S bases and I&S tourism will make it possible to gradually build the I&S industry in China, Japan, and ROK into a pillar industry comparable to those in the US and Europe. In addition, one of the venues for the Beijing Olympic Winter Games is Zhangjiakou, a region with one of the most abundant wind and solar energy resources in North China. The three countries could step up their cooperation in wind and solar energy and jointly build a state-of-the-art international "low-carbon Olympics Area." (2) Promote cooperation in infrastructure. In infrastructure development, China, Japan, and ROK can complement each other. China has a competitive advantage in price and labor, while Japan and ROK have obvious advantages in engineering and technology. China can utilize the technological advantages of Japan and ROK and invite them to participate in infrastructure construction and investment in China's Olympic Winter Games. Japan and ROK will host the Olympic Games and will also need infrastructure investment. China can also use their own advantage and invest in Japan's and ROK's Olympic Games infrastructure development. (3) Promote cooperation in the Olympic Games market development. The domestic enterprises of each country could be mobilized to actively participate in sponsorship programs and concession plans that are conducive to their own development and are supported by the respective organizing committees. National cooperation could promote the ticketing plans of each nation among their domestic market to inspire the public to watch the games.

(2) Strengthen cultural exchanges and cooperation among the three countries and share experiences of hosting the Games.

The sharing of experiences of hosting the Games between the three countries could include the following. (1) The Olympic Games through effect. How to avoid unsustainable development after the Olympic Games is something China, Japan, and ROK must consider when formulating Olympic Games planning and urban planning. (2) The post-Games utilization of the venues. To solve the problem of idling venues, the design of the venues should pay attention not only to the functional requirements during the Games but also to the post-Games functional positioning and comprehensive utilization. The compounding and multi-functional design of the venues should be fully considered, and spaces should be reserved during the construction phase for diversified post-Games utilization. (3) Sharing experiences of hosting the Paralympic Games. Japan is the only country among the three to have hosted both the Olympics and Paralympic Winter Games and has accumulated rich experience and lessons in organizing these events, which are worth sharing with China and ROK.

(3) Establish a CJK League of Olympic Cities and set up an Olympic City Development Fund

The 1964 Tokyo Olympic Games set the precedent for an Asian country hosting the Olympic Games. Over the next four years, the three countries will host three Olympic Games, which means that more cities in China, Japan, and ROK will enter the ranks of Olympic cities.

Beijing was the host city for the 29th Olympic Games, but six other cities also participated. The Olympic sailing competitions were held in Qingdao, equestrian events were held in Hong Kong, and the Olympic soccer matches were held in Qinhuangdao, Shanghai, Shenyang, and Tianjin. In addition, Nanjing hosted the Youth Olympic Games in 2014, and Beijing and Zhangjiakou will jointly host the 2022 Olympic Winter Games. In other words, nine cities in China bear the honor of being an Olympic city. Among them, Beijing, Tianjin, and Shanghai are municipalities directly ruled by China's Central government.

The Olympic cities in ROK are Seoul (1988), Gangneung, and Pyeongchang (2018), and Japan's Olympic cities are Tokyo, Sapporo (1972), and Nagano (1998). We propose setting up a League of Olympic Cities in the three counties, which will involve 12 cities plus the three national capitals. We propose setting up offices, the Secretariat for the CJK League of Olympic Cities, to strengthen exchange and cooperation among the members, with the three capitals serving as the core for each country. As a sub-regional development league (as it involves only some cities in member countries), it has much flexibility and room for development and wide-ranging cooperation. The league would inherit the Olympic legacy, and promote economic, cultural, and social development in the Olympic cities in China, Japan, and ROK.

On the basis of the CJK League of Olympic Cities, we propose setting up an Olympic City Development Fund, which will be used for cultural exchanges, infrastructure construction, the development of the sports industry, and the promotion of Olympism in the Olympic cities of China, Japan, and ROK.

