

Chapter V
Did South Korea Choose the Best Growth Strategy and
Can North Korea Follow the Lessons from the South?*

Introduction

It has been reported that the popularity of former President Park Jung Hee (1961-1979) is rising to its highest as the 2002 presidential election year approaches in South Korea. It is very disappointing that general public can forget the painful past so easily that demagogues misguide history using erroneous explanations for their personal interests. It is desirable to evaluate whether President Park chose the best economic growth strategy for South Korea and his authoritarian presidency was necessary for efficient economic development assuming that the former was the case. Some people believe that the military government can do better than a civilian one in the early stages of economic development, which is questionable. Additionally, considering that current political and economic situations of North Korea are worse than those of South Korea in 1960s, it is meaningful to examine whether Chairman Kim Jung Il of North Korea can follow the lessons from the South in its successful economic growth.

It was a miracle that South Korea experienced rapid economic development on a land devastated by a three-year civil war that destroyed the entire industrial capacity of the peninsula. The Korean War mobilized the rural manpower into the army and the expansion of the armed forces led to military coup in South Korea in May 1961. After that, President Park launched a series of five-year economic development plans. When the economy was small and inelastic in the early 1960s, state intervention was successful in mobilizing resources for labor-intensive industries by pursuing the export-led growth strategy. As the market grew, however, state intervention in the later period caused structural problems by creating bottlenecks and idle capacities in industries, which reduced economic efficiency and market competitiveness. A half century after the Korean War, the world moved toward globalization owing to technological advancement and the borderless flow of information, but the history remains there as was.

State intervention is able to cause both market and government failures. State intervention in the market pursues either capitalistic efficiency (dollars) or democratic equality (rights), which is impossible to achieve simultaneously because of necessary tradeoffs between the two objectives. Due to the lack of checks-and-balances in the system, state intervention is able to encourage monopoly in the market, which distorts resource allocation, reduces economic efficiency, and finally results in market failure. State intervention is also able to cause government failure from doing nothing for what to be done and or doing something for what not to be done. Either government

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incapability or interruption of government function by the political-economic complex causes government failure. Both market and government failures expedited the financial crisis in Asian countries in 1997. The theory of balanced development between politics and economy became more persuasive than the role of Asian values after the 1997 financial crisis. In fact, democratization contributes to free competition in politics by removing absolute power, which increases the economic and social efficiency of the entire system by reducing unnecessary costs for adjustment in the long run.

The authoritarian leaders eagerly pursue economic development but often forget that economic growth facilitates democratization while authoritarian politics control the market. Economic growth with foreign trade expands education and training of workers to compete with foreign products. The foreign trade through multinational firms expedites information flow through borders due to increasing transactions of goods and services. Nation states can no longer monopolize information because of the availability of the Internet, wireless telephones, satellite televisions, fax machines, digital video disks, printers and copiers, and many others. The expanded knowledge through education and business contacts awakens self-consciousness toward democracy pursuing freedom and equality. The rise of household income widens the middle class, which demands more political power. The industrialization in the urban area raises the number of workers, expediting unionization for more economic gains from the capitalists. Both middle and working classes have largely contributed to democratization in South Korea.¹ The international pressures from the trade partners are so influential that the authoritarian states gradually lose their grip restraining freedom waves from foreign countries.

The Sunshine Policy of President Kim Dae Jung and inter-Korean Summit in June 2000 have reduced tension between the two Koreas. But North Korea has faced serious conflict between two strategic goals of politics and economy. Its socialist system reduces economic efficiency while economic growth challenges its totalitarian regime. Even its diplomatic normalization with Washington and Tokyo would not guarantee economic growth equipped with factor mobilization, productivity growth, and demand creation. But if it opens its door, Pyongyang can apply the lessons from South Korean experiences. The two Koreas might coordinate with each other in resource allocation, inter-Korean trade, direct investment, and financial and humanitarian aid. But the limit of economic cooperation lies in the absence of a peace treaty, non-existence of reciprocity and transparency, and technical problems disrupting trade and investment. Moreover, placement of its name on the list of terrorist states by the United States is a paramount obstacle for North Korea to pursue economic ties with other countries.²

The purpose of present study is to investigate whether President Park Jung Hee chose the best growth strategy for South Korea, whether his authoritarian presidency was necessary for economic development, and whether Chairman Kim Jung Il of North Korea can follow the lessons from the experiences of South Korea. This study consists of three main sections. The first section reviews theoretical background of export-led growth strategies for South Korea: balanced growth with import substitution or unbalanced growth with export promotion. The second section investigates whether President Park

chose the best economic growth strategy by formulating an input-output model and analyzing estimated results of four growth strategies. The third section examines how to apply the South Korean experiences in transforming its system toward the market economy drawing upon current problems of the North Korean economy, exploring issues of economic development and democratization. This study will contribute to policy development for both Korean governments and help others to analyze the political and economic development on the Korean peninsula.

Theoretical Background of Growth Strategies³

The economy of South Korea, like Taiwan, Singapore and Hong Kong, has been developed by an export-led growth strategy with consecutive economic development plans controlled by the central government. In the early stage of industrial development, a surplus in the primary sector raises demand for manufactured products, so gains from exports in this sector made imports of nondurable and labor-intensive consumer goods possible.⁴ As investable funds are generated by primary exports, technological potential improves by education and training, demand for imports rises continuously, and the economy begins to substitute for labor-intensive imports by protection and subsidization. As a result of successful import substitution, the labor-intensive industries, such as textiles and clothing, expand their exports by exploiting low-wage labor. This stimulates more import demand for consumer and producer durable, and accelerates more education and training, capital accumulation, and technology transfer. But this is challenged by the movement of comparative advantage and protectionist threats against those labor-intensive imports in foreign countries.

Balanced Growth and Import Substitution

New ideas on the mechanism of economic development in traditional societies have evolved over the past five decades. Rosenstein-Rodan introduced the theory of the 'Big Push' explaining that a minimum quantum of investment is necessary to initiate self-sustaining growth, a little like taking an airplane off the ground.⁵ However, an isolated and small amount of investment does not provide a sufficient impact on growth. It is only the beginning of a departure from the concept of traditional static equilibrium owing to increasing returns, technological external economies, and market imperfection in the less developing countries (LDCs).⁶

Annexed to this big push, Ragnar Nurkse introduced a concept of balanced growth in limited markets and areas of mass poverty.⁷ According to Nurkse, balanced growth is an increase in production over a wide range of consumables, according to consumers' preferences with self-generated demand met with a given labor force, techniques, and natural resources, and only through the use of more capital. "In the absence of a meaningful rise of world export demand for primary products, a pattern of mutually supportive investment in different lines of production can enlarge the size of the market and help to fill the vacuum in the domestic economy of low income areas."⁸ This

means balanced investment between agriculture and manufacturing and horizontal diversification in manufacturing. Nurkse believed that international trade would not increase rapidly due to the slow expansion of primary exports, supply and demand constraints of manufacturing exports in LDCs, and protectionist trends against labor-intensive exports in developed countries (DCs). This implied that growth through foreign trade is hardly expected to narrow income differences between DCs and LDCs.⁹

Raul Presbisch argued that most Latin American countries faced a decline of primary exports due to their low demand elasticities and protectionist policies in DCs, and the difficulty of manufacturing exports due to the lack of industrial infrastructure in LDCs. He suggested that "import substitution stimulated by a moderate and selective protection policy was an economically sound way to achieve certain desirable effects."¹⁰ His theory of center-periphery system meant that developed countries (center) organize the economy for their interests by using technological advantages, while developing countries (periphery) supply raw materials demanded by the center.¹¹ Thus, the strategy of import substitution by protection diverts primary resources to industrial products without export constraints. This expedites technology penetration, domestic job creation, and structural change of manufacturing despite massive demand for investment.

