

From Marketization to a Market Economy in North Korea*

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I. Introduction

North Korea's economic future depends critically on a transition to a market economy and economic opening-up. The history of socialism clearly show that the socialist economic system is not sustainable in the long-run. All the socialist countries failed to revive their economy according to the socialist system, and most of them except North Korea and Cuba adopted a transition to a market economy with different transition strategies across countries. Countries from Eastern Europe and Former Soviet Union tended to make a more radical transition to a market economy than China, which has been taking gradual changes in the economic system. Nevertheless, the scope of China's transition was sufficiently comprehensive from the beginning. De-collectivization and non-state ownership were introduced at the early stage of economic reform, which acted as *de facto* privatization of the productive assets. At the same time, liberalization took a shape in most areas including price, trade, and foreign investment. Stabilization, which was one of the three key transition policies in Eastern Europe together with privatization and liberalization, was not important in China because, unlike Eastern Europe, its macroeconomic conditions were rather stable when the reform was introduced. Hence, China and Eastern Europe are in common in that they followed a similar path toward a market economy by introducing privatization and liberalization although the speed of transition was different between these two.

Economic opening-up is required to exploit benefits by being a part of the international economic community. Freedom to trade and investment leads to deeper involvement in it, and contributes to economic growth both in extensive and intensive margins. China is a prime example. It introduced special economic zones (SEZs) to attract foreign capital, especially from ethnic Chinese in Hong Kong, Taiwan, Macau, and elsewhere. SEZs acted as a catalyst for leaning by doing: from foreign firms in SEZs, China learnt advanced technologies, upgraded business environments, and was able to export its commodities to the outside world. For Eastern Europe, joining the European Union was a desired objective. To achieve this, the transition economies in Eastern Europe made efforts to reform the economy in accordance with a global standard, which also positively affected in institutional development and attracting FDI from Western Europe.

The inevitability of both of the transition to a market economy and opening-up contrast North Korea's seemingly stubborn adherence to a socialist economic system. Kim Jong-un's new-year speech on 1st January 2018 emphasizes the importance of the economy; he used the word of the economy 38 times while the same word appeared 27 times in 2018 and 18 times in 2017. However, at the same time, the words referring to self-reliance was used 14 times. Own resources, own technology, passion of the people, and innovation were the main instruments for self-reliance. Moreover, it stresses that North Korean economy should be managed in accordance with the socialist principle. In fact, the word of socialism appeared 32 times in the new-year speech, and often it was used together with economic construction and self-reliance. This indicates that Kim is unlikely to take a path toward a market economy.

Kim's intention of reviving the socialist state is also in stark contrast with the reality of the North Korean economy, which is sustained by markets and foreign trade (Kim, 2018). It is estimated that most economic growth under Kim's regime is accounted for by marketization and foreign trade (Kim, 2017b). By contrast, variables related to socialism such as the share of the expenditure of the state budget in GDP is negatively correlated with growth (Kim, 201*). The reality is that virtually everybody in North Korea directly or indirectly relies on market activities and foreign trade for their survival and prosperity. The elites derive a large income from foreign trade: receiving commission or kick-backs from trade with Chinese companies is a well-known practice. Kim and Jung (2015) estimate that 7% of the amount of export is paid as kick-backs to North Korean trade partners, who are likely to be connected to the member of the elites. Markets are a survival line for ordinary North Koreans. The participation rate in market activities is higher than 70% while that in the formal economy is about 50% (Kim, 2017a).

Marketization of the North Korean economy is not compatible with the socialist economy and Kim's strong dictatorship. Hence, one can raise the following question: What will be the outcome of the conflicts between Kim's intention and economic realities? Of course, it is difficult to predict. However, one can predict with reasonable confidence that Kim will face an uphill battle against marketization, which affects not only the economy but also mindsets of the North Koreans and power relations. As regards South Korean policies toward North Korea, North Korean markets can be leveraged by economic cooperation between South Korea and North Korea. Is it possible that marketization from below leads to a market economy? This

paper sets out to deal with the above questions. It begins with a dilemma faced by Kim Jong-un between maintaining his dictatorship and economic recovery based on marketization and foreign trade. In this discussion, it is examined whether or not Kim is willing to launch a Chinese-style reform. Subsequently, it reviews the literature on the effects of marketization with a view to highlighting a possibility that marketization can be a transforming factor to lead North Korea to a market economy. Using such marketization as an important leverage, this paper argues that economic cooperation of the two Koreas should contribute to North Korea's transition toward a market economy.

