
**PERFORMANCES AND PROSPECTS OF
THE SOUTH KOREAN ECONOMY AND
THE DIRECTION OF ECONOMIC COOPERATION
BETWEEN TWO KOREAS**

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Performances and Prospects of The South Korean Economy and The Direction of Economic Cooperation between Two Koreas

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I. Introduction

The year 1995 is very meaningful for all Koreans because it is the fifty-year anniversary of Korean liberation from the Japanese colonial rule owing to the U.S. victory in the World War II. It is also the forty-fifth anniversary of the Korean War, where so many young Koreans, Americans, and other freedom fighters lost their lives to keep freedom and democracy. The fall of the Berlin wall and Soviet Union from late 1980s to early 1990s historically ended the long-lasting cold war and made the world free from communistic ideologies and useless arms races. Many South Koreans expected that the death of Kim Il Sung in the middle of 1994 might bring unification of two Koreas very soon. However, the totalitarian Juche regime of North Korea have manufactured the Agreed Framework with the United States by using nuclear capabilities, and its people have suffered from lack of basic needs and human rights. Divided Korea is one of the worst tragedies in human history because of many reasons including destroyed humanity and wasted resources. Why is the regime of Kim Jung Il so important? The civilized society cannot understand the behavior pattern of North Korea showing in rice negotiations and arrest of ships and sailors. But this is the reality of the Korean Peninsula.

The fundamental problem facing North Korea is the dilemma from conflicts between politics to maintain its Juche regime and economy to supply the proper necessities. The immediate inter-Korean problem is in the military confrontation with the continuous arms race, but time is the side of South Korea because of its advanced economy. If Pyongyang remains as a hostile enemy, Seoul will continue to allocate at least 3.5% of GDP for defense which was \$13.4 billion in 1993. It was around two-thirds of North Korean GDP in the same year. This amount will continuously rise as the economy of South Korea grows so their gap becomes larger. There is no hope for North Korea to close the gap within the next thirty years. Then why does the North Korean regime continue the losing game? The KEDO may be helpful to Pyongyang building two light water reactors. Pyongyang will annually receive 500,000 tons of bunker oil from the United States until both reactors generate electricity and will open a representative office in Washington. Diplomacy is a helpful tool, but the economy demands challenging work and enough time, not smoothing words. At this point, the capabilities of Pyongyang's leadership to manage situations appropriately are very questionable.

The purpose of this study is to find out performances and prospects of the South Korean economy and to provide the direction of economic cooperation between two Koreas. The economic performances are investigated through five different categories including real sector, government, financial sector, balance of payments, and foreign trade. (a) In the real sector, the study investigates the structural transformation of expenditure, income generation by industry, and employment by sector. (b) In government finance, it analyzes the change of shares in GDP, composition of revenue and expenditure, and shares in GDP. (c) The study investigates historical changes in money supply

and interest rates controlled by the Bank of Korea, and its monetary policies. (d) The study examines recent developments in the balance of payments and foreign exchange rates and its policy development, particularly in 1994. (e) In foreign trade, the study evaluates exports and imports by type of goods and by principal countries as trade partners. Trade relations of South Korea and the United States are shortly discussed. Finally, economic prospects of South Korea are positively justified by quality of workforce and education, capital and technology, management and marketing, opportunities and benefits coming from geopolitical situations, and spiritual confidence of the people.

For the second purpose of this study, the direction of economic cooperation between South and North Korea is analyzed by four issues. (a) Despite rapid economic development, other sectors of the society remain lagged including politics, the school faction of career civil officers, monopoly power of conglomerates, professionalism of armed forces, corruption of society, and pessimism about unification. (b) The problem of North Korea is investigated in terms of a dilemma of conflicts between the Juche system and the economy. Why is this a dilemma and trade-off? (c) To resolve this problem, the national grand strategy of North Korea is recommended in terms of the multi-dimensional approach to three-step liberalization of the economy and society: partial, middle, and entire openness. (d) Finally, the direction of economic cooperation between two Koreas is recommended subject to a precondition of agreement for the North-South peace treaty with disarmament guaranteed by regional superpowers, which is a kind of unification policy recommendation to both Koreas and United Nations.

This study applies the method of statistical comparison for analyzing performances and prospects of the South Korean economy, and of logical implication for introducing the direction of economic cooperation between two Koreas. The study consists of three main sections excluding this introduction and conclusions. In Section II, recent developments on the Korean peninsula are evaluated by focusing on the rise of China and the U.S. role as a regional balancer. The relations of those developments in the Korean peninsula are discussed shortly. In Section III, performances and prospects of the South Korean economy are investigated in terms of real sector, government finance, financial sector, balance of payments and foreign exchanges, foreign trades, and prospects of its economy. In section IV, the direction of North-South economic cooperation is introduced by weakness of South Korea, a dilemma faced by North Korea, strategic limitations and the national grand strategy of North Korea, and the direction of their economic cooperation.

The direction of economic cooperation assumed a precondition of the new peace treaty with disarmament agreement guaranteed by regional superpowers including the United States and China. This assumption is far from reality but is the best way for North Korea to take advantage of the situations. Without disarmament with the peace treaty, the economy of North Korea will stay far behind the level of under development in the future. The only hope is that the leadership of North Korea recognizes the reality of problems and approaches the problem practically and favorably in the long run. The study also recommends that Pyongyang hires foreign professionals in politics, military strategies, and economics to find out the best alternative idea to resolve military confrontation on the Korean peninsula. The study also assumes that North-South problems should be approached by politics, defense, economy, society, and all others simultaneously. If the economy only leads society, forward and backward linkages with lagged parts of the society demand expensive costs, so the economic development is delayed and interrupted.

II. External Developments on The Korean Peninsula: Interrelations between China, U.S., Japan, and Russia

The world economy has been regionalized and globalized, and economic activities became more closely related to other factors including politics, defense, and socio-cultural elements. It is essential for researchers to investigate environmental factors affecting a nation's economy. This section examines environmental developments affecting the economies of two Koreas through multi-dimensional approaches. It includes (a) the rise of China and Sino-Russian relations affecting Korean issues, (b) U.S.-China relations, U.S.-Japan relations, and China-Japan relations, and (c) evaluation of the impact of their recent developments on the Korean peninsula.

The Rise of China: Conflict between Centralized Politics and Regionalized Economy

China is the rising giant in East Asia. During 1980-1993, the rate of GNP growth was 9.56% in average and her GNP per capita increased from \$280 to \$490, which is equivalent to about \$2,000 value based on the purchasing power parity.¹ Exports rose from \$18 billion to \$92 billion in the same period by expanding over five times in its volume. The GDP share of domestic savings increased from 30.3% to 40.2%, which was fully invested for domestic capital formation, while foreign direct investment rose from \$60 million to \$23.1 billion in the same period. Major capital suppliers were Hong Kong, Taiwan, Singapore, South Korea in addition to Japan and the United States. China would be the largest foreign market for goods and services, and a perfect candidate for direct investment expecting high returns. Despite rapid growth, the economy has maintained price stability, showing the inflation rate of 8.97% in 1985 and 12.28% in 1993. The Chinese government has restricted credits for three years to curb troublesome inflation.²

The prospect of Chinese economy looks optimistic because of following reasons. The leadership of China continuously pursues the same direction of Deng Xiopiang's reform policies: the economy is the priority of national agenda. Beijing applies a separation policy of politics with economy even for Taiwan despite noisy diplomatic differences. China's military expenditures are no more than 6 to 9% of GDP a year, implying that defense spending would not kill the economy. If Beijing spends more money on defense than the current level, its economy might be jeopardized in the long run. The expansion of foreign trade and foreign investment expedites regionalization of its economy, and provinces try to maximize their administrative function to transform the local economy toward the market system by attracting more foreign investors.³ Since the allocation of resources is based on market function, inefficiency coming from the centrally planned economy can be reduced. Recently foreign investment in China rose rapidly, and it will continuously rise because of its size of domestic market as well as competitiveness of Chinese products in foreign markets. Confucianism respects high education, hard work, and the role of government, which contribute to economic efficiency. The revival of private property rights stimulates individual motivation introducing higher productivity by working harder to get more returns guaranteeing savings. Low wages will remain for a longer period because of a large population. On the other hand, China has many problems to overcome its population control, shortage of grains and energy, insufficient infrastructure, housing demand, environment, corruption, growing conflict between conservative center and liberalized regions.⁴

Chinese Armed Forces have been modernized to be a regional superpower. Its defense budget was \$26.08 billion (9.82% of GDP) in 1985 and stayed at \$27.43 billion (6.44% of GDP) in 1993. China is controlling its defense spending and diverting their resources to the private sector since it saw the fall of Soviet Union partially due to defense burdens. As the economy grows, the absolute amount of defense budget will also rise rapidly. If the Chinese economy grows 7 to 8% a year, the current volume of GDP will be doubled within ten years, and per capita GDP will be \$35,682 by the year 2020 in current dollars assuming 3.5% of annual inflation rate. If China uses 5% of its GDP \$48.17 trillion in 2020, defense expenditures would be \$2.41 trillion, which is more than 1/3 of U.S. GDP (\$6.74 trillion) in 1994. This is natural progress. The direction of military power is uncertain but next five categories could be the goals of China's grand strategies. (a) To neutralize domestic uprising, China has been focusing on border security including areas of Xinjiang, Tibet, Nepal, and Mongolia. (b) China has tried to secure territorial rights of Hong Kong and Taiwan for their dream of Great China, supplying capital and technology which China desperately needs. (c) China has been concerning and overly sensitive about South China Sea to secure its vital sea lane of communications, sources of energy supplies including oil and gas, and export markets for its neighboring countries. (d) China has tried to secure its hegemonic power in the region against Japan, which is the strongest in East Asia with U.S. security alliance. (e) China wants to be an honorable world superpower and to do its role with other's respect as a permanent member of UN Security Council in the world community. It needs U.S. help and mutual engagement. The performance of (a) through (c) would be prerequisites for (d) and (e). If the leadership of China favors expansionism, the region would enter the arms race, and China will face self-destruction by internal and external forces. If its leadership favors welfare of its own people, the region would be in peace and prosperity.⁵

In fact, the centrally planned economy in China distorted the allocation of resources, thereby creating an inefficient inter-industrial linkage with bottlenecks and idle caoacutues. The absence of private property rights and loyalty-based compensation from the government reduced workers' motivation. The lack of information flow by restrictions and censorship jeopardized scientific creativity. Bureaucratic control and centralized administration raised various costs. Lack of flexibility, social mobility, and self-adjusting function introduced economic inefficiency. Those factors interrupted and delayed economic take-off in China directly and indirectly. It was fortunate that Deng Xiopiang understood the problems of socialist economy in China in 1978 when he created the five Special Economic Zones (SEZ). It attracted foreign capital, substituting imports, and promoting exports. This was a beginning of transformation for China to eliminate economic inefficiency toward the market system, which has been continued to the present day. The concept of SEZ is the socialist market economy, so called the Chinese model, exploiting benefits of market economy within the restricted zones with maintaining the Beijing's political system. However, gradual expansion of foreign trade and foreign direct investment requires better education and training to produce high quality products and to sell more in the world markets. Trade expansion raises the need for transportation and communications, which accelerates information flow between countries and individuals. Increased household income creates the economic middle class demanding more political power. As the economy is deeply involved in foreign trade and investment, society is internationalized, so domestic policy decisions are gradually influenced by the voices of foreign interest groups. Those factors expedite to liberalize the society. The

Tenamen massacre was a symbolic case explaining interactions between economy and politics, teaching the social scientists to use multi-dimensional interactions.

The Chinese model is about using compromising strategies to transform its socialist regime toward democratic capitalism without external shocks, but with trade-off between equality and efficiency. If the central government reinforces its power to control provincial governments, the old sources of economic inefficiency will revive, and economic growth will decline accordingly. If the economy is fully regionalized, the transformation toward the market economy will be expedited, so the society becomes more liberalized and uncontrollable. Economic regionalization causes it to transfer power gradually from the center to the regions in politics, defense, economy, and other factors simultaneously. As the economy grows, regional forces become larger and stronger with support of local officials and regional armed forces. If provinces create the alliance against Beijing, the risk of civil war in China may cause east-west separation in the worst-case scenario. If the central government recognizes its limitations and shares its power with regional governments, federation of provinces, like the United States, would be the best solution. Whether Beijing favors federalism or not, history will take its course with China paying the price for their mistakes. Another point is population of 1.18 billion is too many to be controlled by the center of Beijing in the age of globalization though its cultural background has remained unchanged.

China factors on the Korean peninsula are mutually important for China itself and for two Koreas. China needs bilateral supports from both Koreas to be a superpower, while normalization with South Korea also helps to isolate Taiwan in the region. Even unified Korea could not be a threat to China, and the Korean peninsula has been a strategic buffer zone defending China. South Korea partially supplies capital and technology, and China applies the growth model of South Korea for China's economic development. New relations with Seoul are helpful in reducing Pyongyang's endless demand for economic aid. From South Korean standpoints, the new Beijing-Seoul relations lead by Moscow-Seoul development are helpful to isolate North Korea from their former supporters in both politics and defense. China is the third-largest trade partner with South Korea after the United States and Japan. The trade volume between the two countries has increased by more than 30% in a year recently. From the North Korean standpoint, politically Beijing-Pyongyang relations are like Washington-Seoul relations, though new development of Washington-Pyongyang relations changes the situations. Recently, Pyongyang has tried to duplicate the Chinese model.