The growth through import substitution is linked to balanced growth, but the two approaches differ from each other. Balanced growth is based on a balanced allocation of resources, but import substitution (IS) has some limitations. IS involves in a strategy of improving the balance of payments by restricting tariffs, quotas, and an overvalued exchange rate, all of which penalize exports. IS requires protection and subsidization for a country's scarce factor that increases costs of production and also consumption, distorts resource allocation, and worsens income distribution in labor-surplus LDCs by increasing returns to capital. Capital formation is massively financed by domestic savings, which reduce consumption. It is difficult to increase savings because domestic producers supply enough consumer goods with lower prices, income distribution shifts from importers to income recipients of new industries, more imports are required for industries to produce consumer goods, and inefficiency of substituted industries lowers profits and savings.¹² When domestic market is small, growth through import substitution is constrained by lacks of economies of scale in production and the limit of domestic consumption resulting in higher capital costs and lower efficiency. In fact, the growth strategy of import substitution maintains sellers' markets dominated by monopolists or oligopolists, and no incentives are provided to improve productivity, which raises inefficiency and worsens income distribution as experienced in South America.

Unbalanced Growth and Export Promotion

Albert Hirschman stressed the unbalanced growth theory, holding that investment concentrated in leading sectors of the economy generates more output, employment, and income through forward and backward linkages. He emphasized decision-making for investment to economize scarce resources. The incentives such as

business profits (in private) and social welfare (in public) attract investment which brings disequilibrium. When the economy is moving ahead, growth policy tries to maintain a previous disequilibrium, which generates additional disequilibrium requiring a movement toward continuous growth.¹³

Hirschman considered two types of investment: substitution and postponement choices. He favored the latter involving in decisions regarding the sequence of several projects. He suggested social overhead capital (SOC) must precede or at least be kept in balance with directly productive activities (DPA). If SOC is expanded, for example, existing DPA becomes less costly, which attracts further DPA. If DPA is expanded first, production costs will rise so that demand for SOC will also rise. When investment motivations are deficient, it is safer to rely on development via shortage of investment rather than via excess capacity, while the opposite is true if motivations are sufficient. The balance between SOC and DPA is equally dangerous because there will be no incentive to induce investment.¹⁴ Hirschman stressed that a development policy must pursue linkage effects to maximize induced investment decision. He hypothesized that countries having assigned the higher priority to high-linkage industries would have higher rates of growth than would countries that have assigned lower priority to them.¹⁵ The theoretical contribution of this idea is a pioneering concept connecting interindustrial linkages to economic development.

Hirschman introduced the concept of antagonistic growth from his experience in Argentina. The income receivers of one of the two sectors are gaining at the expense of those of the other sector at each stage in the sequential growth process. A concentration of resources may neglect other crucial objectives, which comes to public attention. This brings a new concentration for them, creating a new neglect to existing beneficiaries. It reflects the interaction of politics and economy in LDCs,¹⁶ explaining that unbalanced growth depends on resource allocation by the government. The growth through export promotion is combined with the concept of unbalanced growth. The specialization based on a country's comparative advantages increases competitiveness in foreign markets. This competitiveness is reinforced by tax exemptions, duty exemptions, lower interest rates, domestic currency devaluation, and lower utility rates. Due to protection and subsidization, the intensive allocation of limited resources to export industries pulls the economy more than the balanced one. Thus, growth through export expansion is analogous to unbalanced growth due to different demand for industrial products from foreign markets and different allocation of resources to meet those demands.

It is necessary to clarify the relationships between growth strategies of import substitution and export promotion. The former, as Raul Prebisch insisted, concentrates on domestic market demand by restricting imports and focusing less on exports, while the latter gives equal weight to import substitution and export promotion. Export promotion requires a certain degree of domestic technologies accumulated by import substitution particularly in manufacturing. Meanwhile, earnings from exports can

finance import substitution, so the strategy of export promotion is not an exclusive, but a supportive and complementary to import substitution for the economy.

However, the growth strategy of export promotion (EP) has certain limitations. EP via unbalanced resource allocation introduces conflicts between private profits and public services. Excess capacities in leading sectors cause an efficiency problem, and bottlenecks in other sectors spread inflationary pressures throughout the economy. The crucial question is not whether to create the unbalance,¹⁷ but what the optimum degree of unbalance is, and where and how much the economy should accelerate growth. In contrast, EP via unbalanced growth provides intensive investment to key sectors with large linkage effects, and generates more growth than balanced investment. But linkage effects are neutralized by intermediate imports, underutilized production capacities,¹⁸ capital-intensiveness of products, trade patterns,¹⁹ and ignorance of linkages in plans.²⁰ The costs of protection and subsidization for export-led growth are paid in terms of additional costs of production, consumption, allocation, and distribution. Furthermore, EP faces difficulties from increasing factor costs and technology gap in production, foreign protectionism, pressures from market liberalization and currency appreciation.

Pros and Cons of Growth Strategies

Balanced and unbalanced growth is on the same plane of economic development in the long run. If unbalanced investment (ex ante) arrives at a certain saturated point (ex post), it becomes an equilibrium point of the economy with a balance which remains unchanged until new demand induces additional unbalanced investment stimulating the economy. The balanced allocation (ex ante) does not necessarily invite economy-wide balanced growth (ex post) due to the following reasons: (a) technological changes stimulate the change of industrial linkages, value added per dollar output, and imported intermediates in the long run; (b) the change of relative prices causes the substitution of inputs in the production process and even causes the substitution of imports, which makes existing linkages vary; (c) new products and change of product-mix affect factor intensity, which alters the original stimulus of final demand; (d) underutilization of production capacities rooted by constraints of input supply and output demand neutralizes linkage effects; and (e) economies of scale caused by an increase in demand for a particular sector affect linkage relations. Ex ante investment creates ex post structure of industries, which is different from ex ante structure. In sum, the balanced allocation does not allow a country to remain unchanged in the industrial structure in the long run.²¹

Table II-1. Sticky Import Substitution and Export Promotion

Time Period	1	2	3	4	5
Import Substitution (IS)	Labor-Intensive		Capital-Intensive		
Export Promotion (EP)	-----	Labor-Intensive		Capital-Intensive	

Note: "Labor-Intensive" or "Capital Intensive" indicates labor-intensive manufacturing or capital-intensive manufacturing for import substitution or export promotion.

Since import substitution or export promotion is sticky, IS continues even after EP begins. As shown in Table II-1, suppose the economy begins with labor-intensive IS at time 1, and finishes major substitution at time 2; and begin with capital-intensive IS at time 3 and finishes major substitutions at time 4. However, additional IS for labor-intensive products continue after time 2, and additional IS for capital-intensive products continue after time 4. The labor-intensive EP starts at time 2 when its major IS ends, but continues until time 4 when capital-intensive IS ends and its EP starts. Thus, IS and EP arise together during time 2 for labor-intensive, during time 3 for capital-intensive of IS with labor-intensive of EP, and during time 4 for capital-intensive products.

The efficient allocation of resources provides favorable patterns of trade for export promotion based on comparative advantage, while factor inputs and productivity growth are crucial for competitiveness, basically owing to technology and labor quality. Research and development is essential to keep a leading edge of technology among suppliers, provided by funds, manpower, and management,²² and diffusion of technology invites high returns of investment.²³ Paul Krugman argues that East Asian growth is driven not by productivity growth but by resource mobilization. He believes that input-driven growth requires continuous and intensive supply of capital and labor, consequently yielding diminished economic returns and a sharp deceleration of growth. Meanwhile, Western society will strain the diffusion of technology, so no technological convergence between East and West is expected. He considers that state intervention in the Asian economies would not make any discernible difference.²⁴ However, the World Bank estimated that the contributing share of total factor productivity to total growth was over 33 percent for Japan, Taiwan, and South Korean during the period 1960 to 1989,²⁵ which was higher than U.S. productivity growth of 24.7 percent during the period 1948 to 1979.²⁶

Rational Expectations and the Role of Government in Growth

In the short-run adjustment, the effectiveness issue of public policies has been examined in the literature of rational expectations. Sargent and Wallace argued that government policies are not effective because people expect the policy impact and behave or adjust to the policy at the same time with perfect foresight.²⁷ However, policy effectiveness can be justified by following reasons: (a) people's expectations are applied not only to economic agents but also to policy makers so that future decisions expected by economic agents influence policy makers, (b) the equilibrium conditions in developing countries is remarkably vulnerable because of demand constraints, uncertainty, and inconsistency depending largely on both internal and external economic environments, and (c) the flow of transborder information is interrupted in developing countries though the control of information becomes difficult as the economy grows through foreign trade and foreign investment and information technology advances and diffuses widely.