This paper is laid as follows. In Section II, we explain a dilemma faced by Kim Jong-un between his political leadership and economic growth, and predict that it will be unlikely for him to voluntarily introduce a transition toward a market economy. Section III examines the effects of marketization on North Korea by reviewing the relevant literature, and suggests that South Korea's economic cooperation with North Korea should fully utilize the opportunities provided by marketization, which can facilitate the latter's transformation toward a market economy.

II. Kim Jong-un's Dilemma between Dictatorship and Economy

There were significant changes in the policy line pursued by Kim Jong-il and Kim Jong-un. Kim Jong-il adopted "Military-first" politics (*Songun Jeongchi*), which was included in Socialist Constitution of North Korea in 1998. This change can be regarded as a kind of political justification of why North Korea endured economic hardship in the mid- and the late-1990s called "Arduous March". In other words, economic hardship was a valuable sacrifice to develop the military, which is the utmost importance to guarantee the national security.

In 2003, "Military-first" politics changed to the parallel development of the nuclear weapons and the economy. This shift appears to reflect a need to satisfy the demand from the public who had been anticipating an improvement in economic welfare. At the same time, nuclear weapons were considered as concrete outcome of economic sacrifice made by North Koreans. Dissimilar to "Military-first" politics, however, this change entailed more promises than *ex post* justification on the past. These promises are also closely connected to the dictator's

intention to keep his power. More precisely, he might have believed that the nuclear weapons would protect his security as a dictator from external threat, say, from the United States, while economic development is a vital pillar to obtain support from North Koreans. In other words, developing the nuclear weapons and the economy is the dictator's survival code to maintain dictatorship even in the long-run.

A recent change in the strategic line of North Korea took place in 2018. This change put economic development as the single most important objective North Korea should pursue. The official reason for this was that North Korea is now able to develop the economy as it had completed the development of nuclear weapons and become a nuclear state. However, it is known that the capability of North Korean Intercontinental Ballistic Missiles (ICBMs) failed to reach to the stage of second strike capability due to the lack of the re-entry technology of the ICBMs. Rather, North Korea might have been concerned about the negative effects of the economic sanctions on North Korean economy and military actions by the United States if it continued to improve the ICBMs.

A big question one can raise is whether or not Kim's economy-oriented politics can achieve its promise. The delivery of this promise becomes more important for him. The past promise, that is, economic development according to the parallel development of the nuclear weapons and the economy, turned out to be unsuccessful as annual growth rate from 2013 to 2017 was merely 0.3% according to the Bank of Korea. This suggests that the credibility of his leadership might be further undermined unless there is significant improvement in the economic welfare of the people.

Gaining dominance of economic development in Kim's regime may be associated with marketization of the North Korean economy. As we will discuss later, such a phenomenon made the public's interests keeping distant from Kim's rule. As markets become more important in economic life for most North Koreans, they understand the markets provide opportunities for survival and prosperity, and dislike intervention in their working at markets by Kim's government. At the same time, the socialist economy, which has failed to provide food rationing, is in a miserable state. As marketization proceeds, North Koreans themselves are men in markets and influenced by market spirits. This poses a great threat to Kim's dictatorship. Furthermore, his young age implies that the lifetime benefits from economic development is

larger than that of his father, who took power when he was in his 50s. In other words, it is more likely that he is a ‘stationary bandit’ rather than a ‘roving one’. This motivates Kim to have greater interests in return to economic development.

These circumstances might have led Kim to embrace markets instead of repressing them. He may understand that the long-run effects of markets on his power will be negative. However, in the short-run, there are no alternatives to replace the roles of markets in economic activities. He might have learnt this lesson from the hard experience of the currency reform took place in November 2009. By forcing the currency conversion and disallowing larger amount of the old currency to be exchanged with the new currency, household monetary balance substantially decreased and thus market activities were greatly disrupted. When this policy turned out to be very unpopular and caused public anger, Prime Minister publicly apologized to the people and executed a high-ranking official as a scapegoat. Kim could have thought in his mind. “Without markets, people are not able to survive. Hence, any efforts to eliminate markets without substituting an alternative way of economic activities could lead to the loss of my power. Perhaps the best policy for me to take for the time being is to implicitly allow market activities and to utilize them for my benefits but to prepare for the restoration of a socialist economy in the meantime in order to ultimately replace the role of markets.”

