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The Limits of Economic Reform in North Korea under the Kim Jong-un Regime: Lessons from Chinese Experiences

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The Kim Jong-un regime has sought to improve the productivity of state-owned enterprises and collective farms by granting greater managerial autonomy and material incentives. While there are some positive aspects to this reform, it is considerably more limited than that of China in the 1980s which began privatization from the onset of its reform process. Unlike China, collective farms have not been disbanded nor have new non-state enterprises developed in the industrial sector. Considering that privatization is a prerequisite for entrepreneurship-the basic driving force of economic growth, this reform is unlikely to stimulate long-term growth. The limited nature of the reform is closely related to the fact that the regime remains oppressive domestically and isolated externally.

Keywords: Kim Jong-un Regime, Economic Reform, Chinese Reform, Privatization, Entrepreneurship

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1. Introduction

Ten years have passed since Kim Jong-un took power in North Korea. During this time, he has not only managed to consolidate his power base but also more vigorously pursued nuclear development and economic growth than his father and predecessor Kim Jong-il, despite initial concerns about the young and inexperienced leader's ability to rule the country.

The most noteworthy aspect of the Kim Jong-un regime's economic policy is its economic reform, referred to as 'our own style economic management method' in the country. While the regime claims that this is not a reform but rather an improvement, it can still be regarded as a reform if it entails meaningful changes to the economic system. As the root cause of the country's current underdevelopment can be traced to the systemic defects of its socialist planned economy, whether North Korea is undertaking a substantial reform will be a major point of interest in predicting the future of its economy.

There are some previous studies on the economic reforms under the Kim Jong-un regime.[1] According to these studies, the reform policies attempted since the early days of the regime have been somewhat positive as they have promoted decentralization and marketization in a wide range of economic areas, including enterprises, agriculture, foreign trade,

1 Moon-Soo Yang, "'Economic Management System in Our Style' Observed through the Revised Laws in the Kim Jong-un era," *Unification Policy Studies* 26, no. 2 (2017): 81-115 [in Korean]; Andrei Lankov, "Is Byungjin Policy Failing? Kim Jong Un's Unannounced Reform and its Chances of Success," *The Korean Journal of Defense Analysis* 29, no. 1 (2017): 25-45; Seok-ki Lee et al., *A Study on the Economic Reform in North Korea under Kim Jong-un: Focusing on the 'Our Style of Economic Management'* (Sejong: Korea Institute for Industrial Economics and Trade, 2018) [in Korean]; Ki Bum Han, *Economic Reform and Bureaucratic Politics in North Korea* (Seoul: Institute for North Korean Studies, 2019) [in Korean]; Dongho Jo, "An Evaluation of the Reform and Opening of the North Korean Economy in the Kim Jong-un Era," *Korean Economic Forum* 13, no. 4 (2021): 1-37 [in Korean]; Moon-Soo Yang, "The Economic Reform of North Korea in the Kim Jong-un Era: Status & Evaluation," KDI Working Paper, Korea Development Institute, June 2021.

budget, and finance. What is particularly important is the fact that these policies resemble those implemented in China in the 1980s.[2] The successful experience of China may suggest a more optimistic outlook for the North Korean economy.

It should not be overlooked, however, that the fundamental elements that contributed to China's success are missing in the reform of North Korea. In China, the overall trend of privatization of farms and enterprises has been clearly visible from the beginning of the reform process. In contrast, there are no measures that allow privatization in the official reform by the Kim regime, although partial privatization can be found in the informal sector.[3] Considering that privatization is a prerequisite for entrepreneurship—the basic driving force of economic growth, it seems unlikely that this reform will be effective in the long-run.

This paper highlights the limitations of North Korea's economic reform by contrasting it to the Chinese experience, with a particular focus on the management method of state-owned enterprises and collective farms—the main two pillars of its socialist economy. These limitations are closely related to the fact that the country today faces substantially different political and external conditions compared to China in the 1980s. North Korea must restart its reform under a completely different environment by easing political and ideological control as well as normalizing its foreign relations through denuclearization to begin on the path towards true prosperity.

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2 Moon-Soo Yang, "North Korea's Economic Reform Measures in the Kim Jong-un Era: A Comparison with China's Experiences," *Journal of Asiatic Studies* 59, no. 3 (2016): 114-159 [in Korean]; Kevin Gray and Jong-Woon Lee, *North Korea and the Geopolitics of Development* (Cambridge, UK: Cambridge University Press, 2021), 167-192.