In the long-run economic planning, market imperfections in LDCs often fail in the efficient allocation of resources, so that state intervention improves its efficiency.²⁸

Since the market prices do not represent the opportunity cost of the use of factors or certain commodities to society, the free market cannot provide optimum resource allocation.²⁹ In that case, economic planning is justified to fill the gap between private and social interests. Since the market function in LDCs cannot provide rapid structural change, the government coordinates massive investment and invites rapid structural reform.³⁰ In turn, the major argument against planning is costs of intervention. The optimum degree of government intervention is based on necessity and sufficiency. The necessity of intervention is predictable, but its sufficiency for successful industrialization can not be easily quantified as LDCs' planners intend or desire to achieve.³¹ The positive impact of government intervention has shown in the economic miracle from East Asian countries before the financial crisis in 1997.³²

However, government intervention often creates more problems than remedies in the short as well as long run. The nature of power shows increasing returns to scale, so that incumbent political power is used to acquire economic power, which makes it possible to acquire additional political power.³³ This chain of actions generates monopoly power in politics and economy by creating the political-economic complex, jeopardizing its fundamental goals of efficiency and equality as illustrated by the Asian financial crisis in 1997. The relationship between politics and economy has been inconsistent worldwide, but positive achievements have occurred in many cases. Democracy is essential for sustainable growth since it facilitates checks and balances in politics and promotes competition in the economy by minimizing corruption and maximizes efficiency throughout the entire system. The theory of balanced development between subsystems (politics and economy) is controversial since the initial conditions are different in various countries including transition economies.³⁴ If the economy moves quickly forward when politics lags behind, the market may lose the function of fair competition by political pressures, which disturbs efficient resource allocation. As a result, the adjustment costs will be expensive in the future as shown in the restructuring of banking industry and conglomerates in South Korea. Since economic development is a function of time costs in the long run, a balanced development between politics and economy will maximize economic efficiency and political equality.

Did South Korea Choose the Best Growth Strategy?

Four Growth Strategies in South Korea: An Input-Output Model

The performances of four projected growth strategies can be compared with each other by applying an input-output method. It is assumed that the initial base year is 1975 and the terminal year is 1985 in this model, so both 1975 and 1985 IO tables are used.

(a) *Export Promotion without Import Substitution* (Strategy I): Assuming that the export structure remains unchanged at the 1975 structure but export volumes rise by actual amounts in 1985, no further import substitution is expected during the period of 1975-1985 and the technology remains unchanged at the level of 1975, and the domestic

demand structure is not different from the actual market so that imports may rise because of absence of import substitution. The column vectors of both output and value added generated by 1985 exports, $X_i[\text{Exp}(1985)]$ and $VA_i[\text{Exp}(1985)]$, are obtained.

$$(3.A.1) \quad X_i[\text{Exp}(1985)] = [I - A_d(1975)]^{-1} * [\text{Exp}(1975)] \text{ and}$$

$$(3.A.2) \quad VA_i[\text{Exp}(1985)] = A_v(1975) * [I - A_d(1975)]^{-1} * [\text{Exp}(1975)]$$

where $[I - A_d(1975)]^{-1}$ indicates the Leontief inverse matrix (domestic model) for 1975, $A_v(1975)$ represents a diagonal matrix of value added for 1975, $[\text{Exp}(1975)]$ denotes the column vector of 1975 exports, and $*$ means multiplication of two vectors.

(b) *Export Promotion with Import Substitution* (Strategy II): This is the actual growth strategy which South Korea has pursued and achieved great performance in the past. Output and value added generated by 1985 exports can be obtained by:

$$(3.B.1) \quad X_i[\text{Exp}(1985)] = [I - A_d(1985)]^{-1} * [\text{Exp}(1985)] \text{ and}$$

$$(3.B.2) \quad VA_i[\text{Exp}(1985)] = A_v(1985) * [I - A_d(1985)]^{-1} * [\text{Exp}(1985)]$$

where all variables are obtained by the real input-output tables in 1985 because the export structure is actually based on unmodified 1985 transactions.

(c) *Import Substitution without Export Promotion* (Strategy III): Assuming that export volumes in 1985 stay at the 1975 level, and the rising proportion of 1985 exports from 1975 is allocated for import substitution. The 1985 import vector is modified by non-existence of import substitution for agriculture and mining. The representative vector for this strategy, $\text{ImpSub}(1985)$, is obtained by a proportional mix of both 1975 export vector and adjusted 1985 import vector:

$$(3.C.1) \quad \text{ImpSub}(1985) = g * [\text{Exp}(1975)] + h * [\text{ImpMod}(1985)]$$

where “g” indicates the proportion of 1975 exports amount in 1985 exports, “h” denotes the rising proportion of 1985 exports from 1975, and $[\text{ImpMod}(1985)]$ represents the modified import vector based on 1985 imports:

$$(3.C.2) \quad X_i[\text{ImpSub}(1985)] = [I - A_v(1985)]^{-1} * [\text{ImpSub}(1985)] \text{ and}$$

$$(3.C.3) \quad VA_i[\text{ImpSub}(1985)] = A_v(1985) * [I - A_d(1985)]^{-1} * [\text{ImpSub}(1985)]$$

where $X_i[\text{ImpSub}(1985)]$ and $VA_i[\text{ImpSub}(1985)]$ indicate the column vectors of output and value added generated by this growth strategy.

(d) *Domestic Demand Expansion* (Strategy IV): If there are no constraints in domestic demand and supply³⁵, the expansion of domestic demand can be a supportive growth strategy. If this strategy is applied independently, it is linked closely to the theory of balanced growth. The private consumption vector is assumed as a representative of

final demand for this strategy.³⁶ The resources are converted and reallocated from exports to consumption by the consumption vector at time t, [Con(t)]:

$$(3.D.1) \quad X_i[\text{Con}(t)*\text{EXP}(t)] = [\text{I}-\text{Ad}(t)]^{-1} * [\text{Con}(t)] * \text{EXP}(t)$$

$$(3.D.2) \quad \text{VA}_i[\text{Con}(t)*\text{EXP}(t)] = \text{Av}(t) * [\text{I}-\text{Ad}(t)]^{-1} * [\text{Con}(t)] * \text{EXP}(t)$$

where $X_i[\text{Con}(t)*\text{EXP}(t)]$ indicates output demand generated by domestic consumption reallocated from exports at time t, and $\text{EXP}(t)$ denotes the converted amount of exports at time t. The change of value added generated by export promotion is compared to that generated by domestic demand expansion during a certain period:

$$(3.D.3) \quad \begin{aligned} & d\text{VA}_i[\text{EXP}(t)] - d\text{VA}_i[\text{Con}(t)*\text{EXP}(t)] \\ &= \text{Av}(t) * [\text{I}-\text{Ad}(t)]^{-1} * \{[\text{EXP}(t)] - [\text{Con}(t)*\text{EXP}(t)]\} \\ &\quad - \text{Av}(t-1) * [\text{I}-\text{Ad}(t-1)]^{-1} * \{[\text{EXP}(t-1)] - [\text{Con}(t-1)*\text{EXP}(t-1)]\}. \end{aligned}$$

The positive value of the equation (3.D.3) implies that export promotion with import substitution generates more value added than domestic demand expansion. But the strategy of domestic demand expansion was not applicable to an economy with lack of capital and technology at the takeoff stage, such as South Korea in this period.

