

## **Escaping the Poverty Trap: North Korea's Economic Development Strategies**

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### **INTRODUCTION**

**E**xisting research on the economic regime change has focused solely on the North Korean shift toward a market economy. Yet, it is important to look not only at the regime change, but also at the strategies of economic development, in order to better project the future of highly underdeveloped economies such as North Korea, which has been plagued by economic woes, natural disasters and famine. By reexamining a variety of recent economic changes in North Korea based on two perspectives, economic development and regime change, this paper attempts to provide a reliable basis for the evaluation of economic changes in North Korea, as well as to analyze their possible direction and substance. An example is China, more specifically the announcements at the 3rd plenary session of 11th Communist Party Central Committee in 1978 and the 12th session of the Communist Party National Congress in 1982. In the words of Deng Xiaoping, "It doesn't matter whether the cat is black or white, as long as it catches mice." The main problem is not that the regime will transform to a market economy, but that change will come only

as a means to achieve the goal of economic development.

For this analysis, two theories, the “poverty trap” and “big push” will be discussed. As far as economic-regime changes in North Korea, the paper uses two theories suggested by Janos Kornai<sup>1)</sup> and Lin Eefu.<sup>2)</sup> The current economic situation in North Korea, i.e., extreme poverty and starvation, links the two perspectives. Two theories are suggested: the poverty trap theory for understanding economic development, and the shortage economy theory for regime change.

### THE STRATEGY FOR NORTH KOREAN ECONOMIC DEVELOPMENT

#### *The Big Push Theory*

It seems almost impossible for North Korea to revive its economy without outside help, the given nine consecutive years of minus economic growth, a rapidly declining budget, and continued low factory operations. Thus, it seems highly likely that North Korea will have to follow in the footsteps of other underdeveloped countries in order to get out of the current economic crisis.

The development strategies adopted by those successful countries can be summarized as a combination of the “poverty trap” and “big push” theories. The concept and the premises are depicted in Figure 1:

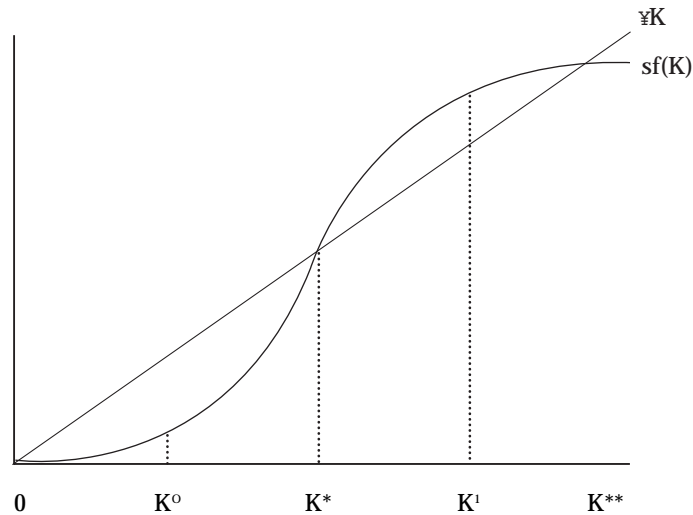
At first, the initial situation appears as follows:  $0 < K^0 < K^*$  ( $K^0$  is the initial amount of capital per person, and  $K^*$  is the critical-point amount of capital),  $K^0$  gradually converges to zero. By contrast, once

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1) János Kornai, *The Socialist System: The Political Economy of Communism* (New Jersey: Princeton University Press, 1992).

2) Lin Eefu, *et al.*, *Reform and Development Strategy in China*, translated into Korean by Han Dong-hun, and Lee Jun-yop (Seoul: Baeksan Seodang, 2001).

**Figure 1. Poverty Trap and Big Push**



Note.  $K$ : Amount of capital per capita,  $K^*$ : Amount of capital  $P/C$  in critical point,  $\delta$ : depreciation rate,  $f(K)$ : production function,  $K^0$ : poverty trap,  $K^1$ : big push,  $s$ : savings rate.

$K^1$  surpasses  $K^*$ ,  $K^1$  continues to increase to  $K^{**}$ . In layman's terms, even though it seems nearly impossible for countries with little capital at the initial stage of economic growth to get out of the perennial poverty trap,<sup>3)</sup> once the amount of the capital ( $K^1$ ) surpasses the critical point ( $K^*$ ), the capital amount per person ( $K$ ) continues to move in the direction of  $K^{**}$ .