There are two pieces of evidence to support the above conjecture. First, Kim Jong-un’s economic policies suggest that he still adheres to the socialist principle of property rights. His economic policies are far short of institutionalizing market activities although they are more positive on markets than his father’s. As regards market activities, there have been little notable repressions against market activities under Kim Jong-un’s rules.¹ In some areas, there were attempts to transform informal market activities to formal ones. For example, department stores,

¹ His major reforms took place in three areas, namely in agriculture, enterprise management, and markets. In agriculture, it appeared that a smaller number of households became collectively responsible for procurement. In other words, although collective farms are still maintained, not the whole members of households in a collective farm but three or four households supposed to work together. There are some different reports on the distribution in products: a proportion taken by households ranges from 30% to 70%. Some reports suggest that the remaining products after the compulsory procurement can be disposed freely by households. However, it is not known yet whether this policy was implemented universally, partially, or in small sample of farms. Moreover, it is also unclear whether the distribution rule is kept or subject to arbitrary intervention by officials at the local or central level. In the area of enterprise management, an autonomy of firms in the decision of production, wages, profits and foreign trade has been increased. It was also reported that Kim mentioned “the financing sources should not matter as long as they are used for investment (Jeong, 2015)”.

which allow the public to purchase goods if they have money, can be regarded as ‘official’ markets. At general markets, traders are charged with market fees per the number of trading tables and thus these trading activities can be considered as fee-paying official market activities. These marketization have been spreading almost every area of economic activities such as real estate, private employment, and money markets. Even *Donju* (private financiers) finance for government projects, and purchase small mines to export minerals. Nevertheless, these activities are not institutionalized in a sense that they are not protected by laws and institutions.

Table 1 compares the level of institutionalization of private property rights in North Korea with that in China. As the table suggests, following Chinese reform started in the late 1970s, there were legal changes in the Constitution and the civil laws toward recognition of the private sector and private property rights in China. By contrast, there are still no notable alterations in the North Korean case. In the most recent revision of North Korea’s constitution, the objects of ownership of means of production expanded from the state and cooperatives to the state, cooperatives and public organizations. The reason why public organizations are included in this revision is not clear. One can argue that financial hardships faced by many public organizations in the period of Arduous of March led to allow these to own factories and enterprises. An alternative interpretation is that North Korea altered the Constitution to embrace ownership different from the traditional ownership of the state. Having said that, it appears obvious that the level of institutionalization of private property rights in North Korea is far short of that in China in the 1980-90s. A similar conclusion can be made in the civil laws as well. In the revision of the civil laws in 1986, the Chinese law permitted the private ownership of means of production while such permission is not granted in North Korea’s civil law even the revised one in 2012.²

² This does not necessarily mean that there are little changes in the North Korean economy. Among the four policies for a transition, namely, liberalization, stabilization, privatization and institutional reforms, North Korea can be evaluated as being ahead of the final stage of Chinese socialist economy or even in the early stage of its transition in the areas of liberalization of domestic markets and foreign trade. Stabilization can be positively evaluated as prices appear to have stabilized since 2013. However, North Korea lags significantly behind the early stage of the Chinese transition in the areas of privatization and institutional reform.

Table 1: The level of institutionalization of private property rights in North Korea with that in China

	China	North Korea
Constitution	<ul style="list-style-type: none"> - In 1982, the private economy was recognized as a complement to the collective ownership of socialism. - In 1993, the concept of socialist market economy was introduced. - In 1999, the private economy was recognized as an important part of socialist market economy. - In 2004, private property rights were recognized as rights that should not be violated. 	<ul style="list-style-type: none"> - In 1972, private ownership refers to ownership for individual consumption of people. - In 1998, cooperative ownership was revised to include social associations and cooperative ownership.*
Civil law	<ul style="list-style-type: none"> - In 1986, it was revised that private wealth includes means of production. 	<ul style="list-style-type: none"> - People are allowed to own individual houses and commodities for daily living such as family goods, cultural goods, and automobiles.

Note

*: Public organizations (*sahwoe danche*) refer to those which were voluntarily established to support common interests and realize common objectives by a certain social class in the society. Notable examples include occupational associations, women's associations, and youth associations. Cooperatives refer to organizations that collectively own means of production and cooperatively conduct activities of production and distribution. They include cooperative farms and fisheries cooperatives.