Since the collapse of the Soviet Union, Sino-Russian relations have improved dramatically. Russian President Boris Yeltsin visited Beijing in December 1992 and signed a long list of accords including partial demilitarization of their border. In November 1993, Beijing and Moscow signed a five-year, renewable military cooperation agreement, and Chinese warships historically entered Vladivostok in May 1994. Chinese President Jiang Zemin visited Moscow in September 1994 and signed several agreements promising not to use military forces and nuclear forces against each other.⁶ In line with Sino-Russian friendships, development of Moscow-Seoul relations in 1992 introduced Beijing-Seoul friendships in 1994, which pushed North Korea to go to the Washington-Pyongyang table making Agreed Framework in October 1994. On the other hand, Moscow informed Pyongyang the repeal of military treaty which was signed between Soviet Union and North Korea in 1961 which expired by September 10, 1995.⁷ Russia needs time to recover its former prosperity, so its focus is on the economy, not in military matters of the region. The two-

Korea policy of Russian Federation is the same as that of China, approaching South Korea as an economic partner, and North Korea as a burdensome neighboring country with defaulted debt. In sum, Russia is far too busy to be involved in power games with North and South Korean matters in the East Asian region.

The United States: The Role of World Leadership and Regional Balancer

The collapse of communism brought new conservatism to the United States. The Republican Party dominated the U.S. Congress through "The Contract with America" in campaign 1994, and this climate is extended for a while. American majority demands balanced budget with tax reduction, restructure toward smaller governments, correction of trade imbalance, welfare reform, abolition of affirmative action, term limits for elected officials, and more. So American domestic politics pushes U.S. foreign policies to have the best of national interests and visible benefits to the U.S. citizens rather than empty reputations. Washington will pursue a hegemonic role in world politics without losing its national interests by minimizing the risk and costs. It will not allow foreign countries to take unfair advantages in the world market, so unfair trade practices will be aggressively corrected through bilateral and multilateral trade negotiations. Pentagon will strengthen U.S. military power through reenforcing its alliances, deploying troops, and developing regional institutions, either bilaterally or multilaterally.⁸ The U.S. interests in the region are both in foreign trade and military alliance. A half century of U.S. alliance with Japan and South Korea has been reality of status quo as a regional balancer defending South Korea. China and Russia normalized diplomatic relations with South Korea, while the United States and Japan are preparing to open diplomatic relations with North Korea. However, bipolar-power dynamism remains unchanged between the United States with Japan and China with Russia in the region. So, U.S.-China-Japan relations are important for the analyses of North-South Korean relations.

The development of U.S.-China relations is important to the Korean peninsula. Three major happenings in 1995 were the extension of China's status of most favored nation (MFN) in U.S. trade, temporary withdrawal of China's Ambassador to Washington because of Lee Teng-hui's admission into America to visit Cornell University, and China's arrest of Harry Wu, an American human rights activist.⁹ First, human rights are another form of democratization, which is the most important value of Americans to be pursued without limit. But China is in conflicting situations between regionalized economy and centralized politics. If Beijing reduces its political control, it will be difficult to sustain the regime. China's leadership will not allow foreign countries to push its own government to make a policy threatening own domestic security because of human rights. There are limitations of U.S. foreign policies to China. Secondly, the MFN status is critical for Chinese economic take-off. China's exports including from Hong Kong to the United States were \$38.78 billion and its imports were only \$9.29 billion and introduced almost \$30 billion of trade surplus in 1994. This is owing to the import restrictions by tariffs and quotas; standards, testing, labeling and certification; export subsidies; violation of intellectual property rights; and restrictions in services and foreign direct investment in certain areas. The United States will aggressively try to correct these trade imbalances with China.¹⁰ Thirdly, in spite of U.S. military strategy of engagement, the leadership of China feels containment because of the following reasons: F-16 fighter sales to Taiwan and interrupting Chinese arms sales to Iran and Pakistan, new diplomatic

establishment with Vietnam, U.S. interruption of WTO admission, U.S. critics on Chinese nuclear tests, new movement of U.S. Congress supporting diplomatic ties with Taiwan, and linkages of human rights with MFN status and tiresome hard trade negotiations. Though China insists the territorial right on Taiwan, it depends on its people. China can not force Taiwan to be merged without voluntary desire to satisfy its expansionism. If China attacks Taiwan, the United States will intervene in the conflict to keep the world order.¹¹

The United States and Japan have two key issues: trade deficit and security alliance. In 1994, U.S. trade deficit with Japan was \$65.67 billion from \$119.15 billion of exports and \$53.48 billion of imports, which was more than one half of Japan's total trade surplus. Japan should remove the barriers and make its market comfortable to foreign businesses, particularly in the areas of low foreign market penetration including construction, telecommunications, automobiles, and financial services. Japan needs to expand domestic consumption, investment, and government expenditures including more defense budget as a part of the world community. Japan should play a proper role as a country of regional and global leaders as much as its economic potential. Japan's trade surplus with the United States should be corrected soon, and U.S. Trade Representative will push Japan to do the job properly. The rise of China stimulates Japan to do something for its defense. Japan paid \$63.95 billion (1.52% of GDP) for defense in 1993, which was 2.3 times of China's (27.43 billion), 4.8 times of South Korea (\$13.4 billion), and more than 1/5 of the United States (\$291.1 billion). Japan's strategic choice is limited to that of Japan becoming a normal country as a regional superpower with independent armed forces. Japan's potential to build up military hardware is as huge as its economic strength in terms of technology and funds. Japan has capabilities to make nuclear weapons and is currently developing the FSX fighter jointly with the United States.¹² Japan shares the defense burden with the United States by paying 70% of costs of U.S. forces in its territory, which is far less expensive than maintaining Japan's full readiness including nuclear weapons. Japan will gradually face rearmament demand as the China's economy grows to pay similar amounts of military spendings to Japan's soon.

China-Japan relations can be considered under the direction of U.S.-China and U.S.-Japan relations. Historically, Sino-Japan relations have been a key element for the regional stability, while Chinese people have unforgettable and unforgivable hatred against Japan because of their memory of World War II. China needs capital and technology which Japan has, while Japan needs less expensive labor and wide markets which China possesses. Currently Japan dominates the Asian markets which China would like to do in the future. They need each other but worry about loss of economic interests from trade off. Eventually, the economy of China would be the largest in the world, so time is in the side of China. From the military standpoint, (a) U.S. engagement with China would be helpful for Japan to save defense expenditures in the short run, but no difference eventually. Japan must prepare for its own defense against China and Russia eventually. If the United States stays with the same distance from China as well as from Japan, the arms race would not be necessary. (b) U.S. containment with China may expedite Japan's rearmament including nuclear weapons. This will stimulate the arms race in the region, particularly between China and Japan. The line of containment could be Japan, South Korea, Taiwan, Philippines, Vietnam, Thailand, Myanmar, and India. If this is the case, economic growth of China will decline tremendously because of the sanctions and interruptions in supplying capital and technology as well as accessing international markets. However, this can not block the natural growth of China

eventually. (c) South Korea would be in the middle of both countries in terms of economic interests and national security in the long run. However, in the short run, China is more important than Japan for Korean exports and investment, while Japan is more important for its national security, owing to being in the line of U.S.-Japan Security Alliance and of U.S.-Korea's. (d) Unified Korea would be much more influential to China and Japan than today, but Korea would fairly be in the middle as a friend to resolve regional conflicts in case.

Regional Developments and Two Koreas

The regional development of politics, defense, economy, and society can be summarized as follows. (a) the United States has been in military alliance with South Korea as well as Japan, so Japan and South Korea are in the same line of the U.S. protection with providing a nuclear umbrella. These security alliances have been firm for at least a decade. (b) The United States and Japan have serious economic interests in South Korea. South Korea imported from Japan \$24.8 billion and from the United States \$21.1 billion in 1994. Foreign direct investment in South Korea was \$1.65 billion from the United States and \$1.29 billion from Japan during the last five-year period of 1990-1994. (c) South Korea has normalized diplomatic with Russia in 1992 and China in 1994 and showed increasing trends of economic relations with both countries. South Korea exported \$14.21 billion to and imported \$6.41 billion from China including Hong Kong in 1994, while it exported \$0.96 billion to and imported \$1.23 billion from Russia in the same year. China has tried to attract South Korean businesses in the recent years including Sam Sung. (d) Russia and China stopped aids to North Korea and all transactions have required hard currency so that trade volume declined rapidly. Russia and China often have border problems with crimes and diseases including cholera.¹³ General perception about North Korea is burdensome. (e) Northern policies of South Korea stimulated North Korea to approach to the United States by using the leverage of nuclear weapons, manufactured Agreed Framework signed by two countries on October 21, 1994. North Korea gained interim supply of 500,000 tons of bunker oil for electric generators and two light water reactors plus opening a diplomatic representative office in Washington.¹⁴ (f) North Korea has tried to alienate South Korea from the United States during the process of nuclear negotiations and tried to abolish the Military Armistice Commission. Its intention is to make a new peace treaty with the United States, which was rejected by the United States as well as China. (g) South Korea has supplied \$150,000 tons of rice to North Korea, but they arrested one sailor of the South Korean carrier without saying any gratitude for Southern hospitality. North Korea has tried to attract South Korean businesses but has avoided inter-governmental dialogue intentionally. So, the Seoul government controls business activities with North Korea until it stops playing the political game. (h) New developments of U.S.-China and U.S.-Russia relations is uncertain, but the economy is different from politics. The diplomacy may be helpful to get aid temporarily though they are not free ride. In the post-cold era, economic-military approach is much stronger than political-military approach to resolve conflicts not only in the Eastern European countries but also in the Asian countries.

The most critical element to achieve a unified Korea is not from outside but from inside of two Koreas having a strong motivation to unite. There seems to be no strong objection for two Koreas to be unified from four regional superpowers including the United States, Japan, China,

and Russia. The United States supports unification of Korea to be a democratic market economy. Japan does the same though they may have a stronger neighboring country but can maintain friendship in line with the United States. From China's standpoint of the Middle Kingdom, unified Korea is more useful than divided Korea as long as Beijing-Seoul relations remain beneficial to the economic exchanges. The cold-war perception of imperialism and its frontier does not have serious meaning to the period of the rise of China. Russian Federation is struggling with the domestic issues. Moscow-Seoul relations would not be much affected by Washington-Moscow relations because the relationships are based on mutual economic interests between South Korea and Russia.

III. South Korean Economy: Performances and Prospects

Since 1910 Japan used Korea as a supply basis for colonial expansion by modernizing its agriculture, infrastructure, and education so its returns to natives were small. Soon after liberation in 1945, Korea suffered from a civil war for three years devastating the entire economy. The military regime in South Korea launched a series of economic development plans from 1962, successfully transforming agriculture-dominated economy into labor-intensive manufacturing, thereafter capital- and technology-intensive industries through export promotion as an engine of growth despite heavy defense burden. Performances owe to the well harmonized symphony with government leadership, business aggressiveness, and educated and trained labor forces. Since 1987 the government role has been gradually reduced from forced allocation to directional advises.¹⁵ The YS administration in late 1994 initiated globalization policies for social reformation, but the ruling party lost the majority in many major cities elections. The impact of this movement on the economy seems to be minute.

Real Sector Developments: Structural Transformation

The performance of South Korean economy has been a role model for developing countries. As shown in Table III-1, during the last quarter century from 1970 to 1994 the annual growth rate of its GDP was 8.6% on average, and GDP increased from 6.77 billion in 1970 to \$387 billion in 1994. Accordingly, per capita income reached \$8,700 by 1994, and will be close to \$10,000 by the end of 1995. In 1994 the expenditure on GDP consists of 54% of private consumption, 10% of public consumption, 36% of fixed investment, and export volume remains at around 30% of GDP with \$3.1 billion of trade deficit. The ratio of consumption to investment seems to be stable at 54:36 in 1990s, which is higher domestic fixed investment than Japan 30.4%, Germany 22.0%, and the United States 16.5% in 1993. However, the gradual rise of consumption is expected as per capita income rises continuously unless the South Korean government collects more taxes.

As shown in Table III-2, the structural transformation of South Korean economy shows the general trends of industrialization. The agricultural sector declined from 26.8% in 1970 to 7.0% of GDP in 1994, while mining and manufacturing sectors rose from 22.3% in 1970 to 30.4% in 1985 and gradually declined to 27.2%. Considering that the ratio of agriculture to manufacturing in Japan was 2.37% to 30.14% and that of Germany was 1.32% to 32.12% in 1993, and that of the United States was 1.92% to 19.07% in 1992; the agricultural sector in South Korea will decline

Table III-1. Gross Domestic Product and Expenditure: South Korea
Selected Years, Current Dollars and Percent of Expenditure within GDP

GDP and Composition	1970	1975	1980	1985	1990	1994
GNP per Capita Current \$	252	640	1,589	2,242	5,883	8,699
GDP Annual Growth Rate %	7.8	6.8	-2.7	6.5	9.5	8.4
GDP Current \$ Billion	6.77	21.22	58.60	94.3	253.60	386.72
Consumption Private %	74.3	72.0	67.6	60.6	53.7	53.84
Consumption Public %	9.5	11.1	11.6	10.8	10.1	10.65
Investment Fixed %	24.7	25.3	32.3	30.8	37.1	35.9
Investment Stocks %	-0.1	2.2	-0.1	0.3	-0.15	0.07
(Private Savings in GDP %)	(18.3)	(18.2)	(23.5)	(29.8)	(35.9)	(33.4)
Exports: Goods & Services %	14.0	28.4	34.8	37.5	29.8	30.09
Imports: Goods & Services %	-23.7	-37.0	-42.9	-37.0	-30.3	-30.92

Sources: The World Bank, *World Tables 1995*, Washington, DC: Johns Hopkins University Press, 1995. p. 396-9.
The Bank of Korea, *Economic Statistics Yearbook 1995*, Seoul, 1995 and various years.

