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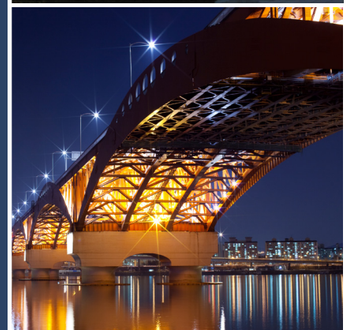

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PREFACE

May 2017

Dear Readers,

With the 31st edition of *Korea's Economy*, we have turned our focus to Northeast Asia where China and Japan represent two of South Korea's most important trading partners. Meanwhile, North Korea remains an economic and security challenge.

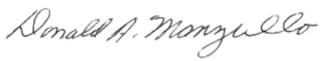
As with past years, this edition of *Korea's Economy* maintains our tradition of looking for experts both on and off the peninsula to help explain the economic situation in North and South Korea, drawing in expertise from the United States, South Korea, China, and Australia.

The current volume kicks off with a look at the current state of the South Korean economy and the role of corporate debt in the economy.

After exploring the domestic economy, we turn our attention to South Korea's economic relations with Northeast Asia. South Korea's FTA with China has now been in place a little over a year and the first article in this section explores the economic implications of this agreement. Continuing our look at South Korea's economic ties to Northeast Asia, the volume considers the importance of South Korea's economic relationship with Japan and the growing importance of economic relations with Mongolia.

Our look at North Korea focuses on three key areas for the future – industry, infrastructure, and healthcare. Here we take a fascinating look at the current state of infrastructure in North Korea, where it may surprise many to learn that North Korea has more kilometers of rail than South Korea. We also give our readers a better understanding of the state of industry and healthcare in North Korea.

We hope that you enjoy this edition of *Korea's Economy*. We look forward to continuing to produce objective and timely analysis of issues affecting South Korea's domestic economy and its economic relations with nations around the world.



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PART I: OVERVIEW AND MACROECONOMIC ISSUES

WHAT LIES AHEAD? KOREA'S LONG-AND SHORT-TERM CHALLENGES[1]

By Edda Zoli

Abstract

For decades Korea has had a remarkable track record of economic performance. But growth has now declined, and Korea may find it difficult to move quickly to the OECD income frontier. Moreover, Korea faces serious structural challenges, many of which will imply a further decline in potential growth. These include demographic shifts, export dependence, structural weakness and corporate vulnerabilities, and the labor market. With the economy facing major structural headwinds, a comprehensive set of measures are needed in a number of areas, including corporate restructuring, labor market reform, and productivity enhancement.

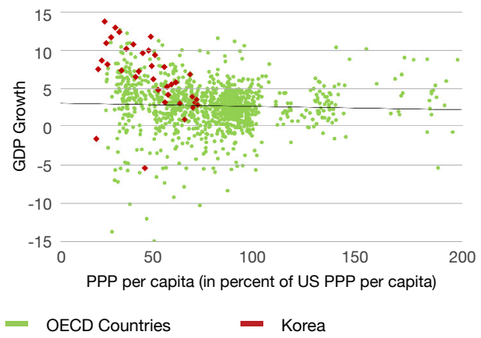
Structural Headwinds Weigh on Korea's Future Income Convergence

For decades Korea has had a remarkable track record of economic performance. The government-guided export-promotion strategy was very successful, yielding an average growth of more than seven percent for nearly 50 years. Per capita income surged from five percent of that of the United States in 1960 to around 55 percent by the time of the global financial crisis. Within two generations, Korea vaulted into the OECD, its goods and services became known around the world, and its national corporate champions entered the ranks of the world's most recognized companies. At the same time, the fruits of this success were widely shared. The land reform in the 1950s, low-cost education, a dynamic business environment and high social mobility helped facilitate an egalitarian development path.

But growth has now declined, and Korea may find it difficult to move quickly to the OECD income frontier. The economy has suffered a series of exogenous shocks since the global financial crisis, but underlying growth prospects also appear to have weakened. Potential growth has dropped quite dramatically— from seven percent in the early 1990s to less than three percent now. Moreover, Korea faces serious structural challenges, many of which will imply a further decline in potential growth. These include:

- *Demographics.* Korea is also one of the world's most rapidly aging societies. The fraction of the population that is of working age is projected to peak in 2017 and decline rapidly thereafter, depressing potential employment and growth. The overall population is expected to start declining after 2025, with negative implications for domestic demand.
- *Export dependence.* Korea's economic success came on the back of exports, but that heavy reliance may now be a liability in a world of slowing trade. With exports exceeding 50 percent of GDP—one of the highest shares among advanced economies—Korea is heavily exposed to spillovers, particularly from China, its largest trading partner. China's slowing growth, rebalancing toward domestic demand, and moving up the value chain will all affect Korea substantially.
- *Sectoral weaknesses and corporate vulnerabilities.* Some of the heavy industrial sectors that underpinned Korea's past growth—for instance, shipbuilding, shipping, steel, and petrochemicals—are now facing bleak prospects globally given the trade slowdown and competition from China. As in other countries, excess capacity in these sectors may need to be shed. While Korean corporates overall appear relatively healthy, there are a number of firms in these particular sectors that are struggling and will need to be restructured.
- *Labor-market issues.* Korea's problem of a declining working-age population is compounded by labor-force participation rates, particularly for females, that are below the OECD average. In addition, the highly segmented labor market is distorted and inefficient—employers' easy access to "non-regular" labor not only promotes inequality among workers but also leads to under-investment in firm-based training; separately, the heavily seniority-based compensation system leads firms to push older, more skilled workers into early retirement, to the detriment of overall labor productivity.
- *Lagging productivity.* Labor productivity is particularly low in the service sector—much lower than in peer economies, and only half that of manufacturing—reflecting in part regulatory barriers to competition. Productivity is also disappointing among SMEs—just one-third of what it is among large enterprises (and down from one-half in the late 1980s).[2]
- *Insufficient social protection.* Korea has rapidly traversed from emerging- to advanced-economy status and has not yet built a comprehensive social safety net. The Basic Livelihood Security Program (BLSP), introduced in 2000, provides cash and in-kind benefits to the most vulnerable but is substantially less generous than the OECD average. The National Pension System (NPS) currently covers about one-third of the elderly, and pension benefits were only around one-quarter of the average wage in 2015.[3] These inadequacies boost private-sector precautionary savings and depress consumption and growth. They also may have contributed to increasing household debt: many retirees borrow to open (risky) small businesses, in an attempt to supplement their incomes. Total social spending amounts to just 10 percent of GDP, less than half the OECD average, and while population aging will drive this up sharply over the long run, social spending will remain relatively low for the next twenty years, with multiple adverse consequences.
- *Rising household debt.* This represents both a short-term vulnerability, with possible risks to financial stability, and a structural issue, insofar as high debt can depress households' propensity to consume and dampen medium-term growth.

Figure 1 OECD Countries - GDP Growth and PPP per capita income (1980 - 2007)



Source: IMF, World Economic Outlook

Income inequality and poverty are also issues that are increasingly on the radar screen. Korea's Gini coefficient had fallen to among the lowest in the world in the mid-1990s and then rose somewhat in the wake of the Asian crisis. While the Gini coefficient remains near the OECD average today, the gap between the richest and poorest quintiles is now slightly higher than average. Moreover, social mobility, traditionally achieved through education and entrepreneurship, is not as strong as in the past—only 20 percent of households were able to move to a higher income bracket between 2011 and 2014, while a similarly sized share slid into a lower bracket. Finally, relative poverty rates, particularly among the elderly, are among the highest in the OECD.[4]

The Financial Sector is Overall Sound, but High Household Debt and Pockets of Corporate Weaknesses Create Vulnerabilities

The financial system remains resilient. Financial soundness indicators—capital adequacy, liquidity, and asset quality of both banks and non-bank financial institutions (NBFIs)—are relatively strong on a point-in-time basis, but they may weaken as banks realize losses on exposures to firms affected by the economic slowdown. Bank credit growth has weakened recently and could slow further given elevated credit risk in the corporate sector. In addition, bank profitability is very low by international standards, possibly on account of banks' policy responsibilities, as well as the low nominal interest rate environment.

Household debt is high. Debt reached 163 percent of net disposable income—above the OECD average of 131 percent. Some key drivers of household debt have been: (1) population aging;[5] (2) a sustained rise in *chonsei* prices;[6] and (3) the recovery in housing prices.[7] Against this background, the authorities announced more stringent bank screening of loan applications, a faster restructuring of the mortgage market toward amortizing and fixed-rate loans, and tighter LTV limits on nonbanks' nonresidential mortgages. The authorities are also planning to introduce comprehensive debt-service ratio (DSR) monitoring for bank borrowers by the end of the year. Following the announcement of these measures, which are under gradual implementation, the growth of household bank mortgages began to moderate—as did house prices—though other household loans continued to grow rapidly.

These measures, though, do not apply to household loans extended by non-bank financial institutions (NBFIs), such as insurance companies,[8] mutual credit cooperatives, savings banks, and securities companies, which accounted for about one-third of the growth in household credit in 2015. In fact, the growth of nonbank household credit has accelerated and may continue doing so as banks' lending standards tighten.

Pockets of vulnerability persist in the corporate sector. Aggregate corporate leverage is moderate, with nearly 90 percent of companies having a debt-to-equity ratio of less than two. But the financial soundness of firms in certain export-oriented industries, as well as construction, has deteriorated as sales have slumped. The share of vulnerable firms—those with an interest-coverage ratio below 1.5—has been high since the global financial crisis and rose beyond 35 percent last year. The authorities have taken steps to foster corporate restructuring and announced plans to recapitalize two major policy banks, Korea EXIM and KDB, that have substantial exposure to vulnerable sectors and could face losses as a result of restructuring.

A Modest Recovery from Recent Year Sluggishness is Expected in the Short-term

With the Korean economy buffeted by the MERS shock and the global trade slowdown, growth dropped to 2.6 percent in 2015, notwithstanding substantial fiscal and monetary stimulus, and remained tepid in the first part of 2016—with some acceleration in Q2.

The weak external environment has weighed heavily on Korea. As in many other regional economies, nominal exports fell sharply during 2015 and early 2016, with the largest declines seen in exports to Asian partners and emerging markets in other regions. Export volumes held up somewhat better but have declined this year. Reflecting Korea's integration in global supply chains, the drop in exports led to a decline in imported parts as well, and given soft domestic demand and low commodity prices, overall imports fell even more sharply than exports did, pushing the current account surplus to a record-high 7¾ percent of GDP in 2015.

Korea experienced portfolio outflows last year and in early 2016—in the aftermath of the RMB tantrum in the summer of 2015, in anticipation of Fed "lift-off," and, to a lesser extent, following Brexit. However, net portfolio flows seem to have turned positive since June this year. After two years of appreciation, the real effective exchange rate began to weaken, and the authorities appear to have sold foreign-exchange reserves during several months over the past year. Brexit led to initial sharp losses in Korean equities and the value of the *won*, but these were largely reversed in the following weeks.

Reflecting economic slack and low oil prices, inflation has been subdued. Headline CPI inflation dropped, by early 2015, to its lowest levels since mid-1999 and even now remains below one percent, much lower than the Bank of Korea's target, which was recently reduced from a range of 2½ – 3½ percent to 2 percent. Core inflation has been more robust, with some moderation in 2016.

Growth is expected to tick up to 2.7 percent this year and 3.0 percent in 2017, supported by recent monetary and fiscal stimulus and a stronger housing market. On the other hand, export prospects will likely remain difficult. In turn, sluggish exports, together with heightened uncertainty, will weigh on fixed investment. Inflation is projected to remain subdued.

Risks to the near-term growth outlook are on the downside. The main near term external risks include slower growth in Korea's main trading partners (China, U.S., EU) and a re-emergence of global market stress, particularly after Brexit, which could affect capital flows. Domestically, the rebound in private consumption could remain tepid on account of increasing household leverage and weakened confidence following Brexit. Corporate restructuring could lead to higher unemployment and weaken consumption. Besides, corporate restructuring, while essential for the longer term, could have an adverse short-term impact on banks' balance sheets, hampering their ability to extend credit and causing them to tighten lending standards.

Policies to Boost Potential Growth and Foster Inclusion

With the economy facing major structural headwinds, a comprehensive set of measures are needed in a number of areas, including corporate restructuring, labor market reform, and productivity enhancement. Fiscal policy can play a complementary role, to incentivize these reforms and to cushion their near-term impact. In addition, social safety nets should be strengthened, both to address inequality and poverty, and also to boost consumption-led growth and contribute to rebalancing toward domestic-led (as opposed to export-led) growth. Given long-term fiscal pressures, enhanced social spending would eventually need to be paid for with revenue increases (or cuts in other expenditure), and the authorities could commit to this, and thus ensure debt sustainability, by introducing a set of formal fiscal rules.

Corporate Restructuring

The authorities have made substantial progress on corporate restructuring. A three-track approach has been devised, covering: (1) shipbuilding and shipping; (2) more routine cases of individual distressed firms across the economy; and (3) the overcapacity sectors of steel, petrochemicals, and construction. Broad plans for Track 1 have already been announced. Moreover, the authorities also announced their intention to further improve policy lending (including the banks' capacity to handle corporate restructuring). In addition, to minimize the impact of corporate restructuring on employment and the regional economy, the government on June 30, 2016 designated the shipbuilding industry as a sector that would require special support. Tracks 2 and 3 may proceed with minimal government involvement, with the latter aided by the recently passed "one-shot" law, which streamlines procedures and offers tax incentives for mergers and acquisitions.

Speedy implementation of corporate restructuring, including not only financial but also operational restructuring of distressed firms, combined with social spending to help affected workers is critical. Resolving the debt overhang could meaningfully boost investment and stimulate hiring. Importantly, the international evidence suggests that corporate restructuring is associated with higher GDP growth afterward, and that swift, decisive action is vital.

Appropriately, the authorities have taken preemptive measures to safeguard the capital position of the policy banks. The recapitalization of these institutions should receive adequate fiscal support as it is the responsibility of the fiscal authorities, although procedural constraints have also implied a short-term role for the BOK in providing bridge financing. The Bank of Korea (BOK) involvement is consistent with its mandate for price and financial stability, but to ensure continued monetary independence and fiscal accountability, the exposure should be unwound—i.e., either repaid from fiscal resources or sold through markets—as soon as possible. Moreover, the government should back up its intention to support an early exit of the BOK by providing sufficient resources for recapitalization in the budget. At the same time, the financial supervisory authorities should continue to monitor commercial banks' exposure to vulnerable sectors, and continue to require banks to maintain sufficient loan loss reserves.

Labor Market Reforms

The September 2015 Tripartite Agreement between unions, employers and the government contained many important reforms but later lost support from some key actors. A package of labor laws, based on the Tripartite Agreement, is now stalled in the National Assembly. The government remains committed to labor-market reform and has issued policy guidance to employers to promote the "wage-peak" system, emphasize performance-based assessment, and clarify conditions for dismissal.

Going forward, it will be crucial to address market segmentation, which results in youth unemployment, inequality, and insufficient investment in training. A priority is to dampen firms' incentives to hire non-regular workers by fostering cooperative labor relations, expanding benefits for non-regular workers, and reducing labor-market rigidities by introducing performance-based assessment and clear conditions for dismissal. In addition, broadening access to training for non-regular workers will foster productivity.

Boosting female labor force participation is another priority, given the expected decline in the labor input because of aging. Addressing labor market duality will help improve female job participation and increase birth rates, but further measures are also needed—these could include providing well-targeted support for childcare, facilitating flexible work arrangements, improving work-life balance, enhancing job search and training support, and addressing gender-based job inequalities.

Productivity Enhancement

Boosting productivity in the service sector and among SMEs should be another area of focus. This would require easing the regulatory environment for upstream service sectors (e.g., electricity, gas, and rail), which is very stringent in international comparison. Significant productivity gains can also be achieved by promoting competition and deregulation in healthcare, education, and professional services. As for the SMEs, government policy should prioritize fostering growth and innovation, rather than shielding less competitive firms. Korea is one of the countries most exposed to the rebalancing of China's economy, so it may need to move further up the value chain, develop sectors that benefit from increased consumption in China, and enhance its traded services sectors; as all that happens, the SME sector will also need to respond dynamically.

Against this backdrop, the government recently announced a three-pronged strategy to strengthen the service sector. The plan includes: (1) promoting synergies between services and manufacturing; (2) revamping infrastructure oriented toward services; and (3) nurturing new businesses, notably in healthcare and tourism. To this end, the government will provide greater tax benefits and other financial support and will also embark upon deregulation to promote competition. The overall objective is to ensure that public policy supports both manufacturing and services in an equitable fashion, and the authorities' aim, in this way, to promote the creation of 250,000 new jobs in the service sector, and to increase the sector's share of the economy from 60 percent currently to 65 percent by 2020.

Complementary Fiscal Policy

Fiscal support should be mobilized to incentivize and cushion any adverse impacts of structural reforms. Additional, well-targeted subsidies for children and for childcare, for instance, could stem declining fertility and improve labor force participation. Fiscal incentives could perhaps be designed to make Korea's substantial R&D activity more effective, complementing the authorities' efforts to promote a "creative economy." And fiscal support, including unemployment insurance benefits, retraining opportunities, and job-search facilities, could assist workers affected by corporate restructuring or labor market reforms—this would allow more equitable outcomes and increase the likelihood of developing consensus for structural reforms.

In addition, a carefully targeted expansion of social expenditure, sustained over the medium term, could yield multiple benefits. Increasing social spending would directly reduce relative poverty among vulnerable groups such as the elderly, nearly half of whom are poor.[9] It could also—by increasing those groups' disposable income and reducing households' need for precautionary savings—boost consumption-led growth and reduce the economy's reliance on volatile external demand. It could contribute to financial stability by reducing retirees' borrowing to open small businesses. And it would give the authorities more room to rationalize support to SMEs, thus boosting labor productivity. There is scope for increases in the basic income as well as the national pension, among other programs. Additional spending to strengthen the public education system would also be desirable.[10]

To preserve sustainability, revenue increases will be needed in the long term to pay for expanded social spending, and fiscal rules could help ensure that these materialize. Increasing revenues too early would, by reducing household disposable income, undercut the desired boost to consumption and growth. But given the long-run fiscal challenges facing Korea, it is clear that compensatory measures will be needed eventually. Increases in social contributions would be a natural place to focus,[11] and tax measures could also be considered—at just 21 percent of GDP, Korea's revenue burden is currently one of the lowest in the OECD. A set of fiscal rules could help make the authorities' commitment to future measures more credible.

Policies to Provide Short-term Support, Address Vulnerabilities and Rebalance the Economy

Given the weak conjuncture and downside risks, macroeconomic policies should remain supportive. The authorities have already been proactive in their short-term policy responses, recently approving a fiscal stimulus package and cutting the policy rate, both of which were appropriate.

The fiscal stimulus package includes 11 trillion *won* supplementary budget, as well as spending through other channels, such as the SOEs. It features a broad mix of measures including: larger unemployment benefits; economic support, via public infrastructure spending and other measures, of the regions most affected by corporate restructuring; an increased tax deduction for housing rent; and tax incentives for the replacement of old diesel cars and for the purchase of highly energy-efficient home appliances, to name just a few elements. While the government expects that these measures will largely be paid for by revenue overperformance (and thus will not require additional borrowing), this nonetheless represents discretionary stimulus to the economy. The package should be implemented as soon as possible, and going forward, the macro policy stance should remain supportive.

Monetary policy should also continue to stay supportive. Monetary policy may not by itself provide strong stimulus—it could create negative wealth effects for deposit holders, it could raise *chonsei* prices[12] and thus reduce renters' disposable income, and it will not address structural factors behind weak investment and exports. Nonetheless, a coordinated fiscal and monetary easing stance can send a strong signal and boost confidence.

Macroprudential standards should be tightened to contain risks to household debt. The authorities have responded to the rapid growth of household debt with several measures, but the DTI cap of 60 percent remains high in international comparison and should gradually be tightened toward 30 to 50 percent. The DTI cap should also be extended to apply to other types of household debt (including so-called "group loans").[13]

The recent acceleration in non-bank lending deserves close monitoring, not only because of the risks nonbank credit has posed in other countries (and indeed, in Korea as well, during the past), but also because, in Korea's highly tiered financial system, nonbanks cater to less creditworthy customers and thus face elevated risks. To contain risk, prudential regulations should be harmonized across banks and nonbanks. This includes insurance companies, which engage in direct lending to policyholders but may have limited expertise in assessing credit risk, as well as savings banks and mutual credit cooperatives, which have looser capital requirements than commercial banks, and whose lending is often used by households to finance risky small businesses.

With regard to the institutional framework for prudential policy, separating macroprudential policymaking from crisis management would increase transparency and accountability among the relevant agencies and ensure greater independence.

The authorities are appropriately planning to ease measures aimed at curbing capital inflows that were introduced after the global financial crisis to contain exposure to liquidity and foreign-exchange risk. These included a ceiling on banks' loan-to-deposit ratio, a leverage cap on banks' foreign exchange derivatives positions, and a levy on foreign exchange funding.[14] These measures were successful in increasing financial sector resilience by limiting exposure to liquidity risk, reducing maturity mismatches caused by short-term FX borrowing, and more generally lengthening the maturity of the financial sector's FX borrowing. Now, given that the pressure of capital inflows has declined, the authorities' decision to relax some of these measures is appropriate.

The exchange rate should continue to be allowed to move flexibly, with intervention remaining limited to addressing disorderly market conditions. A flexible exchange rate will help the economy to weather external shocks, a role that can be supported with appropriate macroprudential measures, such as the planned FX liquidity coverage

ratio. Publishing data on intervention, with an appropriate lag, as in most advanced economies, could be also considered.

Many of the policies described above will tend to reduce savings, boost investment, and support growth. Korea's large current account surplus will moderate slowly over time, and the economy will be able to rebalance away from weak and volatile external demand. The exchange rate will need to be flexible to accommodate this transformation, and to help the economy weather external shocks.

[1] Prepared by Edda Zoli, Senior Economist, International Monetary Fund.

[2] OECD Economic Surveys: Korea 2016.

[3] OECD Economic Surveys: Korea 2016.

[4] OECD Economic Surveys: Korea 2016.

[5] Many of the elderly borrow once retired so as to open small businesses with which to supplement their old-age income.

[6] Under the chonsei rental system, two years of rent are typically paid with an upfront deposit, which is often borrowed from a bank. Landlords have steadily been demanding higher deposits in recent years on account of lower interest rates.

[7] House prices have been rising in the Seoul metropolitan area, while prices in other regions have weakened after increasingly rapidly over the past few years.

[8] Insurance companies in Korea can—unusually, in international comparison—make direct loans to households, including both mortgages and loans collateralized by the value of insurance policies.

[9] OECD Economic Surveys: Korea 2016.

[10] Improving the quality of schools and access to public afterschool tutoring would reduce Korean households' private spending on education, which, at 38 total spending, is nearly double the OECD average.

[11] In this context, a faster pace of increases in the retirement age could also be considered. Automatic adjustment mechanisms could also be envisaged, whereby the authorities would commit to introducing a particular revenue measure if the debt, or the deficit, breached a certain threshold.

[12] Landlords tend to ask for increased chonsei deposits when rates fall in order to keep their interest income up.

[13] These are taken by a group of prospective apartment buyers and guaranteed by developers and public credit guarantee corporations.

[14] The application of the macroprudential stability levy was expanded to NBFIs in 2015, while the application to short-term FX borrowing was narrowed.

PART II: FINANCE

CORPORATE DEBT MARKET IN KOREA

By Paul Moon Sub Choi

Abstract

This report conducts an analysis of the corporate bond market in Korea and the changes in interest rates and term structure since the 1997 Asian financial crisis. The potential risks and solutions for stabilizing the corporate debt market are discussed. Corporate bonds not only play an important role in financing long-term corporate investments but also have a positive and persistent influence on enhancing the capital markets. Thus, the authorities in Korea have attempted to increase the proportion of corporate bonds, which is a means of direct financing, rather than bank loans. Implementing specific plans to stabilize the corporate debt market that are mentioned in this report are critical to sustaining the Korean capital markets as a means towards continued economic growth and prosperity.

Introduction

Since the 2008 global financial crisis, there has been remarkable growth in the size of the corporate bond market worldwide due to several factors, including a decrease in long-term U.S. Treasury bond yields. In particular, the corporate bond issuance of the Asian emerging markets, whose corporate debt market was not as developed in the past, increased significantly. Korea also increased its corporate bond issuance, particularly through large corporations and blue-chip companies, which led to a higher level of dependence on direct financing. Accordingly, the importance of corporate bonds as a companies' means of external financing is gaining momentum.