(4) Strengthen CJK exchange and cooperation in ICT field

The 2018 Olympics Winter Games in PyeongChang presented five grand visions, one of which is to make breakthroughs in the information and communication technology (ICT) field. As a combination of IT (information industry) and CT (telecommunications) services, the ICT framework will integrate the

communications industry, the electronic information industry, the Internet, and the media industry. The five-year strategic plan for the "Korean ICT 2020" (K-ICT 2020) of the ROK government announced that the government will expand its investment in the ICT sector to make it the new "blue ocean" of Korea's innovation economy. In recent years, Japan has also made progress in the development of the ICT industry, and China has made breakthroughs in some areas as well. The annual growth rate of ICT in China is expected to reach 13.3% from 2013 to 2018. The breakthroughs made by ROK in ICT have not only promoted the progress of the Technology Olympics but have also had an important impact on the technological revolution in northeastern Asia and even the whole world. China, Japan, and ROK should strengthen exchange and communication in this area, to try for in-depth collaboration to advance the level of the CJK in the ICT field together to enable northeastern Asia to maintain synchronized ICT development with the world and even lead it in some areas.

(5) Promote the development of intra-CJK tourism

China, Japan, and ROK are neighbors connected by narrow strips of water. The three countries also form an important tourist area with strong growth potential and huge potential in the global tourism market. Taking the opportunity to hold the Olympic Games to promote tourism cooperation between the three countries and strive for a goal of 30 million people trips is undoubtedly worthwhile. For example, a unified CJK tourism route could be designed that so that tourists outside CJK could go through the route and visit China, Japan, and ROK. We could establish a CJK youth tourism cooperation mechanism, formulate an exchange plan, and regularly organize exchange visits among young people, so that they could become the reserve for CJK tourism. We could create new tourist routes and promote the development of the tourism market.

In December 2016, China and ROK officially implemented a mutual visa waiver policy for official passport holders. Japan has not yet implemented a visa-free policy for Chinese tourists. Travel should not be restricted by national boundaries. The three countries could expand the scope of the visa-free policy and strive to let ordinary Chinese tourists enjoy this benefit.

The three countries can step up interconnection and increase air routes and flights between key hub cities, encourage more second- and third-tier CJK cities to open air and water routes, and help and encourage businesses to carry out tourism charter flights to make the exchange of visits among CJK tourists more direct and convenient.

II. Japan (Prof. SAITO)

The hosting of the Olympic and Paralympic Games by China, Japan, and ROK within a short period of time provides a rare opportunity for the three countries to deepen cooperation with each other. Cooperation in a well-planned and well-organized manner should benefit all three countries.

1. Macro-economy

Asia has established itself as the growth center of the world. China, Japan, and ROK have been the main drivers of Asian growth, commanding about 20% of global GDP and about 70% of the Asian GDP. It is important, therefore, that the economic cooperation between the three countries be maintained and reinforced so that the growth potential of the region is fully exhibited. In this regard, economic cooperation

could be enhanced in the areas of trade, financial transactions, and personnel exchanges.

In the area of trade, expansion of trade between the three countries is expected to continue, as the establishment and strengthening of global supply chains has become essential for firms in the region to strengthen competitiveness. For the global supply chains to fully realize their potential, trade liberalization and facilitation in the region is an important factor.

In this regard, the successful conclusion of the China–Japan–ROK Free Trade Agreement would help boost trade and economic growth in the three countries and in the Asian region. If the cooperation of the three countries could promote a wider trade liberalization and facilitation through the successful agreement of the RCEP, it will provide a greater momentum for growth in trade and for prosperity in the region. Cooperation among the three countries in liberalizing and facilitating trade would be a strong countervailing power to protectionism which, if it prevails, would undermine the strength of the global and regional economy.

In the financial sector, developing a sound financial system in each individual country and securing stable financial transactions within the region are essential for achieving steady growth in the Asian region. In this regard, establishing local currency bond markets in the region under the Asian Bond Markets Initiative (ABMI) is important for the development of a deep and stable financial system in the respective countries. To prepare for a sudden need, an arrangement such as the Chiang Mai Initiative Multilateralization (CMIM) is important. This needs to be supported by the appropriate surveillance function of the ASAE+3 Macroeconomic Research Office (AMRO). The cooperation of the three countries in these areas should help reduce the risks and enhance the stability of the global and regional economies.

Regarding personnel exchanges, the number of visitors traveling between the three countries has increased significantly in the past five years. A considerable portion of the visitors consists of tourists who enjoy the rich attractions that these countries provide. The number of tourists is expected to increase, as the Olympic and Paralympic Games in the three countries will provide additional incentives to visit. While introducing measures to further facilitate mutual visits between the three countries, the countries could also make use of the occasion to invite more visitors from other countries by strengthening cooperation in such activities as the "Visit East Asia Campaign."