Estimated Results and Analyses

The input-output exercises based on four alternative growth strategies, as shown in Table III-1, prove that South Korea chose the best growth strategy – Export Promotion with Import Substitution (Strategy II). First, this strategy generates the largest GDP (multiplier: 0.646908) for the same amount of aggregate final demand, except the strategy IV, which was not viable for South Korea. Second, import substitution requires a huge amount of physical and human capital, which can be financed by export earnings. Export promotion requires advanced technology accumulated by import substitution. Both EP and IS are mutually supportive and complementary. Third, export promotion is accompanied by increasing demand for imports so that profits generated by exports may decline significantly without import substitution. Fourth, the movement of comparative advantage due to the product-life cycle theory requires structural changes from time to time, which is adjusted by import substitution to maintain international competitiveness of domestic products.

Table III-1. Projected GDP Multipliers Generated by Growth Strategies
South Korea from Base Year 1975 to Terminal Year 1985

Five Sectors	GDP-Strategy 1	GDP-Strategy 2	GDP-Strategy 3	GDP-Strategy 4
Agriculture	0.067774	0.031247	0.028710	0.166032
Mining	0.012210	0.009273	0.010487	0.004639
Manufacturing	0.315508	0.346476	0.338431	0.177510
Social Overhd	0.010904	0.032845	0.032022	0.034541
Service	0.235267	0.227067	0.175112	0.415231

<i>The Economy</i>	0.641663	0.646908	0.584762	0.797953
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Sources: Above estimates are based on both 1975 and 1985 Input-Output Tables published by Seoul: Bank of Korea, 1978 and 1988.

Export Promotion without Import Substitution (Strategy I) requires less amount of capital formation with external finance, which may reduce the outstanding foreign debt in South Korea. But increasing import demand for consumer and producer goods may cause a balance of payments problem. Considering that the share of labor-intensive exports declines gradually due to loss of foreign competitiveness, this strategy may face demand constraint in the foreign markets. Import Substitution without Export Promotion (Strategy III) requires manpower for research and development, capital formation, and advanced technology. Intensive import substitution without export promotion invites inefficiency and economic decline. The resource conversion from export promotion to import substitution breaks mutually supportive relationships between them. The lack of advanced technology and qualified manpower heavily disturbs proper import substitution. Domestic Demand Expansion (Strategy IV) is desirable if domestic investment can be fully financed by domestic savings, rapid decline of exports creates excess capacities, the domestic market has enough potential to absorb its supply, and the trade balance does not create a balance of payments problem. This was not viable strategy for South Korea.

Domestic Capital Formation: Sources and Allocation

The economic conditions of South Korea in the 1950s were dismal given a land devastated by a three-year civil war after decades of Japanese colonial exploitation. The proportion of GDP in the secondary sector was 10.1% in 1953 and 15.9% in 1960, and its employment was 5.0% and 26.0% respectively while the primary sector hired 75.0% and 66.0% correspondingly. The 47.4% of workers received an elementary level education, but 42.8% received no education by 1960 due to colonial suppression, war, and poverty.

The proportion of fixed capital formation in GDP was 21.0% from the 1962-1971 period but increased to 33.6% in the 1982-1991 period, while average domestic savings increased from 11.7% to 32.0% respectively. The average share of domestic savings to investment rose from 55.7% to 95.4% in the same periods shown in Table III-2. The sources of external capital was borrowing, foreign direct investment, and foreign aid, mainly from the United States, as shown in Table III-3. Borrowing from foreign countries was \$3.4 billion during the first and second five-year plan periods, rising to nearly \$20 billion in the third and fourth plan periods, and declining slight to \$18.8 billion in the third ten-year period. As economic conditions became attractive, foreign direct investment rose from \$96 million in the period of 1962-1971 to \$7.4 billion in the period of 1982-1991. Foreign aid reached almost \$1.3 billion in the first ten years, but declined rapidly in the 1970s as its economy moved to the capital-intensive industries.

Table III-2. Fixed Capital Formation: South Korea

Selected Years, Average Percent at Current Prices

Period	1962-1971	1972-1981	1982-1991
Investment/GDP	21.0	28.9	33.6
Saving/GDP	11.7	21.6	32.0
Savings/Invest	55.7	74.7	95.4

Sources: The Bank of Korea, Economic Statistics Yearbook, various years.

Table III-3. Sources of External Capital: South Korea
Selected Years, Current U.S. Million Dollars

Types of Sources	1962-1971	1972-1981	1982-1991
Borrowing	3,419	19,939	18,774
Foreign Dir Invest	96	1,153	7,431
Foreign Aid	1,284	13	0

Sources: The Bank of Korea, Economic Statistics Yearbook, various years.

The share of capital formation in agriculture was 8.4% during the first and second five-year economic development plan period and maintained that level during the three decades. The average investment share in manufacturing was 21.2% in the first and second five-year plan periods, 18.7% in the third and fourth plan periods, and 23.9% in the third ten years. A share of public utilities including electricity, gas and water, was maintained at the level of 8.0 to 9.0%, while that of transportation and communications was 22.9%, 22.6%, and 13.9% during the three ten-year periods defined in Table III-2 and 3. The average investment share in dwelling was 10.8% in the period of 1962-1971, but rose to 17.3% in the third ten year period as household income rose. As a result of capital formation, the industrial structure was transformed in terms of shares of GDP and employment in the primary, secondary, and tertiary sectors.

Factor Productivity and GDP Sensitivity to Export Growth

The ratio of incremental GDP to domestic fixed capital formation (dGDP/dK), a proxy of capital productivity, was 0.386 in the period of 1961-1970, 0.232 in 1971-1980, and 0.230 in 1981-1990 (an average of 0.283 for 1961-1990). Underutilization of production capacities reduces capital productivity. An export incentive policy such as protection and subsidization attracts more investment to the targeted industries than needed which creates over capacities. Idle capacities in one industry create bottlenecks in the other which causes inflation due to supply constraints. The problems of bottlenecks and idle capacities induce industrial inefficiency and economic decline.

The average annual growth rate of labor productivity in South Korea was 11.82% in the period of 1975-1984, and declined to 9.48% in the period of 1985-1994.³⁷ The high growth of labor productivity was attributable to education and training, research and development, and technology transfer efforts, in addition to modernization of production facilities. South Korean conglomerates have been in better conditions for research and

development than small- and medium-sized businesses, which contribute to productivity growth if other things are equal.³⁸

Model I in Table III-4 explains that GDP growth is positively related to the proportion of investment to GDP and employment growth. Ways to raise production without additional capital lie in utilizing idle capacities, substituting labor for capital, and increasing productivity. Model II explains that the proportional change of GDP is positively related to the incremental change of exports. Its sensitivity depends on the share of imported intermediate inputs and labor-intensive products in exports.

Table III-4. The Sensitivity of GDP to Export Growth
South Korea, 1953-1986, Two Regression Models

(dY/dt)/Y	Constant	(dK/dt)/Y	(dL/dt)/L	(dX/dt)/X	R-Square
Model I (t-Statistic)	0.01307 (0.66934)	0.16192* (2.48754)	1.00307* (2.45393)	-----	0.27068 DW=2.219
Model II (t-Statistic)	0.01109 (0.59515)	0.15942* (2.57116)	0.57450 (1.29574)	0.07804* (2.01940)	0.36059 DW=2.015

Sources: The Bank of Korea. DY/dt indicates the change of GDP, dK/dt denotes fixed capital formation, dL/dt represents the change of employment, and dX/dt means the change of exports. * indicates the significance at the level of 95%.