This report conducts an analysis of the corporate bond market in Korea and the changes in interest rates and term structure since the 1997 Asian financial crisis. The potential risks and solutions for stabilizing the corporate debt market are discussed. Corporate bonds not only play an important role in affordably financing long-term corporate investments without diluting managerial control and sharing future cash flows[1] but also have a positive and persistent influence on enhancing the capital markets. Thus, the authorities in Korea have attempted to increase the proportion of corporate bonds, which is a means of direct financing, rather than bank loans. The implementation of specific plans to stabilize the corporate debt market mentioned in this report are critical for sustaining the Korean capital markets as a means towards continued economic growth and prosperity.

This report covers a briefing of the types of corporate bonds in Korea; trends of interest rates and changes in the term structure in Korea since the Asian financial crisis; and the market mechanism and current issues of corporate debt securities, including potential risks, in Korea.

Types of Korean Corporate Debt Securities

In Korea, corporate bonds are categorized into bonds with guarantees or collateral, ways of paying interest, and the rights given to the holders of corporate bonds.

Bonds with Guarantees or Collateral

Guaranteed bonds refer to corporate bonds for which a financial institution guarantees the redemption of the principal and interest payments. These guarantees are provided by banks, the Korea Credit Guarantee Fund, the Korea Technology Finance Corporation, merchant banks, financial investment companies, and surety insurance companies. The issuing company pays a guarantee fee to the guaranteeing company. Collateral bonds are secured by physically guaranteeing the redemption of the principal and interest payments. They are issued in accordance with the Secured Bond Trust Act.

Non-guaranteed bonds are issued based on the issuer's credit without a guarantee or collateral provided by a financial institution for principal redemption. Most Korean corporate bonds are issued as debentures. The underwriters of bonds are required to undergo credit assessments of their debentures from two or more different credit rating agencies.

Bonds Categorized by Interest Payment

Coupon bonds refer to corporate bonds with coupons denoting the payment of interest on a regular schedule. Discount bonds are corporate bonds where the principal and interest rate are paid at the par value upon expiration, with the discount being the de facto interest. Compound bonds involve the computation of compound interest for the interest cycle. Thereafter, the principal and interest are paid in a lump sum on the date of maturity.

Bonds Categorized by Redemption Period

Depending on the redemption periods, bonds can be divided into short-term bonds, medium-term bonds, and long-term bonds. Generally, short-term bonds have redemption periods under one year; medium-term bonds, between one year and five years; and long-term bonds, over five years. Of note, long-term bonds refer to bonds that mature in 10 or 20 years in the United States.

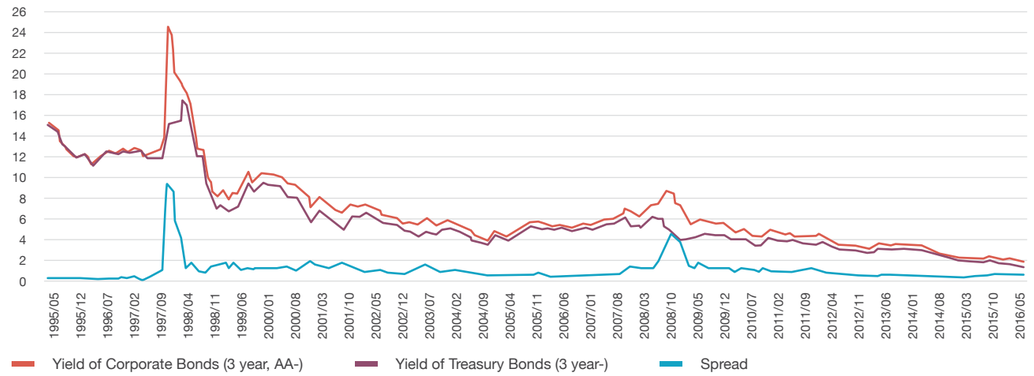
Bonds Categorized by Method of Interest Payment

There are fixed-income bonds and floating rate notes (FRN), depending on how interest is paid. Fixed-income bonds involve the payment of fixed periodic returns, and FRN has a variable interest rate that is linked to the benchmark interest rate.

Bonds Categorized by Bondholder

Convertible bonds (CB) can be converted to the issuing company's equity under certain conditions. Bonds with warrants entitle the holder to purchase a certain quantity of any future issue of the company's stocks at a fixed price after a set period of time has passed. Exchangeable bonds permit the holders to exchange their bond holding for the listed shares of a company under previously agreed conditions within a set timeframe. Participating bonds entitle the holder to receive dividends. Bonds with embedded options allow the issuer to redeem all or part of the bond before it reaches its maturity date. The options include call options such that the issuer can redeem the principal and interest before maturity and put options, which allows the holder of the bond the right to demand the issuer to repay the principal on the bond.

Figure 1 Interest Rate Spread



Source: Economic Statistic System, Bank of Korea

Trends of Interest Rates in Korea since the Asian Financial Crisis

Corporate and Government Bond Yields after the Asian Financial Crisis

As Figure 1 shows, the corporate bond yield underwent dramatic changes after the Asian financial crisis in 1997 and the global financial crisis in 2008.

During the 1997 Asian financial crisis period, the corporate bond yield rose sharply. The three-year yield of corporate bonds with a rating of AA- exceeded 24 percent by the end of 1997, broadening the gap between the corporate bond yield and the government bond yield from 0.1 percent to over 9 percent. As a result, the government established the Bond Market Stabilization Fund (BMSF) in September 1999, and it began to purchase bonds. Its funds consisted of two trillion *won* from banks and 500 billion *won* from insurers. The target bonds for purchase were mostly corporate bonds since the purpose of the fund was to restrain the increase in bond yield and promote the smooth financing of companies. However, due to the insolvency of some conglomerates, such as Hyundai and Daewoo, the corporate bond market shrunk significantly in 2000, and the spread between its yield and the government bond yield widened. After this period, the interest rates of corporate bonds with high ratings (AA- or above) showed a similar trend with the government bond yield, but maintained a spread of 100 bps. On the contrary, the yield of corporate bonds with low ratings (BBB-) showed a high spread of 550 bps.

After the insolvency of Lehman Brothers, the global financial crisis reached its peak, and this led to a credit crunch that included an increase in financial instability and a preference for stable assets. In response to this credit crunch, the Bank of Korea started to lower the base interest rate, and the government bond yield followed suit. Since credit crunches and liquidity crunches were prevailing in the market, the corporate bond yield increased rapidly, from six percent at the beginning of the year to eight percent at the end of the year during the same period. As a result, the spread between the corporate bond and government bond yields broadened.

After March 2009, the global financial market started to stabilize due to decreasing policy interest rates worldwide, stabilization plans for financial markets, and capital expansion for financial companies. Following this global change, the credit crunch and liquidity crunch in Korea's financial market were also alleviated. Accordingly, after the middle of 2009, spreads of companies with high-credit rates returned to the usual rates.

Structural Change in Corporate Bond Yield

By observing the Korean bond market, we can figure out that the structure of interest rates is essentially changing. Before the 1997 IMF bailout crisis, the economic growth rate and inflation rate were the key factors that affected the interest rates, but since the crisis, the risk premium has played a key role in the fluctuation of interest rates.[2] As Figure 2 shows, there has been a significant shift in the composition of the interest rate.

The interest rate of a corporate bond is the value of the risk-free rate added to the risk premium. Moreover, the risk-free rate is determined by the economic growth rate, which is the real growth rate plus the inflation rate, because it depends on the total productivity of all companies in the country. The real GDP growth rate decreased from 8.8 percent in 2000 to 2.0 percent in 2012, while the inflation rate maintained at a similar level (2.3 percent in 2000 and 2.2 percent in 2012), leading to a nominal growth rate of 4.2 percent. Meanwhile, the risk premium increased significantly, from 0.7 percent to 5.1 percent. In short, the proportion of risk premiums

within the bond yield increased significantly, while that of the economic growth rate decreased. The Korean bond market is in the midst of a continuously rising risk premium, which is the cost of economic risk and uncertainty, and a worsening financing environment of companies, especially firms under financial distress. Under this low-growth and high-risk economic condition, households and companies are expected to experience difficulties. It is challenging to promote corporate investments in an environment where not only the return on investment is expected to be low but also the risk premium is prohibitively high, resulting in steep costs of capital.

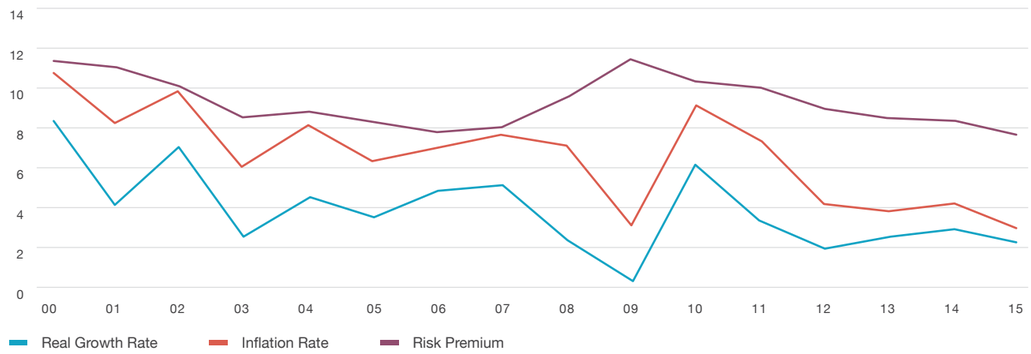
Characteristics of the Structural Change in Bond Yields

Abnormally Low Risk-Free Rate

The ideal level of interest rate is the inflation rate added to the potential growth rate, at which the risk premium is zero. Of course, it is almost impossible to expect this golden rate in our reality full of uncertainties.

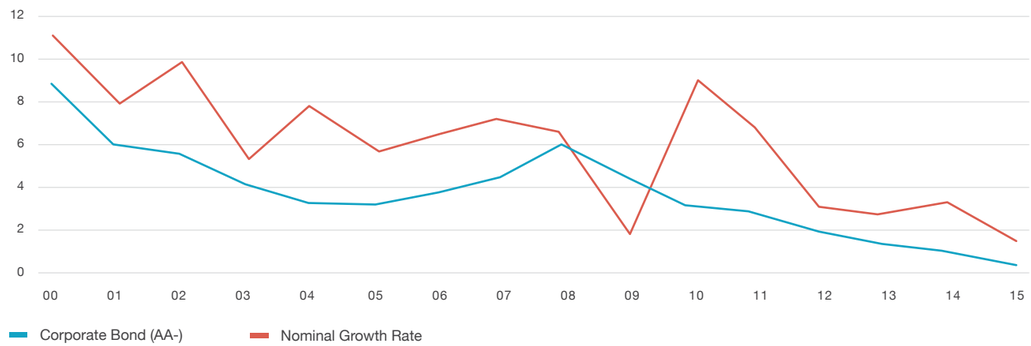
As Figure 3 shows, the interest rate of risk-free bonds in the Korean market is far below the ideal rate, which is the nominal growth rate (growth rate plus inflation rate). This huge gap between the market interest rate and the ideal interest rate

Figure 2 Composition of Interest Rate in Korea



Source: Economic Statistic System, Bank of Korea

Figure 3 Trend of Nominal Growth Rate and Corporate Bond Yield (AA-)



Source: Economic Statistic System, Bank of Korea

shows us that the financial sector does not properly reflect the economic outcomes of the real sector. The fact that the interest rate, which is the link that connects the financial markets and the real economy, is diverging away from the standard level means that the function of financial linkages has weakened. In other words, investors who invest in risk-free bonds with AA ratings or above receive lower interest and thus cannot properly collect their economic opportunity costs. On the contrary, firms with low credit ratings face the difficulty of paying exorbitantly high capital expenses due to such excessive risk premiums.

Expansion of Risk Spread

In the Korean bond market, the gap between the interest rates of different levels of risk—the risk spread—is widening. The interest rate of risk-free bonds hovers lower than the optimum level, while that of corporate bonds issued by companies with low credit ratings are abnormally high. In other words, risk and uncertainty are deepening in the Korean market, although the economy has entered a low-growth and low-interest period, which shrouds the current murky environment of business operations. The expansion of the risk spread means that risk aversion among economic subjects is increasing, and the economic sentiment, or the mental state that drives the economic behavior of people, is waning. In other words, the bond market is not neutralizing the risks. The market originally had a function of neutralizing risk by maintaining a balance between risk lovers and risk averters. However, in a situation where the risk premium is excessively high, a possibility of a credit crunch lurks in the market whenever there is an internal or external shock. Thus, large corporations, as well as small and mid-sized firms, cannot avoid trouble in financing under low credit ratings.

Corporate Debt Market in Korea

Market Mechanism

Corporate bond markets connect debt-instrument investors to companies operating in the real economy in need of funding (1) by allocating growing private savings pools in productive corporate investments; (2) by providing finance to companies seeking business expansion; (3) by encouraging broader ownership of assets for production; and (4) by providing facilities for the competitive transfer and transfer pricing of capital resources.

Companies issue bonds to raise funds for particular time-limited investment projects or business needs. Much of the trading activity in corporate bonds takes place in the primary market at issuance or shortly thereafter. Securities companies help the issuing company structure the issue to match its financial needs and investor demand and to minimize the frictional costs of advisory; they also underwrite the issue and take on the risk of placing it with investors, providing the company with immediate security of funding. Trades in secondary markets are typically infrequent and in large size. Dealers play a significant role.

In a supposedly efficient bond market, investors' confidence is sustained by stable issuances and market processes. Standardized documentation and issue processes, with high levels of transparency and regulation, contribute to maintaining an ideal corporate bond marketplace. Transparency leads to the efficient pricing of debt instruments, the efficient allocation of capital resources, the effective promotion of high standards of corporate conduct, and the stimulation of healthy credit. Although liquidity in the secondary debt market was aggravated following the 2008 financial turmoil, the corporate bond market in Korea sustained its function and role

Market Size and Growth

Soon after the 1997 Asian financial crisis, the proportion of funds raised from the corporate bond market in relation to the total borrowings of the bond market maintained a high level of 30 percent.[3] Starting in 2000, that proportion fell; a decrease in the debt-to-equity ratio of companies and an increase in bank loans also occurred. However, after the 2008 global financial crisis, the issuance of corporate bonds experienced a huge turnaround with the help of lower interest rates, and the proportion of corporate bonds increased to 14.8 percent by the end of April 2014.[4] Also, the proportion of corporate bonds and that of bank loans are moving in opposite directions, as the two sources have a complementary relationship. Amid a credit crunch, the supply of credit through loans tends to shrink and the issuance of corporate bonds increases.[5]

Scale of Issuance by Company Size

In terms of company size, large companies have led the corporate debt market, issuing a majority of the total corporate bonds. In the first quarter of 2013, the proportion of corporate bonds issued by large firms reached 100 percent. On the contrary, the issuance of corporate bonds by small and medium-sized enterprises (SMEs) continued to dwindle; it had a volume below 100 billion *won* (less than $100 million) in 2012 and recorded zero in the first quarter of 2013.[6]

Scale of Issuance by Credit Rating

With respect to credit rating, firms with high credit ratings (AA or above) issued more than 80 percent of the total corporate bonds in the first half of 2014. On the other hand, firms with credit ratings of A or below accounted for 61.3 percent in 2007 and 28.3 percent in 2013 due to scrutinized credit analysis and weakened trust in credit ratings. Furthermore, the total net value of issued bonds with ratings of AA or was about 6.2 trillion *won*, while those with A ratings and BBB ratings and below underwent a net redemption of 7.9 trillion *won* and 1.7 trillion *won*, respectively, showing a clear sign of "polarization among the ratings."[7]

Potential Risks in Corporate Debt Market

As corporate debt instruments generally show a higher interest rate volatility than commercial bank loans do, there is a high risk of financing uncertainty for companies. In addition, a liquidity crunch from the bond market can cause a contagious spillover to other markets. Bond trading in Korea is dominated by government and public-sector (agency) bonds, and due to the market structure reflecting such a bias, the liquidity of corporate bonds remains at a low level. This deterred foreign investors' access to both corporate and other types of bonds, resulting in mere a 2.5 trillion *won* worth of bond holdings by the end of 2012.

Furthermore, there are fundamental problems with market infrastructure and practices, which leads to conservative investing: a lack of investor protection upon default and a heavy reliance on credit rating rather than thorough credit analyses. For these reasons, in Korea, only large companies, or Chaebol affiliates, have easy access to bond issuance, while SMEs face severe challenges in debt financing through bonds unless they have accompanying policy support, such as primary collateral bond obligations (P-CBOs).

Stabilization Plans for Corporate Bond Market

To address the potential risk and current problem of the corporate bond market, four major plans for market stabilization are suggested in the 2016 policy announcement of the Financial Services Commission:[8] First, financially distressed companies can maintain liquidity through debt rollovers. Second, it is crucial to alleviate the aforementioned polarization that is now prevalent in the Korean corporate debt market by supporting high-yield bond taxation, encouraging qualified institutional buyers (QIBs), and promoting the issuance of collateralized bonds. Third, reforming the market infrastructure can stabilize the corporate bond market. It is necessary to overhaul both the credit-rating system and the debt-financing demand forecast system and to enhance efficiency and transparency in the secondary bond market. Lastly, it is necessary to implement programs that support the issuance of corporate bonds for SMEs. Currently, SMEs with credit ratings below BB find debt financing unfeasible without external debt guarantees. To prevent these marginalized SMEs from being excluded from the capital markets, proactive policy supports are necessary. There has been a weakening in the market sentiment with shortfalls in SME debt issues, with credit ratings in the range of BBB and A.

Conclusion

This report conducts an analysis of the corporate bond market in Korea and the changes in interest rates and term structure since the 1997 Asian financial crisis. The potential risks and solutions for stabilizing the corporate debt market are discussed. Corporate bonds not only play an important role in affordably financing long-term corporate investments but also have a positive and persistent influence on enhancing the capital markets. Thus, the authorities in Korea have attempted to increase the proportion of corporate bonds, which is a means of direct financing, rather than bank loans. Implementing specific plans to stabilize the corporate debt market that are mentioned in this report are critical to sustaining the Korean capital markets as a means towards continued economic growth and prosperity.

P.M.S. Choi (Associate Professor) can be contacted at paul.choi@ewha.ac.kr; College of Business Administration, Ewha Womans University, 52 Ewhayeodae-gil, Seodaemun-gu, Seoul 03760, Republic of Korea; tel.: +82-2-3277-3543; fax: +82-2-3277-2776. *Special thanks are due to Troy Stangarone and Yeo Joon Yoon. I am also grateful to Jiyoung Hwang and Ji Won Park for their excellent research assistance. Standard disclaimer rules apply, and all errors are my own.*

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PART III: SOUTH KOREA'S ECONOMIC RELATIONS WITH NORTHEAST ASIA

PROGRESS AND IMPLICATIONS OF THE CHINA-KOREA FTA

By Li Si-qi, Tu Xin-quan, and Liu Bin

Abstract

The article focuses on the China-Korea FTA, analyzing the background of China-Korea bilateral economic relations, the characteristics of the China-Korea FTA and more importantly, the implications and future prospect of this free trade pact. So far, the China-Korea FTA is considered to be the most comprehensive compared with China's previous FTAs and may be the largest in trade terms among all the FTAs concluded by Korea and China, playing a positive role in advancing economic integration in the Asia-Pacific region. However, with lots of exceptions to tariff elimination and market access, as well as a 20-year transition period, the present version of the China-Korea FTA is far from the best in terms of the depth of liberalization and the scope of obligations on trade and investment rules. The recent bilateral diplomatic tensions due to the decision of deploying the THAAD missile system by the Korean government may also jeopardize bilateral economic ties between China and Korea, and further increase uncertainties of the China-Korea FTA. It remains to be seen whether the Chinese and Korean governments will handle this issue smoothly under the present sensitive political atmosphere and achieve substantial progress in follow-up FTA negotiations on services and investment.

Introduction

The Chinese and Korean economies are highly complementary and enjoy a favorable cooperation foundation. In June 2015, China and Korea officially signed the bilateral free trade agreement (FTA), sharing views that this free trade pact will serve as an all-round cooperative platform for both governments and companies to seek new growth engines.[1] In December 2015, the FTA came into effect and tariff elimination was realized for the first time.

Undoubtedly, the China-Korea FTA will have significant impact on the economy of both countries, considering that China has become Korea's largest trade partner and largest destination of overseas investment, while Korea has become China's third largest trade partner and fifth largest source of overseas investment. The FTA is considered to involve "the largest trade value and most comprehensive areas" among China's FTAs[2] and may be the largest in trade terms among all the FTAs concluded by Korea with its major trade partners.

Taking into account the growing importance of bilateral economic relations between China and Korea, this article focuses on the recent China-Korea FTA and sheds light on the implications of the FTA on bilateral economic relations between China and Korea, as well as on the broader Asia-Pacific economic integration. The first section of this article describes the background of the China-Korea FTA in the context of bilateral economic and trade relations between China and Korea. The second section reviews the negotiation process of the China-Korea FTA. The third section sheds light on the key achievements and diverging concerns of the China-Korea FTA, particularly addressing areas of trade in goods, trade in services, investment, electronic commerce, and competition. The fourth section analyzes the implications of the China-Korea FTA from bilateral and regional perspectives, and addresses prospects and uncertainties of the FTA under present complex political and economic situations. The fifth section provides the conclusion.

The Background of the China-Korea FTA

Economic Relations Between China and Korea

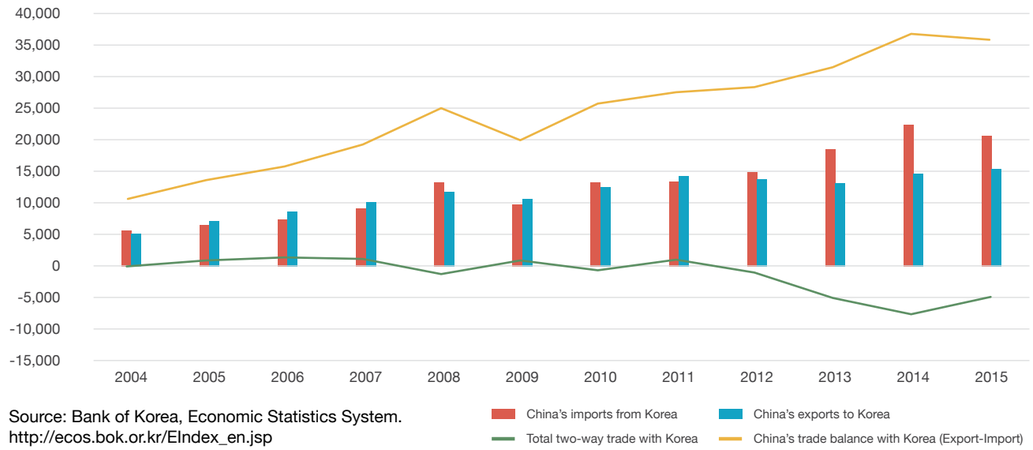
In the last decade, the trade and economic relationship between China and Korea has realized considerable development. When both countries began researching the FTA in 2004, the two-way merchandise trade between China and Korea was only $90 billion, but this number jumped to $276 billion in 2015 (Figure 1). At present, China is the biggest trade partner, the largest export market, the biggest source of imports, and the largest overseas investment destination for Korea. Korea is one of the most important trade and investment cooperation partners of China as well. However, the unbalanced trade between China and Korea has been expanding, with China's trade deficit with Korea reaching $73 billion in 2015 (Figure 1). Specifically, Korea has comparative advantages in high-end manufacturing, a huge trade surplus in electrical and electronic equipment (HS code 85), optical apparatus, etc. (HS code 90), organic chemicals (HS code 29), plastics and articles thereof (HS code 39), and pearls, precious stones, etc. (HS code 71). While China is more specialized in labor-intensive industries, obtaining a trade surplus in iron and steel (HS code 72), articles of apparel, accessories (HS code 61 and 62), furniture and lighting equipment (HS code 94), and articles of iron and steel (HS code 73).

With regard to trade in services between China and Korea, although it remains much smaller than merchandise trade, the growth has been significant over the last decade. From 2004 to 2015, total two-way trade in services between China and Korea rose from $10.6 billion to $35.8 billion, growing on average 11.7 percent a year (Figure 2). However, the unbalanced trade in services between China and Korea has been expanding since 2012, reaching $36.7 billion in 2014 and slightly down to $35.8 billion in 2015.