2. Olympic Economy

Cooperation in the areas related to the Olympic and Paralympic Games would be an obvious and important starting point. This could occur through three channels.

First, information and experiences gained by hosting the Games can be shared by the three countries. One obvious way to achieve this is through personnel exchanges between the Organizing Committees of the Games. Members of the Organizing Committees of the preceding Games could join the Committees of the succeeding Games and pass on their information and experience. Alternatively, members of the Organizing Committee of the succeeding Games could join those of the preceding Games and bring back the information and experience to their Committees. Either way would make the Games in the three countries more successful.

Second, wider cooperation in sports can occur at local levels as well as at civic levels. Cooperation in sports

events between the hosting cities could gradually expand to include other localities. The cooperation could also start with a specific group but could later include other groups.

For example, the China, Japan, Korea Junior Sports Exchange Meet has taken place every year since 1993. In August 2017, the 25th Meet took place in Ibaragi prefecture, Japan, featuring 11 sports. The participants were athletes from the three countries who were either under 18 or high school students.

A three-country sporting event covering wider age groups is also taking place. The China–Japan–Korea Friendship Athletics Meet has taken place every year since 2014. This year, the 4th Meet took place in July in Ningbo, China. Athletes competed in seven events.

These opportunities are invaluable. To commemorate the hosting of the Games in the three countries, the meets can be upgraded to cover all ages, include the handicapped, and cover a wider range of sports.

Third, cooperation can develop into areas that are closely related to sports, such as health promotion. In view of the increasing attention being given to health in the three countries, where an aging population is imminent or is about to become significant, cooperation in health promotion will be beneficial.

Exchanging information on the health situation in the three countries and experiences dealing with the health problems faced by the elderly will help address future problems. Allowing the elderly from the three countries to exchange information will also deepen mutual understanding between the three countries' citizens.

(iii) Research activities to support cooperation

Economic cooperation will benefit from a sound analysis of the economic situation of the three countries. Analyses could examine the current economic situation of the three countries, the economic interdependency among them, the economic outlook in the short and long term, the risks the three countries face, and the policies that could improve the prospects and address the risks the three countries face.

Economic analysis of this kind has been undertaken by the Trilateral Economic Reports. Undoubtedly, it has made a significant contribution. However, to make a further step forward, research activities for the three countries should be made more systematic and consistent.

(1) Recommendations on the organization

Two approaches for fostering more systematic and consistent research activity are possible. One is to establish a permanent network of think-tanks and research institutions, which the TCS could frequently consult. This network could exchange information and analyses, and discuss matters of mutual interest, especially in the area of economic monitoring and analyses.

While the Network of Trilateral Cooperation Think-Tanks (NTCT) already exists, it could be strengthened with a fixed group of economists from think-tanks in each of the three countries, who monitor economic developments and analyze economic issues daily. They could work closely with the TCS to support the Secretariat in economic matters. It should create a solid analytical foundation that future cooperation can build on.

The other approach is to establish, within the TCS, a permanent section responsible for research activities.

It should consist of economists from the three countries who monitor and analyze the economic situation of the three countries. They could publish periodic reports on the economic situation and the policy issues of mutual interest.

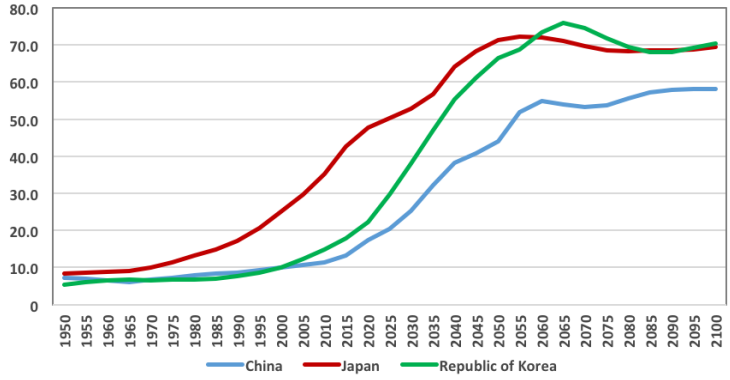
Whichever approach is taken, the research should focus not only on short-term issues but also on long-term issues of mutual interest in the three countries. For the long-term issues, the analysis would require significant time and resources and could be taken up as a multi-year project.