Table III-2. Structural Transformation of GDP: South Korea
Selected Year, Percent within Gross Domestic Product

Economic Structure	1970	1975	1980	1985	1990	1994
Agriculture, Forestry & Fishery	26.8	24.9	16.3	12.5	8.7	7.0
Mining & Manufacturing	22.3	28.0	30.2	30.4	29.8	27.2
Electricity, Gas & Water	1.6	1.3	2.2	3.0	2.2	2.3
Construction	5.5	5.1	9.4	7.6	11.5	13.5
Transportation Communications	6.8	6.2	6.3	7.3	6.7	7.4
Wholesale Retail Restaurant	18.2	19.4	18.0	13.6	12.2	11.7
Finance, Insurance, Real Estate	5.9	5.8	7.8	11.5	15.3	17.1
Social & Personal Services	7.5	6.9	8.0	3.3	3.6	4.0
Government Services	5.0	4.0	4.9	7.2	7.4	7.9
Private Non-Profit Services	---	---	---	2.4	2.3	2.6

Sources: The same sources as Table III-1.

further since the Uruguay Round by taking a comparative advantage. The sectors of manufacturing and services will thus be expanded further. The manufacturing sector has been led by chemical, machinery, automobile, and basic metals industries, while output of traditional labor-intensive export industries including textiles, leather, and footwear has declined because of higher wages. The GDP proportion of construction was 5.5% in 1970 but rose rapidly to 13.5% in 1994, while the sectors of electricity, gas and water and that of transportation and communications remained in stable shares. The share of wholesale, retail trade, restaurant and hotel services declined from 18.2% to 11.7%, while that of finance, insurance, real estate, and business services rose from 5.9% to 17.1% during the same period. The share of government services rose to 7.9% by 1994.

The inflation rate of consumer prices was around 25% during the first oil shock period of 1974-1975, and 28.8% in 1980 and 21.5% in 1981 because of the second oil shock. Since then, the average annual inflation rate of consumer prices was 5.3%, that of producer prices was 1.9%, export prices were 3.2%, import prices were 1.8% during the period of 1982-1994. Particularly, land prices fell continuously since 1991, and the housing market became slow owing to supply of abundant apartments from the completion of government's plan to build two million housing units. High growth with low inflation rate in South Korea has given more attention to the growth strategy of export promotion without deemphasizing import substitution in development literatures. Monthly earnings of manufacturing workers were \$48 in 1970 but increased dramatically to \$1,296 in 1994. The real wage index of all industries rose from 21.6 in 1970 to 132.7 by 1994. The real wage of all industries rose annually by 8.3% on average during the period of 1955-1993. However, labor productivity of manufacturing grew by about 10% on average during the last ten years, which was about 1% faster than the rise of wages. The economic activity rate was 57.6% of all population in 1970 but gradually rose to 61.7% by 1994. The proportion of female workers were a little over 40% of all employed workers. Unemployment was 4.5% in 1970 but was reduced to 2.4% in 1994. Three points need to be mentioned here. (a) Since the civilian government took over the government power, the labor unions became so powerful that the rise of wages is the same as the rise of productivity during the last decade. (b) The number of higher education graduates is much larger than market demand, so there has been surplus of white-collar workers, while employers have been suffering from the shortage of skilled blue-collar workers. (c) Higher wages introduced high consumption of household, so domestic fixed capital formation began to decline gradually as shown in Table III-3. However, it is not too serious to introduce cost-push inflation.

Table III-3. Prices, Wages, and Employment: South Korea
Price Index and Productivity Index 1990=100, Percent in Rates

Prices, Wages, Employment	1970	1975	1980	1985	1990	1994
Producer Price Index	13.6	32.2	72.5	93.0	100	111.6
Consumer Price Index	12.1	24.6	54.5	76.8	100	129.3
Export Price Index	---	38.0	64.1	88.5	100	112.2
Import Price Index	---	42.3	74.0	96.6	100	108.9
Monthly Earning-Manuf. Cur \$	48	83	222	303	824	1,296
Real Wage Index: All Industries	21.6	29.1	50.3	65.7	100	*132.7
Economic Activity Rate %	57.6	58.3	59.0	56.6	60.0	61.7
Unemployment Rate %	4.5	4.1	5.2	4.0	2.4	2.4
Labor Productivity Index Manuf	6.9	18.4	38.7	63.6	100	146.5

Sources: The World Bank, World Tables 1995, Washington, DC: Johns Hopkins University Press, 1995. p. 396-9. The Bank of Korea, Economic Statistics Yearbook 1995, Seoul, 1995 and various years. National Statistical Office, Major Statistics of Korean Economy, Seoul, 1995. * Indicates estimates.

In Table III-4, the primary sector hired 50.5% of all workers in 1970 but its share declined to 13.6% in 1994. The secondary sector hired 14.3% in 1970 and gradually increased to 24% in 1994. The construction sector raised employment from 2.9% to 8.9%, while other services raised

employment from 32.3% to 53.6% during the same period. The employment share in the primary sector is much higher than the GDP share in that sector because of labor intensiveness, reduced investment, lack of economies of scale, and lack of comparative advantage in that sector.

Table III-4. Structural Transformation of Employment: South Korea
Selected Years, Sectoral Percent Shares of Employment

Economic Structure	1970	1975	1980	1985	1990	1994
Agriculture, Forestry & Fishery	50.5	45.9	34.0	24.9	17.9	13.6
Mining & Manufacturing	14.3	19.2	22.5	24.4	27.6	23.9
Construction	2.9	4.3	6.2	6.1	7.4	8.9
All Other Services	32.3	30.6	37.3	44.5	47.1	53.6

Sources: National Statistical Office, Major Statistics of Korean Economy, Seoul, 1995, p. 126 and Ministry of Labor, Yearbook of Labor Statistics 1995, Seoul: MoL, 1995, p. 42.

Government Finance: Structure of Revenue and Expenditure

Revenue of the central government of South Korea was 17.4% of GDP in 1989 and rose to 19.29% in 1994 as shown in Table III-5. The total revenue of local governments remained at 5% to 6% of GDP and about 40% to 45% of local government expenditure was subsidized by the central government during the last several years. The consolidated government expenditure was 21.67% of GDP and gradually increased to 26.34% (\$101.88 billion) in 1994, which was much lower than 33.6% of Germany, but higher than 19.3% of that of Japan in 1993. The balance of consolidated budget showed surpluses in 1989, 1990, and 1993, but recorded deficits in 1991, 1992, and 1994.¹⁶ In 1995 budget, both revenue and expenditure of the central government are 74,534 billion Won, among which total tax revenue is 62, 522 billion Won (85.02% of total revenue) where surplus is expected. The 1996 budget has proposed 11.9% more than 1995 budget, assuming 12.3% of growth and 5.5% of inflation with 770 Won per U.S. dollar of exchange rate. It includes a 10.7% increase in defense, and 11.4% increase in compensation for government employees. So, the tax rate rose from 20.0% in 1994 to 21.2% in 1996.

Table III-5. Government Revenues and Expenditures: South Korea
Selected Years, Current Billion Won

Revenue & Expenditure	1989	1990	1991	1992	1993	1994
Central Govt Revenue Bil Won	25,962.1	32,089.3	36,817.5	43,805.8	50,750.8	58,823.6
(Revenue % of GDP)	(17.40)	(17.87)	(17.07)	(18.22)	(18.38)	(19.29)
Local Govt Revenue Bil Won	8,263.6	11,069.5	13,373.3	15,977.2	18,289.2	18,774.5
Consolid Expenditure Bil Won	32,325.7	42,139.2	51,991.9	60,256.9	64,308.5	80,348.9
(Expenditure % of GDP)	(21.67)	(23.47)	(24.10)	(25.07)	(23.29)	(26.34)
Consolidated Balance Bil Won	1,900.0	1,019.6	-1,801.1	-473.9	4,731.4	-2,750.8

Sources: The Bank of Korea, Economic Statistics yearbook 1995, Seoul, 1995, p. 82-95.

In Table III-6, the composition of consolidated government expenditure in 1994 consists

of 16.5% of public services, 13.1% of defense, 15% of education, 2.1% of public health, 7.8% of social security and welfare, 12.0% of housing and community amenities, 34.4% of economic services. This composition has remained stable during the last five years except in defense and economic services. The defense budget was 18.6% of total budget in 1989 but declined continuously to 13.1% in 1994 owing to the collapse of Soviet Union though the absolute amount increased. The proportion of economic services in the budget was 24.1% in 1989 but gradually increased to 26.8% in 1993 and to 34.36% in 1994, which included national investment fund loans and net lending for government enterprises and giving some of flexibilities to the administration. The major increase in the budget included infrastructure investment, financial support for small- and medium-sized businesses, education and training, research and development, and environmental protection. But there was a reduction in administration, defense, and subsidies for local governments.

Table III-6. Composition of Consolidated Government Expenditure: South Korea
Selected Years, Percentage Share within Total Expenditure 100%

Revenue & Expenditure	1989	1990	1991	1992	1993	1994
General Public Services %	15.27	14.86	15.12	15.94	16.14	16.49
Defense %	18.63	16.13	15.46	14.70	14.27	13.13
Education %	15.97	26.23	14.96	16.50	16.93	14.96
Health %	03.04	02.67	02.37	02.06	02.32	02.14
Social Security, Welfare %	07.01	07.10	08.16	07.88	08.16	07.83
Housing & Com Amenities %	11.92	13.41	13.86	13.39	10.57	10.03
Other Com & Social Services %	00.70	00.40	00.36	00.37	00.45	00.40
Economic Services %	24.14	26.57	24.76	23.78	26.78	34.36
Unallocable & Others %	03.32	(7.37)	04.94	05.38	04.38	00.66

Sources: The Bank of Korea, Economic Statistics yearbook 1995, Seoul, 1995, p. 82-95.

Table III-7. Composition of Central Government Revenue: South Korea
Selected Years, Percentage Share within Revenue 100%

Revenue & Expenditure	1989	1990	1991	1992	1993	1994
Taxes on Income-Profits %	34.14	33.17	30.52	32.12	30.83	29.87
Social Security Contribution %	04.28	04.52	04.88	05.52	08.18	07.77
Taxes on Property %	02.61	02.10	01.42	01.52	02.11	02.24
Taxes on Goods & Services %	31.78	33.91	32.47	33.86	33.62	35.51
Taxes on Foreign Trade %	10.68	11.48	08.95	07.14	05.69	04.80
Other Taxes Not Included %	02.76	03.21	09.21	06.01	05.38	05.87
Nontax Revenue %	11.97	09.25	10.19	11.69	12.39	11.46
Capital Revenue %	01.77	02.36	02.36	02.13	01.81	02.48

Sources: The Bank of Korea, Economic Statistics yearbook 1995, Seoul, 1995, p. 82-95.

The composition of revenue sources, as shown in Table III-7, has been changed because of taxation policies and structural transformation. In 1994 taxes on personal income and corporate profits were 34.14% of total revenue in 1989 but reduced gradually by 5% to 29.87%, while social

security contribution increased around 3% to 7.77% total revenue in the same year. Taxes on goods and services were 31.78% of total revenue in 1989 but rose to 35.51% in 1994, and taxes on foreign trade reduced from 10.68% to 4.80% during the same period. Property taxes remained stable at 2%, nontax revenue at around 12%, and capital revenue at 2% during the same period. The largest revenue increase was from raising special excise taxes including gasoline and diesel and partially from preventing tax evasion by the real name system, which was offset by lowering income tax rates, and introducing marginal tax credit system in the value added tax.

There have been several issues here. First, many of the government enterprises receive endless financial support from the government from the category of economic services. There is no reason taxpayers are responsible for the inefficiency of those operations. The government announced eleven public corporations to be privatized, but only 3 were sold because of unstable stock markets. The privatization needs to be expedited. Secondly, South Korean politics opened the door of local politics, which demands more financial subsidization to the local governments. From the point of equality, several larger cities should subsidize underdeveloped areas which can not support public finance of local governments. So, tax burdens will rise, which is the costs of politics having made wrong decisions in the past, but it should be minimized. Thirdly, the tax system of South Korea is much favorable for conglomerates and the rich compared to developed nations. A thorough review is necessary to minimize income differences without hurting the motivations of businesses and workers. The rise of gasoline prices, for example, would be a burden on average income households, but not the rich. Many loopholes of tax evasion and corruption of tax collectors should be sealed and cleared aggressively. Fourthly, the administration has too much power without the control of parliament authorization. The President's authority using funds boundlessly without parliament authorization makes the real budget deficit wider. This is the problem of politics undermining the economy. Finally, the most severe problem is that many of representatives do not know taxes and the impact of budget on the economy, and are not even interested in budget matters, so they are not serious to pass it. Many cases argued in the past were not because of either economic efficiency or democratic equality, but of immediate show up by expressing their concerns about it. The economy becomes a victim of underdeveloped politics.

Financial Sector: Policy Developments

As shown in Table III-8, the average annual growth rate of currency and demand deposits (M1) was 30.73% during the period of 1970-1974 and gradually declined to 22.32 during the period of 1990-1994. That of M2 including M1 and time and savings deposits and residents' foreign currency deposits declined from 29.18% to 18.48% during the same period. That of M3 including M2 and nonbank financial institute deposits, debentures issued, commercial bills sold, certificate of deposits, repurchase agreements, and cover bills declined from 33.67% to 23.56% during the same period partially owing to increase in deposits in nonbank financial institutions and expansion of certification of deposits. The growth rate of time and savings deposits declined from 27.93% during the period of 1970-1974 and gradually reduced to 18.06% during the period of 1990-1994. Accordingly, that of loans in the deposit money banks reduced to 18.34 during the same period when the ratios of loans to deposits were 93.68% which was much higher than previous period. The average annual interest rate on time deposits was 16.44% during the period

of 1970-1974, but declined to 9.6% during 1990-1994, accordingly that on loans declined from 18.50% to 12.40%.

Table III-8. Growth rates of Money Supply and Interest Rates: South Korea
Average Annual Growth Rate, Percent Increase from Previous Year

Category	1970-74	1975-79	1980-84	1985-89	1990-94	1994
M1: Currency+Demand Dep %	30.73	29.00	18.12	12.58	22.32	11.90
M2: M1+Time-Savings Dep %	29.18	31.86	22.30	16.92	18.48	15.60
M3: M2+Other Sav-Credits %	33.67	34.58	28.00	27.52	23.56	24.70
Time & Savings Deposit %	27.93	33.84	23.80	19.00	18.06	17.30
Loans of DMB %	27.38	31.60	27.88	15.90	18.34	16.10
Interest Rate on Time Dep %	16.44	16.56	12.34	10.00	09.60	09.50
Interest Rate on Loans %	18.50	17.50	13.60	12.00	12.40	12.50

Sources: The Bank of Korea, *Economic Statistics Yearbook 1995*, Seoul, 1995 and various years.