Figure 1 Bilateral Merchandise Trade Between China and Korea, 2004-2015 ($ millions)

Source: UN Comtrade Database. http://comtrade.un.org

Figure 2 Bilateral Services Trade Between China and Korea, 2004-2015 ($ millions)



Source: Bank of Korea, Economic Statistics System. http://ecos.bok.or.kr/EIndex_en.jsp

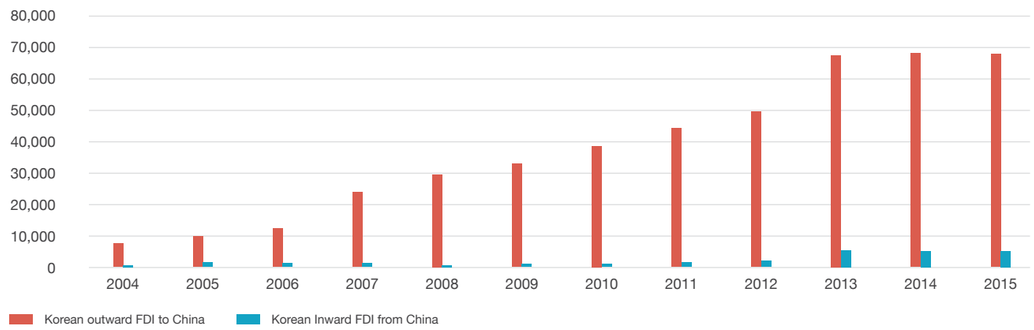
During 2004-2015, Korea's outward direct investment to China's rose from $7.5 billion to $67.8 billion, mostly going to China's manufacturing sector. By contrast, China's outward direct investment to Korea remained limited to $5.3 billion in 2015 (Figure 3). The unbalanced bilateral trade and investment gave both countries impetus for the bilateral FTA construction that could not only expand markets in China but also promote Chinese investment in Korea.

The Negotiation Process of the China-Korea FTA

Since the establishment of diplomatic relations between China and Korea, trade relations between the two countries developed rapidly. In September 2004, China and Korea began joint research on the feasibility of the China-Korea FTA at the private level, investigating the macroeconomic benefits expected from the bilateral FTA. From 2007 to 2010, a joint industry-academy-government analysis was conducted, focusing on impacts to industrial sectors such as agriculture and manufacturing industries, and discussing how to deal with sensitive products. Between May 2012 and November 2014, fourteen rounds of negotiations were held between both sides (Table 2). The China-Korea FTA was officially signed on June 1, 2015 and took effect on December 20, 2015.

In order to facilitate negotiations, the FTA talks were conducted in two stages. In the first stage, China and Korea negotiated the modalities for trade in goods, services, investment and other areas. In the second stage, both sides provided their offers and discussed details in main areas. During the negotiations, China and Korea had "large differences" on key issues, and both sides tried the best to reach a compromise. The main differences came from the list of products to be liberalized or protected under the proposed free trade deal. Korea had requested an early removal of import tariffs on industrialized goods, while China had been seeking greater access to Korean markets for food and agricultural products, which are often considered as the most sensitive issue in Korea's FTA negotiations with other countries.[3]

Figure 3 Bilatral FDI Between China and Korea, 2004-2015 ($ millions)



Source: Bank of Korea, Economic Statistics System. http://ecos.bok.or.kr/EIndex_en.jsp

Table 1 Rounds of the China-Korea FTA Negotiations

Date	Details
May 2, 2012	Official negotiations began
July 2012	Second round of negotiations
August 2012	Third round of negotiations on negotiating modality and scope of trade in goods and services
October 2012	Fourth round of negotiations
April 2013	Fifth round of negotiations on trade in goods and services, investment and other issues
July 2013	Sixth round of negotiations on negotiating modality, reaching consensus on the liberalization level of trade in goods, as well as on the draft of modality of services, rules of origin, customs formality, trade remedies and intellectual property rights
September 2013	Seventh round of negotiations, during which the two Parties reached agreement on the coverage of FTA rules. The first stage of negotiations on the modality or basic guidelines for the China-Korea FTA is concluded.
November 2013	Eighth round of negotiations to further discuss the level of liberalization for goods, exchanging initial offers of trade in goods (general items and sensitive items) between the two sides
January 2014	Ninth round of negotiations to exchange all the tariff reduction schedules (highly sensitive items included) between the two sides
March 2014	Tenth round of negotiations on a wide range of issues, including trade in goods and services, investment, rules of origin, trade remedies, technical barriers to trade (TBT), sanitary and phytosanitary measures (SPS), as well as intellectual property rights
May 2014	Eleventh round of negotiations to further discuss the remaining issues of the FTA
July 2014	Twelfth round of negotiations to further discuss the remaining issues of the FTA
September 2014	Thirteenth round of negotiations to further discuss the remaining issues of the FTA, achieving progress in trade in goods and services, investment and rules. In terms of trade in goods, the two parties exchanged views on tariff schedule, and narrowed divergences in services, investment and rules.
November 2014	Fourteenth round of negotiations
November 10, 2014	Effective conclusion of the FTA (at the APEC summit)
June 1, 2015	The Chinese and Korean government officially signed the China-Korea FTA
December 20, 2015	The FTA came into effect

Source: China FTA Network, available at: http://fta.mofcom.gov.cn/topic/enkorea.shtml

Key Achievements and Concerns of the China-Korea FTA

To a certain extent, the China–Korea FTA is a high level one compared with China's previous FTAs, showing characteristics of expanded coverage that has gone beyond tariff liberalization and further included areas of services and investment, increased non-trade concerns of competition and environment, and topics such as telecommunications, electronic commerce, and government procurement. It is noteworthy that some rules were included in China's FTAs for the very first time. Two separate chapters on financial and telecommunication services, as well as the electronic commerce are incorporated into the pact, showing China's increased focus on services and investment. In addition, the FTA contains a stand-alone competition chapter, which is not even in the most recent China-Australia FTA and only in China's other FTAs with Switzerland and Iceland.[4]

However, in comparison with FTAs signed by Korea with the U.S. and the EU, the outcome of the China-Korea FTA is limited.[5] Although both sides agreed to liberalize a large share of bilateral trade within 20 years, extensive exceptions to basic tariff reforms and market access are underlined. While many new rules are in their initial stage, the two countries committed to conduct subsequent negotiations on services and investment within two years after the FTA came into effect.

Trade in Goods

The two countries have reached an agreement that Korea will eliminate tariffs on 92.5 percent of all Chinese products and China will abolish tariffs on 91.5 percent of all Korean goods within the next two decades. Upon the FTA's entry into force, Korea and China will fully eliminate 49.9 percent and 20.7 percent of tariff lines, respectively. Although the two countries agreed to remove tariffs on more than 90 percent of tax items by stages, the degree of the market opening under the China-Korea FTA will be relatively less than FTAs signed by Korea with the U.S. and the EU, considering the longer transition period of 20 years and lower level of tariff cuts. In the Korea-US FTA, Korea and the U.S. agreed to eliminate tariffs on 98.3 percent and 99.2 percent of products within 10 years, respectively.[6] In the Korea-EU FTA, Korea and the EU agreed to remove tariffs on 93.6 percent and 99.6 percent of products within five years, respectively.[7] Obviously, the pace and scope of tariff liberalization in the China-Korea FTA is much less ambitious (Table 2).

Specifically, the China-Korea FTA excludes a very large number of tariff lines from full liberalization. Korea has a keen interest in how to liberalize the agricultural sector because most negative impacts of the FTA will be felt in that sector.[8] Korea has excluded rice and its products (16 tariff lines) from the obligations of the FTA and finally listed 596 tariff lines as exceptions of agricultural products (27.2 percent of total tariff lines).[9] In contrast, China has more liberalized concessions on the agricultural sector, finally listing 104 tariff lines as exceptions of agricultural products (7.3 percent of total tariff lines).[10] On the other hand, China recorded huge trade deficits in the manufacturing sector including automobiles, chemical, and electronics with Korea. For that reason, China has placed many manufacturing tariff lines in the sensitive and highly sensitive lists, and excluded automobiles and auto parts from full tariff liberalization. The two countries also agreed to exclude several electronic products that are not covered by the expanded WTO Information Technology Agreement (ITA).

Table 2 Tariff Schedules of China and Korea

Product Categories	Tariff Schedule	China's Concessions	Korea's Concessions
General Items	Tariff elimination within 10 years	72.38% of the total trade items (5931 items)	79.57% of the total trade items (9733 items)
Sensitive Items	Tariff elimination within 20 years	91.51% of the total trade items (7498 items)	92.48% of the total trade items (11312 items)
Highly Sensitive Items	Excluded from concessions (exceptions, tariff rate quota, partial tariff elimination)	Some agricultural products, chemical products, equipment, household appliances, automobiles, etc.	Major agricultural products, including sweet peppers, garlic, onions, apples, pears, pork, etc., some chemical products, etc.

Source: Author's calculation based on the China-Korea FTA

Trade in Services

Increased concerns on services are reflected in the current rules of the China-Korea FTA. In the services chapter, legal services, architecture, construction, distribution, and entertainment are included in the concessions. The services chapter involves national treatment with respect to market access for service providers under certain scheduled exceptions. It is noteworthy that the financial and telecommunication services are dealt with in two separate chapters containing sector-specific rules, which is a distinction of the China-Korea FTA. In China's previous FTAs, financial and telecommunications services are subject to general rules of trade in services, but in the China-Korea FTA, these two issues have attracted special attention.

Overall, the China-Korea FTA has balanced the interests of both countries. China has solved the key concerns of Korea about co-production on film, TV drama, documentary, and animation for broadcasting purposes, as well as the tourism and environment; while Korea has satisfied the key offers of China on delivery services, construction, and medical care. Both sides committed to expand the initial stay from one year to two years with regard to investors and staff employed in companies from each other's country. Multiple entry visas valid for one year and for a stay not exceeding thirty days each time to eligible applicants is also guaranteed.

However, although China and Korea have made great efforts in the liberalization of services sectors, the present level of market access remains low. Out of 155 sub-sectors in total, China specified only six sub-sectors for full liberalization, 84 sub-sectors for partial liberalization and 65 sub-sectors for protection; while Korea specified 39 sub-sectors for full liberalization, 67 sub-sectors for partial liberalization, and 49 sub-sectors for protection.[11] The FTA does not establish MFN (most-favored nation) treatment, which is a common feature of Korean FTAs but less common for China.[12] Instead, the two countries agreed to consider MFN treatment in follow-up negotiations, and change the negotiating modality from the positive list approach[13] to the negative list approach.[14] The negative list approach is usually perceived as more comprehensively liberalizing than the positive list approach, as all services sectors will be subject to full liberalization unless otherwise stipulated. Also, if China is admitted to the plurilateral negotiations on the Trade in Services Agreement (TiSA), in which Korea is already a participant, further liberalization of services sectors will be promoted forcefully in follow-up negotiations.

Investment

Investment liberalization is a key priority for Korea given the sizable flows of FDI to China in recent years as well as the significant potential of the Chinese market for Korean service industries. The China-Korea FTA contains an investment chapter and an annex to the chapter on people mobility. The investment chapter highlights the promotion and protection of investment. To establish a favorable and stable investment environment, the chapter includes national treatment, MFN treatment, and minimum standard of treatment, as well as the contents of access to the courts of justice, prohibition of performance requirements, and transparency. The two countries agreed to incorporate the ISDS (investor-state dispute settlement) clauses into the investment chapter to protect investors and set contact points at the level of central and local governments to help solve the difficulties faced by Chinese and Korean companies. Furthermore, in contrast to the separation between investment and services rules in other FTAs, the investment chapter of the China-Korea FTA inserts a clause on services-investment linkage to bridge investment and services. Investment rules "shall apply to any measure affecting the supply of service by a service supplier of a Party through commercial presence in the territory of the other Party pursuant to the Chapter 8 (Trade in Services)," but only under the circumstances that "they relate to a covered investment."

Together with the services chapters, the two countries promised to subsequently negotiate investment rules on the basis of a negative list approach covering the pre-establishment phase of investment. More progress could be made through further talks and based on China's ongoing investment treaty negotiations with the U.S. and the EU.

Electronic Commerce

It is notable that China has brought electronic commerce into FTA for the first time. Realizing the economic growth and opportunity that electronic commerce can provide, the chapter of electronic commerce deals with electronic authentication and electronic signatures, protection of personal information in electronic commerce, paperless trading, and cooperation on electronic commerce. In the event of any inconsistency between this chapter and other chapters, the other chapters shall prevail to the extent of the inconsistency. In addition, the dispute settlement (Chapter 20) does not apply to any matter regarding electronic commerce.

Although the content of this chapter is brief, the expansion and development of the electronic commerce discipline is an important stepping-stone at least for the Asian trading system, which could be a precedent for what can be included in China's future FTAs. As electronic commerce is intrinsically connected with trade in services and goods, novel elements contained within the China–Korea FTA can be an interesting seed for new legal norms for electronic commerce to develop.[15]

Competition

The China-Korea FTA contains a stand-alone competition chapter, which is only the case in China's FTAs with Switzerland and Iceland. The competition chapter highlights trade liberalization, economic efficiency, and consumer welfare as key objectives, covering a wide range of issues on competition laws and authorities, principles and cooperation in law enforcement, transparency, application of competition laws, and the non-applicability of the dispute settlement system. Competition law enforcement is a focus of competition rules of the China-Korea FTA. Specifically, the principles of transparency, non-discrimination, and procedural fairness are underlined. Persons of non-parties can be granted national treatment, and have the opportunity to present opinion or evidence for defense in the investigation process and seek review of the sanction or remedy through administrative reconsideration or litigation. Cooperation in law enforcement is encouraged. Early-stage notification of enforcement activity and consultation on competition issues are also required.

Furthermore, the China-Korea FTA addresses competition in other chapters as well. In the chapter of economic cooperation, the promotion of fair competitive environment in the steel market is highlighted.[16] The telecommunications chapter also highlights competitive safeguards, including the prevention of anti-competitive practices by major suppliers of public telecommunications networks or services.[17] The independence and impartiality of a telecommunications regulatory body is required,[18] and the universal service obligation should be administered in a transparent, non-discriminatory, and competitively neutral manner.[19] Competition concerns are also emphasized in the allocation of spectrum for non-government telecommunications services, such as the encouragement of competition among suppliers of telecommunication services.[20] Although the stand-alone competition chapter cannot resort to dispute settlement system of the FTA, these competition rules throughout the FTA can contribute to elaborate and strengthen bilateral trade and investment rules to some extent.

Implications of the China-Korea FTA

Positive Impacts of the China-Korea FTA

The China-Korea FTA will enable a market with a total population of 1.4 billion, a combined GDP of $11 trillion and a trade volume accounting for nearly 30 percent of world trade, which is expected to provide economic and geo-political benefits for both countries. From the economic aspect, the FTA will inject strong vigor into China-Korea bilateral trade and economic cooperation, and create an easier, more open, and fairer trade and investment environment. According to the joint study report for the China-Korea FTA, under the static model the China-Korea FTA will boost the GDP of China and Korea by 0.4 percent and 2.44 percent respectively; while under the capital accumulation model, it is expected that the GDP of China and Korea will increase by 0.58 percent and 3.31 percent, respectively.[21] According to KIEP, the China-Korea FTA is expected to increase China's GDP by 0.4-0.6 percent and Korea's GDP by 0.95-1.25 percent in five years.[22] Furthermore, the potential effects from service and investment liberalization are expected to be substantial, as long as further negotiations go well and effective implementation is ensured. Beyond economic benefits, the China-Korea FTA is also expected to contribute to stabilizing the diplomatic and geo-political relationship between China and Korea. It will provide a solid basis of common interest to comprehensively upgrade China-Korea strategic cooperative partnership and serve as an institutional framework for future cooperation.

To further upgrade the China-Korea FTA, there are several considerations. First, although China and Korea agreed to reduce tariffs on more than 90 percent of products step by step, the two countries have maintained protection on certain sensitive products. There is still plenty of scope for Korea to liberalize agricultural sectors and for China to further open up chemical and automobile markets. Second, it is important for both governments to continue their efforts to facilitate trade by simplifying documents and harmonizing HS codes, and to better utilize the China-Korea FTA so that firms in both countries tangibly benefit from the free trade pact. Several ways can be considered to promote the utilization of the China-Korea FTA: (1) unifying administrative procedures of customs administration in both countries and curtailing high administrative costs entailed in FTA utilization; (2) simplifying the certificate of origin; (3) spreading FTA-related information in both countries, especially for small and medium sized enterprises (SMEs). In this context, both governments could continue their considerable efforts to increase exports and imports, along with further negotiation to reflect major industrial interests and overcome the limits of the China-Korea FTA. Third, as investment is becoming a large component of bilateral expansion of services markets, the two countries should propose a more aggressive agenda to further remove investment barriers in follow-up negotiations and thus to maximize the investment-driven effects on trade. Fourth, considering the high external dependence of the Korean economy and successful conclusions of FTAs signed by Korea with ten out of twelve Trans-Pacific Partnership (TPP) initial members including the U.S., it is very possible for Korea to join the TPP to pursue higher trade and investment standards in the foreseeable future, while continuing to work with China on other regional trade initiatives. It is necessary for China to adopt active strategies to deal with bilateral economic relations with Korea, and diversify FTA partnership in a broader regional basis.

Beyond strengthened cooperation between the two countries, the China-Korea FTA has broader implications for the economic integration in the Asia-Pacific region. As the first FTA in the Northeast Asian region, the China-Korea free trade deal may be considered to be a potential alternative template for Asian countries, especially for the trilateral China-Japan-Korea FTA negotiations. But we should be aware that the trilateral FTA

is much more difficult to reach a compromise due to several reasons. First, the three countries have different anticipations for the progress of trilateral FTA negotiations. China and Korea are active in promoting trilateral talks, while Japan has invested more efforts and political capital in joining the TPP. Since the TPP has concluded, Japan will possibly switch its focus to China-Japan-Korea FTA talks, considering its potentially huge economic benefits. Second, the three countries have divergent concerns on sensitive sectors, such as agriculture, automobiles, and chemicals, which will limit the possible outcome of the trilateral talks in the short term. Thirdly, the political frictions among the three countries may deter other aspects of economic relations and restrict the negotiation process. However, the good news is that the trilateral FTA talks continue to advance,[23] albeit slowly, and it remains to be seen whether China, Japan, and Korea could reach fruitful outcomes on the basis of the China-Korea FTA. Furthermore, the China-Korea FTA has reflected the confidence of both sides to promote regional economic integration, which will play a positive role to advance larger regional talks, such as the Regional Comprehensive Economic Partnership (RCEP) and the future Free Trade Area of the Asia-Pacific (FTAAP).

Prospect and Uncertainties of the China-Korea FTA

Although the achievements of the China-Korea FTA need to be cherished, there are still uncertainties with China-Korea economic ties. From January to June 2016, bilateral trade between China and Korea experienced almost double-digit decline, with China's exports to Korea dropping by 8.7 percent and its imports from Korea decreasing by 10.1 percent,[24] which is in contrast to most expectations for the conclusion of the China-Korea FTA. On the other hand, the bilateral investment between China and Korea has increased sharply. From January to May 2016, Korean outward investment to China reached $2.2 billion, up 12.2 percent year-on-year; while in the first half of 2016, Chinese outward investment to Korea jumped to $710 million, growing 79.5 percent year-on-year.[25]

It can be observed that the bilateral economic cooperation between China and Korea reveals a mixed picture, even after the FTA came into effect. The shrink of bilateral trade between the two countries can be partly due to the collapse in global commodity prices and the fluctuations of foreign exchange rates. But more importantly, China and Korea are experiencing a period of economic closeness yet political estrangement at the present stage. The decision made by the Korean government to deploy the THAAD (Terminal High-Altitude Area Defense) system[26] has undermined the China-Korea bilateral relationship[27] and further increased uncertainties of China-Korea economic cooperation. China considers the THAAD system as a considerable threat to its legitimate security interest and has strongly opposed this decision made by the Korean government. Undoubtedly, such diplomatic tensions will jeopardize the foundation of the positive economic relations between the two countries. In response, China has imposed restrictions on visas and in the entertainment and tourism sectors, as well as considered a range of measures such as limiting imports of Korean goods and services, and suspending some investments and acquisitions in Korea.[28] The Korean entertainment and tourism industries have already experienced a downturn in recent months, as China is Korea's largest entertainment market and major source of tourists. The companies who are engaged in trade and investment in the two countries also expressed their concerns that the THAAD deployment would strain relations between the two countries and thus trigger a downturn in specific industry sectors. All these worries would weaken the achievements of China-Korea free trade deals and create uncertainties for future China-Korea economic cooperation.

Conclusions

China and Korea have made significant progress in bilateral trade liberalization through the conclusion of the China-Korea FTA. The FTA is more advanced compared with China's previous FTAs and is the largest in trade volumes among all the FTAs signed by China and Korea. It contains widespread contents including "new topics in the 21st century" like electronic commerce, competition, government procurement and environment, and has introduced the content of local economic cooperation for the first time.[29] The successful conclusion of a free trade pact between China and Korea in a short period of two-and-half years is because the two countries agreed to include lots of exceptions that are not subjected to tariff liberalization and other market access requirements. Korea selected major agricultural products as highly sensitive products that are excluded from tariff elimination, while China requested automobiles and some chemical products to be excluded from FTA concessions.

Although the two countries have divergent concerns regarding specific sectors, the China-Korea FTA is expected to provide more benefits than potential costs under normalized bilateral relations. However, the recent dispute on the THAAD system between the two countries has made the situation complex, greatly increasing the uncertainties of China-Korea economic ties. Since economic cooperation is always intertwined with diplomatic relations, it remains to be seen whether the China-Korea FTA will go smoothly under the present sensitive political atmosphere.

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[8] Choi Nakgyoon, *Impacts and Main Issues of the Korea-China FTA*, Korea Economic Institute of America (2012).

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[10] China's agricultural products include 1434 8-digit tariff lines.

[11] Kim Jong Duk, *Korea-China FTA in Services: How Far Can We Go in the Follow-up Negotiations?* KIEP Opinions (12 June 2015).

[12] In the China–New Zealand FTA, the MFN provision is limited to environmental services, construction and related engineering services, computer and related services, and tourism and travel-related services.

[13] A list on which each sector and mode of supply are explicitly listed on a schedule that indicates the type of access and treatment given to foreign services supplier.

[14] All sectors will be liberalized unless specifically indicated in the list of exceptions.

[15] Wang Heng, "The Features of China's Recent FTA and Their Implications: an Anatomy of the China-Korea FTA," *Asian Journal of WTO & International Health Law and Policy*, Vol.11, issue 1 (2016): pp.115-154.

[16] China-Korea FTA, article 17.8.2(c).

[17] China-Korea FTA, article 10.6.1.

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[22] *Macroeconomic Effects of Korea-China FTA*, Public hearing on the Korea-China FTA, Korea Institute for International Economic Policy (KIEP) (2012).

[23] On 27 June 2016, the tenth round of China-Japan-Korea FTA negotiations took place in Seoul, Korea.

[24] General Administration of Customs of People"s Republic of China, http://www.customs-info.com/Trade/Commodity.aspx.

[25] world.huanqiu.com. http://world.huanqiu.com/exclusive/2016-07/9170388.html.

[26] The THAAD system detects incoming missiles and intercepts them at long ranges and high altitudes by using its own hit-to-kill missiles.

[27] On 8 July 2016, Korea and the U.S. jointly announced the deployment of the THAAD system, despite continued strong objections from neighboring countries including China and Russia.

[28] "China Said to Consider Trade Pressure on Seoul over Missiles," *Chicago Tribune* (12 August 2016), http://www.chicagotribune.com/news/sns-wp-blm-china-korea-dba7a22a-6085-11e6-84c1-6d27287896b5-20160812-story.html.

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KOREA'S ECONOMIC RELATIONS WITH JAPAN

By Kim Gyu-Pan

Abstract

Korea's economic relations with Japan, which were re-established as a result of the diplomatic normalization between the two countries in 1965, have transformed from dependent to interdependent. The extraordinary economic growth that Korea accomplished during the post-war period was largely due to intermediate goods imported from Japan, and technical cooperation and joint ventures with Japanese enterprises. However, in the 21st century, the dependence of Korean firms on Japanese technology has somewhat declined as global enterprises have appeared in Korea. In contrast to the post-war economic boom, Japanese companies now prefer to cooperate with their Korean counterparts, resulting in joint business ventures between Korean and Japanese firms being continuously developed. This reversal in the economic ties between Korea and Japan can be attributed to several reasons including: the rise of China; Japan's two lost decades; and Korea's push for domestic structural reform as well as economic globalization after the Asian Currency Crisis of 1997. Nonetheless, the issue of Korea's trade imbalance with Japan, which was established during the post-war period, still remains thereby serving as a serious impediment to FTA negotiations between Korea and Japan as well as Korea's TPP negotiations.