Second, the most recent official document of North Korea, that is, Kim's new-year speech suggests North Korea is oriented toward a status-quo instead of a major reform. As it is noted earlier, the economy mentioned 38 times in the speech lasting about 30 minutes was the most frequently used word. However, at the same time, socialism was mentioned 32 times and it was often together with economic construction, self-reliant economy, and the principle of socialist distribution. By contrast, there are no words indicating for economic reforms. Instead, there are some interesting phrases indicating that Kim cares for the welfare of the people such as the guarantee of living conditions of miners and the respect of opinions and interests of farmers.

The above conclusion is supported by evidence from the experiences of major economic

reforms in former socialist countries. As Table 2 shows, two (Chinese and Vietnamese reform) out of eight reform cases turned out to be a transition to a market economy while the other six ended with a reform within the principles of socialism. The table suggests five factors that may affect the intensity of the reforms: change in leadership; support from the power group; support from the public; external threats; economic crisis. Among these five factors, it appears that the most important factor is change in leadership. Except the two cases, the remaining six cases are positively associated with change in leadership. The two cases that launched a reform without change in leadership (New Economic Policy in the Soviet Union and Labor Management System in Yugoslavia) are correlated with either with severe economic crisis or external threat.

It is also interesting that, in seven cases out of ten, reform or transition was supported by the majority of the power group. Perestroika which failed to attract the support from the power group ended not only with the failure of the reform but also with the demise of the Soviet Union. By contrast, neither external threat nor economic crisis appear to be important in determining the intensity of a reform. Especially, an external threat seems irrelevant to the intensity of the reforms. One can claim that external threats could act as a negative factor for a reform as a status-quo bias can easily emerge and enlarge when a country exposes to an external threat.

In sum, change in leadership which is willing to undertake a major reform can be regarded as a necessary condition while the support from the public and the power group appear to be a sufficient condition. In fact, both Chinese and Vietnamese transition were able to satisfy these conditions while the other reform cases failed to meet at least one of these.

The probability of North Korea's transition to a market economy can be evaluated against the factors suggested by Table 2. There is no change in leadership and Kim Jong-un inherited his power from his father, indicating his difficulty or unwillingness in transforming the socialist line pursued by his father. It is unclear whether the power group supports economic reform. The answer may lie in the expected payoffs they can obtain after the transition. On one hand, it is likely to increase the size of the economy, which indicates the welfare of the power group also rises. On the other hand, however, the transition can make the power group losers. Monopolistic rents they have enjoyed before the transition are likely to disappear as

competition from the inside and the outside intensifies. In addition, there are political risks when the public demand punishments regarding their wrongdoings. A more democratic society after the transition means that their power will subside as well. In overall, there is a likelihood that the power group does not prefer a transition. The public are likely to support it but their influence or voice on decision making is limited. Hence, according to these factors, North Korea is not a candidate that is likely to adopt a transition to a market economy.

Table 2: Factors Affecting the Intensity of Reforms and Transition

Reforms/ Transition	Intensity	Change in leadership	Support from the power group	Support from the public	External threats	Economic crisis
New Economic Policy (USSR)	Strong	No	Support from the majority	Support (opposition to the old regime)	No	Very severe crisis
The 1965 Economic Reform (USSR)	Weak	Yes	Support from the majority	Little support	No	Recession
Perestroika (USSR)	Medium - strong	Yes	Opposition from the majority	Support	No	Recession
New Economic Mechanism (Hungary)	Strong	Yes	Support from the absolute majority	Support (opposition to the Soviets)	No	No
Labor- management system (Yugoslavia)	Strong	No	Support from the absolute majority	Support	Strong threat by the Soviets	No
Chinese transition	Very strong	Yes	Support from the absolute majority	Strong support	No	Recession
Vietnamese transition	Very strong	Yes	Support from the absolute majority	Strong support	No	Recession/ Crisis

Source: revised from Kim (2005)

III. North Korea's Marketization and Its Impacts

Marketization in North Korea became a well-known phenomenon. A majority of North Korea households make a living by participating in market activities, most of which used to be anti-socialist behavior and punished accordingly. However, urban markets, which provided opportunities to purchase food amid the discontinued food rationing for most households, began to emerge during the Arduous March, and have been expanding up to now. It is estimated that more than two thirds of food and consumer goods are purchased at markets while the remaining one third is accounted for by rationing and self-production (Kim, 2017).