Patterns of Export Promotion and Import Substitution

Patterns of Export Promotion (1975-1985): (a) The share of exports in South Korea shifted from labor-intensive industries in 1970s to capital- and technology-intensive industries in 1980s. The export share of textiles and clothing in South Korea rose from 19.4% in 1966 to 30.4% in 1975, but declined to 21.7% in 1985, while that of electronics and communication equipment rose continuously from 1.38% in 1966 to 11.2% in 1985. (b) The export expansion rate³⁹ during the period of 1975-1985 was higher in petroleum and coal products (10.2%), iron and steel products (16.9%), other metal products (14.9%), electrical appliances and equipment (14.8%), and transportation equipment (19.4%). (c) One dollar of aggregate exports created 64.16 cents in 1975 and 64.69 cents in 1985 (rose by 0.52 cents) during the period of 1975-1985 in terms of direct and indirect effects. This was caused by the change of export share in the economy, technological transformation, different shares of imported intermediate input, and change of factor costs. (d) The GDP share generated by exports in South Korea rose from 18.6% in 1975 to 22.7% in 1985 while the output share generated by exports rose from 24.8% to 28.3%, correspondingly.

Patterns of Import Substitution (1975-1985): (a) The import index (1966=100) in Korea rose to 493 in 1975 and 1,291 in 1985. The import share declined rapidly in processed food products from 17.5% in 1966 to 3.1% in 1985, basic chemicals and their products from 23.2% to 11.0%, industrial machinery from 20.2% to 10.2%, and transportation equipment from 17.3% to 3.3% correspondingly. (b) The import

substitution rate⁴⁰ was 3.47% in South Korea during the period of 1975-1985. Higher import substitution appeared in chemical products, iron and steel, machinery, and transportation equipment. (c) Import demand for \$1.00 exports in South Korea rose from 35.8 cents in 1975 to 37.2 cents in 1985. Higher import demand for exports was in the categories of textiles and clothing, chemicals, iron and steel, and electronics. (d) The import substitution rate for exports was negligible due to raw materials, producer durables, sophisticate intermediates, and a lack of technological expertise in specific items. Major import substitution for intermediates in South Korea was in chemical products, iron and steel, and other metals in the period.

Can North Korea Follow the Lessons from the South?

The previous section suggests that export promotion with import substitution was the best growth strategy chosen by South Korea in the early stages of economic development in the 1960s. Although President Park pursued continuous economic development with his growth strategy, South Korea paid heavy costs directly or indirectly originated by his authoritarian rule suppressing democratic movement to retain political power. It is ironic that South Koreans admire an opponent of democracy even though his authoritarian presidency was not necessary for efficient economic growth in the long run.

Authoritarian Rule by President Park (1961-1979)

In politics and government, Park's authoritarian regime faced many difficulties due to a lack of legitimacy. Park tortured, jailed, and expelled his opponents to foreign countries to secure his political power base. Police and intelligence officers closely watched daily activities of military officers, politicians, and business people to minimize threat from internal uprising. They falsely created conspiracy cases by providing fake evidence of links to North Korea, intimidating political oppositions. The political party nominated candidates to run for the National Assembly, and its members could not vote their consciences, but took orders from the Blue House. The National Assembly did not represent the people but simply became a rubber stamp extension of the Blue House. He fortified his power by appointing loyal persons from his home province to key positions in his administration. They were career officers but their roles were similar to political appointees. The judicial branch fell under the control of President Park who appointed judges who were personally loyal to him. As a result, the function of checks-and-balances disappeared and the King-President controlled the entire government.

In economy and business, President Park launched a series of five-year Economic Development Plans (EDPs) in an attempt to control the economy by industrial policy. The Economic Planning Board (EPB) allocated available resources and managed overall development affairs, while the Korea Development Institute (KDI) supplied policies to the government, becoming the dominant think tank in Seoul. In the first and second EDPs (1962-1971), export promotion with import substitution was successful for labor-intensive industries. The subsequent third and fourth EDPs (1972-1981) invested in

heavy and chemical industries because of self-defense pressures, decreasing competitiveness of labor-intensive exports, and long term prospects of capital-intensive exports.⁴¹ However, intensive investment in major industries during the short period of time created huge idle capacities while other industries faced bottlenecks, which reduced factor productivity and economic efficiency. Thus, poor allocation of resources distorted the industrial structure, and protection and subsidization for export industries generated monopolistic profits to favored business groups at the expense of consumers. The conglomerates were able to access to loans with favorable interest rates, which were then invested in real estate for huge capital gains. As a result, income disparity widened between rural and urban, east and west, owners and workers, and favored and unfavored, which created serious social resentments against Park's regime.

In society and labor, President Park prohibited formation of labor unions to prevent their political mobilization and to secure the economic interests of conglomerates which supplied funds for further political operations. As a result, workers suffered from low wages, while the conglomerates enjoyed business profits which they shared with politicians. The share of employee compensation in GDP in manufacturing industries for South Korea and Taiwan was 31.8% and 44.3% in 1974, 41.8% and 47.1% in 1980, and 42.6% and 50% in 1986 respectively. This implies that employees of South Korea received wages less than those of Taiwan by 8.3% of GDP in average in the same period.⁴² President Park destroyed judicial independence by politicizing the judicial system and forcing intellectuals support his regime or at least keep silent by threatening their job security. President Park needed a reliable power base supporting his regime. He fortified his power by surrounding himself with loyal military officers from his home province, creating an informal organization having a more influential than formal chain of command. He gave them special favors in education, assignments, and promotions. Similar favors were given to career officials in other ministries, so that persons selected from his home province or those close to them filled major positions in his entire regime. They formed the mainstream of the regime while others remained in supporting roles, which intensified regionalism in South Korea. Regionalism favored loyalty to capability, which reduced efficiency and expedited antagonism against his regime by the unfavored.

The Cost of Authoritarian Politics in South Korea

Generally speaking, economic development facilitates democratization owing to self-recognition by increasing education and training, information flow through borders by increasing trade and technological advancement, formation of the middle class demanding more political participation, and internationalization demanding reciprocity and equal opportunities between nation states. At the time of military coup in 1961, South Korea was at a low stage of educational and industrial development because of Japanese exploitation and destruction from the Korean War. But a decade of trade and investment generated more income and improved the quality of life. President Park wanted to make a nation free from starvation and achieved rapid economic growth which expedited democratization, although he hoped to keep political power in his life. History shows a

similar ironic case in China. Chairman Deng Xiaoping opened the five special economic zones in 1978 and allowed free trade and investment, keeping its socialist system while exploiting capitalistic profits. China also sent many bright students to the United States and Europe to learn advanced science and technology. Increasing openness through education and trade made China face democratic movements in major cities, leading to the Tiananmen Incident in 1989. It was similar to the Pusan-Masan Incident in South Korea in 1972. President Park and Chairman Deng understood democratic impulses emanated from foreign countries, but underestimated those generated by individual conscience and values. They brought economies alive at the takeoff stage, but failed to keep efficiency because of corruption from the political-economic complex.

The financial crisis in South Korea in 1997 came from corrupt politics, over-expanded businesses, and uncompromising labor unions. First, the government had been a main source of corruption to protect interests of Chaebols due to the lack of check-and-balance in the National Assembly, bureaucratic monopoly in the administration, and non-existence of social justice in the judicial system. Second, Chaebols had over-expanded and their monopoly power caused problems: misallocation of resources, heavy debt-financed structure, cross-finance guaranteeing system, lack of transparency, and others. Third, the labor unions had been powerful in wage negotiations with business owners since 1988, so that the workers gained more compensation than productivity growth in average. Fourth, the value of Korean Won vis-à-vis U.S. Dollars remained high and strong value of Korean Won raised prices of its exports. Moody's credit rating on South Korea declined which raised costs of foreign loans when financial scandals of Hanbo and Kia appeared on the horizon. Thus, major exports from South Korea began to lose their competitiveness in the world market, resulting in a huge trade deficit. Meanwhile, rapid outflow of foreign capital expedited problems of the balance of payments in South Korea. The financial authorities knew the perilous situations of foreign exchanges in March 1997, but failed to provide remedies to avoid embarrassing the presidential candidate from the ruling party. The Bank of Korea used up foreign exchange reserves to protect the Won from falling although currency devaluation was necessary and realistic.