Introduction

Korea's economic relations with Japan in the post-war period were re-established with the diplomatic normalization of the two countries in 1965. At that time, Korea lagged far behind Japan in terms of economic development, and its GDP per capita was $100, which was only one-tenth of Japan's. Even though Korea's decision to normalize diplomatic relations with Japan still remains controversial, it may be regarded as an inevitable move in order to rebuild the country that had undergone an era of massive political turbulence and was completely destroyed by war. This is mainly because normalization with Japan involved financial aid in the name of compensation for Japanese colonial rule over Korea. However, the re-establishment of economic relations between Korea and Japan in 1965 reinforced Korea's economic subordination to Japan to a certain degree. The dominance-subordination nature of the economic relationship between the two countries was more noticeable in Korea's dependency on imports and technology from Japan. Even in the late 1980s after Official Development Assistance (ODA) from Japan to Korea had ended, as much as 30 percent of total imports still came from Japan. In addition, current leading Korean firms in the automobile, electronics, and chemicals industries adopted high-level technology by seeking technical cooperation or establishing a joint venture with Japanese counterparts.

The Asian Currency Crisis of 1997 hit Korea hard and prompted the Korean government to accelerate domestic structural reforms, which also led Korea to fully globalize its economy. With these efforts, global enterprises have gradually appeared in Korea. In addition, since the 2000s the Chinese economy has expanded rapidly, resulting in the economic relations between Korea and Japan taking on an interdependent form. The presence of Japanese companies in Korea has weakened, and the trend of Japanese firms preferring to cooperate with Korean counterparts has been observed. Korea's dependency on imports from Japan was recorded as 30 percent in the late 1980s, but this figure fell to 20 percent in the 2000s and to 10 percent in 2014. In contrast, total investment by Japanese firms in Korean companies was about $400 million in the 1990s, but this increased four-fold and amounted to as much as $1.5 billion in the 2000s.

The main purpose of this paper is to conduct a historical review of Korea's economic relations with Japan in the post-war period by reflecting on the trade between the two countries and the direct investment from Japanese firms. In this paper, it is observed that the economy of Korea relied heavily upon Japan since the normalization of diplomatic relations between the two countries in 1965 until the 1997 Asian Currency Crisis. This paper points out that this dependent characteristic of two countries solidified to a certain degree, and the trade imbalance issues have served as a serious impediment not only to the Korea-Japan bilateral Free Trade Agreement (FTA) negotiations but also to Korea's Trans-Pacific Partnership (TPP) negotiations. In this paper, it is considered that the economic ties between Korea and Japan have transformed into interdependent relations following the 1997 Asian Currency Crisis and Chinese accession to the World Trade Organization (WTO) in 2001. This paper will also introduce the case of the Japanese trading companies (in Japanese, *Shoji*) in Korea that lead Korean and Japanese joint business in third countries. It is also observed that this is one of the trends of economic cooperation between Korea and Japan. For the last section of this paper, the future prospects of the economic ties between Korea and Japan will be analyzed based on the historical review in the preceding chapters.

Korea's Economic Development and Reliance on Japan: The End of Japan's ODA and Start of Private Economic Cooperation

When looking at the process of economic development in Korea, which is often referred to as 'the miracle of the Han River,' the most crucial factor that led to economic success was the establishment of the second Five-Year Economic Development Plan (1967-1971). When it comes to Korea's economic relationship with Japan after diplomatic normalization in 1965, as many experts have pointed out, it is clear that Japan played an important role in triggering Korea's compressed economic development through Japan's ODA to Korea, trade expansion, and Foreign Direct Investment (FDI) by Japanese firms.

When Seoul and Tokyo signed the Treaty on Basic Relations between the Republic of Korea (ROK) and Japan, it was agreed that the Japanese government would provide financial aid to Korea including grant aid of $300 million, loan aid of $200 million, and commercial loans of $300 million. The Korean government decided to invest $120 million out of $500 million (combined grant loan and loan aid) into the construction of Pohang Steelworks which was Korea's leading steel maker. In this process Japanese steel makers such as Yawata Steel (now Nippon Steel & Sumitomo Metal) also engaged in technical cooperation with Pohang Steelworks. At that time, the Japanese Export Promoting Agency such as the Export-Import Bank of Japan (now the Japan Bank for International Cooperation) provided over $500 million as a commercial loan through the Korean government and this loan was utilized to import machinery and industrial plants from Japan.[1] In other words, Japan's ODA to Korea laid the basis for the economic development of Korea, focusing on the manufacturing sector. On the other hand, it also played a significant role in increasing Korea's level of economic dependency on Japan.

By analyzing the trade data between Korea and Japan during the process of Korea's economic development, it is possible to observe the extent to which the Korean economy relied on Japan.[2] When Korea normalized its diplomatic relationship with Japan in 1965, Korea's total imports were $450 million, of which 40 percent ($182.25 million) came from the United States, and of which 35 percent ($166 million) came from Japan. The total trade value of Korea was $625 million, of which the U.S. retained 39 percent, followed by Japan which had 34 percent.[3] It is feasible to consider that Korea's trade pattern was characterized by its dependency on Japan until the late 1980s. Even though the United States was the largest trading partner for Korea in 1988, Japan had the highest proportion of total value of imports.[4] At the time, the items from Japan comprised IC semiconductors, hot-rolled steel sheets, automobile parts, machinery, and computer components. This illustrates that Korean companies' development in the electronics, automotive, and machinery industries was dependent on the Japanese firms' technology in the mid-1980s.

In another sense, Japanese companies' outward FDI to Korea also contributed to Korea's economic growth. It may be coincidental that the Korean government enacted 'the Law on foreign capital importation' in 1966 when the diplomatic normalization between Korea and Japan had just passed. Japan and the U.S. competed for the biggest share of inward FDI to Korea during the 1970s, but the Japanese share experienced a dramatic rise and was more than twice the amount of the U.S. counterpart share. The total share of Japanese inward FDI to Korea was recorded as 56.3 percent and 84.3 percent in 1984 and 1985, respectively, and the Japanese companies' presence was substantially high.[5] At this time Japanese firms focused not only on the service sectors, such as food and hotels, but also on manufacturing. In the case of the manufacturing sector, Japanese firms reinforced economic cooperation with their Korean counterparts by adopting a strategy wherein they first signed a technical cooperation contract and then established equity participation or a joint venture. In such cases, Japan's Mitsubishi Motors had begun to cooperate in the development of an automobile engine with Korea's Hyundai Motors, and later Mitsubishi also conducted equity participation in Hyundai Motors. Similarly, Sumitomo Corporation established a joint venture with Samsung Electronic Tube (now Samsung SDI) in manufacturing color TV picture tubes. This kind of cooperation was extremely important for Korea's economic development. In the 1980s, more Japanese companies including Otsuka Pharmaceutical, Alps Electric, and Yokohama Rubber invested in Korea.

Trade Imbalance between Korea and Japan

As the Korean economy relied heavily on Japan, concerns about an adverse balance of trade had grown. In fact, Korea never achieved a trade surplus with Japan after the Korea-Japan Basic Treaty was signed. The size of Korea's trade deficit already exceeded $1 million in 1974 and this number increased to $10 billion in 1994, and was recorded as between $20 to $30 billion after 2004. This phenomenon can be regarded as a very stark contrast while considering the fact that Korea's total trade surplus has been recorded as at least $9.9 billion and at most $47.7 billion every year except in the year 2008 when many advanced countries were hit by the global financial crisis.

Tapping into Korea's nationalistic emotion was quite feasible as a result of the extreme harshness of Japanese colonial rule, still a vivid memory for the Korean people. In this respect, the Korean government announced the '1st Five-Year Plan for Correction of Trade Imbalance with Japan' in 1986 when Korea achieved its trade surplus for the first time after the post-war period.[6] According to this plan, Korea's trade imbalance with Japan stemmed from the condition that Korea's manufacturing sector, especially the manufacturing of machinery, materials, and components was not sufficiently competitive against the Japanese counterpart. For this reason, the plan suggested that Korea should substitute imports for the localization of these products and promote exports at the same time in order to correct the trade imbalance between Korea and Japan. The Korean government announced the '2nd Five-Year Plan for Localization of Machinery, Materials, and Components' in 1992. The second plan supported Korean companies through diverse government funding for the sake of the localization and included about 4,000 components and materials. Furthermore, this plan endeavored to provide financial assistance to Korean firms so that they could introduce hi-tech facilities.

Table 1 shows Korea's trade balance on the materials and components sectors from 1994 to 2014.[7] Since then Korea's balance of trade in the sectors of materials and components has turned into a surplus. The size of the surplus was recorded as $3 billion in 1997 and this figure has increased from $35 billion in 2006 to $100 billion in 2014. Nevertheless, it is important to note that Korea never achieved a trade surplus with Japan in any single year. For example, Korea had a $11.7 billion trade deficit with Japan in 2000, $20 billion in 2009, and $16.4 billion in 2014. Although the Korean government has attempted to rectify the trade imbalance with Japan, its negative balance of trade with Japan has not been solved and what is worse, the size of the trade deficit is growing rather than shrinking. In particular, 80 percent of Korea's trade deficit with Japan mainly resulted from materials and components. In this sense, the Korean government's localization policy in the field of materials and components, which has been in place since the mid-1980s, may encounter criticism of being ineffective. As mentioned earlier, this criticism is not entirely warranted given the fact that Korea's total trade surplus in materials and components amounted to $100 billion in 2014. These statistics should be seen as a slice of Korea's history of industrial development or structure. In other words, it shows that since the 1970s Korean companies imported intermediate goods from Japan, processed these imports, then exported these final products to third countries. This type of work formed an industrial structure based on export processing.

Table 1 Trade Balance on Materials and Components Sectors of Korea ($ million)

	1994	1997	2000	2003	2006	2009	2012	2014
Japan	-8,278 (-11,974)	-9,864 (-13,414)	-11,730 (-11,361)	-13,898 (-19,022)	-15,564 (-25,322)	-20,094 (-27,743)	-22,233 (-25,442)	-16,394 (-21,473)
World	-4,895	3,380	9,346	6,167	34,736	51,247	90,921	107,775

Note: figures in brackets refer to Korea's total trade balance with Japan.
Source: Ministry of Trade, Industry and Energy, *Materials & Components Technology Network*, http://www.mctnet.org/index.jsp (accessed 02.08.2016)

In the economic relations between Korean and Japan, there have not been any cases where the trade imbalance caused a trade friction or dispute. However, there is little doubt that the trade imbalance between Korea and Japan has served as an impediment to the Japan-Korea FTA (JKFTA) negotiations as well as multilateral FTA that include Japan as potential member. Korea and Japan entered into bilateral FTA negotiations in a politically and diplomatically cordial atmosphere in December 2003. However, assuming that Korea fully accepts the Japanese request in the JKFTA negotiations, there have been concerns that Korea needs to eliminate or reduce the tariff on manufacturing items, thereby possibly leading to the collapse of the Korean manufacturing sector. This scenario may be feasible as Japanese products with high competitiveness can dominate the Korean market under the FTA. In addition, Japan already eliminated the tariffs for almost all manufacturing items except agricultural products because it had joined OECD much earlier than Korea, therefore Korea only needs to reduce the tariff under JKFTA. In this respect, Korea requested that Japan proceed with the elimination of non-tariff barriers, but Japan rejected this request during the negotiation process. JKFTA negotiations have not proceeded and this confrontation between the two countries persisted in several working-level talks.

Toward a Deeper Inter-dependency since the 1997 Asian Currency Crisis

Korea's economic relationship with Japan has not always been imbalanced. After the Asian Currency Crisis of 1997, the Korean government fully committed to pursuing drastic domestic structural reforms and has made considerable progress toward economic globalization by concluding numerous FTAs simultaneously. On the other hand, in 1999 the Korean government completely abolished the restriction on importing from Japan, the so-called 'diversity of origin' system which was introduced in 1978 to restrict the import of 258 manufacturing goods which were causing a huge trade imbalance. In this sense, the Korean government's bold measure on economic globalization was certainly meaningful in creating an environment where Korean companies endeavored to compete with Japanese counterparts on an equal footing.

Since 2000 several events in the region have brought about a remarkable change in the economic ties of Korea and Japan. Above all, China has been rising as a global economic power and the Korean government's efforts on economic globalization have been constant. In the early 1990s, while Japan's economic bubble burst and Japan experienced the so-called 'two lost decades,' the size of the Chinese economy grew to account for half of the U.S. economy, and surpassed Germany in 2007 and Japan in 2010. Moreover, Korea's trade flow started to divert from Japan to China, whereby the economic relations of Korea and Japan, which had been steady for 30 years and based on trade imbalance, started to crumble. Table 2 indicates that the share of Korea's import from Japan has been gradually shrinking and fell to 10.2 percent in 2014. Japan was the biggest import partner of Korea in 1988 accounting for 30 percent, but since 2010 Japan lost this position to China. Nonetheless, it should be carefully considered that the total trade value between Korea and Japan has not been reduced so far and the importance of hi-tech intermediate goods produced by Japanese firms for Korean firms is still relevant.

The decrease in Korea's dependence on Japan in trade can be observed in the trade flow of intermediate goods. Table 3 indicates that the trade of intermediate goods among East Asian countries rose in 2014 compared to 1990. In the case of Korea, its export of intermediate goods to East Asia had been 37.8 percent but increased to 59 percent in 2014. Considering solely the relation between Korea and Japan, Korea's export of intermediate goods moved from Japan to China. For example, 20.9 percent of Korean intermediate goods had been exported to Japan but this figure drastically fell to 6 percent in 2014. On the other hand, Korea exported only 2.5 percent of its intermediate goods to China in 1990, whereas this share experienced a massive increase and reached 36.2 percent in 2014. This can be attributed to the fact that as Korean and Japanese companies entered the Chinese market, the export of intermediate goods

Table 2 Korea's Trade Dependency with Japan and China (%)

Trade Partner		1990	1995	2000	2005	2010	2014
Japan	Export	19.4	13.7	12.0	8.5	6.1	5.6
	Import	26.7	24.6	20.1	18.6	15.1	10.2
China	Export	2.1	7.5	10.8	21.8	25.2	25.4
	Import	2.1	5.6	8.1	14.8	16.9	17.2

Source: UN Comtrade DB. http://comtrade.un.org/data (accessed 09.08.2016)

Table 3 Trade of Intermediate Goods among East Asia Countries (%)

		1990				2014			
		Import				Import			
		Japan	Korea	China	ASEAN	Japan	Korea	China	ASEAN
EXPORT	Japan	-	9.5	4.0	17.0	-	9.1	23.7	17.6
	Korea	20.9	-	2.5	14.4	6.0	-	36.2	16.8
	China	12.4	4.7	-	10.3	7.0	5.8	-	12.6
	ASEAN	23.2	3.9	3.1	-	9.2	4.9	18.4	-

Source: RIETI-TID2014 (RIETI Trade Industry Database 2014). http://www.rieti-tid.com (accessed 09.08.2016)

to China increased instantly. In this sense, Korea was able to reduce its dependency on Japan in terms of intermediate goods export. In spite of this change, Korea still represents 9 percent of Japan's total intermediate goods export which means that Japan still maintains its status as a supply base of intermediate goods for Korea.

A surge in Japanese firms' FDI to Korea serves as momentum in that the economic relationship between Korea and Japan then becomes interdependent. In fact, as explained earlier, some Japanese manufactures had carried out joint ventures with Korean companies in the 1980s, but in the 2000s Japanese firms paid less attention to this type of business because it seemed less profitable. However, as a result of this, Korean companies such as Samsung Electronics, LG Electronics, and Hyundai Motors have accelerated their global business expansion through export and local production since the 2000s, and many Japanese companies have sought to supply their Korean counterparts with components and parts, advanced materials, and production facilities. Other factors that encouraged Japanese companies to shift to local production in Korea include: the improvement of transportation and telecommunications infrastructure; high levels of technology; availability of excellent human resources; and low corporate income tax rates.[8] When Korea came near to overcoming the Asian Currency Crisis in 1999, Japan's FDI to Korea increased from $400 million to $1.8 billion and this trend continued during the 2000s. In particular, in 2012 Japan's FDI to Korea increased nearly two times compared to the previous year, amounting to $4.5 billion. This can be seen as the result of the Great East Japan Earthquake of March 2011 and the appreciation of the Japanese *yen* that followed.[9]

The Case of Economic Cooperation between Korea and Japan in Third Countries

Since 2000, many Korean companies have achieved global competitiveness and enhanced their global presence. This means that Korean firms are on par with Japanese counterparts in terms of the level of global competitiveness, but at the same time strengthens the foundation for Korean and Japanese companies to cooperate and complement each other. In particular, economic cooperation between Korean and Japanese enterprises in third countries have often been observed after the global financial crisis of 2008 and the Great East Japan Earthquake in 2011. This is meaningful in that Korea's economic relations with Japan have transformed from a unilateral dependence to an interdependent form.

The first case of cooperation between Korean and Japanese companies in third countries occurred in the business of constructing the Tihama Co-generation plant in Saudi Arabia in December 2003. In this case, Korea's Hyundai Industries gained a part of the Japanese Mitsui Corporation contract. There have been 50 cases of cooperation in energy and resource development, and the field of cooperation includes the following sectors: combined cycle power plans; coal thermal power generation; wind power generation; geothermal power generation; LNG terminal construction; shale gas exploitation; fertilizer manufacturing plants; mining; and seawater desalination. In the manufacturing sector, there are four cases of cooperation in the sectors of steel, synthetic rubber, milling.[10]

In fact, the energy and resource development sector in third countries is the most typical area where cooperation between Korean and Japanese firms occurs. Since 2000 the global economy has been dominated by emerging markets and the demand for energy and the construction of plants and infrastructure has increased. International oil prices skyrocketed in 2009 creating conditions that offered an unprecedented opportunity for Korean and Japanese enterprises to work together in third countries. This cooperation was conceivable because of their respective complementary strengths. For example, Japanese trading companies' information gathering and financing capabilities and Japan's commercial banks and Export Credit Agency's project financing capabilities were united with Korea's construction and manufacturing skills. Since 2006 Korea's construction performance has surpassed Japan's in the overseas plant market and engineering sector. As the status of Korean enterprises in the global market has been upgraded, Japanese commercial banks, Export Credit Agency, and trading companies have started to recognize the Korean companies' capabilities.

In fact, as international oil prices have been plunging and emerging markets' economic growth has slowed since 2015, there is great concern about the fact that Korean and Japanese companies show signs of faltering in their joint businesses in third countries. Nonetheless, the two countries have been continuing their cooperation in the field of energy and resource development. Moreover, Korean automobile part suppliers attempt to expand cooperation with Japanese suppliers and export their products to automobile companies in third countries. This can be seen as an example that goes beyond the existing framework mainly lead by Japanese trading companies. Considering these positive examples, the economic cooperation between Korea and Japan is expected to expand in the future.

The Future: TPP Negotiations and East Asian Mega FTAs

In the 21st century, economic relations between Korea and Japan based upon interdependence are more likely to intensify. This paper has investigated the economic ties between the two countries in terms of bilateral perspective. However, if it is observed through the East Asian perspective as a whole, Korea will expand economic globalization with interdependent economic relations with Japan. The Korean government will continue to push economic policy based on open globalization to help Korean enterprises utilize the East Asian market and Japanese technology and capital.

It is very crucial to review the major trade negotiations currently in progress in the region so as to predict economic relations between Korea and Japan. These encompass the China-Japan-Korea FTA (CJKFTA), Regional Comprehensive Economic Partnership (RCEP), and TPP. Following the Asian Currency Crisis of 1997, the Korean government recognizes the importance of economic and financial cooperation with East Asian states and it is widely regarded that Seoul has paved the way for FTA negotiations with Tokyo. Nonetheless, as noted, the two countries have failed to produce any fruitful outcome in the FTA negotiations process. Even though Korea has concluded several major FTAs including with the U.S., European Union, and China, it has not succeeded in either a bilateral or multilateral FTA with Japan. This can be seen as a contrast to the fact that Japan, as one of the major members, concluded TPP negotiations in October 2015.[11] In fact, U.S. policy pertaining to the FTA is rather uncertain. It is also uncertain whether the Korean government will take a passive or active attitude in pursuing the negotiation of multilateral and bilateral FTAs with Japan. In spite of these uncertainties, mega-FTAs in East Asia can stimulate economic relations between Korea and Japan.

[1] Abe Makoto, "Ilbonui Daehan kyungjehyupryop [Japan's Economic Cooperation with Korea]," HanilKwangesa: *1965-2015 [The History of Korea-Japan Relationship: 1965-2015]*, 2015: pp. 56-58.

[2] Park Cheol-Hee ("The Pattern of Cooperation and Conflict between Korea and Japan: Theoretical Expectations and Empirical Realities," *Japanese Journal of Political Science* 10(3), 2009: pp. 247-265), and Ja-Hyun Chun ("Have Korea and Japan Reconciled? A Focus on the Three Stages of Reconciliation," *Japanese Journal of Political Science* 16(3), 2015: pp. 315-331) analyze the Korea-Japan relation in a political perspective. They argue that in spite of a historical controversy and territorial dispute, Korea and Japan have constructed 'irreversible trends of improved cooperation,' and have worked towards an understanding achieved to date from an international reconciliation perspective.

[3] UN comtrade DB, http://comtrade.un.org/data (accessed August 9, 2016).

[4] KOTIS (KITA data base), http://www.kita.net (accessed August 2, 2016).

[5] Ministry of Trade, Industry and Energy, *Foreign Investment Statistics*, http://www.motie.go.kr/motie/py/sa/investstatse/investstats.jsp (accessed August 3, 2016).

[6] Kim Do-Hyung, "Hankuk kyoungjebaljungwa Hanil kyungjekwankeui Junge [Korea's Economic Development and the Development of Korea's Economic Relations with Japan]," *HanilKwangesa:1965-2015 [The History of Korea-Japan Relationship: 1965-2015]*, Seoul (2015): pp. 29-31.

[7] Materials sector in Materials & Components Technology Network's classification consists of metal materials, chemical materials, ceramic materials, and textile materials.

[8] Mukoyama Hidehiko, "Japan-South Korea Economic Relations Grow Stronger in a Globalized Environment," *Pacific Business and Industries*, Vol. VII, No. 43 (2012): pp. 15-17.

[9] Ministry of Trade, Industry and Energy, *Foreign Investment Statistics*, http://www.motie.go.kr/motie/py/sa/investstatse/investstats.jsp (accessed August 11, 2016).

[10] KIEP's paper (*Hanilkiupui Jekuk Kongdongjincyul Hwalsunghwa Bangan Yongu [Research on the Cooperation between Korean and Japanese Enterprises in Third Countries]*, Seoul: Korea Institute for International Economic Policy, 2013) refers to the cooperation pattern between Korea and Japanese companies in third countries and the role of Japanese trading company and Commercial bank.

[11] Kim Gyu-Pan ("Japan's Participation in TTP Negotiation: Prospect and Policy Implications for Korea," *World Economy Update*, Vol. 3 No. 21, Korea Institute for International Economic Policy [2013]: pp. 1-8) attempted to find the reasoning behind Japan's participation in the TPP negotiation in that their participation is not only in competition with China but also in competition with Korea in global market. Sohn, Yul ("The Abe Effect on South Korea's Trade Policy," *Asian Perspective* 39 [2015]: pp. 461-481) analyzed how Japan's participation in the TPP imposed challenges for the Korean government in making FTA making strategy.

KOREA-MONGOLIA ECONOMIC RELATIONS: CURRENT STATUS AND COOPERATION MEASURES

By Lee Jae Young

Abstract

Since the establishment of diplomatic relations in 1990, Korea and Mongolia have broadened cooperation in various areas such as politics, economy, society, and culture given their geographical proximity and cultural similarities. However, the progress of economic cooperation which has been identified as one of the pillars of Korea-Mongolia cooperation is still weak in comparison with other areas. Thus, it is important to analyze achievements and limitations of economic cooperation with Mongolia, which has emerged as a burgeoning new market of Eurasia, and find new measures to elevate their economic relations to a new high moving forward. In this context, the main objective of this research lies in looking back upon the past 26 years and developing a new strategy on economic cooperation measures. Korea needs to formulate a new strategy that provides a coherent, systematic framework for cooperation with Mongolia and implement it consistently. Holding bilateral summit meetings and Korea-Mongolian forums on a regular basis, strengthening high-level networking, and concluding free trade and visa exemption agreements are necessary.