When an economy encounters a situation of increasing marginal productivity but cannot escape the poverty trap due to a current shortage of capital, the only way to increase the capital amount to larger than  $K^*$  is to attract foreign capital. Once the amount of capital is increased to the point of  $K^*$ , especially through the introduction of

3) Poverty trap indicates economic situation that actual investment is much less than requirement investment. As is shown by Figure 1, this corresponds to the interval from 0 to  $K^*$  where savings is less than depreciation.

foreign capital, it is possible for that economy to advance toward a self-sustaining development stage.

This is exactly the strategy of the “big push” theory—which lifts the economy out of cyclical poverty, especially through a large, one-time injection of capital into system. As its name implies, the effort to increase the capital amount to a point larger than  $K^*$  is called as “big push.” The logic follows that even currently underdeveloped countries can be ushered into the self-development stage, becoming developed countries, and then, even able to pay off all foreign debts.

According to the big push theory, two conditions should be met: A large sum of foreign capital inflow and the increasing marginal-productivity of production system. North Korea has made efforts to meet both of those conditions. First, to attract foreign capital during the 1990s, North Korean authorities worked on several fronts: The establishment of Rajin-Sonbong Free Economic and Trade Zone, Mt. Kumgang Tourism Project, the establishment and refinement of foreign investment-related laws, and efforts to restore foreign relations with the U.S.

Second, there was increased investment in the IT Industry, especially after the mid-1990s. In particular, the IT industry can be said to be strong in “externality” in the sense that it could have a huge ripple effect on increasing returns in the total production system.

Third, a prime example of the feasibility of a “big leap” is the following statement by a North Korean party organ, “We believe that we have what it takes to make a big leap, since we have already done it in the past, as evidenced by the development of the satellite ‘Kwangmyongsong I,’” the incredible land reforms, and also by the many factories built all over the nation even during this difficult period.”<sup>4)</sup> In short, this is the North Korean style of big push.

North Korea has even taken a lesson in development strategy from South Korean President Park Chung-hee. That strategy

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4) *Rodong Sinmun*, January 7, 2001.

combines the introduction of foreign capital with concentrated investment in key industries. A couple of differences between the North and South should be noted, however. The South Korean economy had adopted a market economy after the Korean War, and it had successfully based its economic policy on comparative advantages, such as from labor-intensive light industry to capital-intensive heavy industry.

Therefore, based on development strategy, which is Pyongyang's immediate concern, we can project the possible direction of the change in the North Korean economic regime. In order to mirror the success of South Korea, however, North Korea must not only adopt a market economy, but must also undertake an industry policy based on comparative advantage.

#### *The Current Development Program of North Korea*

##### (1) Free Economic Zone and Mt. Kumgang Tourism Project

In order to wrest itself from the current economic crisis, while at the same time, maintaining its present system, the North has developed an economic policy based on foreign capital obtained through special economic zones and tourism.

A prime example: North Korea had planned to attract about 7 billion dollars of foreign capital for the development of Rajin-Sonbong area, for which the government enacted 57 foreign capital-related laws, including the Foreign-Investment Law and the Law on Free Economic and Trade Zone. As of December 1999, however, the actual amount was near 10 percent (80 million dollars) of the total contract, mostly from China, Hong Kong, and Japan.

As an alternative, the North Korean authorities embarked on the development of Kaesong Industrial Complex. According to the plan, about 850 small- and medium-sized companies will be moved to the 66 million square-mile site. If successful, total exports could bring 20 billion dollars per year, and provide more than 220,000 new jobs. Regarding the Mt. Kumgang tourism, North Korea was to receive

from Hyundai a total of 942 million dollars, which would be divided into monthly installments of 12.5 million for 6 consecutive years, from November 1998 to March 2005.

Both the industrial complex and the Mt. Kumgang project are currently threatened, however, mainly due to a couple of problems: a delay in payment by Hyundai since early 2001 and the protracted decision-making process for the special zones in the North.

#### (2) Promoting Exports

The general trade environment surrounding North Korea has also changed radically since the collapse of socialist countries in the 1990s. The North has tried to change its trade policy in order to earn foreign currencies, for future economic growth. In short, the North has put much stress on exports, especially on those products on which it could enjoy the benefits of comparative advantage. At the same time, it has worked to strengthen overseas trade by reshuffling the existing trade institutes, and by legislating new trade laws.

More specifically, the North Korean government has promoted various forms of trade such as barter, technology-intensive production for export, border trade and intermediary trade. Among them, it is putting much emphasis on the processing trade because they can utilize the existing production capacity with little or no raw materials or resources. Unlike China or Vietnam, the North had no resources, and must make the most of its production capacity in the processing trade.