3 Suk-Jin Kim and Moon-Soo Yang, *The Growth of the Informal Economy in North Korea* (Seoul: Korea Institute for National Unification, 2015): 20-24, 31-36; Moon-Soo Yang and In-Joo Yoon, "De Facto Privatization of North Korean Enterprises: A Quantitative Approach on Level and Trend," *Unification Studies* 20, no. 2 (2016): 45-88. [in Korean]

2. Reform of State-owned Enterprises

1) Socialist Enterprise Responsibility Management System

The most important component of the Kim Jong-un regime's economic reform is the so-called 'socialist enterprise responsibility management system' intended to improve the management of state-owned enterprises. The core of the modern economy is the industrial sector which includes mining, manufacturing, and electricity supply, and the enterprises in this sector are all state-owned in North Korea. So it is natural that improving the performance of the state-owned enterprises becomes a top priority for North Korea's economic development. Based on the amendments to the economic laws since the mid-2010s as well as the educational materials for party officials, the reform measures can be summarized as follows.[4]

First, the enterprises' right to plan their production has been expanded by reducing the number of 'central indicators' issued by the State Planning Commission, and instead, increasing the number of 'enterprise indicators' determined by the enterprises themselves. The problem of 'overlapping' plans can be resolved through 'order contracts' among enterprises.

Second, enterprises have been granted the right to set the prices and sell their products within certain limits. More specifically, "for products based on order contracts with the buyers or on indicators that they have self-identified, enterprises may independently set the prices and sell the products in consideration of the demand of the buyers following the principles and methods of price-setting so that the costs of production are compensated and the production can be expanded." [5]

Third, enterprises have been granted the right to manage their finances. This includes the right to finance management funds by

4 For more details, see Seok-ki Lee et al., op. cit.: 95-129.

5 Democratic People's Republic of Korea, Enterprise Act (revised in 2014), Article 39 (recited from Ibid.: 106).

themselves as well as the right to independently distribute the residual revenue remaining after paying the state. In particular, the latter includes the right of enterprises to set the wages of their workers within certain limits.

Fourth, enterprises have also been given the 'right to adjust labor' to restructure their organizations and to alter the number of employees. This does not mean that they are free to fire or hire workers but rather that they may adjust the number of employees through certain processes and agreements with other enterprises.

Lastly, the regime has allowed enterprises to self-finance investment in equipment rather than solely rely on the national budget, and has also granted them the right to transfer or rent out unnecessary equipment under specified conditions.

In sum, North Korea's reform of the state-owned enterprises is aimed at expanding managerial autonomy and providing material incentives. This can be viewed as a decentralization in that it partially transfers the central government's authority to individual enterprises. And it is also a marketization as it partially applies market mechanisms to the state-run sector. This reform resembles to some extent the experiments attempted in the former Soviet Union and Eastern Europe prior to post-communist transition, as well as in China during the early stages of its reform and opening-up.

2) A Comparison with China's Enterprise Reform

China's experience of reforming its enterprises in the 1980s provides important lessons and insights. While the reform in China resulted in extremely positive outcomes, this was not always the case in former socialist countries. The economies of the former Soviet Union and Eastern Europe failed to meet expectations, not only before the transition but also afterward, despite having implemented more radical reforms. The main feature that distinguishes China from other former socialist countries is

that a very large number of new enterprises emerged and developed vigorously through the reform process.[6]

In the transition economies of Eastern Europe and the former Soviet Union, existing enterprises that had been state-owned, but mostly being privatized, still accounted for the majority of businesses during the 1990s. In contrast, state-owned enterprises in China were rarely privatized up until the mid-1990s. Yet, different types of enterprises have emerged in very large numbers, such as collective-owned enterprises, individual-owned enterprises with less than 8 employees, privately owned enterprises with 8 or more employees, and foreign-funded enterprises including those from Hong Kong, Macao, and Taiwan.[7] In 1980, there were only 380,000 enterprises in China's industrial sector and among those, approximately 80,000 state-owned companies accounted for about three-fourths of the gross industrial output. However, in the fifteen years since then, approximately 6 million individual-owned enterprises, more than a million collective-owned enterprises, and several tens of thousands of foreign-funded enterprises have been created. As a result of the rapid growth of these new enterprises, state-owned enterprises only accounted for about a third of the gross industrial output in 1995. Such trends were not limited to the industrial sector. In fact, the number of new enterprises became much larger, and the share of state-owned enterprises in employment and production became much smaller in other sectors such as construction, wholesale and retail trade, and transportation.

The state-owned enterprise reform pursued by the Chinese government at the beginning was not that much different from those attempted in the former Soviet Union and other Eastern European

6 John McMillan and Christopher Woodruf, "The Central Role of Entrepreneurs in Transition Economies," *Journal of Economic Perspectives* 16, no. 3 (2002): 153-170.