Introduction

Since the establishment of diplomatic relations in March 1990, Korea and Mongolia have maintained cordial relations, and expanded their cooperation in areas including politics, economy, society, and culture given their geographical proximity and cultural similarities. However, the progress of economic cooperation is still weak in comparison with other areas. One of the root causes of this lies in the views held by Korea on Mongolia; which is seen as a small domestic market with undeveloped industry, and a landlocked country located between China and Russia.[1]

However, recent rapid change in the global economic order has made Eurasia significantly important. As a result, Mongolia's strategic value to Korea has grown significantly. Although the scale of the market and the necessary environment for investment is far from favorable, Mongolia is one of the world's 10th richest countries in mineral resources, and its agricultural livestock sector has high potential for growth. This makes Mongolia a promising country with enormous development potential in the medium to long term. Furthermore, Mongolia is geographically in the junction connecting Europe and Asia and is strategically located with direct access to China and Russia, two of the largest emerging markets. In this respect, Mongolia could become the pillar for Korean food and other resource security, a logistical bridgehead for Korea to make inroads into the Northern regions in the future. Therefore, under Park Geun-hye's administration Mongolia has been set as one of the main bases in establishing Eurasia transport logistics, energy resources, and trade network for which the Eurasia initiative is aiming.[2]

In relation to this, the purpose of the research is to review the relationship with Mongolia over the last 26 years and to seek a new strategy for bilateral economic cooperation. First of all, I examine the impact of economic cooperation between Korea and Mongolia in light of trade and investment cooperation, evaluate its effectiveness, and suggest solutions to problems. Next, I look into the economic policies and prospects of Mongolia, and suggest promising sectors for economic cooperation between Korea and Mongolia. Finally, I suggest a strategic way to increase economic cooperation with Mongolia.

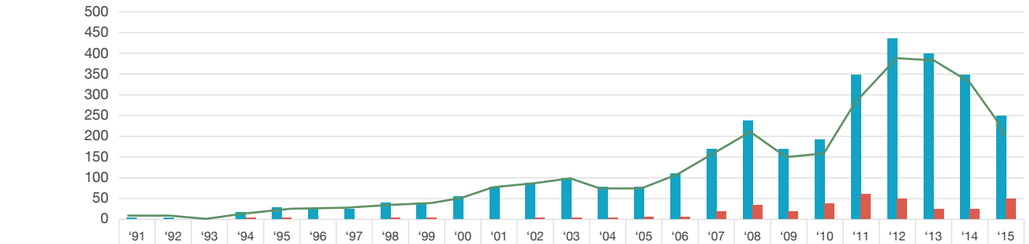
Current Status and Achievements of Economic Cooperation between Korea and Mongolia

Since the establishment of diplomatic ties, trade between Korea and Mongolia has been increasing—gradually in the beginning, and more rapidly in the mid-2000s. As indicated in Figure 1, trade between the two countries was $23.5 million in 1994 and reached $270 million in 2008. Despite a drop in 2008-2009 due to the world financial crisis, trade reached a new annual high of $487 million in 2012. After that, trade between the two countries reversed to a downward trend and fell to $292 million in 2015, mainly due to a decline in global commodity prices and an economic slowdown in Mongolia.

In 2015, Korea was Mongolia's 4th biggest trade partner following China, Russia, and Japan. Apart from 1990, the first year of establishing diplomatic ties, Korea has recorded a consistent trade surplus with Mongolia. The total recorded trade surplus in 2015 was $199 million, reaching 68 percent of the total trade volume of both countries. Nonetheless, the portion of trade volume with Mongolia accounts for far less than 0.1 percent of Korea's total trade.

In the 1990s Korea mainly exported cars, medical devices, computers, and textile goods to Mongolia and imported mineral resources from Mongolia. The goods that have been exported and imported between Korea and Mongolia have not changed since then. In 2015 Korea's main exports were capital intensive goods including vehicles (16.1 percent), boilers, machinery (13 percent), electric appliances, equipment (7.7 percent), and mineral fuels (7 percent). Korea's main imports are minerals, raw materials, and labor-intensive goods such as copper (47.9 percent), ores, slag, and ash (27.2 percent), salt, sulphur, earths, and stone (12.3 percent), and articles of knitted or crocheted apparel (2.4 percent).

Figure 1 Korea's Exports and Imports with Mongolia ($ millions)



	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
Export	5	9	4	19	28	26	26	39	40	55	77	87	100	75	78	110	170	238	167	192	350	433	399	347	246
Import	0	2	4	5	10	2	2	5	4	2	2	6	4	5	5	6	21	31	21	39	61	54	27	24	46
Trade Balance	5	7	0	14	18	24	24	34	36	53	75	81	96	70	73	104	149	207	146	153	289	379	372	323	200

Source: Korea International Trade Association (www.kita.net)

Korea's direct investment in Mongolia started in 1994. From 1994 to 2015, Korea's direct investment to Mongolia grew from $0.24 million to $38.83 million. From 1994 to 2015, Korea's cumulative FDI to Mongolia amounted to $428.84 million. However, this only accounts for 0.1 percent of Korea's total investment abroad.

Figure 2 shows the status of annual direct investment from Korea to Mongolia. In the mid-2000s, Korea's direct investment to Mongolia increased rapidly, mainly due to the boom in the mineral exploitation of natural resources in Mongolia. However, the global financial crisis stopped the rise of Korea's direct investment in Mongolia temporally, which only began to increase after the crisis. Recently, Korea's direct investment to Mongolia has decreased due to Mongolia's sluggish economy and a decline in global commodity prices. Twenty-seven percent of Korea's total cumulative direct investment until 2015 was invested in the mineral sector, 17.2 percent in whole and retail sales, 12.8 percent in the construction sector, and 12.1 percent in the real estate and leasing sector.

Korea's direct investment to Mongolia flowed into whole and retail sale sector, lodging, and restaurant businesses on a small scale in the 1990s. Since the 2000s, Korean investors have begun expanding into various fields in the Mongolian market including publishing, publications and movies, real estate, and the mineral industry. The mineral sector in particular has been a growing investment trend since 2008,[3] along with the construction, small manufacturing industry, and agricultural sectors. Until 2015, Korea's direct investment to Mongolia consisted of small businesses (55.5 percent), large companies (27.8 percent), and individual or private companies (16.7 percent) based on investment amounts.[4]

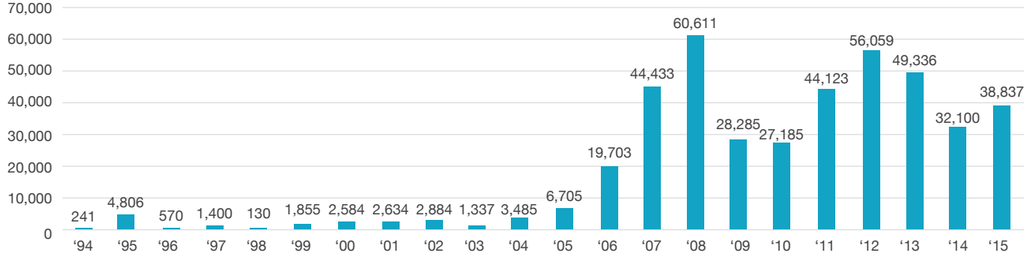
The objective of Korea's investment into Mongolia, meanwhile, is mainly to penetrate local markets: 58.7 percent of Korean companies investing in Mongolia aim to advance into Mongolian markets, 12.3 percent of them to participate in exploitation of Mongolia's natural resources, and others to promote exports and to take advantage of a cheap labor force in Mongolia.[5] Few Korean companies in Mongolia intend to enter into third country markets like China, Russia, and the EU.

Evaluation and Future Agenda of Korean-Mongolian Economic Cooperation

As previously mentioned, over the past 26 years, bilateral economic cooperation between Korea and Mongolia has lagged behind political and socio-cultural cooperation. Meanwhile, the two countries' presidents and high-level officials formed various agreements on economic cooperation. However, only a few of the agreements have been executed. In 2012, trade between the two countries reached its highest level, $487 million, but since then it has decreased to $292 million. Korea's total cumulative direct investment in Mongolia is significantly below the level of China, Russia, the United Kingdom, or Singapore.

The composition of Korea's major export items to Mongolia has changed over the years from fabric, intermediate goods, and light industry goods to automobiles, trucks, and heavy machinery. Yet Korea's trade with Mongolia is still concentrated in a few primary commodities and lacks product diversification. Korea's direct investment to Mongolia, albeit still small, has nonetheless grown consistently over the years and has recently diversified into various new sectors. In the early years of their relations, Korea's FDI to Mongolia mainly originated from

Figure 2 Korea's Annual Direct Investment to Mongolia ($ thousands)



Source: Export-Import Bank of Korea (www.koreaexim.go.kr)

individuals and small firms, but recently participation by large corporations has shown growth. Nevertheless, most resource development projects in Mongolia that are being carried out by Korean firms have not moved into the development stage. In comparison with China, Canada, and Russia, Korea's FDI in Mongolia's mineral resource development sector has generally been less successful.[6] This is partly due to Korea's relatively small amount of FDI per project as well as gross FDI compared to other major investor countries. From the above, one can conclude that the economic cooperation between Korea and Mongolia falls dramatically short of its potential.

The main obstacles to the expansion of economic cooperation between the two countries are as follows. First, the Mongolian government has frequently revised and amended laws and associated regulations. In addition, corruption within the public sector, including bribery of public officials, is a serious problem.[7] Second, there are several negative factors that make Korean investors reluctant to invest, including a small Mongolian domestic market, costly logistics due to lack of infrastructure, harsh weather especially in winter, poor working conditions, and structural vulnerability in the banking sector. Third, Korean firms have pointed out poor competitiveness due to low labor productivity, opaque administrative processes, and frequent changes of officials in charge causing instability and lack of consistency, as the main hurdles to doing business in Mongolia. Looking in more detail, it is often difficult to establish a human network in Mongolia due to frequent changes of officials in charge and to meet deadlines as subcontractors in Mongolia often dishonor their contracts. Mongolia's wage was equivalent to about half of Korea's, but Mongolia's labor productivity only reaches 20 percent of Korea's labor productivity. Hiring Chinese experts in industrial machinery is impossible due to quota restrictions on the foreign labor force. Fourth, Korean firms faced a lack of access to adequate market information in Mongolia, and as a result were not able to seize business opportunities. Therefore, Korean firms lack bargaining power in comparison to firms from developed countries who entered the mineral resources development sector earlier with enough local market knowledge. Fifth, the expansion of economic cooperation was inhibited by high airfare between Korea and Mongolia. Average international airfare is around $100 per hour, but a round trip from Korea to Mongolia, which takes about three hours each way, costs over $800. Mongolian government officials suggested opening the Inchon-Ulaanbaatar route to other carriers but opposition by Mongolian Airlines (MIAT) prevented the proposal from being realized.[8] According to a recent survey of Korean firms in Mongolia,[9] inconsistent implementation with diverse interpretations of tax law and arbitrary taxation by officials, were also viewed as major obstacles to the business environment. The Mongolian government's easing of visa restrictions and issuing long-term visas will help vitalize economic cooperation between Korea and Mongolia.

Mongolia's Economic Policy and Promising Cooperation Sectors

Mongolia's Economic Policy and Outlook

In 1990, Mongolia transformed its economy from a centrally planned system to a market system. Like most transition economies, Mongolia had suffered severe economic downturn in the early stage of economic transition. But soon after, Mongolia achieved relatively rapid macroeconomic stability by abandoning inefficient socialist models, adopting high-level economic reforms, and establishing democracy. Mongolia, the world's 10th richest in mineral resources, is on the verge of a new leap forward after achieving a high degree of economic growth in the 2000s driven by the mining sector.

The mining sector makes an essential contribution to Mongolia's GDP, which is why the government of Mongolia has recognized it as a strategic priority sector. And in 2007 the Mongolian government developed a national development strategy, Millennium Development Goals of Mongolia (2007-2021), focusing on the exploitation of its mineral resources and facilitating the mineral processing industry. The goals of the national development strategy are to facilitate human resource development, create a knowledge-based economy based on high-end technology, and transform into a middle-income country through fostering a democratic system of governance.[10] The national development strategy is to be implemented in three phases. The current level of economic structure was defined by the Mongolian government as a natural resource-based economy. Based on this, the Mongolian government developed a strategy aimed at promoting the efficient exploitation of natural resources and to accumulate capital. The next stage is defined as an investment-based economy in pursuit of diversification of industry and fostering strategic industries using accumulated capital. The final stage is a knowledge-based economy, aimed at fostering a high value-added industry. Supported by high mineral resource prices, Mongolia has achieved extraordinary economic growth rates, including 17.3 percent, in 2011. However, after 2011, Mongolia's economic expansion started to slow down gradually; recording 12.3 percent in 2012, 11.6 percent in 2013, 7.5 percent in 2014, and 2.3 percent in 2015. Mongolia's economic slowdown was driven by a combination of complex factors such as large drops in commodity prices, a long-delayed development at Oyu Tolgoi, shrinkage in FDI flows, decrease in export volume to China, devaluation of *tugrik* due to a decline in foreign exchange reserves, and inflationary pressures. Against this backdrop, the prospects for the Mongolian government's goal of becoming a middle-income country with GDP per capital $12,000 by 2021 remains grim.

Not only is Mongolia highly dependent on foreign trade and investment, but it is also heavily affected by the global economy. Granted, there is considerable uncertainty around economic forecasts for Mongolia. The IMF has predicted that Mongolia will achieve 0.4 percent growth in 2016, a slight recovery in 2017, and then around 5 percent annual growth from 2018.

Even if Mongolia is currently experiencing an economic slowdown, the mid- and long-term economic outlook remains relatively positive for a number of reasons. First of all, Mongolia is not only one of the world's top ten countries with the most mineral resources, but also is strategically located with direct access to China and Russia, two of the largest emerging markets. Second, due to the fact that the Mongolian People's Party won a landslide victory in parliamentary elections on June 29, 2016 (65 out of 76 seats in the parliament), it is possible for it to lead to a stable government over the next four years. Third, because the Mongolian People's Party has a friendly attitude towards foreign direct investors, there are high expectations that the Oyu Tolgoi phase II project will resume in the near future.

Essentially effective implementation of the national development strategy will depend on the willingness and ability of its leaders, building adequate infrastructure and developing highly skilled human resources. In this respect, the new government should take fresh initiatives in creating a friendly investment environment by reducing government regulations, vitalizing the private sector, and setting up proper economic policies in order to gain foreign investors' credibility.

Promising Fields of Cooperation with Mongolia

To promote mutually beneficial cooperation between Korea and Mongolia to a new high and in new forms, Korea needs to break out of existing patters of cooperation mainly comprised of Korean firms investing in restaurants and the broader service industry. Instead, the Korean government should encourage investment into the exploitation of the mineral resource industry, and small and medium-sized businesses to enter into Mongolian market. Korea should also engage in reciprocal cooperation with Mongolia by aligning cooperation measures with Mongolia's national development strategy which focuses on the diversification and modernization of its industry. Economic cooperation between Korea and Mongolia will be able to grow consistently when cooperation is carried out in promising sectors. It is recommended that future economic cooperation should focus on the key areas indicated below.

First, bilateral economic cooperation in Mongolia's mineral sector is considered to be promising. To diversify supply routes of mineral resources for realization of its own energy security, Korea should actively enter into the mining industry of Mongolia, a country with abundant mineral resources. In order to do so, Korea needs to put more efforts in understanding Mongolia's interests. Mongolia holds a negative perception of foreign firms extracting and exporting raw resources without processing the materials inside the country. The Mongolian government, for the sake of job creation and the enhancement of the industrial structure, encourages development of mining-processing plants. In other words, the Mongolian government is implementing a policy whose objective is to transform mineral resources such as copper and gold into finished products and export them in order to maximize profits by increasing the added value and to create more employment opportunities. In this regard, the demand for copper smelters, steel mills, oil refineries, and coal preparation plants will likely rise in the near future. Korea should therefore give positive consideration to entering these markets.

Second, the transportation infrastructure and construction sectors have high potential for cooperation. Mongolia lags behind in transportation infrastructure, such as rail and roads, because the population is only about three million people compared to its vast territory. Furthermore, Mongolia is a landlocked country located between Russia and China, thus it has no seaport. Therefore, the Mongolian government has addressed the improvement of transportation infrastructure as one of its central tasks for ensuring sustainable economic growth and presented its plan to invest $3.345 billion, $2.581

Table 1 Mongolia Economic Forecasts

	Unit	2015	2016	2017	2018
Real GDP Growth Rate	%	2.3	0.4	2.5	5.7
Total Investment (% of GDP)	%	26.2	29.9	36.6	40.4
Average CPI inflation	%	5.9	1.9	4.3	6.4
Current account balance (% of GDP)	%	-4.8	-10.7	-17.7	-20.3
Current fiscal balance (% of GDP)	%	-1.9	-2.1	-1.8	-1.7

Source: IMF, World Economic Outlook Database (April 2016); EIU, Country Report Mongolia (April 18, 2016).

billion, $250 million, and $15 million in rail, road, airport, and port infrastructure respectively by 2021.[11] Therefore, the relevant companies in Korea may need to explore the possibility of strategic alliances with domestic or local companies to participate in these areas. And since local firms lack the technical capabilities, Korean construction firms with abundant overseas experience and high-end technology should actively tender for projects. At the moment, most of the construction materials are being imported from China, but it should be noted that as a result of rising income levels in Mongolia, the demand for advanced quality products is gradually increasing. Korea should therefore give positive consideration to advancing into its related sectors such as construction materials, interiors, and facilities.

Third, the agriculture and livestock sector has great potential, and in particular, the prospect of organic farming, food production, and meat processing plants seems very bright. Not only had the Mongolian government developed a plan to become completely self-sufficient in grain, potatoes, and vegetables in order to avert chronic food shortages, but also planned to export them as well. The government is also expanding livestock farms to raise the efficiency of production. In the midst of growing interest in food security and healthy foods in major Northeast Asian countries including Korea, Mongolia is the place where clean agricultural and livestock products, namely organic grocery and processed meat products can be produced. Therefore, if Korean firms decide to enter the agriculture and livestock sector, they can produce organic products and export them to high-income earners in China (Inner Mongolia, three northeast provinces), and Russia (the Far East, Siberia) as well as Korea. Also, Korea's food processing technology is considered superior to that of China and Russia, therefore the establishment of a production factory for high-quality meat processed foods such as ham and sausage should be explored.

Fourth, tourism is also regarded as a promising area of cooperation—Mongolia and Korea can develop high value-added tourism products. Lately, the number of tourists visiting Mongolia, especially Korean tourists who yearn for Mongolia's grasslands, has risen steadily which proves that tourism in Mongolia is a valuable industry.[12] But the country has not been able to harness its abundant resources into high value-added tourist products. Therefore, with joint efforts from the two countries, Korea and Mongolia can develop marketable tourist products with a fine mix of natural resources, and cultural/historical elements. In addition, Korea can find a way to participate in tourism development projects through promoting cooperation in the management of tourism operations such as vocational tourism training and hotel management. One of the essential tasks in developing tourism in Mongolia is the reduction of airfare, which is too expensive compared to similar distances overseas. Due to the geographical characteristics of Mongolia as a landlocked country, aircraft is the only transportation mode that connects the two countries directly. It is generally judged that multiple air routes between Ulaanbaatar and Seoul are necessary as those between Vladivostok and Seoul (Inchon) because the number of mutual visitors between Korea and Mongolia has been increasing. This is the field in which the two governments must cooperate more actively and work hard.[13]

Fifth, it is expected that importing Korean financial services will be a promising cooperation field. If Korean companies acquire the shares of Mongolian financial companies and provide Korean services to Mongolia, it would be very effective in a short period of time.

Finally, Korea needs to expand the investment area into more promising regions beyond the capital Ulaanbaatar, and to devise a way to diversify the investment. Recently, in Mongolia, as local governments are campaigning for investment promotion activities, Korean companies will be able to make investments in mineral resource development, infrastructure, agriculture, manufacturing, and construction fields in the provinces. China and Russia are moving quickly by signing memorandums on investment cooperation with local governments in Mongolia.[14]

Future Agenda for Promoting Economic Cooperation between Korea and Mongolia

Since the establishment of diplomatic relations in 1990, Korea and Mongolia have broadened cooperation in various areas such as politics, economy, society, and culture for the past 26 years. Nonetheless, the potential for cooperation between the two, particularly in the economic arena, has not yet been fully realized. While the political and economic weight of Eurasia including Mongolia is increasing, a new cooperation relationship between Korea and Mongolia, quite different from the present one, is necessary. To achieve the goal, the two countries should enlarge their strategic cooperation with each other, establish more organized strategies, and implement them consistently.

First, strengthening a high-ranking official network and holding regular summit meetings is necessary. By holding summit meetings every other year and creating a systematic timeframe, major problems can be discussed and cooperation objectives can be set and carried forward. In addition, because the Mongolian Parliament is a key decision maker in regard to domestic affairs, Korea should take advantage of the ROK-Mongolia Parliamentary Friendship Association as a channel for enlarging the cooperation of both countries through strengthening the channel in the National Assembly level.

Second, in consideration of the strategic and potential value of Mongolia, the conclusion of a FTA between Korea and Mongolia should be pushed positively to fuel implementation of the Eurasia Initiative.[15] In the case of Japan, it concluded an Economic Partnership Agreement (EPA), a kind of FTA, with Mongolia in February 2015 and the EPA took effect in June 2016. Even if short-term outcomes and economic benefits resulting from FTA conclusion are insignificant from the viewpoint of the present economic scale of Mongolia and the small scale of trade between both countries,[16] the FTA between Korea and Mongolia should be carried ahead positively from the point of view of the strategy such as long-term resource diplomacy support, political advantage, and security benefits. It is encouraging that the leaders of both Korea and Mongolia arranged on July 17, 2016 to start a joint study on an EPA at the earliest possible time.[17]

Third, it is believed that a visa exemption agreement, which enables people to move freely among both countries, must be signed within the earliest possible time in order to expand economic cooperation between Korea and Mongolia. Mongolians can stay for a short period of time without a visa if they visit Japan or China. It is considered desirable for Mongolia to sign a visa exemption agreement with Korea as soon as possible because Korea is Mongolia's fourth largest trading partner after China and Russia.

Fourth, the Korea-Mongolia business forum, a Track 1.5 diplomatic forum in which the public and private sectors from both countries participate, needs to be held regularly. By doing so, the Korea-Mongolia intergovernmental commission can readily identify projects where the two countries' interests align. It can also contribute to facilitating economic cooperation by acquiring business information, grasping demand, strengthening networks, and activating the discussion about business models.

Finally, it is important to promote interest among the peoples of the two countries and develop bases for revitalizing research on issues related to Korea and Mongolia. For example, we can organize a "Korea-Mongolia Cooperation Forum" or a "Mongolia-Korea Cooperation Forum" involving business, academia, and government. In addition, we may expand networks and acquire information by establishing a "Korea-Mongolia Research Center" in Mongolia.[18] Those measures should contribute to enhancing Korea's status and image in Mongolia.

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PART IV: SECTORAL CONDITIONS IN NORTH KOREA

STRATEGIES FOR DEVELOPMENT OF TRANSPORT INFRASTRUCTURE IN NORTH KOREA FOR UNIFICATION AND BEYOND

By Kwon Young-in, Na Hee Seung and Kim Kyoung-Sik

Abstract

It has been reported that passenger transport and logistics between regions in North Korea are very difficult due to deterioration and imperfect maintenance of transport infrastructure and limited investment in the facilities for several decades. If South Korea and North Korea are unified, massive investment in the development of transport infrastructure is inevitable. This investment would mainly be supported by South Korea as well as through cooperation with Multilateral Development Banks such as the World Bank Group (WBG), Asian Development Bank (ADB), and Asian Infrastructure Investment Bank (AIIB). In addition, special and efficient plans for transporting people and goods need to be established in case of reunification considering the current transport environment in North Korea. Thus, well-prepared strategies should be in place for short, mid, and long-term perspectives.

Introduction

Before discussion of strategies for the development of transport infrastructure in North Korea, it is necessary to describe the current economic situation. Table 1 presents a comparison of key economic factors between South and North Korea. The total population and land area of North Korea is 0.5 times smaller and 1.2 times wider than those of South Korea's, respectively. The urbanization rate (total population residing in urban areas) is 82.4 percent for South Korea and 60.7 percent for North Korea. Total manufacturing of motor vehicles and the total amount of foreign trade in 2014 for North Korea are only 0.09 percent and 0.69 percent of South Korea's, respectively. The Gross National Income (GNI) per capita of North Korea is $1,320, which is only 4.7 percent of South Korean GNI.

These differences in economic indicators are crucial for service level inequality of transport infrastructure for both countries. Due to insufficient transport infrastructure provisioning in North Korea, passenger transport and logistics movement are very difficult. This can easily be seen from the border area with China and Russia. The differences in quality of infrastructure between connected countries are getting more pronounced. North Korea recently announced a national development plan to overcome the current situation, however the government is experiencing a shortage of investment. In addition, international cooperation to improve transport infrastructure has stopped due to sanctions caused by nuclear weapon experiments.