(2) Recommendation on the topic

Among the long-term issues of mutual interest, the impact of demographic changes and the costs and benefits of alternative measures to address their impact should be given the highest priority because all three countries are going to face an aging and declining population in the long term. This will transform the economy and society in a significant way and pose problems to the three countries that may be difficult to resolve. The expected demographic changes could be confirmed by the long-term population projection provided by the United Nations.

As Figure VI-1 shows, the old-age dependency ratio[22] of the three countries, which was 42.7 in Japan, 17.7 in Korea, and 13.3 in China in 2015, is expected to rise significantly as we approach 2100. Japan will see its peak at 72.3 in 2055, Korea at 76.0 in 2065, and China will rise to 58.3 in 2100 (the last year of projection).[23] Since the ratio can be translated as an indicator of the size of the burden on the working generation (which makes contribution for the pension benefit payments received by the elderly), the social security system will be subject to a considerable pressure in the long term.

Figure VI-1 Projection of old-aged dependency ratio



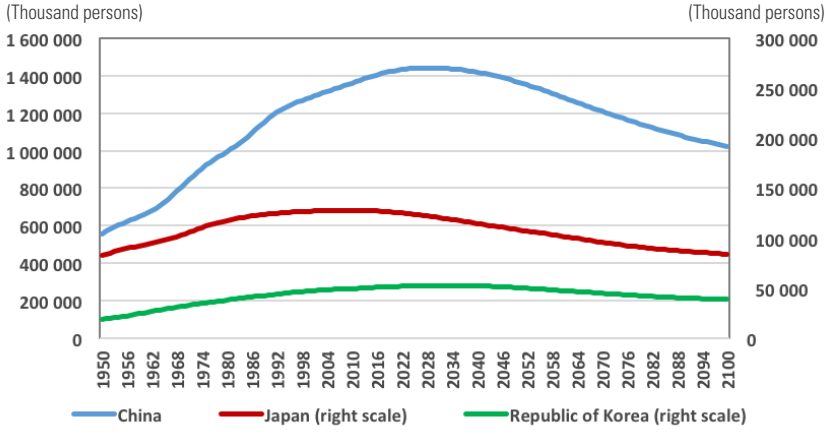
Data source: *United Nations.*

22) The old-age dependency ratio is the ratio of the population between 15 and 64 to the population aged 65 or over.

23) It should be noted that the population projection by the United Nation may be different from the projections made by the individual countries. Both the UN's old-age dependency ratio and total population projections for Japan are more optimistic than the official projections published by the Institute of Population and Social Security Research's Population Projection for Japan: 2015-2065.

Figure VI-2 shows how the population will decline, in the case of Japan, or reach a peak, in the cases of Korea and China, in the long term. The population of Japan, which has already seen its peak in 2009 at 128 million, is expected to see a decline and reach 88 million in 2100. The population of China, which was 1,397 million in 2015, will peak in 2029 at 1,442 million, and then fall to 1,021 million by 2100. Korea, whose population at 2015 was 51 million, will peak in 2034 at 53 million, and then fall to 39 million by 2100. The significant decline in population will affect economic growth in the long term because of the inevitable negative contribution made by labor input.

Figure VI-2 Projection of population



Data source: *United Nations.*

The demographic issue for Asian countries was picked up by the IMF (2017). It discussed the implications of demographic changes in major Asian countries and estimated that the changes could reduce the GDP growth rate by 1/2 to 1% in the long term in countries such as China and Japan. It also argued that strengthening of the pension system is necessary in Asia.

The problems that the aging and the declining populations create and the difficulties of dealing with them have been experienced by Japan, which has become the most aged society in the world and is already suffering from a declining population. Japan has accumulated much experience. Of course, since its development stage, underlying economic system, and economic environment differ from those in other countries, its experience might not be directly applicable to them. Nevertheless, systematic and consistent analysis of the issue should provide important lessons that can be learnt to deal with the problem efficiently.

III. ROK (Dr. JOO and Mr. OH)

1. Macro-economy

Since the global financial crisis, the world economy has failed to escape from the low-growth trend. Therefore, to strengthen global competitiveness and consolidate their economic position, China, Japan, and ROK need to strengthen the economic community by expanding and deepening economic cooperation based

on geographical proximity and high trade volumes.