7 Gary H. Jefferson and Thomas G. Rawski, "Ownership Change in Chinese Industry," in *Enterprise Reform in China: Ownership, Transition, and Performance*, eds. Gary H. Jefferson and Inderjit Singh (Washington, D.C.: Oxford University Press, 1999), 23-27.

countries before the transition. This reform of the early 1980s was often called 'power delegating and profit sharing (放權讓利).'[8] 'Power delegating' involves the process of allowing enterprises greater managerial autonomy, while 'profit sharing' refers to material incentives provided through a certain amount of profits retained in the enterprises. But the performance of state-owned enterprises had only improved marginally in the early 1980s. In response, the government further intensified reforms by granting enterprises greater power and more shares of the profit, and it is widely believed that the performance of state-owned enterprises vastly improved after these additional measures were implemented.[9]

It is necessary to note, however, that it was not only the reform of state-owned enterprises itself but also the new competitive environment caused by the widespread emergence of the other types of enterprises that led to the improvements in the performance of state-owned enterprises.[10] The Chinese government initially acknowledged the 'individual economy' consisting of small businesses with less than 8 employees in the new constitution in 1982, and then legalized the entire private sector, including 'privately-owned enterprises,' hiring more than 8 employees through a subsequent constitutional amendment in 1988.[11] Moreover, new 'collective-owned enterprises' emerged in large numbers, although this type of enterprise was already in existence as an alternative form of socialist enterprises before the reform.

Here, it is worth emphasizing the important role of collective-owned enterprises in rural areas during the early reform period. These enterprises

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8 Jinglian Wu, *Understanding and Interpreting Chinese Economic Reform* (Mason, Ohio: Thomson, 2005), 139-154; Barry Naughton, *Growing out of the Plan: Chinese Economic Reform, 1978-1993* (Cambridge: Cambridge University Press, 1996), 97-136.

9 Barry Naughton, op. cit.: 200-243, 273-308.

10 Gary H. Jefferson and Thomas G. Rawski, "Enterprise Reform in Chinese Industry," *Journal of Economic Perspectives* 8, no. 2 (1994): 47-70.

11 Donald Clarke, Peter Murrell, and Susan Whiting, "The Role of Law in China's Economic Development," in *China's Great Economic Transformation*, eds. Loren Brendt and Thomas G. Rawski (New York: Cambridge University Press, 2008), 381-383.

were legally owned by the local rural communities (townships and villages), but in reality, many of them were not much different from, and later transformed into, private enterprises as they were created and led by individual entrepreneurs.[12] It was also pivotal that most of the successful rural collective-owned enterprises were located in the suburbs near large cities. The growth of these enterprises was more of an expansion of the urban economy than of the rural community, and the competitive pressure they collectively asserted on the urban enterprises became an important factor in the development of the overall economy. In other words, China's enterprise reform was not limited to state-owned enterprises but widely impacted enterprises with different types of ownership.

Compared to the Chinese experience, the crucial difference in North Korea's enterprise reform is that it remains restricted to existing state-owned enterprises and has been unable to stimulate the growth of new enterprises. While the growth of the new rural collective-owned enterprises in China was basically the result of a spontaneous response by the farmers to the political and institutional settings at the time, such developments were also promoted by liberalizing policies such as the relaxation of the state monopoly on the purchase of agricultural materials and the supply of investment capital by the local Rural Credit Cooperatives which were part of the state-run financial system.[13] Moreover, de facto private ownership in many of these enterprises was later recognized and transformed to a de jure one through further reforms in official laws and institutions as stated above.

In contrast, it is difficult to find new enterprises that have been created and managed by individual entrepreneurs in the industrial sector, the central part of the entire economy, in North Korea today, while the private activities of the self-employed in the service sector have greatly expanded. This is because the regime remains very conservative both politically and

12 Yasheng Huang, *Capitalism with Chinese Characteristics: Entrepreneurship and the State* (Cambridge: Cambridge University Press, 2008), 50-108.

13 Barry Naughton, op. cit.: 137-169.

ideologically, and also because official reforms in its laws and institutions have not crossed the boundaries of the socialist system. It is presumed that this fundamental limitation is the reason why the regime has not implemented effective policies supporting the development of non-state enterprises.

In short, the enterprise reform attempted by the Kim Jong-un regime remains far less extensive than that of China in the 1980s. Considering such differences, it is unlikely to bring about comprehensive and sustained economic development, while it may have resulted in small and partial improvements. Its effectiveness may have weakened even more because of the sharp reduction in imports of crucial intermediate and capital goods due to the strict sanctions imposed by the UN Security Council and the border closure since the outbreak of the COVID-19 pandemic.[14]

3. Reform of Collective Farms

1) Expansion of Farms' Autonomy and the Field Responsibility System

The collective farm, the basic organization in the agricultural sector, is one of the two pillars of the North Korean economy, along with the state-owned enterprise.[15] Therefore, reforming the collective farming system is another key component of economic reform. In particular, as food shortages remain one of the most serious problems, how well the agricultural reform addresses this problem will serve as the key to improving many lives of ordinary people in the country.

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14 Kyoochul Kim, "Impacts of COVID-19 on North Korea's Trade," in *2020/2021 The DPRK Economic Outlook*, ed. Suk Lee (Sejong: Korea Development Institute, 2021), 80-106.