In money and banking operations the following was observed in 1993. Assets and liabilities of financial institutions were strictly regulated and enforced by the central banking system. Interest rates on both deposits and lending were controlled, and those on loans for preferred sectors including small- and medium-sized firms and export industries were some points lower than prevailing interest rates as policy loans. Bank loans were controlled by the government to target M2 growth. The principal instrument of monetary control has been the Monetary Stabilization Bonds (MSBs) with repurchase (RPs) agreements. The Bank of Korea issues the bonds and sells to the commercial banks at below-market interest rates and repurchases them if necessary for intervention. Improvement of the current account and stock investment of foreigners owing to partial openness of stock market to foreigners introduced large inflow of foreign capital in 1992, so the Bank issued substantial amounts of MSBs and RPs to stabilize overflow of the currency. The YS Administration regulated the real name system in all financial transactions to trace the flow of funds in the second half of 1993, and launched three step financial sector reform program for the period of 1993-97, which was a driving forces for financial policy reform.¹⁷The reforms in domestic financial sectors include interest rate deregulation, market-based system of monetary control, reduction of policy loans and ceiling-based credit control, and development of money market including diversification of short-term instruments such as money market certificates and money market funds. The reforms extended to all financial areas including the foreign exchange system, capital transactions, and the organizational restructuring.

In 1994, the world economy grew and was recovered, led by the U.S. economy reaching 4.1% of high growth. Accordingly, the Korean economy faced a rapid expansion: 8.4% GDP growth, 11.7% increase in fixed investment, and 7.0% expansion of private consumption but the gross saving ration remained at 35.3%. The Bank of Korea established and operated a target range for M2 growth rate of 14% to 17% on the bases of the monthly average, and controlled reserve requirements more strictly to curb inflationary pressure. As a result, M2 growth stayed at 15.6% on average in 1994. The Bank of Korea pursued various financial reforms as scheduled and

established a new central bank financial network named "BOK-Wire" for efficiency of operations.

The developments of monetary policies in 1994 were as follows.¹⁸ (a) Open market operations: the Bank used the tool of repurchase agreement and reduced net issuance of monetary stabilization bonds. (b) Reserve requirement policy: the Bank strictly forced the requirements. It extended liquidity loans to commercial banks failing to meet their reserve requirements at a penalty interest rate to strengthen its enforcement. (c) Rediscount policy: the loan system of the Bank realigned, so rediscounts on commercial bills, loans for foreign trade, and funds for small- and medium-sized businesses were included within the aggregate ceiling while other policy loans were abolished except loans for the primary sector and reserve requirements. The Bank supplied 600 billion won of emergency funds for small-medium-sized enterprises, which was eligible within the aggregate credit ceiling. (d) Interest policy, the minimum maturity of CDs, high denomination RPs, CP were shortened from 91 days to 60 days. Time deposits with a maturity of one year or more but less than two years, and installment savings with a maturity of two years or more but less than three years were liberalized. Banks were permitted to freely set the interest rates on policy-based loans financed through aggregate credit ceiling system within their prime rates. (e) Loan system: the bank abolished the regulation that conglomerates who had credit extension were required the prior authorization of their bank of investment. The largest 10 conglomerates were allowed to invest in foreign business activities not pertaining to their current business field. (f) Deposit system: commercial banks were allowed to manage a new type of instrument called "cover bill," issued on the basis of underlying prime bills. The Bank raised the ceilings on CD issuance for nationwide commercial banks, local banks, specialized banks, and foreign bank branches.

Balance of Payments and Foreign Exchange Rates: Policy Developments

The trade balance of South Korea performed four-year surplus until 1989, as shown in Table III-3, but moved into deficit in 1990 and showed \$3.15 billion deficit in 1994 though \$1.86 billion of surplus was recorded in 1993. During the first half of 1995, around \$7 billion of trade deficit appeared from \$65.26 billion of imports and \$58.33 billion of exports. Invisible trade balance which includes shipment and transportation, travel, investment income, and others, showed \$0.45 billion of deficit in 1990, but rose to \$1.99 billion in 1994 from \$22.55 billion of credit and \$24.54 billion of debit. During the first half of 1995, a \$1.64 billion deficit appeared and around \$3 billion of invisible trade deficit is expected at the end of 1995. The current account deficits in the 1990s were accompanied by capital account surpluses owing to the large inflow of portfolio investments, which were \$0.76 billion in 1989 but rose to \$11.02 billion in 1993 and \$7.27 billion in 1994. Foreign direct investment in Korea was \$1.12 billion in 1991 and \$757 million in 1994, while South Korean investment in foreign countries surpassed by \$1.36 billion and \$2.07 billion respectively owing to rapid increase in wages and other costs. The short-term capital balance showed continuous surpluses. So, the capital account balance was in continuous surpluses: \$3.88 billion in 1990, \$8.34 billion in 1982, and \$9.08 billion in 1994. As a result, the overall balance of payments was \$3.74 billion of deficit in 1991 but showed a continuous surplus during the last three years.

The position of gold and foreign exchange holdings gradually increased to \$25.67 billion by the end of 1994. The stock of gross external debt of South Korea increased from \$31.50 billion.

III-9. Balance of Payments and Foreign Exchange Rates: South Korea
Selected Years, Current Million Dollars

Category	1989	1990	1991	1992	1993	1994
Current Account Balance	5,054.6	-2,79.4	-8,727.7	-4,528.5	384.6	-4,530.8
Trade Balance	<u>4,597.2</u>	<u>-2,003.6</u>	<u>-6,979.8</u>	<u>-2,146.4</u>	<u>1,860.2</u>	<u>3,145.3</u>
Exports (f.o.b.)	61,408.7	63,123.6	69,581.5	75,169.4	80,949.9	93,676.4
Imports (f.o.b.)	56,811.5	65,127.2	76,561.3	77,315.8	79,089.7	96,821.7
Invisible Trade Balance	<u>210.8</u>	<u>-450.6</u>	<u>-1,595.5</u>	<u>-2,614.3</u>	<u>-1,966.8</u>	<u>-1,989.2</u>
Credit	12,641.6	14,268.6	15,529.4	16,010.2	18,253.2	22,551.2
Debit	12,430.8	14,719.2	17,124.9	18,624.5	20,220.0	24,540.4
Net Transfer	<u>246.6</u>	<u>274.8</u>	<u>-152.4</u>	<u>232.2</u>	<u>491.2</u>	<u>603.7</u>
Capital Account Balance	-3,303.0	3,882.0	4,227.0	8,342.6	6,878.6	9,084.1
Long-Term Capital Bal	<u>-3,362.5</u>	<u>547.5</u>	<u>4,185.8</u>	<u>7,232.7</u>	<u>8,899.8</u>	<u>5,861.9</u>
Direct Invest Abroad	-305.3	-820.1	-1,357.2	-1,047.5	-1,106.0	-2,075.1
Direct Invest in Korea	758.4	715.3	1,115.5	551.0	515.7	757.5
Portfolio Investment	28.8	899.2	3,154.7	5,760.9	11,022.3	7,275.7
Public Loans	-1,067.3	-816.6	-621.4	-616.1	-1,763.6	-278.1
Commercial Loans	-824.7	-764.6	-557.6	-535.5	-1,067.0	-342.8
Short-Term Capital Bal	<u>60.3</u>	<u>3,333.7</u>	<u>41.2</u>	<u>1,109.9</u>	<u>-2,021.2</u>	<u>3,163.0</u>
Overall Balance of Payments	2,453.1	-273.9	-3,740.8	4,898.1	6,542.2	2,821.7
Gold & Frgn Exch Holdings	15,245	14,822	13,733	17,153	20,262	25,672
Gross External Debt	31,503	36,216	41,820	44,598	47,070	54,978
Foreign Exchange Rates W/\$	679.6	716.4	760.8	788.4	808.1	788.7

Sources: The Bank of Korea, *Economic Statistics yearbook 1995*, Seoul, 1995, p. 202-210. Note that the capital account did not include all of the subaccounts. Exports & imports are adjusted by balance of payments standard.

in 1990 to \$54.98 billion by the end of 1995. Net borrowing was \$7.72 billion in 1993, \$7.91 billion in 1994, and \$3.23 billion only in the first quarter of 1995.¹⁹ The Bank introduced the market average rate system in March 1990 for foreign exchange rate of the Won vis-a-vis the U.S. dollar, allowing to float in the interbank market within a daily market average rate for spot transactions. So, the daily volume of transactions in the foreign exchange market increased substantially. The Bank of Korea widened the band for daily fluctuation from +/- 0.8% to +/- 1.0% in 1993 and will introduce free floating exchange rate by the end of 1997. The foreign exchange rate of the Won vis-a-vis the U.S. dollar was 679.6 in 1989 and gradually increased to 808.1 at the end of 1993, and further declined to 756.5 by the June 1995. The Bank made payments equivalent to \$35 million to international financial institutions in Korean Won and convertible currencies. Additionally, the Bank disbursed SDR 3.0 million (\$13.7 million) to support the structural adjustment.

In 1994 the foreign exchange policies were developed in South Korea as follows. (a) Foreign exchange market: the daily fluctuation band for the exchange rate widened from 1.0% to 1.5% above or below the prevailing average exchange rates during the previous business day. The underlying real demand requirements for foreign exchange transactions eased from \$3 million to \$10 million per transaction for currency forward transactions. The ceiling of the bank's foreign exchange position rose to 15% of net worth. (b) Foreign exchange concentration system: restrictions on domestic residents' holdings of foreign currency eased to \$50,000 without reports.

The government allowed businesses to hold foreign currencies overseas up to \$300 million, and residents up to \$20,000. (c) Overseas business activities: the government abolished the limits on local financing of subsidiaries, and the ceiling on the remittance of working capital to overseas branches. The ceiling on the remittance of maintenance and operating expenses to overseas offices were raised to \$20,000 per month. The government eased the settlement period for imports on a deferred payment basis from 30 days to 60 days. The ceiling on the receipts of export advances was raised to 5% of export performance for the past year. (d) Foreign Investment: The government abolished portfolio investment limits to domestic securities companies, investment trust companies, and insurance companies. Other corporations were allowed up to \$300 million and residents up to \$100 million for overseas portfolio investment. The government reduced the number of sectors prohibiting overseas investment from 16 to 14, and less than \$10 million of overseas investment were required simple notification. (e) Domestic Capital Market Opening: the government partially opened the domestic bond market, allowing nonresidents to purchase non-guaranteed convertible bonds issued by small- and medium-sized enterprises subject to 30 % limit on total foreign investment per issue, and 5% limit on individual foreigners. Foreign direct investment authorization was transferred to the central bank to foreign exchange banks, and inflows of speculative short-term funds were restricted. (f) Management System: the government abandoned the classification of foreign exchange banks, letting them manage foreign exchange business equally. Foreign exchange banks were allowed to lend foreign currency denominated funds to nonresidents exceeding \$20 million by filing a report. The government allowed money changers to manage reconversion of Won by nonresidents. (g) The Bank of Korea expanded the foreign currency loans to encourage facilities investment and augmented competitiveness in the world markets. The maximum ratio of foreign currency loans for import production facilities and equipment in overseas manufacturing were adjusted upward to 90% of the required amount.²⁰

International Trade: Recent Developments

South Korea has pursued the growth strategy of export promotion. The annual growth rate of exports was 40.18% on average during the period of 1970-1979, 15.76% during 1980-1989, and further declined to 9.08% during 1990-1994 as shown in Table III-10. The total amount of exports reached \$96.01 billion by 1994, and its composition by the type of goods varied gradually. The ratio of exported light to heavy industrial products was 39.73% to 53.93% in 1989 but changed to 26.81% to 66.60% in 1994. Exports of light industries declined by almost 13% of total exports while those of heavy industries increased by the same. For example, exports of textiles declined from 23.13% in 1989 to 17.02% in 1994 in terms of percentage of total exports, while those of footwear declined from 5.16% to 1.55% in the same period. Exports of chemical and chemical products increased from 2.15% in 1989 to 5.11% in 1994, those of electronic products rose from 14.67% to 18.92% in the same period. But exports of metal goods, machinery and equipment rose by around 1% of total export volume. In other words, the structure of South Korean exports moved from labor-intensive to capital- and technology- intensive industries. About 40% of total exports became electronics, machinery and equipment, and metal goods by the end of 1994.

On the other hand, the annual growth rate of imports was 28.88% on average during the period of 1970-1979, 12.23% during 1980-1989, and declined further to 11.04 during 1990-1994.

Table III-10. Exports by Type of Goods: South Korea
Selected Years, Percent within Total Exports

Category	1989	1990	1991	1992	1993	1994
Total Exports Cur \$ bil (Export Growth Rate %)	62.38 (2.8)	65.02 (4.2)	71.87 (10.5)	76.63 (6.6)	82.24 (7.3)	96.01 (16.8)
Food and Direct Consump Crude Materials & Fuels	3.95 2.67	3.52 2.64	3.35 3.70	3.06 4.14	2.78 4.22	2.68 3.91
Light Industrial Products	<u>39.73</u>	<u>38.68</u>	<u>35.21</u>	<u>32.40</u>	<u>29.28</u>	<u>26.81</u>
Textiles	23.13	21.44	20.48	19.58	18.39	17.02
Footwear	5.16	6.19	4.97	3.80	2.47	1.55
Heavy Industrial Products	<u>53.93</u>	<u>55.15</u>	<u>57.74</u>	<u>60.40</u>	<u>63.72</u>	<u>66.60</u>
Chemical & its Products	2.15	2.68	3.28	4.51	4.61	5.11
Metal Goods	9.24	8.71	8.33	9.16	9.78	8.11
Machinery & Equipment	9.02	9.31	9.74	9.85	10.52	10.75
Electronic Products	14.67	15.74	16.15	16.67	16.37	18.92

Sources: The Bank of Korea, Economic Statistics yearbook 1995, Seoul, 1995, pp. 211-5. National Statistics Office, Major Statistics of Korean Economy 1995, Seoul, 1995, pp. 240-1.