When President Kim Dae Jung took over the power, his administration pursued reform policies focusing on financial institutions, corporate management, state-owned enterprises, and labor relations. However, his reform policies faced continuous resistance from existing interest groups in politics, economy, and society. Additionally, corruption of the ruling party itself created another problem. As a result, the administration spent a huge amount of tax money to restructure the system, but its performance was far behind general expectations. Those adjustment costs were the prices to be paid for authoritarian politics beginning from President Park in 1961. Park could mobilize available resources intensively and aggressively, but the civilian government led by Chang Myun could do the same through the democratic process. Considering that the armed forces were better trained than civilian manpower due to the Korean War, we can imagine that the degree of performance could be better in the military regime than a civilian in the 1960s. However, as we noted above, authoritarian politics strengthens the economic power by

creating a political-economic complex, which interrupts competition in the market, distorts resource allocation, and reduces capitalistic efficiency. After the 1997 financial crisis, South Korea paid a high adjustment cost to fix the problems. If South Korea pursued gradual development strategies under a democratic government in the 1960s, the adjustment costs would not have been so expensive.

Political development is essential in pursuing sustainable growth because the check-and-balance system in politics promotes competition in economy, and the self-adjustment function of the democratic system reduces corruption. The modernization of a nation-state requires coordinated and integrated efforts of its subsystems, including politics, economy, security, and others. If the economy moves fast forward while politics in lag, the system creates problems of corruption reducing efficiency so that adjustment costs impose a heavy burden on economic growth over the long run. The current leadership of South Korea recognized that balanced development between politics and economy is necessary to escape from the economic crisis. However, the reality of politics is different from ideal. The political monopoly in South Korea came from the nominating system for party candidates running for the National Assembly. Candidates who wanted to be a National Assembly member had to demonstrate loyalty to a party boss in order to get the nomination. If a member of National Assembly voted against the party line, he could not get nominated in the next election. Therefore, the nominating system should be removed and primary elections need to be introduced. This is the most urgent and important reform, but both ruling and opposition parties do not want to revise the election law in order to maintain their existing interests. Since the party candidates running for the Assembly seats in each electoral district become delegates to vote for the presidential candidate of each party, the nominating system guarantees the presidential candidacy of the party chairman, while the primary election system requires open competition.

Lessons from South Korean Experiences

We are able to draw followings from the South Korean experiences. First, when the market was not competitive and the economy was primitive, government intervention with plans and policies were necessary to expedite economic takeoff by providing efficient resource allocation. The efficiency gain could remain until the economy was simple and easily controllable in labor-intensive industries pursuing import substitution. Second, when the economy became increasingly complex by moving towards capital- and technology-intensive industries pursuing export promotion, government intervention caused market failures by creating bottlenecks and idle capacities. Therefore, reduced state intervention was necessary by depending on market function. Third, the favored groups of the political-economic complex such as politicians-bureaucrats-judges with powerful business interests have enjoyed monopolistic benefits, jeopardizing market efficiency and inviting economic decline, which culminating in the financial crisis of 1997. Inefficiency coming from corruption could have been corrected by removing entrenched monopoly power in politics, economy, and society through democratization.

In other words, balanced development between politics and economy reduces adjustment costs in the long run to fix problems caused by the political-economic complex.

The South Korean experience provides several lessons for transition economies such as China, Vietnam, and North Korea, as noted in this author's previous studies:⁴³ (a) a series of economic development plans should be used in early stages of economic takeoff, even if political freedom is restricted, as the aggressive driving forces expedite a big push effect on the economy; (b) government intervention should be gradually reduced after ten years from the initial point, and a balanced path should be pursued between politics and economics based on fair competition with the leadership watching corruption closely; (c) economic expansion should start from import substitution of labor-intensive products and move to export promotion of the same industries, and import substitution of capital- and technology-intensive products should be emphasized at the start, moving to export promotion of the same products; (d) proper capital could be supplied by selling ownership (except in energy, transportation, communications, finance, and media industries), and aggressive investments should be made in education and training and research and development, but with an effort to minimize protection of infant industries; (e) if politics remain unchanged, the economy will lose efficiency and equality, which threatens continuous growth, thus time is important in this case to reduce adjustment costs for recovery; (f) balanced growth between politics and economy is essential, and other sectors are also important to reduce adjustment costs, and the defense budget should be minimized to economize limited resources; and (g) subsequent policy reforms for adjustment are necessary to make the economy efficient, reducing accumulated costs arising from state intervention. Since outdated policies induce unnecessary costs, speedy policy adjustment is essential through the democratic process. Self-adjustment function of democratic decision-making system should be respected because it is a source of economic efficiency in the long run.

Can North Korea Learn from the South Korean Lesson?

The economic problems of North Korea stem from its socialist system. The planned or projected consumption and production by the government causes inefficiency by bottlenecks and idle capacities in industries. Marxist ideology does not allow personal property rights, and a small group holds political power under the name of proletariat dictatorship. Loyalty-based compensation for workers lessens motivation and reduces productivity. The heavy burden of military expenditure reduces investment for infrastructure and manufacturing facilities, which raises overhead costs in the entire economy. Heavy censorship threatens borderless communications, and brainwashing interrupts creative ideas, and lack of education and training and research and development disturbs technological improvement. A self-sanctioned autarkic economy makes North Korea unable to exploit its comparative advantage in the economy so that the production possibility frontier remains unexpanded. It is also difficult for North Korea to mobilize resources to increase input factors for additional production. Pyongyang has used much of its resources to prevent internal uprising by policing intellectuals and political

dissidents, a waste of resources making the economy inefficient. The rigidity without flexibility by centralizing power interrupts self-adjustment, which reduces efficiency and productivity. The leadership of North Korea must understand the importance of time-cost considering that Pyongyang has wasted time by delaying many opportunities for meager gains.

Unfortunately, Pyongyang faces a dilemma: openness threatens the survival of the regime, but the economy cannot revive without openness. The only available option is clear: “to open its door by taking a risk and provide a peace treaty with Seoul.” It is essential that North Korea should give up development and proliferation of weapons of mass destruction. If Pyongyang follows this option, the international community will become closer and friendlier through pursuing trade and investment by removing barriers toward globalization for mutual prosperity. However, as long as North Korea pursues the development of weapons of mass destruction and maintains the forward deployment of conventional weapons near the DMZ area, the United States, Japan and South Korea must prepare militarily against this threat. Additional investment of North Korea in its national security further jeopardizes its economic growth. If North Korea wants to realize economic growth, it must open the market and remove the military threat. This is the only way Pyongyang can survive. It is obvious that the Sunshine Policy of President Kim Dae Jung is unable to exist without reciprocity and transparency. If Chairman Kim Jung Il wants to remove North Korea’s name from the U.S. List of terrorist states and to get support from the international community, the only option to take is to make North Korea *a normal nation* which can apply the lessons from South Korean experiences for its own economic development. This has been the course pursued by many Eastern European countries. Every dictator throughout history wanted to keep their political power, but failed because they did not listen to outside advisors to address and resolve both existing and coming problems.