15 Each collective farm in North Korea consists of an average of 300 households and 5 to 10 work groups, each with 50 to 100 workers, and the basic units of management were originally the work groups. Kyung-Saeng Boo et. al., *Agriculture in North Korea: Current State and Development Prospects* (Seoul: Seoul National University Press, 2001), 78. [in Korean]

The reform policies implemented by the Kim Jong-un regime on the collective farms can be summarized as follows. First, the managerial autonomy of collective farms has been increased. The agricultural law revised in 2014 granted collective farms a variety of rights. These include; the right to plan independently the cultivation of some crops that have 'high profitability' based on the 'farm's own indicators' along with main crops planned by the central government; the right to reallocate labor according to the specific conditions of each farm; the right to utilize funds that have been accumulated in bank accounts; the right to collect and utilize extra funds owned by members of the local community; the right to sell excess crops remaining after state procurement; the right to set the price of crops produced based on the 'farm's own indicators' and sell them; and the right to export products through 'relevant agencies.'[16]

Second, the 'field responsibility system' has been introduced within the framework of the 'sub-work team management system,' which was first implemented in North Korea during the mid-1960s with the aim of enhancing work incentives by linking productivity and remuneration.[17] However, the problem of lacking incentives in the communist collective farming system had not been solved as individual efforts had still not been linked to personal income within the sub-work teams. That's why the regime introduced the field responsibility system, an attempt to strengthen work incentives. It is reported that the sub-work teams consisting of 10 to 25 workers have been further divided into smaller field teams, each consisting of 5 to 6 workers from 2 to 3 families, who have been placed in charge of their own fields.[18] The size of field teams appears to differ depending on specific conditions of farms and work groups. Some North Korean refugees have testified that in some cases individual members or

16 Seok-ki Lee et al., op. cit.: 66-68.

17 Young-Hoon Kim, Hyung-Jin Jeon, and Soon-Cheol Moon, *A Study of the Income Distribution System in North Korea's Collective Farms* (Seoul: Korea Rural Economic Institute, 2001), 16-29 [in Korean]; So-young Kim, "Plan and Market in North Korea's Agriculture After the Economic Crisis" (Ph.D. Dissertation submitted to University of North Korean Studies, 2017), 65-68. [in Korean]

18 Seok-ki Lee et al., op. cit.: 225.

families are assigned their own fields for which they are responsible.[19]

The basic principle of distribution to the farm members has also changed.[20] According to official principles, each member of a farm would receive 260kg of unprocessed grains per year, and the rest of their income in cash. Specifically, the remaining amount of crops after deducting shares for farms–the basic food for farm members, seeds, and fodder–had to be sold to the state at very low prices set by the state, and the cash earned from this sale was distributed among the members. Under this system, the additional income apart from the basic food was extremely small, which consequently tended to reduce work incentives.

The most important is how to decide the amount of crops to be sold to the state. In the past, this was based on the needs for public food distribution of the state, regardless of how much farming resources (fertilizer and pesticide) the government had provided to farms. But under the new system, the amount is determined by translating the fees for land and irrigation and the materials provided by the state into actual agricultural products, and the rest (excluding seeds and feed) is then distributed to each member in kind based on each person's 'earned days of labor.' This enables farmers to earn more income by selling excess food at market prices if they succeed in increasing their production. In this way, the mandatory amount supplied to the state can be predetermined, and the remaining crops can be distributed based on the harvest performance of each field. In sum, the main goal of the reform is to grant stronger incentives to each farm member.

These points suggest that the regime's agricultural reform has similar features and objectives to the enterprise reform. They are both intended to strengthen the producers' incentives to work through decentralization and marketization. If the new system works as intended, farms would utilize their expanded autonomy to acquire farming resources from and

19 For more details see So-young Kim op. cit.: 190-209.

20 For more details see Seok-ki Lee et al., op. cit.: 242-245.

sell their produce to the markets that have already been developed. And farm members would be compensated based on the performance of their respective fields.

Has the reform resulted in an increase in agricultural production and farm member income as intended? While it is difficult to answer this question due to the lack of reliable data, we can make a rough guess based on the Chinese experiences during the 1980s as well as some information about the current situation in North Korea.

2) A Comparison with China's Agricultural Reform

The agricultural reform in China in the 1980s is the most important example to refer to when evaluating North Korea's recent reform of collective farms. China's collective farm system prior to the reform was similar to that of North Korea and resulted in chronic food shortages due to its inefficiency. But China was basically able to solve its food problems in a few years thanks to the success of the reform. In contrast, North Korea's reform still appears to have had only marginal success.

In the past, the income of the Chinese farm members under the collective system was not related to individual efforts and was instead tied to working hours. Therefore, the farm members only worked to fill their timesheets without much enthusiasm. A variety of responsibility systems have been introduced with the aim of encouraging work incentives since the late 1970s, including 'contracting job (包工)', 'contracting output quota (包産)', and 'contracting responsibility (包干).'[21] In particular, the latter two were called a 'output-linked system(聯産)' as the remuneration was based on harvest performance.