Cooperation between the two Koreas for transport infrastructure improvement was initiated by an open-door policy for South Koreans at North Korea's Mt. Keumgang tourist region and followed by the North-South Korean Summit Meeting in held in 2000 and 2007 in Pyongyang. In this atmosphere, South Korea's Kaeseong Industrial Region (KIR) started to operate in North Korean territory in 2005. A road linkage project, completed in February 2003, established a direct connection between Mt. Keumgang and South Korea for tours.

The Mt. Keumkang tour program and KIR project triggered road connection projects between countries. National highway No. 1, No. 7, and Gyeongeui line railway—which were disconnected due to the division of the peninsula—were re-connected in 2004. However, two incidents caused this honeymoon period to cease: the July 2008 shooting of a South Korean tourist by a North Korean soldier at Mt. Keumgang; and North Korea's March 2010 attack of the on the South Korean naval vessel, the *Cheonan*.

In 2013, newly-elected President Park Geun-hye proposed the Eurasia Initiative, a transport corridor connecting South Korea, North Korea, China, Russia and Central Asian countries to Europe to formulate a massive single market through energy and logistics infrastructure. The Eurasia Initiative proposed interconnection with China's 'One Belt, One Road' and Russia's 'New East Policy' for cooperation with North Korean transport infrastructure development, but could not proceed because of international sanctions imposed on North Korea in reaction to its nuclear experiments.

There are few financial resources available for North Korea's transport infrastructure, and cooperation among South Korea, China, and Russia is both inevitable and difficult. This paper reviews the current situation of transport infrastructure in North Korea and proposes strategies for the preparation of reunification.

Current Status and Problems of Transport Infrastructure in North Korea

North Korea's transport network has been shaped by its topography and geography. Railways and roads have been developed alongside western coastal plains and the eastern coastline whereas the density of transport network facility in northern mountainous region is quite lower than that of the coastal area. The railway system is the main transport mode and road transport plays a secondary role to link the railway. Ports and airports take on a limited role.

Table 1 Comparison Economic Indicators between South and North Korea

Item	South Korea (A)				North Korea (B)				B/A x100 2014
	2000	2005	2010	2014	2000	2005	2010	2014	
Population (1,000 persons)	47,008	48,138	49,410	50,424	22,702	23,561	24,187	24,662	48.9%
Area (km)	99,461	99,646	100,033	100,284	122,762	123,138	123,138	123,138	122.8%
Urbanization Rates (%)	79.6	81.3	81.9	82.4	59.4	59.8	60.2	60.7	73.7%
Production of Motor Vehicles (1,000)	3,115.0	3,699.4	4,271.7	4,524.9	6.6	4.5	4.4	4.0	0.09%
Foreign Trade (100 million USD)	3,327.5	5,456.6	8,916.0	10,981.8	19.7	30.0	41.7	76.1	0.69%
"Per capita GNI (USD)"	11,870	18,511	22,166	28,180	743	1,025	1,072	1,320	4.7%

Table 2 Comparison Transportation Infrastructure Indicators between South and North Korea

Item	South Korea (A)				North Korea (B)				B/A x100 2014
	2000	2005	2010	2014	2000	2005	2010	2014	
Length of Railway (km)	3,123	3,392	3,557	3,590	5,124	5,235	5,265	5,302	147.7%
Length of Electric Railway (km)	667.5	1,670	2,147	2,457	4,189	4,211	4,229	4,232	172.3%
Length of Subway (km)	433.1	503.1	550.6	615	34	34	34	34	5.5%
The Number of Rolling Stock (each)	17,541	18,118	17,149	15,709	20,092	21,881	26,312	28,084	178.8%
Length of Roads (km)	88,955	102,293	105,565	105,673	23,633	25,495	25,950	26,164	24.8%
Length of Expressway (km)	2,131	2,968	3,859	4,139	724	724	727	729	17.6%
Cargo Handling Capacity at Ports (1,000 ton)	430,437	650,281	915,430	1,039,378	35,500	37,000	37,000	41,560	4.0%
The Number of Motor Vehicles Registered (1,000)	12,059.30	15,396.70	17,941.40	20,118.00	261.90	249.70	257.00	275.80	1.4%
The Number of Airplanes (each)	268	297	514	656	20	20	22	23	3.5%
Tonnage of Vessels (In 10,000 G/T)	615	1,007	1,427	1,392	85	90	80	71	5.1%

Table 2 shows a comparison of the transport infrastructure indicators between countries, mainly for 2014. Total length of rail and electronic railway and the number of rolling stock for North Korea are greater than for South Korea. While the urban subway system implemented in South Korea is 615 km for six cities, North Korea has only 34 km for two routes in Pyongyang. The characteristics of the North Korean railway system can be summarized as a high percentage of a single line system, low speed, and deterioration, which leads to inconvenience. A comparison of length of road and expressway shows that North Korean statistics are 26 km and 729 km which are only 18-25 percent of South Korea's. The number of motor vehicles registered in North Korea is 1.4 percent of South Korea's. Overall the gap in the level of transport infrastructure between the countries is too big. There is only one private airline company in North Korea with 23 aircrafts, which is 3.5 percent of South Korea's. The total tonnage of North Korean vessels is much smaller than South Korea's.

Railway

North Korea's railway network comprises about 60 main and local railway lines. The total length of the railway network is approximately 5,302 km. Of this, about 1,100 km was built after 1960. North Korea has also electrified the railway network to improve its operations; more than 4,000 km has been electrified since 1958. However, despite a high level of electrification, about 98 percent of the railway network is single-track and is assessed to be very inefficient in terms of operating speed (average train speed: 30 to 40 km/hr). Overall, railway transport in North Korea has failed to make use of the advantages of rail transport; that is, it is more competitive for long-distances and for carrying large and heavy cargo.

Road

The development of roads in North Korea started after the Korean War. However, the closed economy, a lack of financial resources, and mountainous terrain in most of the country constrained the road network. The ratio of paved roads is only 6.7 percent, which in turns lowers the efficiency of roads. As part of the June 2000 Summit, the rehabilitation of roads was one of the suggestions to improve inter-Korean exchanges. North Korea needs to take steps to reconstruct the disconnected route to improve the efficiency of roads. As North Korea's trade with China increases, the Dandong-Shineuiju and Wonjeong-Rajin routes will play an important role. In the future, Shineuiju will be an important location for the creation of a special economic zone, similar to Kaeseong. Therefore, it is important that the government provides adequate road access around the surrounding areas.

Airport

North Korea is known to have about 10 airports which civilian airplanes can use. The major international airport is Soonan International Airport, which has two runways (3,500m x 70m, 4,000m x 50m) and opened a new international passenger terminal in April 2015. Soonan International Airport is located in the outskirts of Pyongyang, and is linked to Pyongyang by a four-lane semi-expressway. The annual passenger handling

capacity of the airport is estimated to be about 20 million passengers. But, because of low travel demand, existing airport facilities are underutilized. In July 2015, Kalma international airport opened in Weonsan near Mt. Keumkang.

Port

As North Korea trades primarily with China, there has been little need for investment in seaports. And given the availability of rail and land transportation with China and Russia, this has further reduced the need for seaports. Due to a lack of investment in ports, regular power failures result in slow unloading of ships. Only few ports can handle 40-ft containers as there are no cranes available. The main problems of North Korea's maritime trade include the country's collection of exorbitant port-entry fees and poor quality of inland transportation within North Korea.

Strategies for the Transport Infrastructure Development of North Korea

National Land Development and Transport Infrastructure in North Korea

North Korea established the 'National Economic Development and Strategic Plan for Decade' in 2010 and $100 billion investment and development plan was also announced for four industrial districts including Naseon petro-chemical industrial district, electricity and agricultural development, and transport network expansion as shown in Table 3. This investment plan includes $25.8 billion for railway, highway, and airport. In addition, North Korea is in the process of developing Weonsan-Mt.Geumgang as an international tourist zone including development of Weonsan/Kalma International Airport opened in 2015, and construction of railway, road and port are being planned.

South Korea's Ministry of Land, Infrastructure and Transport is in the process of establishing a 'Master Plan for National Land Development' to minimize the costs of unification and to fulfill the conditions of systematic and efficient unification in preparation. The South Korean government released the 'Revision of the 4th National Territorial Plan' in 2011. This revision includes a master plan for border area to expand inter-Korean cooperation and to reinforce the basis for Eurasia-Pacific cooperation.

Inter-Korean Cooperation of Transport

The transport plan established in 1999 by South Korea's Ministry of Construction and Transport and revised in 2011 has suggested the 'Comprehensive Transport Network Plan for the Korean Peninsula' as a long-term plan. The objective of the plan is to connect the Eurasian Continent by constructing two express railways which cross the Korean Peninsula with the profile line, in connection with a branch railway. For the road network, the plan aims to reconstruct the six national highways in the North-South borderline and to connect Asian road networks with China and Russia in the long-term.

In order to reconstruct the road network, the South and North Korean governments agreed on a road reconstruction project in ministerial talks between the two Koreas in July 2000 and August 2002. Consequently, the transportation of goods has been available since November 2004. Both sides consented to an investigation of current conditions of networks and reconstruction of roads and railways in the South-North Korean Summit on 4 October 2007.

Despite efforts and outcomes, the South Korean government placed sanctions against North Korea due to the killing of a female South Korean tourist by a North Korean guard near a restricted area on 11 July 2008, and the sinking of the *Cheonan-ham* vessel on 26 March 2010. The sanctions lead to the suspension of all inter-Korean dialogue and contact. Despite this, there was a recent agreement in 2015 on the reconstruction of the Gyeongwon Railway and a ground-breaking ceremony was held in South Korea.

Table 3 Special Economic Zones of North Korea

Type	Economic Trade Zone	Economic Development Zone	Industrial Complex	Tourist Zone	Economic Trade Zone
Location	Naseon, Hamgyeongbuk-do	Sinuiju, Pyeonganbuk-do	Gaeseong, Hwanghaenam-do	Mt. Geumgang, Gangwon-do	Hwanggumpyong Island and Wihwado, Pyeonganbuk-do
Area	about 470km^2	132km^2	66km^2	about 100km^2	28.2km^2
Specify Time	Dec-91	Sep-02	Nov-02	Nov-02	2010
Laws	Act on Naseon Economic Trade zone	Framework Act on Sinuiju Special Administrative Region	Act on Gaeseong Industrial District	Act on Mt. Geumgang Tourism District	Act on Hwanggumpyong Island and Wihwado Economic Trade Zone

Eurasia Initiative and Cooperation Strategy with China and Russia

President Park Geun-hye of South Korea introduced the Eurasia Initiative in international conferences, named "Global Cooperation in the Era of Eurasia." Comprehensive transport and logistics networks in Eurasia, called the Silk Road Express (SRX), were proposed as a strategic way to achieve the goal.

The Silk Road Express forms a transportation and logistics networks based on transcontinental railways connecting South Korea, North Korea, Russia, China, Central Asia and Europe, creating a massive united market. This plays a crucial role in North Korea's economic recovery and the mutual growth of Eurasian countries. With the Eurasia Initiative, China and Russia have been proceeding to develop the transportation network with the policies of 'One Belt, One Road' and 'New East Asia Policy' respectively.

China's 'One Belt, One Road' is the representative international strategy combined with the Silk Road economic belt and the plan of the Ocean Silk Road of the 21st century by Chinese president Xi Jinping. This plan was proposed for Eurasian comprehensive cooperation in economy, politics, finance, and the military. The plan includes the construction of an international transport corridor, international long-haul railways, and main road network. As key projects, the plan precedes the construction of the six economic corridors to establish land transportation and logistics network with railway, road and energy network for fostering the development of urban and rural districts. Due to no consideration for South Korea and North Korea in the plan, cooperation with Korea and the Six Economic Corridor plan is needed.

Russia's New East Asia Policy materialized with the inauguration of the Putin administration. As part of the plan, Russia cooperates with Korea and China on the East Asian market. The continental railway, Najin and Tumen river development, and Tumen riverside attractions are key projects. However, establishing an execution plan is essential to specify funding for the project: $1.7 trillion rubles, which is 86 percent of total business costs and suggested to be funded from the private sector.

Construction of a Transportation System by International Organizations

Creating the transport infrastructure in a developing country is generally conducted by Official Development Assistance (ODA), with funding by an international organization or Multilateral Development Bank (MDB). It is not easy to carry out a project for North Korea, with its uncertain political risks. However, the possibility of carrying out a project can be raised through dispersed risks and international cooperation.

The first international cooperation project was undertaken by the UNDP, the representative development program of the UN. This organization called representatives from South Korea, China, Russia, Mongolia, North Korea, and Japan together in Pyongyang to develop the Tumen River Area Development Program (TRADP), designated as a top priority for the northeast region in October 1991. TRADP lost momentum due to the East Asian economic crisis in 1997, and changed its title to the Greater Tumen Initiative.

Meanwhile, the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) pushes forward with two road and railway improvement projects: the Asian Highway and Trans Asian Railway. The Asian Highway is the main road connecting 140,000 km in 32 countries, with the AH1, AH6, and AH32 lines passing through North Korea. ESCAP visited the North Korean portions of the highway to improve operating efficiency and invited North Korean public officials to Bangkok for technical training. The Trans-Asian Railway held its fourth professional conference in Bangkok in November 2015 to discuss railway network setup between Europe and Asia, which is a project of improving 117,500 km of railway in 28 countries, and it frequently holds international seminars such as ESCAP-UICs.

Funding Strategy for Development of Transport Infrastructure in North Korea

Development of transport infrastructure requires large expenses and a long time for implementation. If North Korea is able to secure economic growth engines through expanding investment on transport infrastructure in the period of South and North cooperation until unification, unification expense would be reduced and more benefits produced from the unification in the early stage. For that reason, it is necessary to study efficient funding strategy.

The Strategic Study on the Transport Infrastructure of the Korean Peninsula in Preparation for Unification of The Korea Transport Institute estimates the costs are 20-100 trillion *won*, and divides the financing measure into two categories; domestic and overseas. On the one hand, domestic financing contains inter-Korean cooperation funds, preparation of development fund for transport and logistics infrastructure of North Korea and the establishment of an infrastructure development bank of the Korean Peninsula with issuing national-and public-bond and financing of private corporation. On the other hand, overseas financing includes ODA, issuing foreign currency bonds, establishing an economic support fund for North Korea, a special trust fund, a development bank of Northeast Asia, and the Asia Infrastructure Investment Bank (AIIB), or participating

in the Global Infrastructure Hub (GIH) of the G20. Financing for expanding the transport infrastructure of North Korea, however, should be established under cooperation between South and North Korea and international organizations – with North Korea taking an active part in the project.

The most practical measure is to use existing financing rather than to establish new ones. If North Korea solves the nuclear weapon issue, joining international financial institutions will be accomplished without difficulties. Because North Korea may have a problem securing transport infrastructure financing on its own, a strategy of cooperation, governmental support for a licensing system, supplying of land, and providing construction workforce and materials will be required.

As a financing strategy for a development project of transport infrastructure, South Korea's "Act on Public-Private Partnerships in Infrastructure" should be revised to cover North Korea. In addition, establishing a private investment service center for North Korea to manage and support private investment business on infrastructure in North Korea—similar to South Korea's PIMAC (Private Infrastructure Investment Management Center)—would be valuable.

Conclusion and Future Tasks

This paper reviews the current status of transport infrastructure in North Korea and proposes strategies for development of their facilities. Overall, transport facilities in North Korea are seen as underdeveloped, with the railway system as its main transport mode and road transport as a secondary link to the railway.

To efficiently develop and integrate North Korea's transport infrastructure, inter-Korean cooperation plus engagement from neighboring countries such as China and Russia is essential. International organizations such as UNDP and UNESCAP can play an important role as well. Most importantly, to reduce unification expense and produce more benefit from unification in an early stage, it is necessary to study efficient funding strategies.

If South and North Korea are unified, a massive budget investment in the development of transport infrastructure is inevitable. This investment would mainly be supported by South Korea, with cooperation from multilateral development banks such as the WBG, ADB, and AIIB. In addition, specific plans for transporting people and goods in the event of unification need to be established now considering the current transport environment in North Korea. These strategic plans must include short, mid and long-term perspectives.

Finally it is necessary that academic and policy research toward transport infrastructure of North Korea should be continuously undertaken regardless of the political confrontation between South Korea and North Korea. This research effort is expected to play an important role in providing a sound foundation to promote cooperation to establish a transportation infrastructure network in a very short period of time for the restoration of mutual exchange between the two Koreas.

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PRESENT CONDITIONS OF NORTH KOREAN INDUSTRY AND POSSIBLE RECONSTRUCTION PLANS

By Lim Soo-ho & Hong Seok-ki

Abstract

Since the collapse of industry during the 'Arduous March' (1995-1997), Pyongyang has continuously launched reconstruction plans but has failed to see a rebound. The key is to restore industrial linkages; however, the DPRK allocated a majority of state investment to the defense industry under the 'Military First Economic Policy.' As long as the 'strategic sector' retains priority, a sound outcome seems to be out of reach. In reality, North Korea's comparative advantage lies on labor-intensive business, with abundant labor forces at a low cost. After unification, such industries will have bright prospects with technology and capital not only from South Korea, but also from China and Japan. The economic integration scenario of the two Koreas—whether radical or gradual—will decide industrial policies for the upper half of the peninsula in the post-unification era.

North Korea's Industrial Reconstruction

Facing the sudden disintegration of the Soviet bloc and consecutive natural disasters, North Korean industry collapsed *de facto* in the mid-1990s. Supply shortages in not only manufacturing and mining but also agricultural and food industries resulted in mass starvation; the death toll amounted to at least hundreds of thousands. DPRK calls this period the 'Arduous March' (1995-1997). As Kim Jung-il took control in 1998, he set up 'building a strong and prosperous state' as a new policy goal and initiated industrial reconstruction. Such an objective refers to restoring economic conditions up to those of 1987, when economic prosperity reached its peak.[1] Kim's regime announced 2012 as the deadline for achievement.[2]

As seen in Table 1, however, present production records fall far behind the target. Compared to output levels around 1987, iron ore (57.6 percent), cement (49.4 percent), and electricity (38.9 percent) are only about a half of expected yields; coal (31.9 percent), chemical fiber (20.6 percent), steel (16.5 percent), and chemical fertilizer (9.7 percent) are even worse, mostly reaching below 30 percent of peak level. Only food supplies are showing a relatively solid recovery (89.8 percent). Even if the benchmark was set realistically at the year 1990—the dawn of the collapse of the Soviet Bloc—output performances are not so impressive. Food (125.1 percent) and cement (108.9 percent) surpassed the reference point, but coal and electricity productions are at 81.7 percent and 78 percent respectively. Other sectors such as iron ore (64.9 percent), steel (36.3 percent), chemical fertilizer (56.5 percent), and chemical fiber (20.6 percent) still have a long way to go.

In other words, reconstruction has been delayed as industrial linkages are stuck in the middle of the road. Slow recovery of the metal sector hindered productive circulation (energy → metal → machinery and construction) in the heavy industry; performances in coal and chemicals are not sufficient to restore enough chain-reactions (energy → coal → chemicals → light industry and agriculture) to expand supply of consumer goods. Even though food production overcame the 1990 level, it was not as a result of an increased supply of fertilizers and farming machines or the recovery of industrial linkages. Pyongyang has been emphasizing investment in the metal and coal chemical industries, but focusing on old and economically inefficient technologies such as Juche, iron, fertilizers, and textiles instead of advanced ones.[3]

Why did industrial reconstruction in North Korea turn out to be a failure? Pyongyang adopted the 'Military First Economic Policy' as a means of constructing a 'strong and prosperous state' in the early 2000s. Measures for economic reform and opening up, such as the July 1st Reform, were introduced to first support military-related production industries—'the strategic sector.' Non-strategic sectors, such as light and local industries, could then be recovered through a trickle-down effect. Since the DPRK economy is centered on heavy industry, which systematically supports military production on top of the ladder, North Korean authorities expected that developing the 'strategic sector' first would stimulate the entire industrial system through a multiplier effect. In reality, however, momentum was quickly lost even before trickling down to heavy industry.

Table 1 Production Records of North Korea's Major Products

Products	Circa 1987 (A)*	1990 (B)	1998 (C)	2002 (D)	2010 (E)	2011 (F)	2012 (G)	2013 (H)	2014 (I)	I/A (%)	I/B (%)	1998-2002 Avg. yearly growth (%)	2002-2010 Avg. yearly growth (%)	2010-2014 Avg. yearly growth (%)
Coal	8,500	3,315	1,860	2,190	2,500	2,550	2,580	2,660	2,709	31.9	81.7	4.40	1.70	2.03
Electricity	55.5	27.7	17	19	23.7	21.1	21.5	22.1	21.6	3.9	78	2.97	2.90	-2.14
Food***	560**	402	389	413	450	469	441	492	503	89.8	125.1	2.09	1.26	3.01
Iron Ore	950	843	289	408	509	523	519	549	547	57.6	64.9	9.76	2.91	1.84
Steel	740	336	95	104	128	123	122	121	122	16.5	36.3	3.61	2.71	-1.16
Cement	1,350	613	315	532	628	645	645	660	668	49.4	108.9	14.41	2.14	1.55
Chemical Fertilizer	520	89	39	50	46	47	48	49	50	9.7	56.5	8.39	-0.89	2.27
Chemical Fiber	12.6	5.0	3.5	2.6	3.0	2.5	2.5	2.5	2.6	20.6	52.0	-6.51	1.90	-3.17

* It refers to the best yearly performance circa 1987; the benchmark year for food, iron ore, and steel are 1987, 1985, and 1984 respectively. Other products are based on output levels in 1989.

** North Korea reported production of grains in 1987 as 10 million metric tons, but the standard is rough grains not yet polished. Hence, numbers are converted by Korean Rural Development Administration, in terms of milled grains.

*** Estimates since 2010 came from FAO/WFP (2013).

All Quantities are measured in 10,000 metric tons except for electricity, which is based on billion kWh.

Source: Korea Ministry of Unification (1996); Bank of Korea Economic Statistics System (2015); Kim (2015), pp.41-51.

Furthermore, to execute such a plan, Kim Jung-il had to allow the advent of markets in non-strategic sectors under the 'self-reliance' principle; marketization in North Korea is just a flip-side of relinquishing fiscal assistance on non-military sectors in this manner. The policy also assumes exploitation and transmission of economic surpluses from marketization in order to develop the strategic sector, which severely restrains capital accumulation in market and civilian sectors. While the 'Military First Economic Policy' was a means of achieving a 'strong and prosperous state,' it turned out to be the core cause of failure in North Korea's industrial reconstruction for the last 18 years.

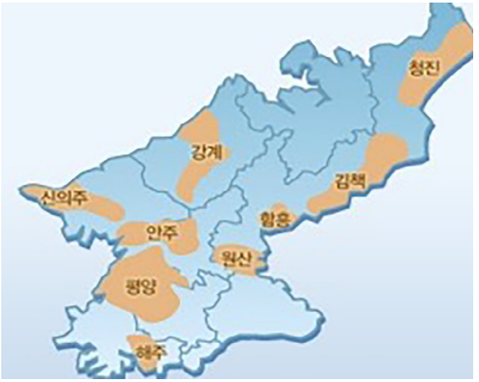
Geographical Distribution of North Korean Industry

The majority of North Korean firms are located in one of the five large industrial zones—Pyongyang-Nampo, Shinuiju, Hamhung, Chungjin, and Gangye—or the four medium to small zones of Haeju, Anju, Wonsan, and Kimchaek. Even before 1945, enterprises had been intensively clustered in maritime regions for proximity to resources, convenience in transportation, and high population density, except for Gangye which was built as a defense industry cluster. All of the other eight zones share these common traits. In addition, there are two special economic zones (SEZ) in Kaesong and Rajin-Sunbong area.

The largest industrial zone in the DPRK is the Pyongyang-Nampo area, conveniently located at the nation's capital and around rich mines. Comprised of Pyongyang, Nampo, Songlim, and Sariwon, it is the greatest in terms of area and economic performance, accounting for 50 percent of GDP and 30 percent of manufacturing industry in North Korea. In Pyongyang, not only heavy industries such as machinery, steel, and construction materials but also light industries, such as food, are well developed. Nampo is centered on manufacturing, so metalworking and mechanical industries such as steel, heavy machinery, and shipbuilding are well established there. This area is also the largest nonferrous metal processing belt in DPRK, which sustains the supply chain of heavy industry flowing from iron and steel to machinery.