Table III-11. Imports by Type of Goods: South Korea
Selected Years, Percent within Total Exports

Category	1989	1990	1991	1992	1993	1994
Total Imports Cur \$ bil (Import Growth Rate %)	61.46 (18.6)	69.84 (13.6)	81.52 (16.7)	81.78 (0.3)	83.80 (2.5)	102.35 (22.1)
Grains	3.02	2.40	2.05	2.29	2.20	---
Crude Oil	7.02	8.18	8.89	10.22	9.63	7.98
Food & Consumer Goods (Re-exports)	8.95 (1.85)	8.63 (1.50)	8.82 (1.39)	9.17 (1.39)	9.24 (1.44)	9.84 (1.39)
Capital goods (Re-exports)	32.67 (10.13)	32.59 (9.00)	32.87 (8.62)	32.72 (7.87)	32.20 (8.83)	36.35 (8.95)
Industrial Materials (Re-exports)	48.16 (20.72)	48.21 (18.23)	47.36 (16.99)	45.60 (17.19)	46.73 (19.04)	45.83 (18.83)

Sources: The Bank of Korea, Economic Statistics yearbook 1995, Seoul, 1995, pp. 216-9. National Statistics Office, Major Statistics of Korean Economy 1995, Seoul, 1995, pp. 252-3.

as shown in Table III-11. Imports of grains remained at around 2.5% of total imports and will gradually decline as the total amount of imports increases. The self-sufficiency rate of South Korea in 1993 was 33.9% for all grains, which includes 96% of rice, 77.2% of barley, 0.03% of wheat, 1.40% of corn, 13.8% of soybean, 99.6% of potato, and 12.8% of all other grains.²¹ Imports of crude oil were around 9% to 11% of total imports. Those of food and consumer goods remained

at around 10% to 11% of total exports during the period of 1989-1994. Imports of capital goods increased from 36.40% in 1989 to 39.50% in 1994. Exports of industrial materials remained at around 53% of total imports during 1989-1993, but declined to around 50% by 1994, while its imports for exports remained at around 20% of total exports during the same period.

In Table III-12, South Korea has exported to the United States, Japan, Hong Kong, China, Germany, and Singapore, but its exports have been also diversified to Taiwan, Indonesia, India, Thailand, United Kingdom, Malaysia, Canada, and others. The export proportion to the United States was 33.1% in 1989 but gradually declined to 21.4% in 1994, while that to Japan declined from 21.6% in 1989 to 14.1% in 1994. Exports to Hong Kong rose from 5.4% to 8.3% during the same period, and those to Singapore increased from 2.5% in 1989 to 4.3% by 1994 which was the similar proportion to those of Germany. Exports to China rose very rapidly from 1.4% in 1991 to 6.5% in 1994, and will continuously increase owing to geographical benefits, cultural similarity, increasing trends of foreign direct investment in China, and technological cooperation.

Table III-12. Exports by Principal Country: South Korea
Selected Years, Percent of Total Exports

Category	1989	1990	1991	1992	1993	1994
Total Exports Cur \$ bil	62.38	65.02	71.87	76.63	82.24	96.01
United States	33.1	29.8	25.8	23.6	22.1	21.4
Japan	21.6	19.4	17.2	15.1	14.1	14.1
Hong Kong	5.4	5.8	6.6	7.7	7.8	8.3
China	--	--	1.4	3.5	6.4	6.5
Germany	3.4	4.4	4.4	3.8	4.4	4.2
Singapore	2.5	2.8	3.8	4.2	3.8	4.3

Sources: The Bank of Korea, Economic Statistics yearbook, Seoul, 1995, pp. 220-1. National Statistics Office, Major Statistics of Korean Economy, Seoul, 1995, p. 242.

Table III-13. Imports by Principal Country: South Korea
Selected Years, Percent of Total Imports

Category	1989	1990	1991	1992	1993	1994
Total Imports Cur \$ bil	61.46	69.84	81.52	81.78	83.80	102.35
Japan	28.4	26.6	25.9	23.8	23.9	24.8
United States	25.9	24.3	23.2	22.4	21.4	21.1
Germany	4.3	4.7	4.5	4.6	4.7	5.0
China	---	---	4.2	4.6	4.7	5.3
Saudi Arabia	1.7	2.5	4.0	4.6	4.5	3.7
Australia	3.6	3.7	3.7	3.8	4.0	3.7

Sources: The Bank of Korea, Economic Statistics Yearbook, Seoul, 1995, pp. 221-2. National Statistics Office, Major Statistics of Korean Economy, Seoul, 1995, p. 254.

In Table III-13, imports of S. Korea came from Japan, the United States, Germany, China,

Saudi Arabia, and Australia but were diversified to Indonesia, Malaysia, Canada, Singapore, France, Taiwan, United Kingdom, Italy, and other oil rich countries. The import proportion from Japan was 28.4% and gradually declined to 24.8% in 1994, while that from the United States also declined from 25.9% to 21.1% during the same period. Imports from Germany remained at around 5% of total imports, and those from Saudi Arabia and Australia remained at around less than 4%. Imports from China was 4.2% in 1991 and rose to 5.3% in 1994, which will increase continuously according to the rise of exports. South Korea will continuously diversify its imports as well as its exports though around 9% to 11% of exports will remain at oil producing countries.

As shown Table III-14, South Korea exported to the United States \$20.20 billion in 1989 and \$20.55 in 1994, imported from the United States \$15.45 billion in 1989 and \$21.56 in 1994, so the United States was the first South Korean export market, and South Korea was the sixth U.S. largest export market in 1994. The stock of U.S. foreign direct investment in Korea was \$3 billion in 1994 which was 5.3% less than in 1993, while South Korean FDI in the United States was only \$573 million in 1994. It is fair to say that trade disputes between two countries have been resolved satisfactorily through bilateral channels though U.S. Trade Representative demands further.²² It includes partially remained portion of restrictions in government procurement, financial services, and foreign direct investment. South Korea has a blueprint of market liberalization reaching the standards of OECD countries.

Table III-14. Trade Relations of South Korea with The United States
Selected Years, Current Million Dollars

Category	1989	1990	1991	1992	1993	1994
Exports to U.S.A.	20,203	19,446	18,608	18,090	18,138	20,553
Import from U.S.A.	15,445	16,946	18,904	18,287	17,928	21,579
Balance with U.S.A.	4,758	2,500	-296	-197	210	-1,026

Sources: International Monetary Fund, Direction of Trade Statistics Yearbook, Washington, DC: IMP Publication, 1995, p. 269. IMF Statistics are a little different from the Bank of Korea because of different criteria and adjustment for their own scales.

Prospects of The South Korean Economy

A couple of research forecasted optimistically as shown in Table III-15. According to those research, real GDP of South Korea will be \$378 billion in 2000 and \$807 billion in 2010 in term of 1990 constant price. The annual growth rate of GDP will be 6.3% in 1996, 5.8% in 2000, and 5.4% in 2010. Population growth will be so slow that it will reach only 51 million people by the mid 2020. Per capital real GDP will become \$10,170 in 2000 and will reach \$15,825 in 2010. The rate of unemployment will be 3.0% by 2010, and the annual inflation rate will gradually decline to 4.4% in 2010. The volumes of exports and imports will be \$236 billion and \$247 billion in 2000, and \$491 billion and \$490 billion by 2010, respectively. The world market share will be 2.84% in 2000 and will reach 3.00% by the end of 2010.²³ It is not difficult to calculate GDP based on the assumed growth rate. If a different growth rate or different inflation rate were applied, the number

must be adjusted. But the issue here is not the number but the key points of optimism.

Table III-15. Future Economic Growth: South Korea
Selected Years, Base Year 1990

Category	1990	1996	2000	2010
Real GDP Growth %	9.50	6.30	5.80	5.40
Real GDP \$ billion	253.60	378.00	477.00	807.00
Population million people	42.87	45.30	46.90	51.00
Per Capita Real GDP \$	5,883	8,344	10,170	15,825
Unemployment Rate %	2.40	2.50	2.70	3.00
Annual Inflation Rate %	4.20	5.50	4.80	4.40

Sources: Data Resources, Inc., June 1995, and Korea Institute for International Economic Policy, July 1995.

This author believe that the South Korean economy will be bright and prosperous because of following reasons. First, South Koreans respect family values and support education for their children with sacrifice. Education and training develop individual potentials and capabilities and supply appropriate manpower for growth. This is accumulated human capital. In 1994, 63.1% of high school graduates entered college and 19.3% of college graduates received graduate education. Secondly, the supply of capital and technology are optimistic in the future. Domestic private savings were 33.4% of GDP which was 2.5% less than fixed investment in 1994. The technology base is not strong enough to catch up with Japan or the United States, but businesses have been aggressive for research and development. R&D expenditure was \$6.33 billion and researchers per 1000 population were 2.03 persons in 1994. Thirdly, businesspeople in South Korean were aware of management and marketing as much as those in advanced countries. They pull the government to work for them and negotiate successfully with the labor union. Workers' productivity grew around 10% a year during the last five years, and the discipline in working places contributed to the productivity owing to the performance-based compensation. In fourth, South Korea has many opportunities with China and North Korea as well as the United States and Japan in the coming century. Investment in foreign countries and expansion of its exports will pull the economy to grow continuously. Finally, Koreans have spiritual confidence in challenging difficulties with patience without losing hope. Koreans have self-adjustment function for themselves in the society.

IV. The Direction of Economic Cooperation between North and South Korea

As investigated in Section III, the economy of South Korea has been reaching the level of OECD countries in terms of trade volumes of around \$200 billion in 1994 and almost \$10,000 of per capita income to be in 1995. But there have been significant problems of South Korea lying in the lagged development of other parts of the society including politics and government, which would restrict cooperation between the two Koreas. On the other hand, North Korea has faced a serious dilemma from conflicts between politics to maintain the socialist system and economy to supply appropriate necessities. The economic aid or cooperation is based on clear demand for North Korea and voluntary supply of South Korea. However, current political and economic

situations of North Korea is uncertain so that its demand is unclear. This section investigates (a) weakness of non-economic factors in South Korea restricting cooperation with North Korea, (b) current economic situations of North Korea as a dilemma, (c) its grand strategies to resolve the problem and its demand for help, and (d) direction of economic cooperation between them.

South Korea: Weakness of Non-Economic Factors

South Korea has maintained 600,000 armed forces with high education and training since the Korean War, so the officer's corps became a leading edge of western civilization, and their role grew larger and influential. In 1960 General Park Jung Hee took over the civilian government by force, modernized the government system, launched a series of economic development plans, and pursued social reform. Rapid growth of the economy has pushed and pulled society toward democracy and capitalism. Expansion of foreign trade with foreign direct investment and increase in exchanges of people and information brought liberalization and democratization of the society. South Koreans gained the western standard of political freedom through 1987 free election. After five years of transition with trial and error, the first civilian government started operations in early 1993, but the ruling party lost the majority seats in major cities in the revived local elections in June 1995. The YS Administration did the right things in purifying the armed forces by removing political officers from active duty, introducing the real name system in all financial transactions, and restricting the amount of campaign funds. Those are not the root of main problems, but the micro-appearance of them. The leadership of YS Administration has missed to read the real problems of South Korean society. The following discussions may give some tips for YS Administration to wake up and to prepare for winning elections in 1996 and 1997. In the previous section the bright side of the South Korean economy has been investigated, but now we are going to discuss about the dark side of its society. Though the economy has been a leading edge and has pulled South Korea, some lagged parts of the society remain unchanged, which will be negative factors for North-South cooperation and the unification of two Koreas in the future. They are the political system without primary elections, monopolized public offices by a school faction, monopoly power of conglomerates, the fallen morale of armed forces officer's corps, declining moral and values of the second generation, and gradual increase in pessimistic views about unification in South Korea.