China, Japan, and ROK have rapidly increased their trade volume and investment based on a mutually complementary trade structure. However, the need to expand trade through new economic cooperation has recently increased due to low economic growth in ROK and Japan, the end of China's rapid economic growth era, and the changes in the demographic and industrial structures of each country.

In order for China–Japan–-ROK economic cooperation to continue to expand, it is necessary to establish an institutional basis through a rapid conclusion of the CJK FTA.

The CJK FTA will open up a huge common market in the region by mutually opening and integrating the three markets. The three countries have different demographics and income distribution, and their market integration can expand the consumption market by diversifying the consumers. Reducing trade costs by mitigating tariffs and non-tariff barriers between the three countries will help improve the trade structure of northeastern Asia, which is vulnerable to external factors, by expanding imports and exports in the region. In addition, although there are many competitive industries in the three countries, new markets can be created based on cooperation between them because there are also many complementary industries. Moreover, the efficient distribution of production factors should be increased by mitigating regional investment barriers and by promoting manpower interchange.

Financial cooperation between China, Japan, and ROK is another important task. Based on the experience of the global financial crisis, the need for financial cooperation to mitigate external financial vulnerability has increased.

Amid the current global economic uncertainty, the three countries can reduce their external financial vulnerability by engaging in economic cooperation as well as by concluding a trilateral currency swap that provides liquidity support in a crisis. By actively utilizing it for trade settlement, the countries could enhance the international utilization of their currencies and strengthen regional financial stability.

In addition to expanding trade based on current industries, China, Japan, and ROK should strengthen regional cooperation by exploring and pioneering common-interest industries and markets. The three countries should focus on cooperation in the fields of marine, environmental, and other issues of mutual interest as well as in the development of next-generation technologies such as unconventional energy and ICT and the creation of a market for them.

To adapt to technological changes caused by the appearance of the fourth industrial revolution, the three countries have been making huge investments in technology development related to big data, artificial intelligence, and the Internet of things (IoT). In the new technology field, it is necessary to strengthen technical competitiveness in the world market by strengthening technical cooperation such as through joint R&D investments between the three countries. Cooperation is necessary in order to develop new markets and diversify export markets. Joint investments by the three countries would help mitigate the investment risk in new market exploration.

2. Olympic Economy

China, Japan, and ROK will need to strengthen sports exchanges and cooperation to take advantage of their geographical proximity, as the 2018 Pyeongchang Winter Olympic Games, the Tokyo Summer Olympics in 2020, and the Beijing Winter Olympics in 2022 will be held successively.

First, holding a regular sports policy forum among the three countries will allow policymakers in the three countries to network and communicate about sport policies. They will be able to promote cooperation in education, training, financing, and investment in sports-related fields by exchanging opinions and sharing knowledge.

Second, it is necessary to exempt foreigners from requiring visas during future Olympics in order to expand the tourism industries of the three countries. For example, foreigners who have received a visa for one country should be temporarily exempt from requiring a tourist visa for the other two countries during the 2018 Pyeongchang Winter Olympic Games, 2020 Tokyo Summer Olympic Games, and 2020 Beijing Winter Olympic Games.

Third, the sports facilities, athletic villages, media villages, and other facilities established for international sporting events in each country should be actively used as training and training sites for athletes in the three countries. Some of the facilities should be changed into cultural, performance, and educational facilities to create an integrated space for sports, culture, and the arts. It would then be possible to hold large and small regional and international events between the three countries after the Games and to promote joint sports and cultural exchanges between them. Furthermore, it is necessary to seek ways to utilize the venues as tourism resources by developing and promoting tourism attractions connected to the surrounding area.

Fourth, hosting international sporting events involving the three countries jointly and constructing distributed infrastructure and facilities in the three countries may alleviate the financial burden of hosting international sporting events. After the closing ceremony, the facilities could also be used jointly by the three countries to expand mutual exchange.

China, Japan, and ROK should expand their sports cooperation and revitalize their culture and arts industries by increasing cultural and arts exchanges, such as through the joint production of cultural and artistic events involving the three countries.

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The TCS is mandated to promote cooperation and co-prosperity among the three countries. The primary mandate is to support the trilateral consultative mechanisms including providing reference to newly established mechanisms. We also aim to become the hub of trilateral cooperation by organizing multiple projects and events. Additionally, we conduct research, explore new initiatives and promote public understanding of trilateral cooperation.

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