Having abundant electric power sources, the Shinuiju zone fostered the chemical fiber, paper, textile, and shoes industries. This area was originally developed for pulp production during Japanese rule; nowadays light industries take up a large share due to comparative disadvantages in terms of skilled labor, port facilities, and energy supply to other zones. Hamhung has grown into the largest complex for chemical industries in DPRK with its ample resources, proximity to production plants, and transport convenience. It is also part of a huge industrial belt extending down to Wonsan, making up the largest machinery production base second to Pyongyang, with 16 percent of total outputs in mechanical industry.

Figure 1 North Korea's Major Industrial Zones



Source: Korea International Trade Association (KITA)

The Chungjin zone is the largest industrial complex in the northeast region. Both heavy (especially iron and steel) and light industries are well established in a balanced way. Its abundant natural resources, including iron ore and brown coals, attracted core heavy manufacturers such as Kimchaek Iron and Steel Complex, the largest steelworks in DPRK. Gangye, the only landlocked industrial zone in the state, has been developed as a military-related production base with its remote location from the coast and truce line. Plentiful stock of iron ore, anthracite, and graphite as well as ease in supplying machine parts from Pyongyang through the Manpo railroad line brought more than 20 large factories, including the nation's largest Huichon machinery plant, to this area.

Potential of North Korean Industry

Assuming that unification occurs, or inter-Korean relationships improve, labor-intensive industries have a bright future with their competitiveness in overseas markets. The wage level is significantly lower than that of major developing countries in Asia; abundant low-cost labor is likely to expedite investments to the North, as labor costs are recently on the rise in China, a current production base for a number of Korean firms. Actually, China's yearly average income growth rate is more than 10 percent, and appreciation of the Chinese *Yuan* is expected.

Among current industrial zones in the DPRK, Pyongyang-Nampo, Kaesong, Shinuiju, Wonsan, Hamhung, and Chungjin seem to be appropriate places to attract foreign investment and trade. They have a large labor force and provide easy access to neighboring countries. On the contrary, landlocked areas such as the Gangye zone need to undergo structural adjustments as they are established for strategic reasons in spite of unfavorable geographical conditions.

Building new production facilities for the iron and steel industries in the North may be another higher value-added business. South Korean firms own high technologies and competitiveness in this field, but they are looking for manufacturing bases in resource-rich countries overseas due to burdensome real estate prices. North Korea has advantages not only in abundant resources but also the possibility of supplying state-owned land at a low cost. However, whether large-scale iron and steel facilities are economically feasible should be scrutinized. In addition to resource-related industries, nonferrous metal processing businesses such as cement, ceramics, glass products, and floor tiles may also be relocated to northern parts of the Korean Peninsula. Even though there are a variety of nonmetallic ores in the south, associated industries are declining for rising production costs following high wages and environmental regulations.

North Korea's prospects are likely to be strong in this area with low labor and land costs and its accessibility to raw materials. Investment incentives in North Korea are also solid in industries where location matters; regarding the depth of the sea and number of rainy days, the Wonsan area has perfect conditions to attract large shipyards.

Since major industrial sites in the DPRK are already well equipped with basic infrastructure including sites, buildings, and roads, it may be possible to develop manufacturing centers at a lower cost than the Kaesong complex. The South Korean government managed the whole process in founding a new industrial zone at Kaesong and offered: grants for constructing infrastructure, investments on power and telecommunications facilities via state-owned enterprises such as Korea Electric Power Corporation (KEPCO) and Korea Telecom (KT), and long-term loans with payment guarantees to firms entering the complex. Such governmental efforts successfully stabilized the project. If these experiences are used effectively to develop North Korean industrial zones after Korean unification, not only traditional labor-intensive businesses such as clothing and textiles but also partly labor-intensive businesses such as electronics, machinery, and metals will have considerable potential.

Industrial Policies on the North Korean Region after Unification

The main framework for post-unification industrial policies in North Korea will depend on how the two economies integrate. If the Korean Peninsula experiences a rapid economic integration similar to the German one, labor-intensive industries may not be as competitive as expected. Current wage levels will quickly skyrocket as the labor market and social welfare system are merged with those of South Korea in a short period of time, thus weakening competitiveness in cheap labor costs. In this scenario, measures would be comparable to actions taken by West Germany; immediate reconstruction of industries in the North and intensive buildup of capital-intensive industries would close the gap between wage and productivity.

On the other hand, a gradual merger of the two Koreas may also take place. In this scenario, the North Korean region would maintain its current wage level for a considerable amount of time and competitiveness of labor-intensive industries would be retained. However, productivity would not rise as much as with rapid integration, so the entire integration process would decelerate as well.

Which integration scenario a unified Korean government would choose is more than just an economic decision. In Germany, socio-political factors played a crucial role in leading unification to take an immediate track. Residents in East Germany were set to receive substantial economic benefits within a brief period in order to gain public support for unification and solidify the ruling party (CDP)'s victory in the upcoming election.

Yet, it should be noted that South Korea has relatively insufficient financial capacity to carry out a radical approach, considering West Germany's top-notch economic strength at that time, and a larger economic gap between North and South Korea than East and West Germany. A sudden integration without efforts to downsize the cost of unification to a manageable level may turn out to be an economic disaster.

A more favorable approach to economic integration after unification is a gradual merger within temporary separation, if the administration is able to control socio-political pressures favoring the rapid integration scenario. After political unification, the North Korean region would be managed as a special economic zone for a designated period. The two economies would merge at a moderate pace when economic development in the North reached a desirable level. The main objective of such a temporary arrangement is to provide enough economic incentives to deter a massive migration from the North to the South. Industrial and development policies should also aim to achieve this goal. In order to implement this kind of unification plan, a political consensus that the economy is the first consideration should be reached beforehand.

When establishing industrial policies for the North Korean region, it is also important to choose between selective and horizontal industrial policies. The former concentrates on promoting strategic industries, while the latter intends to ameliorate industries as a whole. The selective approach improves outputs and constructs vertical integration with industrial counterparts in the South in a relatively short term; however, it also distorts industrial structure in the Northern regions for a long time, thus delaying social integration of the Korean Peninsula. On the other hand, the horizontal industrial policy evades structural distortion problems but experiences rather crawling improvement in economic outcomes. The government needs to finance unification costs for an extended period, and it takes more time to be compensated for such inputs. Also, structural complementarities between two Korean industries will be attained only in a longer term.[4]

Since it is the government who decides on carrying out either selective or horizontal industrial development, political constraints take a part in the decision-making process as with the integration approach. The degree of socio-political pressures may be less in this case, however, so there will be room to implement economically sounder blueprints. In principle, the ideal plan is as follows: selective promotions take place first and are gradually replaced by horizontal policies in the long run. Such a sequence is similar to South Korea's economic development process from the 1960s to 1990s. It is important to prevent current structural distortions in industries of the South from being reproduced in the North.

If the temporary separation approach and selective industrial development become two pillars of medium-term integration policy, the industrial development plan in the Northern region is likely to prioritize industries with comparative advantages in terms of wage, resources, or location. For comparatively disadvantaged ones, policymakers should pursue gradual improvements rather than sudden rearrangements. Since most of DPRK industries fall under the latter category, an expeditious restructuring based on industrial competitiveness would lead to massive layoffs. A surge in unemployment would also strengthen migratory pressures to the South, becoming impossible to maintain the Northern area as a special economic zone for a sufficient amount of time. Thus, the main objective of a unified Korean government on this subject is to focus on reinforcing industries with an export edge and recovering, not restructuring, others. The only exception is the munitions industry, which has virtually zero investment value—a sudden structural change in this area is inevitable after the unification.

Most of the former DPRK industrial zones would be able to retain their competitive edge as long as their facilities and infrastructure, such as power and transportation, are in line. As mentioned before, they are equipped with basic facilities, are located near the world's demand centers, and have opportune logistical conditions. It is advisable to develop the Sinuiju zone into a light industry complex, Hamhung into heavy industry complex, and Pyongyang-Nampo and Chongjin area into a multifunctional complex covering both light and heavy industries. The uniquely landlocked Gangye area, Mecca of North Korea's arms industry, is the only zone that needs to be restructured.[5] To revamp and utilize former industrial complexes, the government should lead large-scale investments in industrial facilities and infrastructure. Institutional and policy-based support will also help captivate private investments from home and abroad.

To parlay former supply sources, the government should select competitive industries as main export drivers and foster them intensively—the strongest candidates would be labor-intensive businesses. This includes not just the clothing and textile industries, but even those traditionally classified as capital-intensive ones such as electronics and shipbuilding. Division of production may occur naturally within the Korean Peninsula, with southern regions specializing in high-end and northern ones in budget products. Thanks to the lower wage level in northern parts of the state, it is probable that industries in their twilight years may revisit their growth phase and a fair number of firms may decide to reshore their manufacturing bases.

Industries where abundant resources from the North and capital from the South can be combined—such as the steel industry—also have bright prospects. If POSCO, one of the world's biggest steel corporations, constructs a production complex near iron mines in the upper parts of the peninsula, the flagship companies in South Korea would be able to restore price competitiveness. When a bountiful stock of rare earths in the north is utilized, the high-tech materials industry acquires a powerful edge over overseas competition in the long run.

In order to foster export-driving industries, Seoul needs to designate multiple SEZs and help firms attract domestic and foreign capital. A possible development plan is to develop export processing zones by private investments, and save governmental budget spending. The Pyongyang-Nampo-Kaesong-Haeju belt is a strong candidate, thanks to a large labor pool and ideal infrastructure. If expanded in size, the Rajin-Sunbong and Sinuiju frontier districts could be likely contenders.

Future Industrial Cooperation Programs for a Unified Korea

After unification, international economic cooperation would be as crucial as intranational support for industrial development of the North Korean region. The subject of economic cooperation is likely to be different for each industrial zone in the North Korean region. For example, Sinuiju and Nampo mainly interact with China's Pan-Bo Hai area (Beijing, Tianjin, and Liaoning province), while Rason and Wonsan are connected with China's Jilin province, Japan, and Russia. Considering that such cooperation takes place in the North, it is worth suggesting two different programs for each coastal area:

Plan I: Transformation of Nampo-Kaesong-Haeju belt into a labor-intensive industrial complex

Assuming that the North Korean region would be managed as a special economic zone for a designated time period after unification, the Nampo-Kaesong-Haeju belt has great potential to be the center for labor-intensive industries in Northeast Asia, in terms of labor, infrastructure, and market. First, the Korean government constructs an international industrial complex using public funds; then production facilities can be prepared

by attracting foreign direct investment. Finally, abundant labor in the region creates final goods that can be sold in China, Japan, and Korea. This plan may attract labor-intensive industries from not only Korea but also Japan and China, where wage levels are continuously rising. In order to support the plan, the Nampo port should be expanded so that it can be developed into an international logistics hub. Opening up the expressway and high-speed railroad connecting Seoul, Kaesong, Pyongyang and Sinuiju will enhance the supply chain from Tokyo to Beijing, through the Korean Peninsula.

Plan II: Development of Rason-Chongjin-Wonsan-Sokcho belt into a center of tourism and logistics

From Mt. Chilbo in the north to Mt. Sorak in south, the eastern coast of Korea is famous for its superb natural landscape. 'The Eight Famous Spots in Eastern Korea' have been popular tourist attractions since the Chosun dynasty (A.D. 1398-1910). The southern part is already designated as a special tourist zone with Mt. Sorak as its center, and Pyongyang is recently carrying forward a tourism complex from Mt. Chilbo to Mt. Geumgang. If the two zones are connected after unification, the area may rise as the center of tourism in Northeast Asia. Since the high-speed railway in China now runs from Shanghai to Hunchun, the border area with Rason, Chinese tourists are likely to flow into the region. The tourist belt is not necessarily limited to the peninsula; it can be extended internationally, covering Mt. Baekdu (Mt. Changbai in Chinese)-Hunchun-Rason and Zarubino in Russia's Far East.

In order to develop the above area into a center of leisure, railroad and highway infrastructure improvements along 'The Eight Famous Spots in Eastern Korea' are essential. Since South Korea will host the 2018 Winter Olympics in Pyeongchang, high-speed railways and expressways from Seoul to Pyeongchang are soon to be opened. When current coastal railways are expanded, it is possible to establish a railroad network connecting Seoul-Pyeongchang-Wonsan-Rason-Hunchun.

Considering Rason as the core of logistics in pan-Pacific areas, China and Russia are seeking ways to upgrade harbor facilities and infrastructure around Rason. If Rason, Sunbong, and Chongjin are renovated into international transit ports and connected to Busan, the Korean Peninsula can become a logistics hub bridging the Eurasia continent and Pacific Ocean. If the North Pole route is developed, the importance of the greater Rason area will be magnified.

Development progress of the Rason special economic zone is barely noticeable except for infrastructural linkages with adjacent areas. After unification, it will be necessary to foster the area further with investments from abroad including China and Russia; the final role model will be a cosmopolitan city similar to Singapore.

[1] Lee, Kyung-Chul, "Democratic People's Republic of Korea is truly the nation for people and the socialist state centered on the general public," statement in a conference for International Association of Korean Studies held in Shanghai, 27 August 2009 (a North Korean publication).

[2] Lee, Ki-Sung, "Chosun economy, paving the way to strong and prosperous state with revolutionary high tides," statement in a conference for International Association of Korean Studies held in Shanghai, 27 August 2009 (A North Korean publication).

[3] Lee, Seok-ki, et al., North Korean Industries and Firms in the 2000s: Recovery and Operation Mechanism (Seoul: Korea Institute for Industrial Economics & Trade, 2010).

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HISTORY, INTERNATIONAL RELATIONS, AND PUBLIC HEALTH - THE CASE OF THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA 1953 – 2015

By John Grundy

Abstract

The historical legacy of North Korea is characterized by occupation and conflict, and economic rehabilitation and then collapse, with tragic and widespread consequences for population health. From the standpoint of the historical determinants of health, this paper reviews the health system in North Korea between 1953 and 2016. Ideology and political relations have been dominant forces in determining the evolution of the health care system and of population health. Despite the development of an extensive primary health care system in the country from the early 1960s following the establishment of the DPRK state in 1948, the public health system experienced a major decline in the 1990s, with catastrophic implications for the health and survival of the population. In recent years, evidence has emerged of some important public health gains, particularly through immunization, women's and children's health, and communicable disease control initiatives. This experience demonstrates that, within the overall policy context dominated by the historical and political determinants of health, there remains the capacity for implementation of public health programs that can yield both tangible health benefits for the population in North Korea, as well as assist the health system to edge closer to a regional standard.

Introduction

For many, the Democratic People's Republic of Korea (the DPRK or 'North Korea') has been characterized as a hermit nuclear state, with secretive government, limited representation of civil and private sector constituencies and highly restricted movement of peoples, trade and information across borders. But despite the lack of information regarding the current situation in North Korea, this does not mean that there is not a method for understanding the nature of North Korean society.[1] Arguably these knowledge gaps are being addressed through a growing body of academic literature in relation to the economic, political and historical aspects of North Korean society.[2]

In contrast, there is a very limited literature surrounding issues of human security in this context, and particularly in relation to public health. A search in the PubMed health data base (https://www.ncbi.nlm.nih.gov/pubmed/) illustrates that there are currently 1488 articles listed for the title search term "Cambodia" and 5750 articles for "Vietnam," but only 90 for "North Korea" and four for "DPRK." This lack of information on public health is even more obvious in relation to the non-medical aspects of public health (health planning, health financing, and human resources management) which are highly subject to the broader social and political rules regarding the way management systems are organized and resources allocated. This leaves the question open regarding the extent to which public health programs are in any way alleviating the harsh health and social conditions of the population.

Despite political constraints, North Korea has over the last 10 years developed some extensive international partnerships in the health sector through the agencies of the United Nations, some international non-government organizations, the Republic of Korea, and increasingly through global public private partnerships such as the Global Fund to Fight Malaria, Tuberculosis and HIV AIDs (GFTAM) and the Global Alliance for Vaccines and Immunization (GAVI).[3] But despite these efforts, national and international investment in the health sector, and related health indicators of the general population, have continued to lag well behind regional countries. This is leading to international concern regarding the impacts of food insecurity and access to quality health care on maternal and child survival.[4]

So, to what extent have the pressures of national history and international relations impacted on the quality of the health care system in North Korea, and what implications do the findings of this analysis present for bringing the North Korean health system up to regional standards?

This paper will aim to clarify the links between health and history in this country by describing and analyzing national history and international relations between 1953 and 2015, and examining the impact this has had on health system development. In the conclusion, I will then consider the implications of these findings for health system strengthening approaches in North Korea.

Data Sources

The author has undertaken development work in the country between 2006 and 2014, and has been involved with development of national plans, project evaluations, immunization[5] and health system strengthening strategy,[6] and analyses of international cooperation.[7] Statistical information on health status has been sourced from national surveys including multi indicator cluster surveys,[8] the most recent census[9] and data from the Global Health Observatory of the World Health Organization.[10] Additional data has been sourced through population based health surveys and assessments conducted by government agencies in collaboration with international agencies including the World Food Program and the United Nations Children's Fund.

Main Findings and Observations

The Historical Legacy

Following the Korean War, the period from up until the 1970s arguably proved to be the zenith of the northern regime in terms of economic development. The North managed to outpace the GNP per capita of the South for the first 30 years after the establishment of the two Koreas.[11] This was due in part to a combination of factors. While in the South there was a succession of military regimes, the North in contrast stabilized its model of governance. Secondly, the northern regime benefitted from substantial trade subsidies and investments from the Soviet Union. And finally, it was during this period that a strong industrial base was established in the North.

From the 1960s, the policy of the government of the DPRK was to expand public services further out to the population, and to reach farmers and populations in remote areas of the country. In fact, the government expanded public health services immediately after separation from the South, with a focus on lower cost prevention services. Kim I1-sung instituted free health care and compulsory free education, and abolished the agricultural tax. The regime initiated vaccination services in the 1960s, and with programs focusing on personal hygiene and sanitation, and expanded health care infrastructure. There were about 20 times more hospital beds available per person in North Korea than South Korea in 1970.[12] By the 1980s, government sources reported that universal health care access had been achieved.

With the collapse of the Soviet Union in the late 1980s and the related cessation of favorable subsidies and trade conditions, tragedy struck North Korea in terms of the great famine in the mid-1990s, when the northern government reported 220,000 people to have died from hunger[13] and with other sources estimating population losses of from three to five percent of the total.[14] There was a catastrophic economic collapse in the 1990s, with GDP halving between 1992 and 2000. The country during this period was beset by the three shortages of energy, food supplies, and foreign exchange.[15]

It was during the humanitarian catastrophe in the 1990s that international cooperation in the field of health and humanitarian affairs first commenced. There is highly contested literature regarding the value of these international efforts. Some, while acknowledging the restrictions on information and on movement of aid workers, nonetheless made the claim that the partnerships that resulted contributed to both an ease in the humanitarian situation as well as a more informed awareness of the conditions of the population in North Korea.[16] A growing number of NGOs have been reported in the country in the mid-2000s, with these NGOs reporting improved public health interventions as a result, as well as providing the opportunity for improved international relations arising from NGO partnerships. Others provide far more negative assessments, and allege diversion of aid to the military establishment.[17]

The National Political and Administrative Structure and Implications for Health

Throughout the twists and turns in national history and international relations outlined above, the political structure has remained remarkably resilient for over five decades. Administratively, the country is divided into 10 provinces and 206 counties, and is further subdivided into rural *ri* (or *dong* in the urban area), and thereafter into neighborhood sections. The section is the lowest administrative level and constitutes essentially the local neighborhood administration.

Before illustrating the links between this administrative structure and the design of the health care system, it is important first to explore the important links between national security policy and public health. The shift towards a military first strategy and the nuclearization of the country has important consequences for health sector resource allocation. According to the political ideology of *Songun* politics, the Korean People's Army is accorded the highest economic and resource allocation priority. The DPRK now has a standing army of 1.1 million in a population of only 23 million. From 25 to 30 percent of the GDP of $28 billion is invested in defense expenditures in the DPRK.[18] This large technological, hardware and human resource investment, in the context of a low and stagnant GDP alluded to earlier, has important implications for investments in social sector development. An in depth costing exercise of the medium-term plan for the development of the health sector in the DPRK confirmed that only 33 percent of funding was committed over a five-year period from priority health programs between 2011 and 2015, indicating substantial financial gaps for essential health commodities and lifesaving medicines for the population over this period.[19] As we will see in more detail below, this shortfall in national investment for the health sector is linked to both low rates of international aid flows and relatively high rates of defense expenditures relative to GDP. This has had catastrophic consequences for the population, and in particular for the quality and reach of women's and children's health care services.

Structure of the North Korean Health Care System

The administration of the health system tracks the administrative system of the state. There is a network of provincial, county and *ri* hospitals, and at the primary level the "section doctor" model of health care. It is at the primary level of care that the very distinctive nature of the North Korean health care system becomes evident. The section doctors, though based at the *ri* clinic, are in fact directly accountable for provision of primary care to a set block of houses (50) in each community. There are 44,760 section or "household doctors" in the DPRK and with a ratio of 7.6 health workers per 1000 population has one of the highest health worker densities in the region.[20] This network of primary care practitioners forms the backbone of health care system in the DPRK by providing first line medical and emergency care, as well as a range of preventive health care services including ante natal care, family planning, child illness management, and immunization services.

Current Health System Barriers and Gaps

Although human resource numbers are high, there are major concerns regarding quality of care in North Korea. Despite support through development partners in recent years, the fact remains that, due to years of tensions in international relations and the related aid and economic embargoes, and restrictions of population movement across borders, the health workforce has become isolated from the most recent international health developments.

There is evidence from multiple sources over a lengthy period of time of under resourcing of the health sector. In 2003, it was reported that 70 percent of essential medicines to clinics and hospitals outside of the capital are being provided by international organizations, in particular UNICEF and the International Federation of the Red Cross.[21] An independent evaluation of a Women's and Children's Health Project conducted in 2008 observed consistent reporting of about 30 percent stock out in the last three months in most of the facilities visited for pediatric drugs, and that the unmet need for emergency obstetric drugs was reported to be even higher at up to 50 percent.[22] This seems to be verified by a number of reports of the desperation of the population in accessing the most basic medical care, and with increasing pressures on the population to make payments for care due to shortages of essential medicines, supplies, and referral transport.[23]

The Decline in Public Health Infrastructure

Since the end of the Soviet era, there has been widespread decline in the quality of public infrastructure across the country. This particularly applies to the issue of water and sanitation. In the 1990s, the series of natural disasters had severe impacts on both water supply and sewerage systems. The 2008 census reported that 22 percent of the population above the age of 15 years is involved in collecting water, often from unprotected sources. Irregular water supply systems have resulted also in inability to maintain flush toilet sanitation systems, with most households now reliant on open air pit latrines. Chronic energy shortages mean that essential public facilities such as schools and hospitals are without basic energy supplies, and town water supplies are threatened by the breakdown of gravity fed water supply systems.

The current crisis in national and international financing is not restricted to under financing of the health sector. In fact, underfinancing of the public sector more broadly has had a catastrophic public health effect. In the 1970s, the DPRK had eliminated malaria. However, subsequent to changes in farming practices, natural disasters, and poor public health responses, there was amplification of the vector leading to an outbreak of 296,540 vivax malaria cases in the southern part of North Korea in 2001.[24]

There is consistent documentation across the years of food insecurity in the country, exacerbated by recent natural disasters, with international agencies requesting significant (but largely unmet) requirements for essential food supply. Only 25 percent of the land surface in North Korea is arable for high yield agricultural products.[25] A Food and Agriculture Organization Food Security Assessment conducted in 2013 concluded that, despite an improvement in harvests in 2013, most of the households have "borderline and poor food consumption", with consumption of proteins and oil being a major problem.[26] In terms of food security, the country remains highly vulnerable to the impacts of natural disasters of flood and drought or of economic downturn. Problems have been noted at the sub national level in the northeastern mountains and the flood and drought prone parts of the country with a large population in Ryanggang, North Hamgyong and South Hamgyong provinces. The most recent estimate by the World Food Program indicates that 70 percent of the population is food insecure.[27]

It has been reported that the population adapts to food insecurity in several ways. Even though the most common source of food is the Public Distribution System, food can also be acquired through private markets where they are available, including farmer's markets, daily markets, and state shops. Other sources include transfers from relatives, the cultivation of kitchen gardens, and the collection of wild foods. Chronic childhood malnutrition ("stunting") rates are currently at 27.9 percent,[28] which means that just under one third of children (aged six and under) are chronically malnourished, leading to concerns regarding psychosocial and physical development of these children over the longer term.