First, the main problem of domestic politics in South Korea is non-existence of the primary election. The chairman of the party creates a committee to nominate candidates running for Members of the National Assembly against other party candidates. No voters in South Korea gave the primary voting rights to the political party bosses. The previous dictatorial government made this rule, and the YS government and the opposition parties do not have any intention to change the rule because the political beneficiaries can enjoy their existing monopoly power under legal protection. This is the primary reason the dictatorship of party chairman can exist in South Korean politics, so factions of "Three Kims" can survive for over thirty years in politics. As a result, the political system has lost the function of check and balance between Administration and Assembly. And most of the members are loyal to the party boss to secure another nomination four years later. The National Assembly becomes a rubber stamp for the President, chair of the ruling party. Committees and Subcommittees of the National Assembly do not discuss much about laws, but

mostly follow the direction of their party leader. To win the party nomination, it has been said that some of the competitive candidates bribed the party leader. It is a source of corruption because elected officials must return the funds by receiving bribes from government contractors. President Park created the Non-District Memberships, and they have been nominated by the party leaders from the business circle to collect campaign funds. It is rare to discuss issues against the party line in the National Assembly based on individuality. There is no acceptable freedom for the members to vote for or against the proposed laws according to their own values or decisions, because one violation may end their political careers. The party nominations of assembly members in some cases have been based on loyalty and financial capabilities, so sometimes the qualifications of the candidates became a problem in terms of lack of professional knowledge and honesty. Many of South Korean voters eagerly demand honest and fresh ideas for politicians.²⁴

Secondly, the alumni of the College of Law in the Seoul National University (SNU) dominate the legal system. Prosecutors, defense attorneys, and judges have almost graduated from SNU. Almost seventy percent resembles of current Cabinet members appointed by President Kim are SNU graduates. The Cabinet meeting resembles a kind of alumni gathering. (a) This is the major reason informal connections are more powerful than the authority of formal organization in the South Korean society. The government function loses fairness in services and becomes a convenient tool for connections and interest groups. (b) The domination of SNU graduates over major public positions jeopardizes the variety of society coming from various resources. How is it different from the domination of graduates of Kim Il Sung University over North Korean society? The unity should be created by the focus from variety. A society without variety is losing creativity. (c) Since career civil officers of the government are dominated by a school faction, the organization loses the function of check and balance within the system. This could be a root of corruption for faction members to do anything under the protection. (d) Since one faction dominates major public positions, the majority of public workers become the minority in power. This jeopardizes the harmony of career officers and may cause their unionization to protect themselves. The social costs of one-faction domination must be much larger than those of non-domination. (e) The domination of SUN faction over major public positions has introduced a serious sacrifice of high school education. High school students and their parents believe that admission to SNU is a kind of certificate guaranteeing a successful future. So, competition is so severe that high school boys wait two or three years to receive SNU admissions. This causes serious social problems in South Korea. From the U.S. standpoint, one-school faction can not occupy public positions that much, and the Congress may provide a law limiting less than five percent of high positions to be occupied by one school faction except political appointees.²⁵

Thirdly, the monopoly power of conglomerates has been jeopardizing political equality and economic efficiency, and public perception about conglomerates has been negative. The majority of public seems to believe that the wealth of conglomerates came from past unfair favoritism under military governments: exploiting laborers by prohibiting labor union activities, stealing consumers' wealth by protection and monopoly power, gaining taxpayers' funds by subsidies, taking profits unfairly by noncompetitive government contracts, using borrowed funds illegally for investment of real estate and the financial market, destroying small businesses in the domestic market, and so on. The role of conglomerates contributing to economic growth should not be underestimated. The real problem is not in the past, but in the present continuously expanding its monopoly power. The

pro-jaebuls of politicians, government officials, lawyers, professors, and researchers have occupied major offices in Seoul and supported them theoretically and practically. One of the urgent social issues is how to curb the monopoly power of the conglomerates from the market and society to secure fairness for the ordinary people. This is not the problem of equality versus efficiency. It is a problem of justice. The intervention of government power in markets is normally in two purposes either to increase capitalistic efficiency or to promote democratic equality or both. Since the monopoly power of conglomerates destroys both efficiency and equality in the South Korean society, it must be corrected before the unification. If it is not corrected before that, North Korean voters plus low-income voters in South Korea may unite and will vote for the Labor Party, which will nationalize major industries and land owned by conglomerates through the legal process of democracy. If the theory of history repeating itself is correct, then the economy will come back to the system of equality to near socialism. The politicians and conglomerates in South Korea should understand what is more constructive for mutual benefits in the future.

In fourth, the South Korean Army should build up military professionalism. Since 1960 the Korean Army has been a base of political power until YS took over the administration in early 1993. Taking over the office, YS removed all political officers from the armed forces and purified the officer's corps, which was the most effective performance as a president in Korean history. (a) The Korean Army is in the period of transition in terms of professionalism. The officer's corps should firmly understand that there are no correlations between the Army and politics. The age of the sword has gone, and the age of the pen has come; so, to be a politician study laws, and to be a general study military strategy. (b) South Korea needs to maintain defense expenditure at around 3.5% of GDP continuously to keep military superiority against North Korea until its threats fade away. The arms race is not desirable, but the strategic goals of Pyongyang regime have not been changed. However, South Korea will face North-South cooperation eventually. It is necessary to develop a program of military unification in the future as a contingency plan. (c) Military professionalism is based on an appropriate workforce of theorists, managerial staff, and generalists, requiring different education and experiences. Continuous investments in education and training are important in maintaining military capabilities. Both generalists and specialists are necessary to support and to win the war in any kind of situation. As technology advances, the role of specialists will increase in the system. (d) Now is the time for the armed forces of South Korea to rebuild its morale with harmony through fairness of personnel management by eliminating the rise of factions in the future. The opportunities of education and training, new assignment, and promotion should be fair and equal to everyone. The spirit of more cooperation and less competition should be promoted. The current compensation needs to be adjusted in accordance with that in private firms to keep the equality of manpower.

In fifth, the second generation in South Korea saw too much from a corrupted society. When they were in elementary school, they saw that their teachers received money regularly from their parents for special treatment in the class. They saw that their parents paid bribes to government officials to get contracts, and the prime contractors hired subcontractors with margins, and subcontractors hired sub-subcontractors with additional margins, and so on. The funds left to final contractors became far below the actual costs, so construction became shabby causing major bridges to fall. They saw that their parents had to pay bribes to avoid time-consuming processes of the government permissions. They saw their professors were much interested in politics rather

than academic performance though their academic products were below world standards. They could not hear the voices of intellectuals demanding social reforms aggressively but read flattering articles in newspapers advertising government policies expecting government jobs. They could read conservative papers protecting the well-established class of society including conglomerates, while a couple of radical or liberal papers were treated as dangerous communist propaganda. So, they did not have time to compare different views. They saw how media was strongly controlled by the government, and media people could accumulate much more wealth by kickbacks than by receiving paychecks. They saw that many of both elected and career high ranking officials declared their wealth they accumulated by the law in early 1993. It was so huge that anybody could believe that the wealth was stolen by using government positions, but no one was prosecuted. They heard voices saying that authorities could not prosecute them because they were not the only persons who stole money by using government positions. They saw so many criminal cases did not pay the right prices. The future generation learns from family, school, and society. Above mentioned is a small portion of contamination in South Korea, but it is powerful enough to attack and destroy the entire system immediately by spreading disease particles, about which we must worry.

Finally, there have been increasing trends of pessimistic views about unification of Korea. During the cold-war period the authoritarian government of South Korea tightly controlled socialist movement in colleges and universities as well as labor organizations. That was a golden period for North Korea to expand its propaganda in line with the self-created communist circle linked to laborers and factory workers with student activists. However, the fall of socialist countries as well as democratization of South Korea puts them out of steam because of lack of ideology and motives to argue with in social issues. The political opportunities for dissidents to participate in real politics began to increase, so many of former dissidents and activists took elected offices and favored jobs to feed their families. In short, North Korea lost the ideological base in the South. Another point is that South Korean people learned from the experiences of German unification that North-South unification will bring more suffering than prosperity considering that the degree of economic growth and capital and technological capabilities far beyond those of Germany. So immediate unification may result in chaotic situations in the South in terms of economic transformation and employment, that will jeopardize continuous economic growth and prosperity in South Korea. The third point is that South Koreans have been sick of P'yang's uncivilized behavior. For example, P'yang asked for rice, so Seoul sent rice, but they arrested one of the sailor's claiming espionage. If the South supplied free rice for aid, they should express some gratitude for Southern hospitality, but they arrested another ship. This is a kind of kid's game asking for more candies by threatening to hit. The rise of pessimism about unification could be a serious barrier in North-South economic cooperation, though business activities are based on long-run profitability from investment in North Korea.

North Korea: A Dilemma between Politics and Economy

Since the fall of the Berlin wall in 1989, people believed that the two Koreas will be unified soon either by collapse of North Korean regime or by mutual consensus of two governments. In contrast with expectations, North Korea used its nuclear capability in making a deal with the United States and gained as demanded. It is quite successful for North Korea to avoid its

breakdown like former communist countries in Europe and to overcome its isolation from the world community. But fundamental problems of the socialist system with centrally planned economy remains unchanged with serious conflicts between politics to maintain the socialist regime and the economy to supply minimum necessities. Why does it happen?

Table IV-1. GDP, Military Expenditure and Trade: North Korea 1990-1994
Current U.S. Billion Dollars and Percent

Category	1990	1991	1992	1993	1994
GNP \$billion	23.10	22.92	21.10	20.50	20.15
GNPGrowth	-3.7	-5.2	-7.6	-4.3	-1.7
Def/GNP%	21.5	22.4	26.3	27.4	27.6
Exports \$bil	1.96	1.01	1.03	1.02	0.81
Imports \$bil	2.76	1.71	1.63	1.62	1.02

Sources: The Bank of Korea, National Unification Board, and Korea Trade Association.

Table IV-2. Grain Production and Demand: North Korea
Thousand Tons, Production in 1992 and Demand in 1993

Category	Rice	Corn	Soybean	Potato	Others	Total
Production	1,043	2,256	213	281	105	3,898
Demand	4,022	1,999	252	2,340	450	9,063
Shortage	-2,979	+257	-39	-2,059	-345	-5,165

Sources: Woon-Geun Kim, "Food Crisis of North Korea and Prospects of Agricultural Revolution in The Future," in The North Korean Economy in Transition, Seoul: KDI, 1994.

In fact, the economy of North Korea has been declining gradually to the bottom of the worst. As shown in Table IV-1, its GNP was \$23.10 billion in 1990, but declined to \$20.15 billion in 1994. The annual growth rate shows negative signs during the period of 1990-1994 and peaked -7.6% in 1992. The military expenditures rose from 21.5% in 1990 to 27.4% in 1994 in terms of the share in GDP. Exports declined rapidly from \$1.96 billion in 1990 to \$0.81 billion in 1994 owing to the collapse of Warsaw Pact countries as trade partners. Import volumes, accordingly, declined from \$2.76 billion to \$1.02 billion during the same period.

Grain production in North Korea in total was 3.90 million tons in 1992 consisting of 1.04 million tons of rice, 2.26 million tons of corns, 0.21 million tons of soybeans, 0.28 million tons of potato, and 0.11 million tons of others as shown in Table IV-2. The estimated demand for grains was in total 9.06 million tons in 1993. The shortage of grains was in total 5.17 million tons consisting of around 3 million tons of rice, a little over 2 million tons of potato, and others. One of visitors who had a chance to meet a church group in North Korea in 1994 revealed that he heard

many prayers of "Oh God, let us have three meals a day." The shortage of 5 million tons was 57% of 9 million tons of total grain demand, which could scarcely allow two meal a day. North Korea asked for Japanese rice to avoid this urgent problem,²⁶ but instead received 150,000 tons of rice from South Korea, which will be continued if relationships become normalized.

North Korean energy supply was 34.78 million tons of crude oil equivalence in 1991. But oil imports were 5.23 million tons a year, which was only 15% of total demand because of the lack of foreign exchange. In other words, 85% of total demand came from coal and partially natural power. Consumption for industries was 82.13% and that for transportation was around 8% of total consumption. U.S. supply of 500,000 tons of bunker oil in a year to North Korea would be a great relief to solve its urgent energy problems. Industries and even households in North Korea have suffered from lack of energy and electricity supplies in prime-time operations.

The fundamental reasons why the economy has declined lie in the centrally planned economy just like fallen communist countries. (a) The allocation of limited resources in North Korea has been decided by economic planners, either professionals or non-professional politburo members, based on favored strategies. This creates the problem of bottlenecks and idle capacities in industries. (b) North Korea does not allow private property rights of the people, which discourage the desire for accumulating wealth to maximize economic efficiency. The compensation of labor is based not on job performance in the working place, but on political loyalty to the party, which depresses worker's motivation to produce more. (c) Lack of overseas education, research and development, information flow with privacy delayed the spread of science and technology. (d) North Korea has been on the list of terrorist countries, so its trade was limited to a few countries. Since international trade pursues comparative advantage of the country, the production possibility frontier of the nation's economy can be expanded by specialization of certain products. But the self-sanctioned economy could not take the trade advantage. (e) Continuous military build-up with more than 25% of GDP caused the economy to decline. Even in 1992 when its economy was falling down, North Korea assembled 25 of MIG-29 assisted by Russian Federation. (f) P'yang uses resources to monitor its own people to maintain the closed socialist regime. The party cells, one third of its population, watch the people anywhere in every moment with forced brain-washing lessons. (g) Lack of flexibility and social mobility of the system causes economic inefficiency in North Korea, and lack of self-adjustment function has been amplified under the uncertain shaky leadership.

Pyongyang wants to open its door to expand foreign trade and to attract foreign investment, but the worst fear is that a severe storm from the capitalistic countries will strike its regime to fall as experienced in European communist countries. The expansion of foreign trade liberalizes the closed society as follows. First, trade expansion requires workers and managers to know more about theories and practices: technology to produce better quality products, marketing skill to link producers to consumers smoothly, and management to maximize business profits. Since the product life cycle is short in high-tech industries, developing countries try to catch up to advanced countries to share markets. Intensive investment for research and development are required to keep the leading edge of high technology. Expanded education makes people to be aware and self-recognized, and to understand democratic values. As a result, the North Korean government will gradually lose the support from the people. Secondly, foreign trade expedites information flow between individuals and countries. Foreign trade is closely related to manpower, money, materials

and technology more than domestic trade, so increased transportation and communications accelerate the flow of information domestically as well as internationally. Foreign trade demands a wider range of information affecting foreign markets, so a lot of general information needs to be collected, analyzed, and distributed timely to the businesses. Sooner or later North Korean people can watch cable TV channels and understand what is going on in and outside of the country. They will be influenced by the media, and they will judge by facts, not by propaganda. Finally, the transformation of the socialist system towards the market economy will allow private property rights in North Korea, stimulating the productivity with strong motivation. The increased productivity contributes to the competitiveness in the world market, and exports will rise gradually. As the nation's economy becomes industrialized, the ruling power and business owners will form common interest groups accumulating wealth and owning properties, so called political-economic complex, and will produce the economic middle class. The new middle class will demand more political power for democracy and the ruling power cannot ignore the voices of the middle class because they are the majority.