'Contracting job' gives team members certain entitlements as a basis

21 Jinglian Wu, op. cit.: 108-114; Yak-Yeow Kueh, "China's New Agricultural Policy Program: Major Economic Consequences, 1979-1983," *Journal of Comparative Economics* 8, no. 4 (1984): 354-358.

for participating in the distribution of the final output by the farm in exchange for performing specific tasks, such as rice-transplanting and harvesting. Meanwhile, the basic practice of 'contracting output quota' was to assign plots to farmers under contracts stipulating output quotas which include the amount of production mandatorily purchased by the government and the above-quota part retained by the farmers. 'Contracting responsibility' was similar to contracting output quota as they allowed farmers to take home the remaining crops, but differed in that the individual farmers were granted the right to decide their production plans and to use draft animals.

The responsibility systems were either based on work groups (組) or households (戶). 'Contracting job' was operated generally based on work groups. In this case, it was called 'Contracting job to each work group (包工到組).' In the case of contracting output quota, 'contracting output quota to each work group (包産到組)' was also the norm at the beginning, but this quickly shifted to 'contracting output quota to each household (包産到戶)' which further led to 'contracting responsibility to each household (包干到戶).'

China's agricultural reform rapidly shifted from contracting jobs to contracting output quota, and then to contracting responsibility, also changing from contracting to each work group to contracting to each household. As a result, 'contracting responsibility to each household' became the norm by late 1983, which effectively disbanded collective farms, so called 'people's communes' and established the 'household responsibility system.' In other words, the communist system of collective farming was abolished, and replaced by the traditional system of small family farms.

<Table 1> The Agricultural Responsibility System in China, 1980~1983: Four Main Types

		Contracting What?		
		Contracting Job	**Contracting Output Quota**	**Contracting Responsibility**
Contracting to Whom?	Work Group	Contracting job to each work group (包工到組)	Contracting output quota to each work group (包産到組)	
	Household		Contracting output quota to each household (包産到戶)	Contracting responsibility to each household (包干到戶)

Source: Author's own summary based on the studies cited in footnote 21.

North Korea's current field responsibility system is similar to China's contracting output quota in that distribution is tied to harvest performance. But it is very different from contracting responsibility to each household, the final result of the Chinese reform process, in that the managerial right still remains with the collective farms. Moreover, it is not clear whether the basic units are work groups or households. While they appear to be small groups in principle, there are quite a few cases where they are households since each collective farm can adopt the system independently based on their specific conditions.[22] In short, North Korea's field responsibility system is likely a mix of China's 'contracting output quota to each work group (包産到組)' and 'contracting output quota to each household (包産到戶).'

How do these differences in North Korea and China impact work incentives of the farmers? In China, farmers preferred contracting to each household over contracting to each work group, and preferred contracting responsibility over contracting output quota. These preferences were reflected in how the reforms were actually implemented. Changes in the farming system were initially made informally based on the preferences

22 An article in *Rodong Sinmun* in 2015 reports on the practice of a collective farm in Seoncheon County as follows: "Work groups, the basic production unit, were reorganized to allow the members of the same family to work together." See "The Secret to Making a Leap in a Single Year: On the Business of Workers of Suk-Wha Corporate Farm in Seoncheon County, Who Produced an Additional 1,000 Tons of Grain Last Year," *Rodong Sinmun*, April 7, 2015.

of the farmers, but later were adopted officially by the government. The farmers' preferences were a function of the incentives. The reason why contracting responsibility to each household, a system of granting individual households the right to manage and be responsible for their output, became the eventual result of reforms is that this method was the most effective in increasing productivity.

Agricultural production in China increased rapidly following this reform which solved its food shortage problem over the coming few years. The noteworthy phenomenon was that the production of non-grain foods such as vegetables, fruits, and meats increased much more rapidly than that of grains.[23] These food products contributed to better nutrition, which meant that the diet of the Chinese people improved qualitatively as well as quantitatively. This was achieved through the shift to commercial food crops and livestock products by independent farmers who newly had the right to choose their own crops, coupled with the simultaneous growth in the food market.

In comparison, under the collective farming system, farm managers focus on the production of staple grains in order to fulfill the mandatory amount to be purchased by the state for nationwide distribution. Though the North Korean regime has expanded the autonomy of collective farms to a certain extent, this policy is not likely to result in the significant increase in non-staple food production other than basic grains because the regime, still facing a shortage of staple food, continues to emphasize the production of the main grains, such as rice and maize, for staple food.[24] Though it appears that the production of commercial non-cereal crops has increased considerably since the early 2000s, this was due to the growth of informal private farming

23 Jikun Huang, Keijiro Otsuka, and Scott Rozelle, "Agriculture in China's Development," in *China's Great Economic Transformation*, ed. Loren Brendt and Thomas G. Rawski (New York: Cambridge University Press, 2008), 478-488.

24 Kim Jong-un stated that "agricultural production should be reorganized into a grain-centered structure … Instead of non-cereal crops, we need to increase the area of rice and corn cultivation." Kim Jong-un, "Let's Innovate in Agricultural Production under the Banner of Socialist Rural Area Theses," *Chollima* no. 3 (2014): 13.

in small plots and private stockbreeding outside collective farms. But because the share of this informal farming remains limited, such developments will not likely result in such a huge increase in food production as observed during the reform period in China.