Table 3 presents the participation rate in the formal and the informal economy and income from them. We use the results from the surveys conducted by researchers in Department of Economics, Seoul National University, conducted a survey of North Korean refugees in 2011 and those at the Institute of Peace and Unification Studies (IPUS) at Seoul National University from 2012 to 2018.³ Both surveys show that about 75% of households work at informal markets while the participation rate in the formal sector reaches to about 50%.⁴ Moreover, the ratio of the median income from the formal sector to that from the informal one is either 1: 137 or 1: 200, which suggests the absolute dominance of informal income against the formal one. This dominance appears to have intensified from 2011 to 2018 because the ration of the median income has increased.

³ Syngjoo Choi, Jungmin Lee, Sokbae Lee and the author conducted the SNU survey. For the details of this survey, refer to Kim (2017). The IPUS (Institute of Peace and Unification Studies) survey was conducted by researchers affiliated with the institute, the details of which are explained in Chang et al. (2005).

⁴ Unlike many other surveys of North Korean refugees conducted in South Korea, these two surveys recruit the refugees arrived in South Korea within less than a year before the date of the survey. In addition, they targeted those who had not spend much time in a third country before they eventually arrived in South Korea. In more detail, most of them came to South Korea within a year after they escaped out of North Korea. This design is able to substantially decrease a bias of retrospective memory on the life in North Korea, which may affect the surveys recruiting the refugees who spent a substantial period in South Korea.

Table 3: Participation Rate and Income from the Formal and the Informal Economy

	SNU Survey (2011)	IPUS Survey (2012-18)
Participation rate in the formal economy	51.9	47.6
Participation rate in the informal economy	75.0	75.5
Nominal income from the formal economy (median, won) (A)	2,000	2,000*
Nominal income from the informal economy (median, won) (B)	275,000	400,000*
Ratio (A : B)	1 : 137.5	1 : 200
Number of respondents	132	911

Note:

*: These income are not deflated using CPI. However, North Korean exchange rates at *Jangmadang* and rice price have been quite stable since 2013. Hence, these figures may not be so different across years especially after 2013.

Sources: SNU survey (2011) and IPUS surveys (2012-2018)

Markets operate not only at the consumer markets but also other markets such as factors of production, real estate, labor, and money. For instance, the share of firms purchasing inputs from markets and that of selling products at markets range from 27 to 67% and from 16 to 55%, respectively (Kim, 2017). The private employment of labor, which is illegal, is known to be widespread. It is reported that small domestic firms making garments employ individuals who are in charge of specific stage of production. Real estate markets are established and agent called *deco* mediates seller and buyers. Buyers of new apartments obtain the certificate of the tenant right instead of ownership by the seller but regards them as *de facto* ownership. Some joint venture companies usually with Chinese firms open a small bank which pays interests to deposits. It appears that a small scale informal privatization takes place as well. Some firms or organizations sell their shops, restaurants, means of transportations, and small units of firms to individuals as a form of lease agreement. Also they accept privately owned firms as an affiliate

in a way that the firms are officially registered as being an affiliate to state firms or organizations.

An important question is whether or not this marketization is able to bring about fundamental changes in the North Korean socialist economy. In other words, is it possible that Kim Jong-un makes a transition forced by such marketization from below? Of course, no one can be sure about this possibility. It will be the first case in the history of socialism if it happens because all the other socialist countries made a transition either after the collapse of the old socialist regimes (Eastern Europe and the Soviet republics) or by a decision of the leaders at the top level (China and Vietnam). Nevertheless, one can forcefully argue that a transition from a society based on king's absolute power to a modern one was led by commercialization or marketization, which caused a compromise between the political power and the market power (Root, 1989).⁵ Another point one can make is that no other socialist countries had experienced such a widespread marketization North Korea has been experiencing. If the quantitative expansion of markets surpasses a threshold, they will be an insurmountable pressure on the regime to qualitatively change to a market economy.