Among processed export goods, textiles have been number one since the mid-1990s, edging out steel and nonferrous metals that led during the early 1990s. It should be noted, however, that while proportionately, textile goods are in the lead, the actual export amount has decreased.<sup>5)</sup>

Recently, the North has emphasized technology-intensive trade goods because knowledge-related industry does not normally require material resources. A North Korean economist stated it this way: "In order to meet the increasing demand for foreign

currencies...we have to increase the amount through technology trade, and the main reason is so that we can obtain foreign currencies, despite our small land mass and lack of natural resources.”<sup>6)</sup>

From the above facts, it may be concluded that the current policy of comparative advantage based on low labor costs shows that the North Korea is still at a low-growth stage, which is not promising for long-term growth.

**THE ECONOMIC-REGIME CHANGE IN NORTH KOREA:  
REINTERPRETATION OF THE “SHORTAGE ECONOMY”**

The basic idea of the regime-transformation model is a “shortage economy.” More specifically, it regards the current economic situation of the North as extreme end of a shortage economy based on the following: Starting from a “resource-constrained economy,”<sup>7)</sup> the socialist economic system tends to move toward a shortage economy, mainly due to the inefficiency of its economic system. Here, the shortage economy is explained from the combined

5) North Korea’s Textile Export (Unit: thousand dollars, %)

Year	Textile Export	Increase Rate	Textile Export Proportion	Total Export
1993	200,950	-	19.7	1,020,508
1994	198,783	-1.1	23.7	839,244
1995	233,668	17.5	31.7	736,008
1996	210,464	-9.9	29.0	726,676
1997	184,171	-12.5	20.4	904,602
1998	148,097	-19.6	26.5	559,331
1999	130,616	-11.8	25.4	514,962

Source: Korea Trade-Investment Promotion Agency

6) Kim Hye-ok, “The Significance of Technology-Intensive Trade Goods in Expanding and Developing Foreign Trade,” *Economic Review*, Vol. 2.

7) Malcolm C. Sawyer, *The Economics of Michal Kalecki* (London: Macmillan, 1985), p.241.

perspectives of Kornai's microeconomic approach, and Lin Eefu's macroeconomic approach of economic development.<sup>8)</sup>

The essence of a socialist economy has been defined as socialized production means and a central-planning economy. While the social ownership and planned economy in the original arguments of Karl Marx and Friedrich Engels were suggested as means to overcome the bad effects of rampant capitalism, in modern socialism that focuses on heavy industries, they are means by which underdeveloped economies can catch up with advanced capitalist countries.

Their relationship can be explained as follows: A socialist economy at the initial stage was confronted with the lack of resources, especially capital. As a logical development strategy to solve those problems, as well as to achieve rapid growth in a short time, the heavy-industry-first policy was put into practice so that increased investment from suppressed consumption would be pumped into heavy industry. For this, there had to be a large amount of long-term investment. But the problem was that the capital cost (i.e., the interest rate and the exchange rate) was too high, mainly due to the lack of capital itself. Investment in heavy industry was therefore difficult since resource distribution was decided by the logic of a market economy. Thus, for the promotion of heavy industry, the socialist economy, where surplus demand for the capital exists, has to depend on a planned economy. The structure of a planned economy is as follows: (a) The system of administratively planned resource distribution based on the order of priority; (b) The macroeconomic policy for lower cost and higher profit (price-distortion policies such as low interest rate, low labor cost, low energy cost, low exchange rate, etc.); and (c) The micro-planned mechanism focusing on the denial of managerial autonomy, and the strengthening of central government control. The above-mentioned

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8) As the meaning of shortage economy not only emphasizes the shortage of resources itself but also entails walkout originated from inefficiency. In that sense, "shortage economy" has a different meaning from "resource-constrained economy."

economic system of a self-sustaining planned economy will worsen the imbalance of industry structure from the macro-perspective, and will also result in lowering economic incentives from the micro-perspective. As a result, a shortage economy will arise, in which the supply of most products will be lower than the demand.

*The Current Stage of Economic-Regime Change in North Korea*

(1) Change in the System of Planned Resource Allocation

Admitting the failure of the economic policy for the third 7-year economic plan at the 12th plenary session of the Sixth Central Party Committee in December 1993, the North Korean leaders, declared the three-priority task (agriculture, light industry and trade) as the major strategy for new economic development. Nonetheless, there was no radical change in the distribution of available resources or the investment structure. While there is limited data to show the actual investment trend for each industry, it is clear that emphasis on the three-priorities have generally declined since 1995.