Another important point is how the mandatory amount purchased by the government is determined. Here, the question is whether the amount is decided by a fixed ratio or a fixed quantity. A fixed ratio indicates a method in which the state and the farmers both share the benefits of increased production as well as the risks of a bad harvest. In comparison, the farmers enjoy all the benefits of increased production but bear all the risks related to potential losses under a method of fixed quantity. While each of these methods has their respective merits and demerits, the latter is better aligned with the objectives of the reform since it better incentivizes the farmers as long as the amount purchased by the state is set appropriately. In the case of China, the amount was usually based on a fixed quantity which resulted in a substantial increase in productivity following the transition to contracting responsibility to each household. According to studies based on the testimony of North Korean refugees, the method appears to have been different in each region and for each farm in North Korea.[25] In some cases the method may also be ambiguous. For example, if the authorities raise arbitrarily the mandatory amount that a farm has to supply to the state, when the yield of a farm has increased significantly, this will actually be the fixed ratio method, even if the fixed quantity method has been used before.

Moreover, the effects of reform may be marginal, regardless of how the amount sold to the government is determined, if the portion distributed to the farmers is too small. The North Korean public food distribution system has not been operated properly since the 1990s crisis. As this has led to a complication of the food distribution channels, there were frequent cases of farm members not receiving their basic food portions.[26] Under such conditions, the farmers were forced to make their living by the private farming

25 So-young Kim op. cit.: 192-194 and 200.

26 For more details see So-young Kim op. cit.: 212-221.

of small plots and stockbreeding, not by income from collective farms. As such, if farm members are in a position where they can't depend on work at collective farms and instead must rely on their own endeavors, the impact of reforming distribution methods at collective farms may be minimal. A study based on the testimonies of North Korean refugees suggests that the field responsibility system has not been able to sufficiently solve North Korea's food problems because of these limitations.[27]

The limits of reform are also revealed through the grain production data self-reported by the regime. According to North Korea's Voluntary National Review (VNR) submitted to the UN, annual grain production has been stagnant from 2014 to 2020 even though collective farms underwent reform during this period.[28] Moreover, the fact that the production has greatly varied from year to year suggests that the harvest has still been strongly influenced by weather conditions during farming seasons. Simply put, agriculture in North Korea has not been modernized enough to overcome natural constraints.

Lastly, it is important to note that China's agricultural reform not only improved the agricultural production but also vastly contributed to the development of its manufacturing and service sector. Agricultural productivity sharply increased once collective farms were disbanded and replaced by a system of family farms, which, in turn, enabled greater production with much less labor force. Excess labor force moved from agriculture to manufacturing and services, which consequently enhanced production in these sectors. The number of workers employed by rural collective-owned enterprises grew rapidly from about 30 million to about 100 million and the number of workers from rural areas working in the cities exceeded 60 million over a decade later.[29] And even apart from these groups,

27 *Ibid.*: 190-238.

28 Government of the Democratic People's Republic of Korea, *Democratic People's Republic of Korea Voluntary National Review on the Implementation of the 2030 Agenda* (June 2021): 15. This review can be downloaded from the website of UN Sustainable Development Knowledge Platform. https://sustainabledevelopment.un.org/vnrs/#VNRDatabase. (Accessed July 5, 2021).

there was also a large number of farmers who either worked a second job other than farming or changed their profession altogether.

Compared to the Chinese experiences, the reform of collective farms in North Korea is much more passive and limited in scope considering that the reform has merely changed how these farms are managed and has not actually disbanded them. The abolishment of the collective farming system, as in China's case, would grant farmers greater economic freedom, which, in turn, would lead to prosperity not only in the agricultural sector but in the entire economy.

4. The Political Challenge and Foreign Relations

The initialization, progress, and outcome of economic reform in a country are heavily influenced by its political system and foreign relations. And it is in this regard that North Korea's reform has also differed considerably from the Chinese experiences.

First, the economic reform in North Korea is being implemented without any changes in its politics and ideology.[30] In China, there were significant changes in its politics and ideology in the late 1970s and early 1980s when economic reforms first began, and these changes cultivated a social context that enabled the success of the reforms.[31] The personalist dictatorship in the

29 National Bureau of Statistics of China, China Statistical Yearbook 1999, Table 5-4 Number of Employed Persons by Residence in Urban and Rural Areas, Accessed September 13, 2021, https://www.stats.gov.cn./english/statisticaldata/yearlydata/YB1999e/e04e.htm; Kam Wing Chan, "Migration and Development in China: Trends, Geography and Current Issues," *Migration and Development* 1, no. 2 (2012): 187-205.

30 Sungmin Cho, "Why North Korea Could Not Implement the Chinese Style Reform and Opening?: The Internal Contradiction Between Economic Reform and Political Stability," *Journal of Asian Security and International Affairs* 7 no. 3 (2020): 305-324.