Evidence of Some Recovery in Health System Performance in North Korea in Recent Years

Table 1 provides an overview of a selection of main health indicators in North Korea, including a comparison with regional countries.

Table 1 Selection of Regional Health Indicators

	Human Development Index Ranking[29]	Maternal Mortality per 1000 Births[30]	Child Mortality per 1000 Births	Ante Natal Care 4 Visits	% Childhood Stunting (children aged <5)	% DPT3 Vaccine Coverage[31]	Estimated TB Cases and Deaths per 100,000 pop[32]
	2015	2015	2015	Year	Year	2015	2015
North Korea	No Data	82	25	93 (2009)	28 (2012)	96	61
Myanmar	148	178	50	73 (2007)	35 (2010)	75	49
Cambodia	143	161	28	76 (2014	32 (2014)	89	55
Lao PDR	141	197	67	61 (2012)	44 (2012)	89	49
Nepal	145	258	36	60 (2014)	38 (2014)	91	20
Vietnam	116	54	22	74 (2014)	23 (2011)	97	17

These indicators provide a mixed picture for public health status and trends in North Korea, with some areas providing evidence of decline and stagnation, and other areas demonstrating signs of recovery. Despite high ante natal care and health facility delivery rates, the maternal mortality rate in North Korea has increased from the 1990 rate of 75 per 100, 000 births to 82 per 100,000 in 2015.[33] Although the current rate compares quite favorably with other countries in the region, the fact that North Korea is the only country in this sample from the region to have increased the rate from 1990 is indicative of stagnation in the quality of health system functioning, particularly with regards to functioning of a health care referral system between primary centres and hospitals, which is the critical area of investment for maternal mortality reduction. In contrast, child health indicators have demonstrated sustained improvements from 1990. Child mortality has declined from 43 per 1000 births in 1990 to 23 per 1000 births in 2015.[34] Consistent with this decline, there have been improvements to both nutritional status and immunization coverage of children in this same period. Childhood stunting rates have declined from 64% in 1998 to 28% in 2012.[35]

The case of immunization highlights the value of targeted interventions in such governance contexts as North Korea. There has been a steady improvement in immunization coverage from the crisis years of the mid-1990s, where immunization coverage was below 40 percent. Coverage has been maintained above 90 percent since 2006 (Diphtheria, Pertussis, and Tetanus vaccine or 'DPT3' – see Figure 1). The country, through collaborations with the Global Alliance for Vaccines and Immunization (a global public private partnership), has introduced new vaccines into the childhood vaccination program (for prevention of hepatitis and some forms of meningitis), and with local United Nations partners in country, assisted to rebuild cold chain systems and surveillance capacity to ensure safer and more effective delivery of vaccines to most children in the country. These partnerships have led to improved immunization coverage for children in the country, which has been validated through coverage surveys and international estimates of coverage.[36]

Malaria prevention and control is another area which suggests some level of success. Following the re-emergence of malaria in the 1990s, the MOPH has dramatically reduced yearly caseloads from that of 296,540 cases in 2001 to 14,407 cases in 2010. These achievements, reinforced through multiyear investments through the Global Fund, were made through implementation of a series of public health measures including prompt treatment and distribution of insecticide treated bed nets. Figure 2 provides an outline of the latest UN estimates of the number of malaria cases in the DPRK between the early 2000s and 2014.

Figure 1 Diphtheria, Pertussis and Tetanus Immunization Coverage in North Korea 1994 – 2015 UN (WHO UNICEF) Estimates[37]

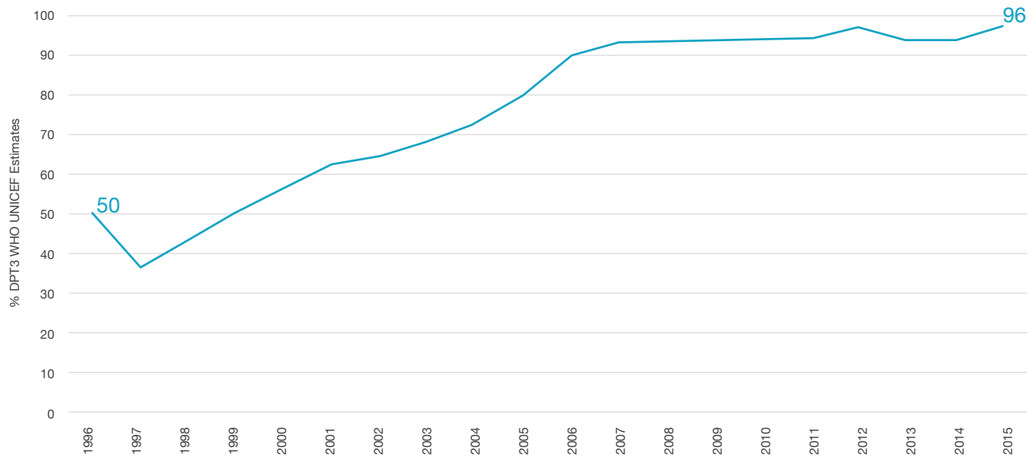
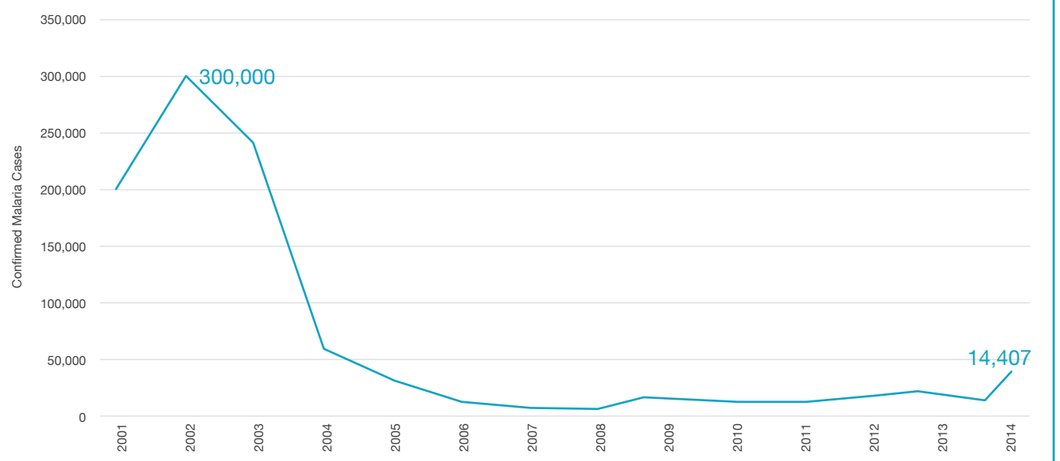


Figure 2 Confirmed Malaria Cases North Korea 2001 – 2014[38]



The field of tuberculosis (TB) control is far more contentious, principally due to lack of data to evaluate the nationwide incidence of TB.[39] Due to the benefits of Global Fund investments in tuberculosis (TB) control, the directly observed treatment approach has been scaled up nationally, and case detection has been consistently above 90 percent since 2003, and treatment success rates more than 85 percent continue to be achieved. Recent performance reports from the Global Fund indicate that 90.1 percent of new TB cases were successfully treated.[40] Despite these investments, as illustrated in Table 1, the incidence of TB in North Korea is still very high, and the latest data from the World Health Organization indicates cases in the country are increasing.[41] Recent evidence is also emerging of high levels of multi drug resistant TB in the country.[42]

Non-communicable diseases are also a significant problem in North Korea, with high smoking rates and rates of cardiovascular diseases and cancers, but with very limited specialist or primary care capacity to address the problem. One recent review of the burden of disease in North Korea has found that almost two thirds of deaths in North Korea are attributable to non-communicable diseases, although the burden of disease attributable to tuberculosis and malnutrition is still very significant.[43]

An evaluation from the field of a women's and children's health project funded by the Republic of Korea through the World Health Organization found that the project implementation resulted in improved access to quality child health care and a reduction in maternal deaths where the project has been investing.[44] There are several challenges related to such models of bilateral funding for women's health. The first is financial, as far as investments in maternal mortality reduction requires broader investment in strengthening of health systems including infrastructure, surgical facilities, referral services, essential medicines and blood and laboratory services support. The second challenge with such bilaterally funded projects is that funding can be captive to external political events, resulting in a 'stop start' project culture that works against long-term efforts to rebuild the health care system. Nevertheless, despite the constraints presented by the pressures of national and international politics, there is now gathering evidence, particularly in relation to child health and communicable disease control, to support the claim that recent public health interventions have alleviated the health conditions for women and children in North Korea.

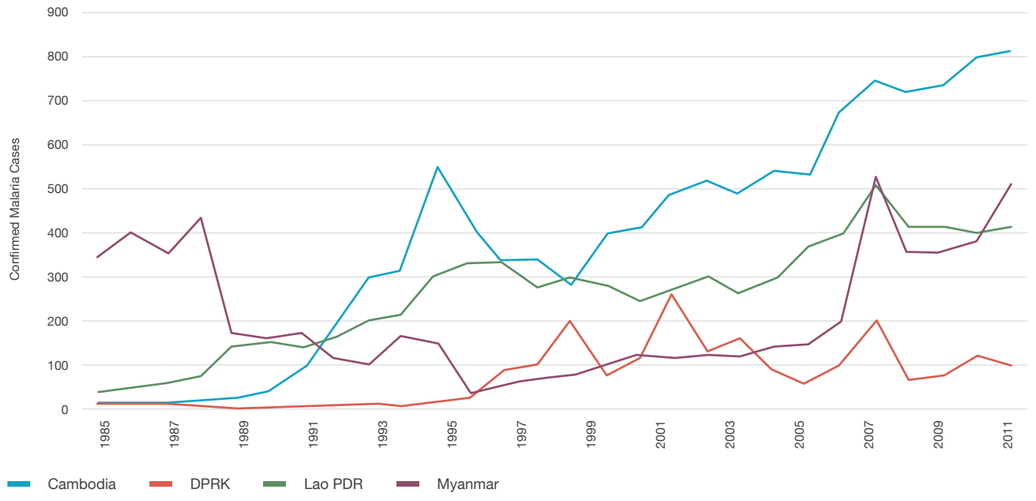
Trends in International Financing for Development in North Korea

This finding of recent public health improvement, particularly in regards to child health, suggests that international partnerships and development programs have had some impact in recent years. But analysis of development assistance disbursements between the mid-1980s and 2015 does illustrate that development partner disbursements have been significantly lower to North Korea than to countries with a comparable development status in the region (see Figure 3). Previous published data on aid flows indicate that rates of development assistance flows to countries such as Cambodia and Laos for example, are up to 11 to 12 times higher on a per capita basis than in North Korea and in Myanmar.[45]

Figure 3 illustrates the history of total donor flows (all sectors) to 4 countries including the DPRK. The sharp spike in development assistance in Myanmar in 2011-12 illustrated in figure 3, is related to the political openings in that country following constitutional reforms and commitment to general elections. This opened pathways to additional bilateral and multi-lateral assistance through the World Bank and the ADB, resulting in an increase in aid to that country of over 4 billion US$ in 2013.[46] These findings confirm a major thesis of this paper, in that public health systems investment, and the related public health status of the population, are closely intertwined with domestic political priorities and with trends in international relations.

To offset the negative impact of domestic political priorities and international relations on public health, it is vital that aid is well targeted with cost effective public health interventions. Despite previous assessments indicating that aid is only beneficial in countries with sound macro policy frameworks,[48] the data presented in this paper regarding childhood immunization coverage and malaria control, does suggest that, well targeted aid in the context of a comparatively low volume of development assistance and domestic financing, still does have the capacity to realize tangible public health benefits for the population.

Figure 3 Total Donor Official Flows (All Donors and Multilateral Support) Net Disbursements All Sectors 1985 - 2012 Cambodia, Myanmar, Lao PDR, North Korea[47]



Discussion and Conclusions

The Role of History in Shaping Population Health and Health System Formation in North Korea

From a technical standpoint, the design of the North Korean health care system, with its vast array of facilities and human resources as previously outlined, should make a major contribution to public health. In fact, the household doctor system offers more opportunity for close contact of the population with the health care system than most countries of the region, which often struggle to locate health professionals in rural and remote areas of the country. But as we have seen, the benefits of health system investments have been swamped by the tide of international relations, and the rise of *Songun* politics in the Post Kim Il Sung era.

Domestically, the political ideology of "military first" clearly has significant implications for the internal allocations of resources to health and other social sectors. It is not possible to estimate the costs of nuclearization, but in the context of the size of the North Korean economy, these costs are no doubt formidable. There are also major questions of course regarding the economic efficiency of collectivized production systems

with most 20th century political experiments in this regard ending in stagnant economic growth and pressures for economic and social reform, as the cases of the Soviet Union and the People's Republic of China amply demonstrate. Although it is in fact the case that the DPRK experienced economic growth in the earlier decades following its foundation in 1948, the fact remains that this growth was based in large part on favorable resource inflows from the former Soviet Union. This finding is reflected in trade statistics, which demonstrate that trade as a percentage of GDP dropped from 20 percent before the Soviet collapse to 12 percent in 2000.[49] The "Sunshine Policy" of the Republic of Korea altered the tenor of relations between the North and the South between 1998 and 2008, and resulted in a rise in trade between the two from $333 million in 1999 to $1.8 billion in 2008. By 2008, trade had recovered to the pre-Soviet level of 20 percent of GDP. Along with this improving trade came a gradual opening up of international aid.

Despite the impact of the Sunshine Policy and expanding trade links with China, recent public health initiatives have taken place against a backdrop of ongoing economic embargoes and trade sanctions from the broader international community. In fact, where aid instruments have been applied, they have often been used more crudely, with the provision of economic aid reportedly being used as a lever by which to extract political concessions. This is most evident in the conducting of intermittent Six-Party Talks between USA, China, Japan, Russia, the DPRK and South Korea, where international aid, energy supplies and economic sanctions are being continually applied as instruments of negotiations in order to encourage de-nuclearization of the country.

U.S. policy on the DPRK has been reported by one analyst to "stand on two legs", with one leg being that of gradual engagement with the North, commencing with a series of negotiations with Pyongyang in the early 1990s on denuclearization. The other policy leg is that of containment, largely mediated through upgrading the US Government's own as well as allies' military capabilities in the region.[50] Initially, the Six Party Talks provided a unique opportunity for the U.S. and China to forge a strategic cooperation in the area of North Korean policy,[51] and thereby assist to tilt international policy towards one of engagement. However, recent tensions in the South China Sea, and continued testing of nuclear devices by the Northern Regime, is testing the relationship between the larger powers. A fundamental principle of the Sunshine policy is the absolute rejection of war as an instrument of policy including policy on reunification. Rather than being interpreted as a form of appeasement, the Sunshine policy operates on principles of engagement through "dialogue, cooperation, exchanges and trust building."[52] From the standpoint of international aid, the current predominance of national security and containment strategies over those of human security and engagement in international relations will mean that there is unlikely to be significant changes to patterns and volume of aid in the coming years.

These tensions in international relations outlined above have arguably also contributed to the siege mentality of the DPRK State, and assisted to reorient its domestic pattern of resource allocation towards defense expenditures. The evidence for this siege mentality has been reinforced by the recent unilateral declaration of the DPRK government on March 11, 2013 to nullify the armistice arrangements from 1953. In other words, in the context of the DPRK, it is the hard diplomacy of military power that is the dominant paradigm in both national politics and international relations. Soft power diplomacy, particularly here in relation to humanitarian and development effort, has being relegated as a lower order foreign and domestic policy priority. In this regard, the history of the Korean Peninsula particularly in the 20th and early 21st century provides more than enough evidence of the extent to which the ebb and flow of national politics and international relations has impacted on the health of the population.

In summary, health systems and population health have been socially and politically deconstructed by the military first patterns of political power exercised domestically through *Songun* politics, and internationally through confrontational stances of encircling bilateral powers. The national ideology of *Juche*, with its overall emphasis on self-reliance, has resulted in external economic relationships being limited to politically and economically subsidized relations with Soviet and Chinese sponsors, in contrast to the outward orientated economic policies of the South.[53] Similarly, in the health sector, this philosophy of self-reliance has in all probability contributed partially to deconstruction, by limiting ideological motivation for partnerships with external agencies and non-government organizations. In this regard, the fate of the health care systems and the population it serves have become very much subject to the vicissitudes of domestic political priorities and international relations.

Mitigating Historical Impacts - Lessons from International Partnerships for Health in North Korea

Bridging the divide between these contending historical forces of political construction and deconstruction of health care systems are the tentative steps undertaken through national and international partnerships to revive the faltering health care system in the last 10 years, with, as we have seen, some promising but yet very early results. Improvements in immunization, and communicable disease control, and early steps towards strengthening of primary level maternal and child health care services, augur well for the Korean population from a number of perspectives. In providing essential services and health commodities for life saving interventions, such partnerships have demonstrated the real capacity to conserve and improve the lives of ordinary Korean families, without in any way impinging upon the strategic political objectives of states in conflict. Secondly, and even more importantly, these partnerships in improved primary care are bringing the North Korean health workforce into contact with the latest international guidance and technical knowledge on public health, which bodes well for ensuring a transition towards an integrated health care workforce on the Korean Peninsula in future years. Such an approach should do well to build on the lessons learned from reunification of the German health care system, the experience of which points to the need to develop long term partnerships and road maps, and that the most critical way to prepare for this road map is to *make improvements to the current system.*[54]

By engaging with this narrow "technical space" for health system improvement, partners on the peninsula have the opportunity to move beyond and around the forces of history and ideology. It provides feasible scope for addressing the immediate and medium-term health humanitarian needs of the population in North Korea, as well as providing the best opportunity to bring the North Korean health system up to regional standards.

Conclusions

Most available evidence would support the claim that, although there are ongoing threats to the human security of the North Korean population, there is no immediate threat to the survival of the North Korean state. The ranking of humanitarian health aid and investment as a lower order domestic and foreign policy priority has locked the international discourse onto the national security objectives of rival states, with the human security of the North Korean populations viewed at the very best as a bargaining chip in their hard power negotiations. In this regard, there is a real sense in which the population in North Korea has become entrapped within a rigid political culture that is dominated by geopolitical position and internal security, and situated between rival states in an international order dominated by the doctrines of hard power. It reinforces the notion that, as Thucydides has been quoted in the North Korean context, *the strong do what they can, and the poor suffer what they must.*[55] In this way, the system of both national politics and international relations permeates the everyday existence of North Korean families, and is arguably the most powerful force in shaping their health destiny.

Notwithstanding the power of political and historical forces to shape the pattern of health in North Korea, it nonetheless remains the case that there is still room for technical health policy maneuver to make substantial improvements in public health, even in the toughest of historical and governance contexts. The tactical positioning of Global Health Initiatives and other non-state actors in particular represent important opportunities for widening the humanitarian and development space for shared action, particularly in such critical public health domains as immunization, communicable disease control, nutrition and maternal and child health. Bilaterally funded programs also have the potential to be effective provided they are not subject to the 'stop start' mentality of a project timelines linked to external political events.

If there is to be common ground between various national and international players on the Korean Peninsula, then joint action on the health and nutritional welfare of mothers and young children should the safest space on which to build longer term humanitarian and development relationships. This will enable a shift in the international discourse on the Korean Peninsula from an almost exclusive focus on national security, onto matters of human security, and will enable the North Korean health system to edge closer to an acceptable regional standard.

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Leading Economic Indicators for Korea

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Growth Rate of Real GDP (%) Annual change at Chained 2010 Constant Prices	2.8	0.7	6.5	3.7	2.3	2.9	3.3	2.8	2.8
GDP Current US$ billions	1,001.7	902.3	1,094.3	1,202.7	1,222.4	1,305.4	1,411.0	1,382.40	1,411.00
GNI Per Capita US$	20,419	18,256	22,105	24,226	24,600	26,070	27,892	27,171	27,561
Current Account Balance Current US$ billions, BOP basis	3.2	33.6	28.9	18.7	50.8	81.1	84.4	105.9	98.7
Consumer Prices (%) Annual Change at 2010=100 Constant Prices	4.7	2.8	2.9	4.0	2.2	1.3	1.3	0.7	1
Unemployment Rate (%)	3.2	3.6	3.7	3.4	3.2	3.1	3.5	3.6	3.7
Inward Foreign Direct Investment US$ billions	11.2	9.0	9.5	9.8	9.5	12.8	9.3	5.0	N/A
Stock Price Index Average	1529.49	1429.04	1764.99	1983.42	1930.37	1960.5	1982.16	2011.85	1987
Exchange Rate Average *Won*/US$	1,260	1,165	1,135	1,152	1,071	1,055	1,099	1173	1208

Bank of Korea
National Statistical Office
UNCTAD

FTA Trade Data (Imports)

FTA Partner	Year FTA Implemented	Imports Year Prior to Implementation	2012	2013	2014	2015	2016
ASEAN	2007*	$34,053,303	$51,977,288	$53,339,069	$53,417,787	$45,030,695	$44,308,069
Australia	2014*	$20,784,616	$22,987,917	$20,784,616	$20,413,019	$16,437,806	$15,165,380
Canada	2015	$5,442,591	$5,247,371	$4,717,331	$5,442,591	$3,983,082	$3,942,465
Chile	2004	$1,057,723	$4,676,463	$4,657,503	$4,810,134	$4,402,094	$3,701,955
China	2015	$90,082,226	$80,784,595	$83,052,877	$90,082,226	$90,250,275	$86,962,000
Colombia	2015	$607,608	$414,770	$206,586	$607,608	$323,482	$432,859
EFTA	2006	$1,818,056	$7,713,240	$6,408,617	$5,631,875	$5,122,925	$4,042,319
European Union	2011	$38,720,830	$50,374,026	$56,229,819	$62,393,661	$57,199,021	$51,901,261
India	2010	$4,141,622	$6,920,826	$6,180,172	$5,274,668	$4,240,565	$4,188,967
New Zealand	2015*	$1,526,481	$1,339,176	$1,395,172	$1,526,481	$1,225,020	$1,098,258
Peru	2011	$1,038,932	$1,639,407	$1,983,017	$1,432,825	$1,135,814	$1,294,815
Singapore	2006	$5,317,665	$9,676,408	$10,369,435	$11,303,182	$7,942,129	$6,805,668
Turkey	2013	$672,311	$672,311	$691,870	$655,159	$789,555	$737,782
United States	2012	$44,569,029	$43,340,962	$41,511,916	$45,283,254	$44,024,430	$43,212,047
Vietnam	2015*	$7,990,325	$5,719,246	$7,175,193	$7,990,325	$9,804,831	$12,495,050

In thousands of U.S. dollars.
*indicates FTA came into effect at the end of a calendar year.
Data from the Korea International Trade Association.

FTA Trade Data (Exports)

FTA Partner	Year FTA Implemented	Exports Year Prior to Implementation	2012	2013	2014	2015	2016
ASEAN	2007*	$40,979,192	$79,145,169	$81,996,804	$84,577,372	$74,824,364	$74,530,999
Australia	2014*	$9,563,090	$9,250,485	$9,563,090	$10,282,512	$10,830,635	$7,488,836
Canada	2015	$4,916,629	$4,828,116	$5,202,855	$4,916,629	$4,623,244	$4,886,206
Chile	2004	$517,187	$2,469,337	$2,458,198	$2,083,323	$1,742,342	$1,611,455
China	2015	$145,287,701	$134,322,564	$145,869,498	$145,287,701	$137,123,934	$124,432,718
Colombia	2015	$1,509,399	$1,467,701	$1,342,312	$1,509,399	$1,128,951	$853,467
EFTA	2006	$1,090,367	$1,494,923	$2,441,207	$2,021,334	$6,301,959	$4,110,145
European Union	2011	$53,506,562	$49,370,825	$48,857,103	$51,658,051	$48,079,270	$46,613,849
India	2010	$8,013,290	$11,922,037	$11,375,792	$12,782,490	$12,029,587	$11,598,547
New Zealand	2015*	$1,730,305	$1,465,066	$1,490,532	$1,730,305	$1,262,746	$1,305,131
Peru	2011	$944,438	$1,472,617	$1,440,213	$1,391,727	$1,217,373	$1,156,030
Singapore	2006	$9,489,300	$22,887,919	$22,289,028	$23,749,882	$15,011,164	$12,459,151
Turkey	2013	$4,551,618	$4,551,618	$5,657,826	$6,664,732	$6,249,319	$5,385,453
United States	2012	$56,207,703	$58,524,559	$62,052,488	$70,284,872	$69,832,103	$66,472,534
Vietnam	2015*	$22,351,690	$15,945,975	$21,087,582	$22,351,690	$27,770,750	$32,650,609

In thousands of U.S. dollars.
*indicates FTA came into effect at the end of a calendar year.
Data from the Korea International Trade Association.

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