This can be explained partially by Pareto improvement,<sup>9)</sup> not to mention the absolute lack of resources. The three-priority task is aimed at changing the order of the resource allocation, by changing industrial policy in order to make the best of the comparative advantage and lack of resources, by adjusting the current over-emphasis on heavy industry. If successful, it would lead to administrative improvements in the resource-allocation system, followed by side effects such as improvement in the general price policy, as well as management policies of production units. In other words, the North could experience a more successful reform process if successful reform in one sector could be transferred to the others.

However, it is also expected that the transition policy on the changed priority order would not only lead to conflicts between

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9) Pareto improvement indicates an allocation of the endowment that improves the welfare of a consumer without reducing the welfare of another.

industries and companies, but also incur the wrath of vested interests and existing power circles, even before the North could taste the fruits of reform. It would mean reducing the interests of the existing power groups such as the heavy industry-related companies, the military and the bureaucracies that have monopolized the past resource allocation system. In a word, this is “non-Pareto improvement.” For this reason, the North put the brakes on the light-industry priority as we can see from the suggestion of the interim period, and also from the unchanged position on the ultimate priority of the heavy industry. In addition, the absolute lack of resources would make worse the already-deepened conflict. That’s why there was a failed or, at least, weakened light-industry priority policy even before the end of the bumper period, especially after the death of Kim Il-sung, the former leader of North Korea.

(2) Change in Micro-Management Mechanism.

Micro-management mechanism focuses on three factors: rule, organization and attitudinal changes of the actors.<sup>10)</sup> According to the 1998 Constitution, several new items are as follows: (a) the increased number of categories allowed for group ownership (more flexible than state ownership), including non-agricultural sectors (Article 2, Clause 22). (b) The expanded domain of individual or private economic activities into legal for-profit activities, in addition to existing side jobs (Article 2, Clause 24). (c) The written specifications for a planned economic mechanism such as independent profit system, net price and profit rate, aiming at the improvement of economic efficiency (Article 2, Clause 33). (d) Specifications on freedom of movement and travel (Article 5, Clause 57).

Notwithstanding the fact that North Korea has tried to legalize some, if not all, previously illegal economic activities in the wake of

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10) This approach is based on Douglass North’s theory. Douglass North, *Institution, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press, 1990), translated by the Korea Economic Research Institute (Seoul, 1996).

the recent economic downturn, it cannot be regarded as the attempt for overall economic change for the following reasons. First, so-called collective ownership is a form of public ownership in a socialist planned economy. Secondly, individual ownership is limited to “possession or ownership only for consumption.” Thirdly, the concepts of the self-supporting accounting system, net price, profit rate that had already been suggested in the past as a management methods for economic efficiency within the framework of socialist planned economy, are only for efficiency of accounting and planning, not in terms of supply and demand in a market economy.

Changes in organization are another issue, namely, the introduction of the independent profit system. For example, there are numerous collective farms, such as the independent profit system established in 1995 in Sukchon County. A combination of two different types of ownership, one by the state and the other by the collective farm, they foster a sense of responsibility, and improve agricultural production.

Second, the work-squads management system was improved. In 1996, the 20-member squad was broken down to 7-8 member-squads in order to enhance farmers’ collective responsibility and increase their productivity. It also allowed individuals to take advantage of surplus products. The system’s future, however, is questionable. It could go the way of the old production-unit system in China, a failed system existed before the Rural Household Contract Responsibility System implemented in early 1980s.

For improved production efficiency, North Korean authorities have focused on the strong role of the cabinet as well as the transformation of the collection (taxation) system in 1998. Also, about 40 associated production units were dissolved into individual factories in January 2000 in order to eliminate prevailing associated-unit self-interest and effective resource use. Since September 2000, however, about 20 large heavy industries such as Kimchaek Steel Plant, Daean Heavy Machinery Factory and Namhung Youth

Chemical Factory were restored to an associated corporative form, due to low efficiency caused by structural problems such as lack of parts, raw materials and subsidiary materials.