There exists a dilemma of whether to open or to close the door because either way threatens the existence of the regime. North Korea learned lessons from Chinese experiences and began to duplicate its socialist market economy by introducing the concept of the special economic zones (SEZs) in Tuman River far from Pyongyang. The original intention of SEZs initiated by Deng Xiaoping was an gradual openness policy by taking capitalistic benefits in the zones without losing the socialist regime. But expansion of foreign trade and foreign direct investment brought China regionalization and have made Beijing's control weaker. This implies that democratization would be a matter of time. At this point, the national grand strategies of North Korea resolving this dilemma is limited to "Open the Door but Neutralize Freedom Waves." The tactical alternatives are combinations of different degrees of openness with various methods of controlling the people. North Korea gained from the nuclear deal with the United States, but this could not be a economic breakthrough. In this situation, P'yang's leadership should know that political gains are economic losses. The only way to maximize efficiency is simultaneous development of the entire system. If the political development pulled the economy, that would be the best choice.²⁷

At this moment, Pyongyang does not need to worry about the absorption theory by the South because the collapse of the regime is neither beneficial nor desirable for both countries. As mentioned previously, industries of South Korea do not have enough capabilities to absorb millions of refugees from the North in case of immediate collapse of the regime. The number must be almost one half of its labor forces including political subsidiary groups, over 1 million of armed forces, unemployed labor, political prisoners, and their families. From the economic standpoint, since North Korea has well disciplined labor forces, if production facilities are provided, the productivity would be great. In other words, if the Rajin-Sunbong Development Project is finished with proper infrastructure and production plants as scheduled, their products will be sold in the world market with competitiveness, which will return a quite an number of foreign exchanges to Pyongyang. If North Korea wants to expand these profits, P'yang may open several other places including Sinuijoo and Nampo in the west coast, Wonsan in the east coast, and Cheolwon on the middle of DMZ. North Korea can enjoy the excellent opportunities to expand economic growth without threats.

The Grand Strategy of North Korea

Since economic cooperation is based on the national grand strategy of North Korea, it is important to investigate strategic limitations of North Korea before introducing acceptable NGS and the framework of North-South economic cooperation. Its strategic limitations are as follows.

(a) As discussed above, P'yang has faced a dilemma from conflicts between politics to maintain the Juche regime and economy to supply necessities to people. Openness threatens the existence of the regime, and closeness also threatens the bread line. The leadership of P'yang wants to keep the regime without problems of grains and energy at least in the short run. This must be a trade-off: the gains of the former must be the losses of the latter.

(b) Recovering its economy from serious difficulties, P'yang is going to build up the military power against Seoul, which will dampen its economy again. The economy of North Korea is too weak to build up military power at this moment. The military power without appropriate supportive capabilities from the economy can not sustain and will finally destroy its system.

(c) Considering the economy of South Korea, there is no hope that P'yang can surpass the amount of defense budget of the South. If P'yang continues to build up military power, Seoul will allocate its defense budget to two or three times of P'yang's even though it is less than 3.5% of its annual GDP. So, the time in arms race lies in the side of Seoul at least in next thirty years until when the leadership of Kim Jung Il perish or the grandson of Kim Il Sung take over the power.

(d) The collapse of former socialist countries in early 1990s including Soviet Union as well as democratization of South Korean politics since 1987 made socialist propaganda useless in South Korea. Liberalization of labor activities with political participation of former dissidents made the South Korean society bright and vociferous in the process of national decision-making.

(e) Increased escapees from North Korea have revealed the tragic situations of human rights and sufferings from shortages of foods and energy. Those reports of the sufferings of human rights awakened the South Koreans to understand the real facts of North Korea. These disappointments removed a small possibility of collaboration from the unprivileged groups in South Korea.

(f) The Seoul's northern politics improved Seoul-Moscow and Seoul-Beijing relations, which made P'yang's dependency to China and Russia rootless. The security alliance between Washington and Seoul would be the worst barrier for P'yang to manipulate the situation for own benefits. P'yang's demand to abolish the Military Armistice Commission has been rejected by Beijing and Washington.

(g) The world community has been more practical and has considered economic gains from foreign relations. The number of aids to North Korea for natural disaster remained at \$13 million from China, Switzerland, Japan, Russia, Germany, and the United States.²⁸ However, P'yang can not expect free aids from the world community like the cold war period. Diplomacy might be helpful for words, but it could not be helpful for money to take out the vicious circle.

(h) P'yang should remember that simultaneous development of the economy with other sectors could maximize the efficiency of economic growth. If the economy grows fast by expansion of exports and foreign direct investment, domestic politics needs to be liberalized as much as the economy advances. If politics lead the economy, then business activities would be much easier. If other sectors lagged far behind the economy, economy's costs pulling other sectors

would be too expensive in terms of forward and backward linkages to coordinate with them. So, the advancement of the economy will be delayed or even stay without growth.

Table IV-3. The National Grand Strategy: North Korea
Multi-Dimensional Approach to Three-Step Transformation

Category	Partial Openness Present to 2000	Middle Openness 2001 - 2010	Entire Openness 2011 - 2020
Economy	Open 1 special economic zone: Rajin-Sunbong	Open 4 more zones Sinuiju, Nampo, Wonsan, Cheolwon	Open entire country to foreign businesses with restrictions
Politics	One-party system Release pol prisoners. Expand diplomacy	Start 2 party system. Free speech & press Cultural exchanges	Free election: president & congress Expand exchanges
National Security	Peace Treaty (2+2) Exch strategic level	Disarmament Exch of tactical level	North-South Alliance Disarmament

Note: See WheeGook Kim, "The Impact of Regional and Global Developments on The Korean Peninsula," presented to the Joint Conference held on September 20-21, 1995, at The Center for Strategic and International Studies, Washington, DC with The Research Institute for National Unification from Seoul, Korea.

From those limitations, the strategic options of North Korea are limited to multi-dimensional approach with gradual transformation as shown in Table IV-3. To avoid collapse of the regime, the gradual approach needs to be introduced from the partial to middle and entire opening stage, which is accompanied by liberalization of politics and alliance of national security with South Korea. In the process of economic openness towards the market system, P'yang should try to transform its political system towards democracy, and it should try to make a new peace treaty with disarmament towards North-South alliance in the future. The simultaneous efforts from North Korea should be provided to achieve maximum efficiency of transformation in its politics towards democracy, economy towards capitalism, and defense toward alliance with South Korea. In national security, P'yang should understand two crucial factors. First, South Korea does not want to absorb North Korea which can be guaranteed by both the United States and China. Second, the heavy defense burden of over 25% of GDP in North Korea is killing its economy with losing ground in the arms race. The only way to stop the arms race is to make a new peace treaty with disarmament agreement between two Koreas guaranteed by two or four superpowers in the region. From the South Korean standpoint, military spending does not help domestic economy, but help foreign defense industries. If today P'yang and Seoul agree with a new peace treaty with disarmament, 3.5% of South Korean GDP plus 25% of North Korean GDP can be diverted into rebuilding the North Korean economy. It was over \$20 billion in 1994 only and over \$100 billion for the next five years. Considering the development project of Rajin-Sunbong was less than \$7

billion, around seven of the similar development projects can be launched with one half of those funds. Considering the costs of two light water reactors were \$4 billion, one half of defense expenditures can afford to build 25 units of similar light water reactors. Why is the leadership of P'yang so blind to this economic calculation. The gold mine is in the DMZ. Remove the mine fields and build factories coordinated with South Korea, and export products to the world market. What is the use of armed forces in North Korea if South Korea does not have any intention of fighting against their brothers and sisters.

This author recommends a multi-dimensional approach to three-step transformation as a grand strategy of North Korea. The multi-dimension includes politics, defense, economy, society, and others with goals and values, which could be gradually transformed toward a desirable direction: political equality and economic efficiency. Gradualism cannot be defined by a definite period, but the minimum period should be considered for investment and their returns. Let us assume that we are going to build an industrial park. It will take at least three years of intensive construction to build the infrastructure and at least two more years to build the manufacturing plants. It will take an additional two years to normalize operations by putting appropriate employees and marketing. At least three to five more years are needed for the plants to mature. In sum, around ten or more years are needed to build an industrial park and to normalize operations only if the supply of capital and technology follows up with the plan. But if it does not follow up with the plan, the period will then be longer. So, each stage of openness assumes around ten years.

In the first stage, P'yang opens one SEZ of Rajin-Sunbong in Tuman River area as it was intended originally. If the supply of capital and technology are appropriate as planned, businesses in the Rajin-Sunbong SEZ will have normal operations with proper returns by the year 2000. It is imperative that they learn about price mechanisms, money and banking, function of private property rights, in addition to technology of production and management as a trial case for the entire country in the future. Political environment will be loosened to prepare for more openness through removing party cells and censorship, separating politics from administration and armed forces, releasing political prisoners, terminating criticism against the South, and removing the brain washing lessons. It is critical to make a peace treaty with disarmament guaranteed by the United States and China. The exchanges of strategic level officers between P'yang and Seoul will increase mutual understanding and increase common interests between the two different officer's corps to build future friendships.

In the second stage, P'yang opens several more SEZs including Sinuiju and Nampo on the west coast, Wonsan in the east coast, and Cheolwon in the middle of DMZ area, which will take another ten years until the year 2010. The capitalistic know-how gained from the first stage will spread to the newly opened zones. P'yang needs to create a new economic planning board inviting foreign scholars from the United States, Japan, South Korea, and Taiwan in the beginning of the planning stage of the second openness. This stage is important in preparing for the entire openness. In politics, two party systems need to be introduced with freedom of speech and press, which means that the function of the Labor Party is dissolved. Exchanges of government officials and businesspeople in various sectors should be increased for mutual understanding. Tactical level officers need to be exchanged including at least one officer to the battalion.

In the third stage, P'yang opens the entire country to the world. If the peace treaty is effective under the inspection system guaranteed by superpowers, the maintenance of domestic

security would not be a problem in North Korea. The period assumed ten years until the year 2020, when it will exercise democracy and capitalism. The election system will be introduced by voting for or against a referendum to choose a new constitution, so President and Congressmen will be elected for the new Republic. In this period, the North-South Security Alliance needs to be formed for the future unification of the two Koreas. If the North Korean Republic pursues democracy and market economy under the peace treaty, unification of the two Koreas would only be a matter of years. The two Republics should create a joint committee for unification and work together to compromise differences. The unification can be achieved through the confirmation in its Congress.

Direction of Economic Cooperation between Two Koreas

Based on the grand strategy of multi-dimensional three-step transformation as shown in Table IV-3, the development strategies of North Korean economy are shown in Table IV-4. In the stage of partial openness (present-2000), the government utilizes the function of economic planning in the allocation of resources. prices are controlled because of the non-existence of market function. The property ownerships are allowed by limiting certain areas of land, house, and belongings to stimulate motivation to produce more. The sources of funds include \$100 billion of north-south funds, 10% of GDP from savings, foreign direct investment as much as possible, and \$20 billion of long-term loans. It could be as much as \$150 billion by the year 2000. The resources are allocated to agriculture and labor-intensive manufacturing for import substitution and partial exports with highways, railroads, airports, seaports, power plants, and communications facilities.

Table IV-4. Sources of Funds and Allocation of Resources: North Korea
A Recommendation to North and South Korean Governments

Category	Partial Openness Present - 2000	Middle Openness 2001 - 2010	Entire Openness 2011-2020
Economic Planning & Price Control Property Ownership	Centrally Planned Prices Controlled Limited ownership	Planned / Market Prices 1/2 Controlled Limited ownership	Free Market No Prices Controlled Unlimited ownership
Sources of Funds	N-S Funds \$100 bil 10% GDP Savings Foreign Direct Invest Long loans \$20 bil	N-S Funds \$150 bil 20% GDP Savings Foreign Direct Invest Long loans \$20 bil	N-S Funds \$200 bil 30% GDP Savings Foreign Direct Invest Long loans \$20 bil
Resource Allocation	Import Substitution Labor-Intensive Exp Agriculture/Manuf	Imp Sub / Exp Pro Labor/Cap-Intensive 5 Spec Zones: Manuf	Export Promotion Cap/Tech-Intensive Manuf/Services

Notes: North-South Funds are provided by both governments. From cutting defense spending by one half, South Korea can save \$8 to \$10 billion and North Korea can save \$3 billion a year. The North Korean government can sell its land to South Korean people, either business or non-business, to provide North-South funds.

In the stage of middle openness (2001-2010), one half of planning function is transferred to the market function, and one half of prices depends on the market function. Around one half of personal properties are allowed to own except in large area of lands or expensive real estates. The sources of funds become \$150 billion of north-south funds, 20% of GDP from savings, foreign direct investment, and \$20 billion of long-term loans. Total sources could be \$200 billion. The resources are allocated to labor intensive import substitution and export promotion and to new areas of capital- and technology intensive industries. Most of the funds are absorbed by five special economic zones as planned on the east coast, and west coast, and the central part of demilitarized zone. In the stage of entire openness (2011-2020), the function of economic planning diminishes and that of guidance is introduced. Prices are decided by the market function, personal properties are allowed without limitations. The fund resources will rise to at least \$250 billion as the economy grows. The resources are allocated to capital- and technology-intensive manufacturing and services for import substitution and export promotion. Investment for transportation and communications would be the important part of investment in the entire region of North Korea.

In the early stage of economic development, spillover resources from the agricultural sector are exported for foreign exchanges as a part of the savings. (a) But the shortage of grain production has been almost one half of its demand, so at least 5 million tons of grains need to be imported for North Korea. (b) The shortage of energy and electricity requires net imports of oil and coal demanding additional foreign exchange. (c) The purchase of military hardware and parts plus their maintenance requires foreign exchange continuously. (d) Rapid decline of exports and increase in hard currency imports expedited the shortage of foreign exchanges. (e) External debt of North Korea was around \$8 billion in 1993 to former communist trade partners including Russia and less than 10% of debt owed to OECD countries. (f) As economic situations became worse, countries refused to give loans to North Korea to ease its foreign exchange difficulty. So, Pyongyang defaulted on debt services, and the shortage of foreign exchanges disturbed capital formation.