Summary and Conclusion

We have examined that the export-led growth strategy with import substitution under President Park Jung Hee and determined that it was the best choice at the takeoff stage of the South Korean economy in the 1960s. Despite his early success in economic development by the intensive mobilization of factor input, his achievements are tarnished for several reasons that were not necessary for economic development. First, Park took political power by force and did not hesitate to torture, jail, and expel his opponents ruthlessly. Police watched over dissidents continuously, and his administration disrupted their employment opportunities. Humanism must be respected as part of values for economic development. Second, his authoritarian politics suppressed democratization by force. The political power was used to acquire economic power, which led to additional political power. Corruption from the political-economic complex caused both market and government failures. Third, President Park intensified regionalism in South Korea by designating a faction from his home province as the mainstream of his administration, providing special favors in personnel management. He created additional

seats in the National Assembly providing a proportional representative system with no electoral districts in order to collect political campaign funds illegally and to expand his influence in politics. Fourth, the military coup brought military culture into society so that an undemocratic way of thinking prevailed, leading to a friend-or-foe mentality with no middle ground. Finally, because none of these measures was essential to economic growth, a civilian government could have achieved the same degree of performance as Park did for economic development. Even assuming that his economic performance was better than a civilian government, the cost of unbalanced development between politics and economy was much more expensive than short-term gains from his early success.

Like China, North Korea can follow the South Korean model of economic growth considering that current situations of the North Korean economy are not better than that of South Korea in the early 1960s. In the early stages of economic development, capital formation is essential to expand production capabilities. North Korea can borrow from external savings, attract foreign direct investment, and receive foreign aid if the leadership has an intention to reform its politics and economy. Additional sources include World War II compensation from Japan, a peace dividend from signing a peace treaty with South Korea and the resulting disarmament, privatization of state-held assets, export of the labor force, and domestic savings from export earnings. Resource allocation can be based on unbalanced growth strategy and coordinated industrial structure with South Korea, early investment in agriculture, export promotion with import substitution starting from labor-intensive industries, investment in infrastructure, and the formation of human capital. The government must reduce its intervention as soon as the economy diversifies. The experiences of South Korea well illustrate that authoritarian politics disrupt competition in the market, inducing both market and government failures. The transformation of socialism into a market system requires recognition of personal property rights, introduction of a price system, privatization of state-owned enterprises, and provision of efficiency measures. In the process of economic transformation, Russia experienced that people did not easily change their old habits in terms of the way of thinking and their way of life. Both Russia and China fighting against corruption have been well documented. North Korea would experience the same if it opens its markets. Thus, North Korea can utilize the lessons from the South Korean experience to minimize the cost of unnecessary adjustment.

Then, will North Korea follow the lessons from South Korean experiences? The answer is not so simple. First, socialist ideology and domestic politics in North Korea are critical factors. Chairman Kim Jung Il has monopolized information by isolating the people from the outside world in order to hide domestic problems. If it opens the door to the world, its people will know the reality of its totalitarian regime, which suppressed them in order to retain political power despite poor economic conditions. This may cause an internal uprising threatening the survival of its regime. Second, trade expands the production possibility frontiers for trading partners by taking comparative advantage for exports, while an autarkic economy having a fixed market cannot expand this frontier. Thus, North Korea cannot survive without foreign trade and investment over the long

run. Third, North Korea has maintained its over-expanded armed forces and developed weapons of mass destruction, which it has tried to use as leverage in negotiations with South Korea and the United States, although these expenditures reduced investment in infrastructure causing economic decline. Unfortunately, the development of weapons of mass destruction and the forward deployment of conventional forces have created problems in international relations, leading U.S. President George W. Bush to call North Korea part of the “Axis of Evil” along with Iraq and Iran in his 2002 state of the union address. North Korea has to make a critical decision whether it will stay in the “Axis of Evil” or move away from it because the United States has made it clear that it is willing to destroy the evils together with their terrorist associates to protect its national security.

Policy Recommendations to North Korea: First, North Korea should open its door to the world as soon as possible, and liberalize its politics in line with economic development by taking risks. Otherwise, North Korea will perish without economic transformation through foreign trade and investment. Higher risks will give high returns although openness itself does not guarantee economic success. Second, because inter-Korean economic cooperation is not sustainable due to the lack of reciprocity and transparency, North Korea must provide a political-economic environment that capitalizes foreign aid for its economic takeoff, while South Korea needs to enhance its capabilities by improving efficiency with competition in politics and economy. Third, North Korea should change the concept of national security. Based on realism, North Korea may seek cheating from partners and better achievement of gains, which is impossible in the age of globalization. But liberalism suggests that basic determinants of state preferences are representation and rent-seeking in government, market incentives in business, and social identity and values in society. It means that military strength is not the only measure of national security considering that no countries in Northeast Asia intend to attack North Korea as long as it remains as a normal state. Finally, there are some reasons why North Korea remains on the U.S. list of terrorist states. As long as the name is not removed from that list, economic survival of North Korea would be difficult. The majority of South Korean people do not support the Sunshine Policy if North Korea avoids reciprocal and transparent actions for “southern hospitality.” The current U.S. position toward North Korea is realistic and reasonable, even though the South Korean government believes that it negatively affects inter-Korean relations. The ball is in North Korea’s court.

Endnotes

¹ Edward N. Muller “Economic Determinants of Democracy,” in *Inequality, Democracy and Economic Development*, ed. Manus I. Midlarsky, New York: Cambridge University Press, 1997, 137. “capitalist economic development also initially heightens income inequality in a country, and this is expected to have a negative impact on democratization because a high level of income

equality radicalizes the working class, enhances class polarization, and reduces the tolerance of the bourgeoisie for political participation by the lower classes.” Therefore, the rise of working class can negatively contribute to democracy.

² Reuters, “Iran, Iraq and North Korea Dismiss Bush Accusations,” *The New York Times on the Web*, January 30, 2002. President called Iraq, Iran, and North Korea as an “Axis of Evil.” Michael O’Halon, “Choosing the Right Enemies,” *The New York Times on the Web*, February 6, 2002.

³ WheeGook Kim, “Alternative Growth Strategies of North Korea: Lessons from Experiences of South Korea and Taiwan” presented to the 1996 Annual Convention of the Allied Social Science Associations held at San Francisco Hilton Towers, San Francisco, California on January 5-7, 1996.

⁴ Bela Balassa, *The Newly Industrializing Countries in the World Economy*, New York: Pergamon Press, 1981, 4-6.

⁵ Paul N. Rosenstein-Rodan, “Problems of industrialization of Eastern and South-Eastern Europe,” *Economic Journal* 53 (June-September 1943): 202-11. _____, “Notes on the Theory of the ‘Big Push,’” reprinted in *Economic Development for Latin America*, ed. Howard S. Ellis and H. C. Wasllich, New York: St. Martin’s Press, 1961.

⁶ _____, “Natura Facit Saltum: Analysis of the Disequilibrium Growth Process,” in *Pioneers in Development*, ed. Gerald M. Meier and Dudley Seers, New York: Oxford University Press for World Bank, 1984, 207-21.

⁷ Ragnar Nurkse, *Problems of Capital Formation in Underdeveloped Countries*, New York: Oxford University Press, 1953, 12. W. Arthur Lewis, *The Theory of Economic Growth*, London: Allen & Unwin, 1955, 274-83. Tibor Scitovsky, “Two Concepts of External Economies,” *Journal of Political Economy* 62 (April 1954), 143-52. Rodan and Nurkse stress the balance in demand (markets), but Lewis and Scitovsky emphasize the balance in supply (investment).

⁸ Ragnar Nurkse, “Balanced and Unbalanced Growth,” in *Equilibrium and Growth in the World Economy*, ed. Gottfried Haberler and Robert M. Stern, Cambridge, Mass.: Harvard University Press, 1961, 241-59.

⁹ _____, “International Economy and the Problem of Growth,” in *Equilibrium and Growth in the World Economy*, pp. 304-24.

