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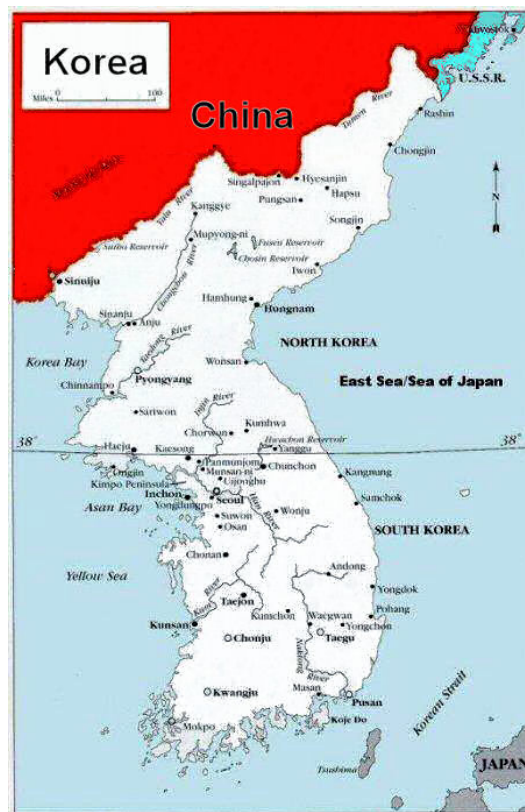
The Future of North Korea: System Conservation or Guided Market Economy?

Georgy Toloraya

The spectacular advancement in the peace process during 2007 (the six-party talks and the U.S.-DPRK talks as well as increasing North-South cooperation), progress in solving the nuclear issue (at least partly) and in normalization of the DPRK's relations with the West bring to the fore the question of the DPRK's future course. Provided hostility diminishes and its external security is guaranteed, will the country seize the chance to modernize and prosper, integrating into today's world?

The North Korean leadership seems to wish to use these opportunities, arguing that since DPRK statehood and defense are now firmly established, now is the time for economic progress. The joint New Year Editorial for 2008 for the first time stated that "building of an economic power" is the priority while "the objective of our advance is a great, prosperous and powerful socialist country" (with a target date of 2012 – Kim Il Sung's 100th anniversary). Might the introduction of "the people's-living-first policy" principle [1] signal changes in the economic management system to make it more market-oriented?

In considering North Korea's possible reform and transformation, we cannot but wonder how much the national specifics that have determined North Korean socialist practices will count. If the country sooner or later moves to adapt to the market, will the North Korean way of doing so again be unique? Anything would be progress in comparison with the traditional Stalinist inefficient economic system (conditionally acceptable only for the production of armaments). But could progress be stopped on the way to a full market economy and at what stage?



Does marketization necessarily mean that the North Korean variant of the economic system would be similar to other, basically liberal and therefore internationally accepted ones? I think the DPRK's national interests are likely rather to dictate that it adopt a "state market system", not unlike East Asian "guided capitalist" models of development, but still stressing national uniqueness, "self-reliance" and "socialist principles". How should the world react to possible attempts to wrap economic reforms in such *juche* clothing?

Of course these issues could be analyzed under the presumption of a politically stable DPRK, whose sovereignty is challenged neither from the outside nor from the inside, so that for years to come we will still be dealing with the same—although gradually changing because of generational shift—ruling elite. Preservation of the leadership would mean there would be no criticism of former policies, including economic policies. The nomenclatura was brought up in the "bosom of the Great Leader" and many North Koreans may sincerely believe in *juche* ideas (which have actually proved effective in assuring regime survival) and socialist principles. After total economic collapse killed hundreds of thousands without weakening the control of the economy by the same Pyongyang leaders, those leaders probably believe that economic change can be manipulated any way they wish.

Pyongyang still regards the economic innovations under way since the 1990s as an instrument for survival, not a development strategy. Therefore, changes in the economy are not yet bringing about system transformation. Yet could such a transformation happen and in what manner?