31 Maurice Meisner, *The Deng Xiaoping Era: An Inquiry into the Fate of Chinese Socialism*, 1978-1994 (New York: Hill and Wang, 1996), 81-136.

Mao Zedong era was replaced by collective leadership, and political repression was greatly eased with numerous people who had been imprisoned being released and reinstated. In terms of ideology, pragmatism, which emphasizes economic development instead of dogmatic adherence to communism, has prevailed.

The reason why political and ideological change is important is that economic reform can only succeed if people behave in a new way without worrying much about the possibility of being punished.[32] But the regime's political, ideological, and socio-cultural control under hereditary dictatorship remains strong in North Korea. In this environment, it is unlikely that officials and ordinary people will be able to actively engage in new businesses without fear of political persecution, even if reform policies are being promoted by the regime.

Second, the reform is being implemented without being sufficiently announced to the public. While several economic laws have been revised and educational materials for officials have been distributed, new rules in these documents are abstract and ambiguous about how the reform policies are supposed to be applied in the workplaces. Similarly, though official media such as *Rodong Sinmun* have often reported on enterprises and farms undertaking these policies, the reports are so vague that it is difficult to know what is actually happening.

There was also considerable ambiguity during the initial phase of the reform in China. But the substance of the reforms has been clearly defined in its laws and regulations, and applied in the field in a short period of time. As studies and statistics on the state of the economy have been reported, the progress, achievements, and problems of the reform were revealed in detail. This has not been the case in North Korea at all.

32 Generally speaking, as Kornai stated, "the radicalism of the changes in political structure primarily decides how far the whole [socialist] system can depart from its classical form." János Kornai, *The Socialist System: The Political Economy of Communism* (Princeton, New Jersey: Princeton University Press, 1992), 409.

Third, the Kim regime has carried out its reform amid international isolation. In stark contrast, domestic reforms were closely tied to opening up to the world in China. In the 1970s, before reforms were first introduced, China had already begun to improve relations with the U.S. and had normalized relations with most developed countries including European ones and Japan by the time it began reforms. Such a favorable external environment contributed to the success of the reforms.[33] Foreign trade, which was very small in the past, has increased rapidly, and foreign direct investment poured in, particularly into its special economic zones.

The Kim Jong-un regime also acknowledged the benefits of improving foreign economic relations and expressed its intention to attract foreign enterprises into special economic zones and economic development zones.[34] However, unlike the Chinese government which led the development and operation of its special economic zones, the regime has tried to entrust the entire economic zone projects to foreign developers without any effort to improve the country's poor business environment. As a result, the projects did not go well, and are now completely abandoned.

Furthermore, the regime conducted several nuclear tests and test-launches of its ballistic missiles in 2016-2017 to which the United Nations Security Council responded by imposing much stronger economic sanctions, further damaging North Korea's foreign economic relations. Moreover, remaining trade has all but been suspended due to

33 Jonathan D. Pollack, "The Opening to America," in *The Cambridge History of China Volume 15: The People's Republic of China, Part 2: Revolutions within the Chinese Revolution, 1966–1982*, ed. Roderick MacFarquhar and John K. Fairbank (Cambridge: Cambridge University Press, 1991), 402-472.

34 Myung-Cheol Cha, *Major Economic Zones in Democratic People's Republic of Korea* (Pyongyang: Foreign Language Press of DPRK, 2018), 1-43 [in Korean]; Moon-Soo Yang, Seok-ki Lee, and Suk-Jin Kim, *Plans to Support North Korea's Special Economic Zones and Economic Development Zones* (Sejong: Korea Institute for International Economic Policy, 2015), 23-54 [in Korean]; Ho-Yeol Lim and Joon-Young Kim, "Economic Development Zones in North Korea: Current Status and Future Tasks," World Economy Brief, Korea Institute for International Economic Policy (2015.4.10.), 1-13. [in Korean]

the regime's decision to close its borders after the outbreak of the COVID-19 pandemic. Such extreme isolation is a very unfavorable environment for promoting its economic reform.

5. Recent Tightening of Control and the Future of Reform

The economic recovery from 2012 to 2016 during the early years of the Kim Jong-un regime may be attributed to informal marketization and expansion of trade with China.[35] Had the regime further committed to its economic reform under these more favorable conditions, it might have been able to achieve better results, although the positive effects of the reform seem to have been limited.