Finally, the changes in ideology affected the activities of economic actors. In a brief review of the arguments in several articles published in North Korea's *Economic Review* in the 1990s: (a) "One of the most important lessons to be gained from reform efforts made by modern social democrats is that we have to get rid of solely profit-oriented management techniques."<sup>11</sup> (b) "The introduction of a capitalist management method can be regarded as 'reactionary opportunism.'"<sup>12</sup> (3) "The independent profit system for autonomy and decentralization of company activities that go against the core ideas of a socialist economic system would destroy the planning and balance of the socialist economic development, and lead to anarchy in the long run."<sup>13</sup> (4) "The viewpoint in favor of small production units should be severely criticized."<sup>14</sup>

In short, the symptoms of economic change can't be detected in terms of ideology. There was a stronger conservative trend than ever in the late 1990s, as evidenced by the strong reaction against profits, autonomy, and decentralization. However, it has also been said that the official conservative trend doesn't itself indicate complete lack of change. Rather, it can be understood as a reaction against the expansion of a market economy. Thus, it seems inappropriate to predict future changes in the North Korean economy, simply by looking at official statements, especially given the fact that the economic crisis actually produced the expansion of market economy

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11) Park Kyong-ok, "The Method to Use the Laws on Value in Economic Management, Rejecting Profit-Oriented Views," *Economic Review* (1996), Vol. 2.

12) Lee Myong-ho, "Reactionary and Opportunistic Views that Reject Economic Management and Economic Institutions," *Economic Review* (1998), Vol. 1.

13) Hong-yup, "The State Corporations' Relative Autonomy and its Expression," *Economic Review* (2001), Vol. 2.

14) Seo Young-sik, "Realizing Corporate Interest for the State and Individual in Socialist Labor Payment System," *Economic Review* (2001), Vol. 2.

on the one hand, and the reduced role of a planned economy on the other hand. As Karl Polanyi<sup>15)</sup> argues in his historical analysis, the market expansion process can be interpreted as a dual movement of market economy and society in general. Moreover, the conservative trend in official statements can be understood as a natural repulsion to market expansion, or the spreading logic of a market economy. The bottom line is that the conservative trend should be understood as a passing phase in the process of change.

In sum, the attempt to change the system of planned resource allocation failed to make any significant impact on changes in other policies, due to the lack of resources and the non-Pareto improvement. Moreover, the micro-management mechanism, still limited by an inflexible ideology, didn't bring about fundamental changes in economic management methods, resulting in the continued expansion and retrenchment of organization and personnel recruitment. We can argue, therefore, that the North Korean economy is still at the stage of a pre-transition economic system.

## CONCLUSION

Major findings in this paper can be summarized as follows. The future direction of the economic-regime change in North Korea can be explained by the North's strategy to overcome the current economic crisis. In a word, they are trying to escape from the poverty trap with the help of the "big push strategy." More specifically, they are trying to elicit the "effects of increasing return," i.e., much investment on key industries such as IT, as well as inducing a sizable amount of foreign investment or capital. There are several problems

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15) Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 1957), translated into Korean by Minumsa (Seoul, 1992).

in a direct comparison with South Korea in the 1960s, however. First, there is a low level of foreign capital inflow as well as underdeveloped key industries in the North. In addition, we can also point out the pre-transition stage for the regime change, and the negative attitude of intellectuals toward a market economy. In short, it can be said that North Korea is shackled by the absence of pre-conditions. Thus, we can hardly expect the North to achieve the effects of increasing return for the following reasons: Uncertain ability to attract sufficient foreign capital in the immediate future, ongoing presence of traditional socialist economic problems, and entrance into IT industries, without passing through the necessary stage of comparative advantage.

To succeed, North Korea must have the pre-conditions for increasing return, together with foreign capital. And while the restoration of foreign relations with U.S. is important in attracting much of the foreign capital, it can't solve all the problems. Despite the sizable input of foreign investment into the North, the North may not be able to enjoy the effects of increasing return, given the continued inefficiency in production, economic actor's low incentives and the underdeveloped status of key industries.

Especially with regard to attracting foreign investment, it seems to be a function of regime change. That is, we can hardly expect success without regime reform. Based on a common logic that capital follows profit, it is unreasonable to expect sufficient foreign capital investment in the current, unchanged regime in the North, especially where the leaders still take an antagonistic view of profit.

Thus, North Korean authorities should be doing their best to change the existing regime, and to restore U.S.-North Korea relations, if they really want to escape from their impoverished situation. Otherwise, there will be little chance for the regime to achieve an economic breakthrough, especially when the current leadership sticks to inflexible ideology and self-interest. That is, priority should be placed on encouraging North Korea to adjust to the outside world.

Finally, we may conclude that the most desirable path to economic regime change in North Korea would to follow a gradual “Pareto improvement,” given the likelihood of conflicts that may develop as a result of reform. Considering the fact that the previous “three-priority” policy that was scheduled to overhaul existing resources is likely to fail, mainly due to group conflicts, there may be a possible solution in micro-management mechanism such as the initiation of an independent profit system in state-owned companies and a rural household contract responsibility system such as in China, so that the interests of specific groups will not be impacted by the reform process.