North Korea's Basic Economic Approaches and their Results

The words "reform" and "openness" are still not acceptable to Pyongyang. Kim Jong-il himself stated as much during his October 2007 talks with President Roh Moo-hyun of South Korea.[2] Under the present leadership, any economic reforms would most likely not be called such. They would take place in an unpublicized manner and without discussion. A crucial issue for legitimization of changes in the framework of North Korean ideology is this: how can the process of change be explained from the point of view of traditional North Korean theories, and to what extent would it be influenced by them?



Kim Jong-il and Roh Moo-hyun (right)

In the eyes of the Pyongyang leadership, any economic policy should guarantee sovereign economic decision-making and be independent of the outside world. It should also preserve political stability. The DPRK rulers from the very start proclaimed “economic independence” to be a key component of protecting national sovereignty and the country’s security.[3] Obvious enough in a postcolonial, war-torn economy, it was necessary to “overcome the one-sidedness,” but the actual course was soon altered to “concentrating all attention on guaranteeing self-sufficient development of the economy.”[4] That economic rationale was abandoned by the 1950s and the goals were politicized. Kim Il Sung’s logic called for “building a diversified economy so as to produce domestically most of the products of heavy and light industry and agricultural produce.”[5] The system of workforce mobilization was established in accordance with Stalinist prescriptions: “if we conduct political work properly, increase the political consciousness of the masses, their revolutionary enthusiasm . . . regardless of the size of the economy there is plenty of room for its speedy development.”[7] The doors of the nation’s economy were closed to the extent that North Korea came to resemble some of the world’s least developed countries, in which foreign trade equals about 10 percent of the gross national product (GNP).[8] Economic thinking has not changed much since then. The same theories are still taught at universities (although with a small addition of “bourgeois economic theories”) and remain the guidelines for practical conceptualization. The DPRK economy is still subordinate to the regime’s political purposes to the extent that it has lost its own substantive function.[9]



Pyongyang

During a recent visit to Pyongyang the author was told that *songun* (priority to the army) determines economic policy and that the military, being “the vanguard of economic construction”, can solve all the economic problems the country faces by directly engaging in economy now that DPRK defense and statehood are on a firm footing. The position of “priority of defense industry” was stressed again in the New Year Editorial.[10]

Economically speaking, the lack of savings and investment was and remains the chief reason for North Korea’s economic malaise. If investment at the beginning was funneled into industrial development at the expense of agriculture,[11] in the period from the 1970 to the 1990s this source of growth was exhausted while low-efficiency and over-diversified industries could not generate enough savings. The sorry state of agriculture led to agricultural shortages, and no funds were available to import food. The DPRK’s economy entered a period of stagnation (and at times crisis) after the initial industrialization phase was completed in the early 1970s, declining in the 1970s and 1980s. While remaining technically backward, it was plagued by a lack of innovation, dependence on imported raw materials and fuel with no possibility of generating financial resources to pay for them, degradation of its capital stock (even compared with the USSR and Eastern European countries), high costs, and low quality of its industrial products. In the 1970s and 1980s the country fell into a classic poverty trap, with economic growth insufficient to replace deteriorating capital stock or invest in new technologies to increase productivity.[12]

For continued economic growth, North Korea required external investment, but this dried up by the beginning of the 1990s with the breakup of the USSR. The North Korean centrally planned economy entered a downward spiral from which it seemed it might never recover.

Much of the country’s industrial stock was lost in the 1990s.[13] Floods in 1995–96 made worse by extensive soil degradation and deforestation not only caused damage (up to \$15 billion) but also resulted in a sharp decline in agricultural output.[14] The famine that ensued resulted in the deaths of hundreds of thousands of people[15] because no alternative to the state production and distribution system existed. Humanitarian catastrophe led to the breakup of the centrally planned command and distribution system—the arteries of the economy. By the mid-1990s the epoch of the “command economy” actually came to an end.[16]

Reports on recent microeconomic improvements do not imply any corresponding macroeconomic trend. The structure of the GNP has changed because of the virtual termination of a large part of industrial production while consumption has grown somewhat with the help of individual production and trade as well as foreign aid. But that does not constitute economic growth in the usual sense of the word—at least not for internal production. Some positive figures indicting consumption growth since the early 2000s are mostly attributable to economic aid, chiefly from China, South Korea, and international relief organizations. In 2000–2004, as calculated by the Korea Institute for International Economic Policy (KIEP), foreign economic assistance to North Korea accounted for 90–100 percent of the yearly increase in GNP.[17]

The North Korean economy is still not working as an industrial economy. Only macroeconomic reforms can take it out of its dead end.