North Korea's economic policy, however, appears to be changing in the deteriorating economic conditions after the failure of its '2016-2020 five-year economic development strategy'[36] as a result of sanctions as well as further isolation precipitated by COVID-19. At the 8th Party Congress of the Workers' Party of Korea (WPK) held in January 2021, the regime stated that "the state's unified guidance and strategic management of economic projects need to be strengthened," and that the new five-year economic development plan is premised on "the responsibility and centrality of the cabinet on economic projects."[37] Moreover, during the 2nd plenary session of the 8th WPK Central Committee held in February, it was stressed that "special interests and departmentalism that obstruct the implementation of the Party's decisions need to be sternly punished by the authority of the Party, the laws, and the military."[38] These recent policies that emphasize centralized control give the

35 Byung-Yeon Kim, "North Korean Economy under the Kim Jong-un Regime," *North Korea Today vol. II*, ed. Yong-kwan Yoon (Seoul: Neul-Poom Plus, 2019), 71-105 [in Korean]; Suk-Jin Kim, "Recent Research on the North Korean Economy: A Review Essay," *Journal of Peace and Unification Studies* 11, no. 1 (2019): 33-78 [in Korean]; Jae Hwan Hong, *North Korean Economy under the Kim Jong-un Regime* (Seoul: Korea Institute for National Unification, 2017), 13-143. [in Korean]

36 Suk-Jin Kim, "Why did North Korea's Five-Year Development Strategy Fail?," Online Series CO 21-06 (Korea Institute for National Unification, Feb. 24, 2021).

37 "On the Dear Comrade Kim Jong-un's Report to the Eighth Congress of Workers' Party of Korea," *Rodong Sinmun*, January 8, 2021. [in Korean]

impression that the economic reform that initially promoted decentralization and marketization might be losing traction.

Centralized control is not a new policy, but rather a principle that the regime has traditionally abided by. While it may seem that "the state's unified guidance" may be at odds with its reforms of economic management, this may not necessarily be the case. North Korea's economic reform has not been comprehensively market-oriented, but instead partial and limited in that it has only sought to improve management methods of the state-run sector without any significant privatization. This implies that centralized control and discipline are still necessary for core sectors of the national economy, even if decentralization and marketization are pursued. It is because the internal links within the state-run sector may collapse if these dual processes are promoted unrestrained.

'Perestroika,' pursued by the former Soviet Union in the late-1980s, was also a partial reform that attempted to maintain the state-owned economy while promoting decentralization and marketization. China's reform in the 1980s, when it comes to the industrial sector in urban areas, had similar features. However, while China achieved rapid economic growth, the former Soviet Union fell into a severe economic crisis and collapsed. The most reliable view on the cause of the difference explains that while China persisted in controlling major parts of its state economy, the former Soviet Union failed to do the same, allowing the managers of state-owned enterprises to misappropriate supplies and products for their private interests and subsequently break the internal linkage system within the state economy.[39]

This suggests that the unified guidance and control of the state, as well as the central role of the cabinet emphasized by the Kim regime, may have

38 "Report on the Second Plenary Session of the Eighth Central Committee of the Workers' Party of Korea," *Rodong Sinmun*, February 12, 2021. [in Korean]

39 Kevin M. Murphy, Andrei Shleifer, and Robert W. Vishny, "The Transition to a Market Economy: Pitfalls of Partial Reform," *Quarterly Journal of Economics* 107, no. 3 (1992): 889-906.

some merits. But on the other hand, it seems likely that reinforcement of centralized control by the regime might harm the original objectives of the reform. This is because officials in charge of actually implementing reforms are not sure how much they can exercise their autonomy and are more worried about the danger of political persecution as political and ideological controls are further strengthened.

As observed in the past in China and Vietnam, reforms can gradually be expanded while maintaining state control over key sectors of the economy when there is a favorable external environment. However, North Korea currently faces the opposite situation. The strict sanctions enforced by the international community are not only unfavorable in themselves, but also could lead to more extreme political and ideological conservatism as the sanctions are viewed as a serious threat against the regime. Under these circumstances, it is difficult to expect stable implementation of an economic reform that could fundamentally expand the economic freedom of its people.

6. Conclusion

The Kim Jong-un regime has sought to improve the productivity of state-owned enterprises and collective farms, the two main pillars of its socialist economy, by granting greater managerial autonomy and material incentives. This may be viewed as a somewhat rational and progressive policy considering how it promotes decentralization and marketization in the state-run sector.

However, it is considerably more limited than that of China in the 1980s, which began privatization from the onset of its reform process. Unlike China, collective farms have not been disbanded nor have new non-state enterprises developed in the industrial sector. Considering that privatization is a prerequisite for entrepreneurship, the basic driving force of economic growth, this reform is not expected to stimulate long-term growth.

The limited nature of reform is closely related to the political challenge and external environment the regime faces. The Chinese Communist Party was able to vastly lessen political and ideological control while still maintaining political stability during the reform process. Moreover, China had normalized relations with most developed countries including the U.S. by the time it began reforms, and then expanded rapidly its foreign trade and attracted direct investment from foreign enterprises. In stark contrast, North Korea still has an extremely repressive hereditary dictatorship and has brought about its global isolation by threatening the international community with the development of weapons of mass destruction.

The economic crisis in North Korea is worsening due to UN Security Council sanctions and the COVID-19 pandemic. The growth of the North Korean economy during the first five years of the Kim Jong-un era has since transformed into the subsequent five years of economic decline and stagnation. The regime has responded to sanctions with extreme policies of self-reliance and stronger domestic control. These circumstances make it hard for the regime to create meaningful results from executing economic reforms.

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