In fact, P'yang opened Rajin-Sunbong to foreign countries to overcome the shortage of capital formation but offered conditions and lagged construction of infrastructure have been less attractive than China and other developing countries, so that the progress was slow. The delayed leadership succession of Kim Jung Il and hostile military build-up with forward deployment of forces have increased business uncertainty, interrupting practical North-South cooperation as well as foreign direct investments. In sum, the lack of domestic savings, no loans from outside sources, and slow foreign direct investment forced North Korea to stay without active mobilization. From this reality, the direction of North-South economic cooperation should be in line with the direction of economic developments in North Korea, which is a mixture of growth strategies with transformation of socialist economy as considered in three stage openness of Table IV-4. The following suggestions are the direction of economic cooperation between the two Koreas, which is based on the precondition providing a new peace treaty between Seoul and P'yang guaranteed by the United States and China, and Russian and Japan if it is necessary. This could be a UN proposal to North and South Korea to resolve problems in the peninsula.

First, domestic capital formation is a beginning of the economic development in North Korea by providing take-off from the vicious circle. The funds can be provided in the following ways. (a) From cutting defense expenditure by one half, P'yang can save \$3 billion, and Seoul can save \$8 to \$10 billion a year until the year 2000. As the economy grows, the amount could rise.

(b) From foreign direct investment of at least \$5 billion can be attracted in a year. The South Korean businesses could be main sources of investors if P'yang gives a special premium package. (c) North Korea sells land properties owned by the government to South Korean businesses, either profit organizations or non-profit organizations to raise at least \$5 billion a year. (d) As the economy grows, domestic savings could be an important part of capital formation, which might be from 10% to 30% of GDP in North Korea. (e) As North Korea joins the international community by opening representative office in Washington, it is possible to borrow funds from international financial organizations including the World Bank, International Monetary Bank, Asian Development Bank, and so on. It could borrow \$2 to \$3 billion a year or \$20 billion for a five-year period. The borrowing amount is based on debt service ratio to export volumes and GDP. The important part of capital formation for North Korea heavily depends on South Korea. Without South Korea it will be near impossible.

Secondly, allocation of resources from collected funds is the most brain-demanded task for economic development. Various theories of balanced and unbalanced growth, forward and backward linkages, and labor- or capital- or technology-intensiveness with comparative advantages need to be considered. Development experiences of South Korea, Taiwan and China give lessons that labor-intensive industries including textiles, footwear, sportswear, and toys would be competitive and more profitable for exports, and helpful for import substitution in the first stage of openness. Partial investment in the agricultural sector will maximize its output and reduce its imports to save foreign exchanges. It will take five to ten years for labor-intensive industries to mature. As soon as the economy takes off through export expansion of labor-intensive products, investment for capital- and technology-intensive industries should be expedited in the second stage of openness. In this stage, North Korea should consider the aggregate industrial structure of two Koreas in the future. For example, South Korea has the largest steel industry and ship building industry in the world, and construction industry is also strong. If North Korea invests in those industries, the unified Korea will have a lot of idle capacities of production plants and equipment as well as specialized labor forces. This would be waste of resources in the future, so it is desirable for P'yang to avoid investment in those industries that South Korea currently has a comparative advantage. In the third stage, export promotion will be in products of capital- and technology-intensiveness, while labor-intensive exports are mature but still profitable, but lack of technology would be a problem in the world market. South Korea will fill this gap soon when the unification of two Koreas lies within years. South Korea supplies theories and knowhows of resources allocation from own experiences and helps and guides for transformation of the socialist system towards the market economy. A lot of South Korean direct investment and joint ventures should work as same Koreans, not foreigners.

Thirdly, In the first stage of openness, labor-intensive technology will be easily transferred by foreign direct investment through learning by doing method. The purchase of equipment from foreign countries would not be a problem in building your own plants. In the second stage, technology transfer for capital- and technology-intensive industries would require physical capital to purchase machines and patents, and human capital to operate and maintain plants. The human capital requires a Ph.D. degree in science, taking at least ten years of post high school education from advanced institutions in foreign countries plus more than five years of practical experience. If P'yang sends students to overseas college now, fifteen years later they can be useful for

technological development. Of course, it is not too late to send students to foreign countries right now. But the easiest way is to use South Korean engineers. The degree of technology transfer from the South to the North depends on the closeness to North-South unification. It is obvious that South Korea will be very cooperative in transfer of technology after the agreement of the peace treaty with disarmament between the two Koreas. If the peace treaty remains and unification of two Korean is within years, all technology in two Koreas will have no boundary within the Korean peninsula. This is a serious and important assumption because both are considered enemies at the present time. As long as hostile relations remain unchanged, it is common sense to say that no serious technology can be transferred between the two Koreas. Another part of technology transfer is in management and marketing in the market economy. This can be transferred by lectures and practical exercises. The joint venture between North and South may increase experiences of its entrepreneurs through learning by doing. The secrecy of marketing cannot be obtained by normal operations, but through personal contacts and business connections in practices, which really needs to know how to do it.

V. Conclusions and Recommendations

The purpose of this study is to analyze performances and prospects of the South Korean economy and to investigate the direction of economic cooperation between the two Koreas. First, the study evaluated the development of external environment on the Korean peninsula including China and the United States. Secondly, the performances of the South Korean economy were analyzed through real and money sectors, government, and external sector, from which its economic prospects were evaluated. Thirdly, the direction of cooperation was examined by introducing the national grand strategy of North Korea from defining current problems faced by P'yang and negative factors in Seoul with assumption of a peace treaty with disarmament.

In conclusion, first, the most critical element to be achieved by a unified Korea is not from the outside but from the inside of the two Koreas having mutual strong motivations to unite. No strong objections against the unification of the two Koreas could exist from the regional superpowers including the United States, China, Russia, and Japan because the unification does not hurt their interests and removes a kind of regional headache in the region.

Secondly, the economy of South Korea has grown continuously by average of 8.6% a year during the last fifteen years. The gross domestic product will be over \$400 billion, and its per capita GDP is going to reach near \$10,000 in 1995, and the inflation rate of consumer prices has remained at 5.3% in average during 1982-1994. The expenditure of government was around 26.3% of GDP and defense budget remained at around 3.5% of GDP in 1994. The Bank of Korea has managed the supply of money for stable growth of the economy with highly qualified manpower of nation's central bank. South Korean exports were \$96.01 billion with around 40% in metal goods, machinery and equipment, and electronic products, and its imports were \$102.35 billion with around 36% in capital goods and around 46% in industrial materials, which includes intermediate inputs for reexports being around 30% of total imports. South Korea exported \$20.55 billion and imported \$21.58 billion from the United States in 1995 with \$1.03 billion in trade deficit, while exported \$13.52 to and imported \$25.39 from Japan in 1994 with \$11.87 billion in trade deficit. The prospect of South Korean economy is optimistic because of education and good manpower,

capital and technology, entrepreneurs and marketing skills, geopolitical opportunities, and spirit of confidence pulling the economy of the next generation.

Thirdly, despite rapid economic growth, the lagged parts of the society have remained unchanged including non-existence of primary elections, monopoly of key public positions occupied by the SNU-school faction, growing monopoly of conglomerates, declined morale of officers corps and lack of their professionalism, increased corruption and faded values of the second generation, and declining desire for unification of the two Koreas. On the other hand, North Korea has also faced a dilemma from conflicts between politics to maintain the Juche regime and economy to divert the negative growth. This is a trade-off situation because gains from the former causes' losses for the latter. The national grand strategy of North Korea, therefore, is limited to gradual transformation of the Juche system toward the democratic market economy without external threats. It should be a multi-dimensional approach, pursuing simultaneous liberalization of the economy with other elements including politics, defense, and society of North Korea. The direction of North-South economic cooperation is in providing capital, allocating provided resources wisely, and transferring technology subject to the precondition of the peace treaty with disarmament guaranteed by regional superpowers. This is the direction of North-South economic cooperation.

The study recommends the following to both North and South Korean governments and the United Nations. First, as a national grand strategy of North Korea, the study recommends a multi-dimensional approach to three-step transformation of the Juche system toward democratic market economy. In the first stage (present to 2000), North Korea opens the Tuman River area as planned and attract foreign direct investment and joint venture plus additional capital of \$100 billion from North-South cooperation funds. Seoul and P'yang agree to sign a peace treaty with disarmament by one half within the period, which is guaranteed by the United States and China. Each side dispatches at least one officer to the battalion level of the Army to secure the peace treaty. North Korea releases political prisoners, dissolves the Labor Party, and disconnects the politics from government organizations. In the second stage (2001 to 2010), North Korea opens four more special economic zones attracting foreign capital and invests \$150 billion of N-S cooperation funds to build the infrastructure and plants. At least one half of the economy depends on the uncontrolled market price system. P'yang allows two-party politics with free speech and press, and freedom of residence with private property rights. North and South increases exchanges of people in many areas to expand mutual understanding. In the third stage (2011 to 2020), P'yang opens the entire country to the world with little restrictions. N-S cooperation funds reach \$200 billion, which is invested wisely based on long-run economic development plans. Foreign investment and joint ventures are attracted continuously. The new constitution for the Republic is based on check and balance of power. The free election system will introduce a new president and congresspeople. The DMZ is removed, and no economic barriers exist between the two Koreas and North-South will use the same currency at the end of the period. In this period, the N-S military alliance moves toward practical military unification. This is an extremely optimistic period for both Presidents of North and South to agree to be unified based on the new constitution confirmed by the referendum of the entire nation.

The second recommendation is in the direction of economic cooperation between two Koreas. First, North and South provide capital from North-South cooperation funds by cutting

defense expenditure by one half and by selling real estate to South Koreans, domestic savings, foreign direct investment as much as possible, and long-term loans. The total amount of capital will be \$150 billion in the first, \$200 billion in the second, and \$250 billion in the third stage. Secondly, the allocation of resources should be wisely planned by economic professionals applying lessons gained from experiences of South Korea, Taiwan, and China. The first stage focuses on labor-intensive industries for import substitution, and the second stage gradually moves from labor to capital/technology-intensive industries, and the third stage focuses on capital/technology-intensive industries for export promotion. At this stage, planners should consider the aggregate structure of industries in the Korean peninsula to limit the capacity problems in the period of post unified Korea. Thirdly, technology transfer would not be a problem. In the first stage, technology of labor-intensive industries is transferred by equipment purchases and its operations through the process of learning by doing. From the second and third stages, the transfer of technology would be a matter of time because the precondition of the peace treaty is subject to economic unification in the first, and political-military unification in the second. Around the year 2010, there would be mutual consensus of the people in North and South. Since it takes at least ten to fifteen years after high school graduation to produce the top-level engineers, P'yang can recruit and use South Korean manpower in specialized areas until getting new engineers from expanding overseas education for young North Koreans. The power of unified Korea would be doubled with economies of scale.

In addition to the above three conclusions and two recommendations, this author would like to emphasize the importance and benefits of the North-South peace treaty with disarmament guaranteed by regional superpowers. First, the direction of world history is moving toward democracy and market economy. No civilization and no government can survive without being in accordance with this historical direction. The old age, taking over the power through mass uprising learned from the French Revolution, has already evaporated in South Korea. This environment is mature enough to return to uncivilized society again because of the level of high education and high income despite the existence of equality versus efficiency problems. The ideology of communism and Juche has gone, and no ideology is necessary in this age except reasoning for a better life toward individual value. Secondly, the absorption theory has been dead in South Korea because of its own benefits. South Korea wants to enjoy continuous prosperity without external disturbances. The capabilities of South Korean economy are not enough to absorb millions of North Korean refugees, and its capital stock can not meet investment demand to expand industrial production capacities. From the theoretical standpoint, it is better off for P'yang itself to provide its own development plans and to pursue its economic growth by itself supported by South Korea. Thirdly, the arms race of North Korea against South Korea is a losing ground because of the amount of defense expenditures available. If North Korea remains an hostile enemy against South Korea, Seoul will allocate at least 3.5% of GDP for defense budget which is two third of North Korean GDP as of 1993, but the gap will become larger as the economy of South Korea grows. There is no possibility for P'yang to close this gap within the next thirty years. In fourth, the economic relations of South Korea with regional superpowers grow much faster than expected. Accordingly, economic interests between Seoul and Washington, Beijing, Tokyo, and Moscow have shown rapid growth so that mutual interests between trade partners raise political linkages because of increased number of people and money. Even Russia and China will not support North

Korea if they stay as a hostile warlord, so North Korea is losing the battle in international supports. Finally, the arms race is waste of resources where neither North nor South can gain anything but lose more than \$10 billion or more a year. This is more than one half of North Korean GDP in 1993. There is no need to continue the losing game. This author believes that the new leadership of North Korea is going to do something to overcome faced problems.²⁹ The leadership can create history but can not alter its direction.

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25. WheeGook Kim, "Check and Balance: Revival of Local Elections," The Korea Times Washington, April 14 - 16, 1995. Three series of the article investigated the root of the problems missing check and balance in the political system of South Korea. WheeGook Kim, "To Build the Society Paying the Right Price," The Korea Times Washington, February 27, 1995, p. 3.
26. Young Sik Jang, North Korean Energy Economics, Seoul, Korea Development Institute, 1994.
27. It seems to be difficult for us to expect current leadership of North Korea to be wise and smart. Editorial, "Shaky North Korea," The Wall Street Journal, October 4, 1995, A14. It is reported that North Korea built up along the DMZ, consisting of SAM missiles, long-range artillery, new reconnaissance flights and air exercises, and 54 Frog and 30 Scud missiles. Kim Jung Il made a visit to a forward base on September 13, 1995, to urge soldiers to step up their combat readiness.
28. Korea Times Forum, "International Aids to North Korean for Recover from Flood Damages," The Korea Times Washington, October 7, 1995, p. 11.

29. Washington=Yonhap, "N. Korean Minister Han Visits Washington," The Korea Times Washington, October 7, 1995. It was reported that Minister Han Sung Youl and First Secretary Hyun Hak Bong visited the Institute for Peace Research in Washington to discuss about regional development. It is related to discussing about regional peace and disarmament, but not related to opening an office of representatives, the paper reported. It is also reported that P'yang is going to organize a new organization in the United States supporting its policies, which is similar to Jochongryun in Japan.