Reform or Tinkering with the System

Since the beginning of its acute economic crisis, North Korea tried first to overcome economic difficulties by relying on its own forces and limiting changes to cosmetic ones. At first it attempted to restructure the economy by depending on internal resources.

Beginning in the mid-1980s, the leadership toyed with the adoption of market elements without changing the basics. These changes were prompted by the threat of a gradual change in the country's relations with Eastern Europe—from one of cooperation to one based purely on commerce. Because North Korea needed to create a profit-generating mechanism, most of its experiments in the 1980s and early 1990s were related to the international sphere (joint ventures, export-processing plants, foreign trade self-accounting companies). Kim Il Sung initiated the adoption of a number of liberal laws aimed at attracting foreign capital.[18] Nevertheless, inside the country both macroeconomics and microeconomics were supposed to remain socialist, and any private activity or uncontrolled trade was prohibited until the beginning of the crisis. Then, the control system itself fell apart.

The economic history of the DPRK over the past two decades is the story of missed opportunities rooted in the reluctance and inability of political leaders to change the rules of the economic game in accordance with new challenges. It is ironic that Marxist theory, which was the theoretical foundation of North Korea's economic system, found unexpected confirmation in the DPRK in 1990s. Among other things, Marxist theory says that the "productive forces" determine the "relations of production." The virtual disablement of North Korea's centralized industry made it necessary for the people to resort to market-driven economic activity for survival—first, the simplest forms of barter, then chaotic, money-mediated exchanges based not on the former central distribution symbolic prices but on real cost proportions, often measured in foreign currency.[19] This process was given tremendous—over-hyped—attention in the West, where it was largely seen as signifying the introduction of market principles that would eventually lead to the breakup of the North's centrally planned economic system and then (most interesting to observers) to the collapse of the political regime.

However, the uncontrolled breakup of the command economic system does not necessarily signal the birth of a capitalist market system. The economic reality that started to emerge in the DPRK in the 1990s was a primitive quasi-market division of labor with mostly horizontal ties on a regional basis. No monetary system existed, and no macroeconomic policy too shape. In the absence of leadership from above, it was unlikely that these processes could lead to spontaneous emergence of a modern economic system. "Productive forces," especially a modern industrial and postindustrial economy, cannot develop on such a narrow basis unless further market-oriented policies are implemented. In the 1990s, however, Kim Jong-il was concerned more about his power than anything else, and it was not possible for him to risk contradicting the majority of hardliners in the country's leadership as they tried to check microeconomic changes. By the time he consolidated his power base, the economic processes under way could no longer be ignored or dealt with exclusively by bans and persecution, which were anyway impossible because of the magnitude of these "deviations from socialism." Kim Jong-il seemed to understand the need for internal economic reforms. According to a Kyodo Tsushin report of 19 December 1996, he spoke about it that month while visiting China where microeconomic issues were high on the agenda. This China experience was seen in Pyongyang as not quite relevant, however, owing to the different political situations in the two countries and the different economic realities - China started introducing market reforms in the agricultural sector with the "household contract system" but in North Korea agriculture has limited potential.

However, embracing the new market-influenced economic reality proved controversial and the initial efforts naive. Take for example the much-lauded so-called government measures of July 2002. Pyongyang, whose position vis-à-vis the West had considerably improved in 2000–2002, probably hoped these changes would prompt its neighbors (especially Japan and South Korea) to increase economic and financial aid, thereby helping increase consumer supply and reinvigorating production on a more realistic commodity exchange basis using the new flexible price and currency system.