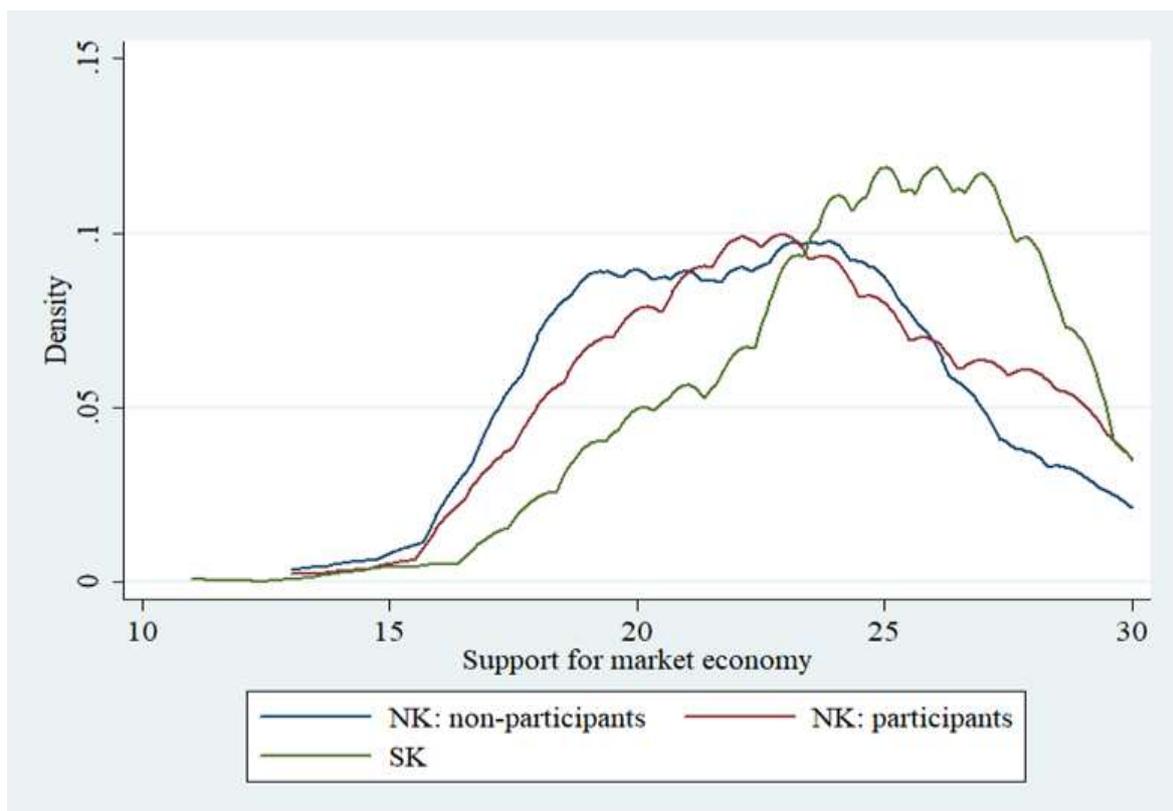
What effects does this marketization on North Korea? The literature suggests there are broadly three areas this effect exists: social norms; the formal economy; the power relations. As regards the social norms, marketization was found to increase support for a market economy, trust on most people, and adjustment for a life in a market economy.

Using the data from the surveys of North Korean refugees settled into South Korea conducted from 2014 to 2016, Kim and Kim (2018) found that the experience of participation in the informal economy while the refugees were living in South Korea is positively associated with support for a market economy measured by the extent of support for competition (vs no competition), private ownership (vs state ownership), and salary based on performance (equal salary regardless of performance). For a comparison, the survey of South Korea natives using the same questions took place. Aggregate score was computed to be equivalent to the sum of

⁵ In more detail, French absolute kings required financing for wars or royal expenses and thus borrowed from private financiers and entrepreneurs. It became more difficult to borrow or he had to face higher interests if the king defaulted his debts. Hence, he compromised on protecting these businesses which acted as a factor of constraining his absolute power. Similar stories can be found in many countries including Japan (Okazaki, 2002).

the three scores. Figure 1 compares the extent of support for a market economy of the three groups, namely, South Korean natives, North Korean refugees who had participated in informal economic activities, and North Korean refugees who had not. As Figure 1 shows, there is a clear order among the three groups in terms of the extent of support for a market economy. SK (South Korean natives) is ahead of the other two groups, followed by NK: participants (North Korean refugees who had participated in informal economic activities). Contrastingly, NK: non-participants participants (North Korean refugees who had not participated in informal economic activities) has the lowest support for a market economy among the three groups. The differences in the level of support between NK: participants and NK: non-participants are clear and statistically significant at scores either below 20 or above 26.⁶

Figure 1: Extent of Support of the Market Economy by Three Groups



⁶ Regression results controlling not only North Korean factors but also South Korean one confirm this finding. In addition, the experience of informal economic activities accounts for most of the difference in the extent of support for a market economy.