¹⁰ Raul Prebisch, “Five Stages in My Thinking on Development,” in *Pioneers in Development*, p. 179. He concerned about the disparities of income and wealth in the periphery as well as between center and periphery countries. The disparities in the periphery were explained by the concentration of land, protection, and inflation; but those between countries were considered by technological advantages.

¹¹ _____, *The Economic Development of Latin America and Its Principal Problems*, New York: United Nations, 1950. _____, *Economic Survey of Latin America*, New York: United Nations, 1950.

¹² John H. Power, “Import Substitution as an Industrialization Strategy,” *The Philippine Economic Journal* 5(2) (1966): 169-74 and 191-9. John H. Power, “Import Substitution as an Industrialization Strategy,” *The Philippine Economic Journal* 5(2) (1966): 169-74 and 191-9.

¹³ Albert O. Hirschman, *The Strategy of Economic Development*, New Heaven: Yale University Press, 1958. Chapter 4. Arguments about Unbalanced Growth. He argues that balanced growth may not stimulate the economy in the absence of sufficient resources such as capital, entrepreneurs, and decision-makers because of lack of big pushing power. Albert O. Hirschman, *The Strategy of Economic Development*, New Heaven: Yale University Press, 1958. Chapter 4. Arguments about Unbalanced Growth. He argues that balanced growth may not stimulate the economy in the absence of sufficient resources such as capital, entrepreneurs, and decision-makers because of lack of big pushing power.

¹⁴ *Ibid.*, Chapter 5. Investment Choices and Strategies.

¹⁵ Ibid., p. 112 and 116 in Chapter 6. Interdependence. The backward linkages utilize significant amounts of intermediate inputs from other activities, while the forward linkages provides inputs to the other activities, generating further impact on domestic demand and supply.

¹⁶ Albert Hirschman, "A Dissenter's Confession: 'The Strategy of Economic Development' Revisited," in *Pioneers in Development*, 108-9. This explains the politico-economic complex in LDCs.

¹⁷ A. P. Thirlwall, *Growth and Development*, London: McMillan Press, 1978, 181-6. Ashok Mathur, "Balanced versus Unbalanced Growth," *Oxford Economic Papers* 18 (July 1966): 137-57. Paul P. Streeten, "Balanced versus Unbalanced Growth," *The Economic Weekly* (April 20, 1963), 669-71, reprinted by Gerald M. Meier, *Leading Issues in Economic Development*, 642.

¹⁸ V. Bulmer-Thomas, *Input-Output Analysis in Developing Countries*, New York: John Wiley & Sons, 1982, 183-97. V. R. Pancharukhi, "Linkages in Industrialization: A Study of Selected Developing Countries in Asia," *Journal of Development Planning* 8 (1975): 121-65. The correlation coefficients between linkages and capacity underutilization were positive, and the relationship between output and income multiplier was negative in Indian experiences.

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²⁵ World Bank, *The East Asian Miracle: Economic Growth and Public Policy*, New York: Oxford University Press, 1993, p. 58. Also see "The Asian Miracle: Is It Over?," *The Economist*, March 1-7, 1997, pp. 23-25. Paul Krugman used Alwyn Young's estimates for 118 countries over 1970, which proved to be incorrect.

²⁶ Dale W. Jorgenson, "Productivity and Postwar U.S. Economic Growth," in Dale W. Jorgenson, ed., *Productivity, Volume 1: Postwar U.S. Economic Growth*, Cambridge, MA: MIT Press, 1995, 1-23.

²⁷ Thomas J Sargent and Neil Wallace, "Rational Expectations and the Theory of Economic Policy," *Rational Expectations and Econometric Practice*, ed. Robert E. Lucas, Jr. and Thomas J. Sargent, Minneapolis: University of Minnesota Press, 1981, 199-213.

²⁸ Subrata Ghatak, *An Introduction to Development Economics*, London: Allen & Unwin, 1986, 309.

²⁹ A. P. Thirlwall, *Growth and Development*, 212-4. Bela Balassa, "The Lessons of East Asian Developments: An Overview," *Economic Development and Cultural Change* 36 (3 Supplement) (April 1988): S273-90. The role of government is to create a modern infrastructure, to provide a incentive system, and to help export expansion.

³⁰ Martin Fransman, "International Competitiveness, Technical Change and the State: The Machine Tool Industry in Taiwan and Japan," *World Development* 14(12) (1986): 1375-96. Joseph E. Stiglitz, "Technological Change, Sunk Costs, and Competition," *Brookings Papers on Economic Activities: Social Issue on Microeconomics*, Washington, DC: Brookings Institution, 1987, 883-939. Martin Fransman, "International Competitiveness, Technical Change and the State: The Machine Tool Industry in Taiwan and Japan," *World Development* 14(12) (1986): 1375-96. Joseph E. Stiglitz, "Technological Change, Sunk Costs, and Competition," *Brookings Papers on Economic Activities: Social Issue on Microeconomics*, Washington, DC: Brookings Institution, 1987, 883-939.

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³² Gustav Ranis, "Another Look at the East Asian Miracle," *The World Bank Economic Review* 9(3) (September 1995): 509-534. He pointed out that East Asian governments clearly understood the importance of human capital. World Bank, *The East Asian Miracle: Economic Growth and Public Policy*, New York: Oxford University Press, 1993, 79-103.

³³ Adam Przeworski et al., *Sustainable Democracy*, New York: Cambridge University Press, 1995, p. 40.

³⁴ Minxin Pei, "The Puzzle of East Asian Exceptionalism," in Larry Diamond and Marc F. Plattner, eds., *Economic Reform and Democratization*, Baltimore, MD: Johns Hopkins University Press, 1995, 112-25.

³⁵ If domestic savings exceed demand for capital formation and the economy keeps trade surplus, and if production capacities are underutilized because of unexpected fall of exports, a part of resources to be allocated to exports is purely reallocated to domestic demand without any frictional costs.

³⁶ The private consumption is chosen as a representative-vector because: (a) Government expenditures, either consumption or investment, are planned by the central authorities. (b) Fixed capital formation, either private or public, is focused on construction, machinery, transportation and communication equipment. (c) Fixed capital formation means investment for both exports and domestic demand, which is not limited to domestic demand only. (d) The final demand vector

of government consumption in the input-output tables lies in one sector, government services and defense, in South Korea showing limit of data limitations.

³⁷ Ministry of Labor, *Yearbook of Labor Statistics*, Seoul: ROK Government, various years.

³⁸ Eui Hang Shin and Moon-Ki Suh, "An Analysis of Structural Determinants of Organizational Effectiveness: The Case of Business Firms in South Korea," *International Journal of Korean Studies* III(1) (Spring/Summer 1999): 163-189.

³⁹ The export expansion rate is defined by a changing ratio of export-generated output to total domestic output for an industry during a certain period $[(dOUT*EXP/dt)/OUT]$.

⁴⁰ The import substitution rate is defined by a changing ratio of total imports among total output for an industry $[dIMP/dt)/OUT]$.

⁴¹ Dong-Se Cha and Kwang Suk Kim, eds., *The Half Century of the Korean Economy: Historical Evaluation and Vision for 21st Century*, (Seoul: KDI, 1995), p. 50.

⁴² The Bank of Korea, *Input-Output Tables*, Seoul, Korea: ROK Government, various years. National Statistical Office, *Major Statistics of Korean Economy*, Seoul, ROK Government, various years. Council on Economic Planning and Development, *Input-Output Tables*, Taipei, Taiwan: Executive Yuan, various years. _____, *Taiwan Statical Data Book*, Taipei, Taiwan: ROC Government, various year. Considering depreciation, taxes, and labor intensity in both economies in comparing the statistics, the difference may be reduced to around 5.0% of GDP.

⁴³ Wheegook Kim, "Democracy and Economic Development in South Korea and Its Application," *International Journal of Korean Studies*, Vol. 2, No. 2 (Fall/Winter 1998), p. 83-84.