Notes: Surveys were conducted from 2014 to 2016. SK, NK: participants, and NK: non-participants refer to South Korean natives, North Korean refugees who had participated in informal economic activities, and North Korean refugees who had not, respectively.

Source: Kim and Kim (2018)

Using the data from the surveys of North Korean refugees living in South Korea, Kim and Kim (2019) recently find that trading at markets is positively correlated with trust on most people.⁷ In other words, by facilitating interactions with customers, market trading nurtures trust of North Koreans, which had been inhibited by the repressive regime and its secrecy. The magnitude of this effect is large: the probability of trust rises by about 60% if one participates in trading at markets in North Korea. This indicates the possibility of the emergence of an informal organization among North Koreans based on mutual trust. Such an organization is likely to contribute to spreading information and building a consensus among people, which does not necessarily support the regime. Hence, marketization leads to weakening the control power of the authorities on the people and the society.

It is also found that informal economic activities enhance human capital (Kim and Kim, 2016). In more detail, human capital measured by either stability of employment (holding regular jobs, self-employed or entrepreneurs) or income in South Korea is positively associated with the share of informal income and the duration of informal economic activities in North Korea. Such a positive relationship between the two variables can be explained by the accumulation of understanding about the market economy and increased skills and entrepreneurship by learning by doing at markets. Activities at markets encourage participants to actively work; both gain and loss go to the individual responsible for the activities and thus he/ she becomes more active at markets utilizing their skill as much as possible. This is rather a new phenomenon generated by the informal economy; in socialism it was not necessary for him or her to exert a maximum effort. In this way, people are encouraged to develop human capital by participating market activities. In terms of the size of an effect of informal economic

⁷ This study utilizes the data from the three surveys conducted in 2011, 2014 and 2015. The number of the respondents was 485. Regression results controlling demographic variables, North Korean-related ones and South Korean-related ones also confirm this result.

activities on job status suggests that change in one-standard deviation of informal economic activities (4.9 years) raises the odds of having a stable job by 40%. In addition, the experience of informal economic activities increases household income in South Korea from 18 to 23%. Particularly, production and repair are the most effective in holding a stable job in South Korea.

The above findings suggest that informal economic activities are able to affect the belief, the attitude, and the behavior of North Koreans. The traditional system of a passive individual believing loyalty to the dictator is the utmost importance in their life tends to disintegrate due to marketization. Instead, individualism asserting autonomy in one's life and family-centered mindset has been emerging. It is likely that this change poses a mounting pressure on the old regime.

The effects of marketization does not end at the individual level. It can also affect the power structure in the system through bribery. Kim and Koh (2010) claim that bribe-givers pay bribes to government officials with a view to evading punishments regarding market-related activities. Also households want to obtain privileges on their businesses by giving bribes. In this way, bribe-givers and bribe-takes make a collusion regarding informal economic activities.⁸ Upon obtaining unofficial permission and protection from government officials, bribe-giving households are able to conduct their businesses rather safely. This collusion contributes to the expansion of marketization as market activities become semi-official. However, it poses a dilemma to Kim Jong-un. He needs to penalize bribe-taking officials and prevent marketization from expanding to keep his power but he can't. From the perspective of government officials, such bribes are the main source of their survival as their official wages are far below the subsistence level. If bribes are not taken, they cannot survive economically. Understanding this problem, Kim pays a benign neglect to the practice of taking bribes by officials as long as they are loyal to him. The bureaucrats also understand that they should be loyal to Kim politically but economically submissive to the power of markets by taking bribes. A conflict between political consideration and economic one may arise if the dictator orders to eradicate market activities and to arrest participants in them. Utilizing their advantage of asymmetric information, they tend to sabotage such an order to protect their economic interests.

⁸ The effect of bribery on North Korean regime was analyzed in more detail in Kim (2010).

The prevalence of bribery was indicated by North Korean refugees living in South Korea. Some of them said, “One has to pay bribes at every one step in North Korea”. This is caused by the fiscal collapse, which prevents the government from paying wages sufficient for living. For example, a monthly wage of a government official is only 3000 North Korean won, which is only about 40 cents if the unofficial exchange rate at markets is applied. However, a family of four members need about 400,000 – 500,000 North Korean won per month. A bulk of this gap needs to be financed by other sources including informal economic members of other family members and bribes.⁹ In fact, using the data from the surveys of North Korean refugees, Kim and Yang (2012) find that about 10% of household total expenditure was paid on bribes. When this figure was converted to the share in GDP, it is about three times as much as that during *perestroika* in the Soviet Union.

Given such a prevalence of marketization and collusion between market participants and bureaucrats, one can argue that marketization is irreversible. One attempt to reverse it was made by the currency reform in November 2009, which ended up with a great failure. Before the reform, the North Korean authorities might have believed that shrinking money available for market activities by the currency reform could hit them to a large extent. However, they misunderstood that the root cause of marketization was on the supply side not the demand one. In other words, the shortage of production in the socialized sector induced marketization, which increased not only efficiency in distribution of produced goods but also production to some extent. The consequence of the reform was that it hit not only the demand but also the supply, which significantly reduced the welfare of the population. This incidence can be regarded as the first event where markets won the state.

Marketization leads to informal privatization in North Korea. Businessmen give bribes to government officials and managers of state owned enterprises, who allow them to own assets formerly belonging to the state. This process can further transform the economic structure of North Korea from state ownership to unofficial private ownership. However, this unofficial ownership has certain limitations. Because of being unofficial, property rights are not secure,

⁹ Government officials tend to receive food rationing regularly while a majority of North Koreans are not able to do it. However, the sum of official wages and food rationing converted to money income is still very short of the subsistence level.

which prohibits investors from making investments particularly in the manufacturing sector that normally require a large amount of investment during an extended period. This is why informal privatization in North Korea is confined rather to the service sector and small-scale businesses.

Kim Jong-un appears to accept the positive role of markets. Indeed, marketization seems to have intensified during his era. However, at some point of time, the uncomfortable coexistence of marketization and dictatorship could erupt into a full-scale war. Markets prefer autonomy and no intervention by the dictator, which are direct conflict to Kim's intention to maintain his absolute dictatorship. As we argued before, he is unlikely to adopt a transition toward a market economy. Yet, markets have been expanding, experiencing spill-over to various areas, claim a territory that formerly belonged to the state, transforming the mindset and the attitude of North Koreans, and changing the power structure inside North Korea. Perceiving this forthcoming danger, Kim Jong-un would have thought to make attempt a third way. His emphasis on domestic production (*guksanhwa*) based on science and technology indicates that he wants to pursue a third way combining socialist economic principles with science and technology. For him, the current marketization is one step backward utilizing market spirit for the time being for the purpose of economic growth. However, if revenue from this market spirit helps to build capacity of domestic production reinforced by science and technology, he would have believed a two-step forward following one-step backward and thus a reversal to the socialist economy without markets can be a reality.

The above analysis suggests that South Korea's economic engagements should be driven by purpose of inducing North Korea to adopt a market economy. Purpose-driven economic engagements are economic instruments utilizing marketization from below, empowering household market activities and forcing Kim Jong-un to compromise on the market economy. This forced transition allows the coexistence of Kim's power and the power of markets, which can serve as an institutional basis for economic integration of the two Koreas. This is a more realistic scenario than the simultaneous transformation toward a market economy and a democracy, which is hardly possible without a violent conflict with Kim's power. Unconditional economic engagements are neither desirable. Economic engagements missing this objective can help Kim to prolong his absolute dictatorship and to make an attempt to reverse marketization toward the re-establishment of the socialist economic system although

such an attempt is quite unlikely to be successful.

IV. Conclusions

This paper looks at Kim Jong-un's dilemma between keeping his power and a transition toward a market economy. Without a transition to a market economy, it would not be possible that North Korean economy takes off for sustainable economic growth. At the same time, it predicts that Kim is unlikely to become North Korea's Deng Xio Ping unless he accepts some sacrifice of his power.

This paper focuses on the effects of marketization on North Korea, and suggests that we should use prevalent marketization in North Korea as a transformative leverage. The existing works find that marketization has been affecting various aspects of North Korea ranging from mindsets to power relations. Hence, it maintains that inter-Korean economic cooperation should be designed with a view to empowering household market activities and maximizing the possibility of making a transition to a market economy.

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