North Korean products

The goal, however, was not to change the principles but only the methods of economic control. The official explanations remained totally anti-market. In interviews with this author, high-ranking North Korean economists made the point that, although the "previous price system" followed the example of the USSR, where costs for production of basic industrial goods—coal and iron—were taken as a scale for the whole price system, the new DPRK system took the price of rice as its basic equivalent. The increase in wages (much lower than the increase in prices) was based on calculation of a "consumption basket" reflecting fixed official prices. It is true that microeconomic decision-making was liberalized and in many cases directors of plants were given freedom to use state property in ways they considered most efficient. They were allowed to do this because central authorities relieved themselves of responsibility over "local industry" enterprises, allowing them to solve their problems themselves. However, most were not very successful. Enterprises received access to foreign markets, mostly to get foreign currency in any form possible, but strategic items like electricity, coal, and products with direct relevance to defense were still centrally controlled, which limited the ability of enterprises to be competitive.[22]

The "measures" of 2002 were not perceived in Pyongyang as true reforms, nor were they even seen as a "first step" in reform. They were not based on a long-term vision and in fact were not part of any master plan with an inner logic and sequence. Therefore the half-heartedness and controversial character of the measures soon became obvious.

Marketization and Its Consequences

The changes in recent years remained mostly spontaneous, and the 2002 reforms only opened the floodgates to market forces. This is significant because, regardless of the intentions of DPRK leaders, the logic of the process called for more changes. The economy actually changed from centrally planned to multi-sectoral, combining the state sector (largely inoperational, except for the military which is quite separate and in fact a "state within the state"), the capitalist sector (joint ventures and trading companies, free economic zones), the semiprivate sector (especially in agriculture and services), and the shadow (criminalized) sector. [23] The testimony to this is plentiful and visible. Beginning in the early 1990s, markets greatly increased in numbers and size. They now number approximately 500 around the country and about 20 in Pyongyang alone.

"Shuttle merchants" deliver merchandise from China in exchange for local minerals and natural products, much as in Russia at an earlier period. Foreign-currency shops increased in number and became the major source of commodities for the middle class. People started small home-based production. The service sector flourished, including restaurants, billiard parlors, karaoke bars, rooms for rent carved out of personal living space, and repair services. Quasi-banking services emerged, and private lenders appeared.[24] All efforts to check these developments through periodic campaigns were in vain.

Did the government intend to adapt its economic guidance system to these new realities? Probably not. Personal interviews indicate that even the most predictable negative by-products of the 2002 measures were quite unexpected to the reformers. One such result was spiraling inflation, with the won devaluing from the official 150 won to \$1.00 to more than 3,000 won to the dollar at market rates within five years. This factor alone severely undermined the state sector and the material situation of those working for it. Social stratification became a major source of social tension. Among those able to work, 30 percent are now unemployed. Although 70 percent of the population of North Korea receives 250–380 grams of food per day, a new class of affluent people has emerged. As in Russia, most members of the new, affluent class are connected with the shadow sector, with semi-legal services, or they capitalize on their official bureaucratic positions to gain profits.[25]

Unless checked, the criminalization of the economy could become a major concern not only internally but also internationally (imagine North Korea becoming a safe haven for the Asian underworld). Low-level corruption in North Korea is already widespread, and (as happened in South Korea) it might become a serious problem in the building of a modern transparent economy. Also, in Vietnam, to which North Korea now seems to be looking for inspiration, growth is attributable mostly to the inflow of foreign capital, and one of the consequences has been rampant corruption.

Measures to curb the spread of capitalism were by and large designed to reduce social tensions by giving a guaranteed minimum to the most underprivileged layers of industrial workers and public servants, making state-sector workplaces more attractive, and strengthening control over the population. Controls on markets are said to have been tightened since Kim Jong-il's 2007 summit meeting with President Roh and the resulting assurances of more help from South Korea. Plans are rumored to exist to prohibit the sale of industrial goods at the markets and to channel them all into state-run shops.

However can the clock be turned back? The introduction of market principles into what was supposed to become the international market-oriented sector of the economy became one of the leadership's priorities. This process, which started in the mid-1990s, included attempts to create joint ventures and establish free economic zones as testing grounds for new policies. Most significant was the attempt to start the Rajin-Sonbong special economic zone in 1997 based on the "testament" of the late Kim Il-sung. Although many of these efforts were unsuccessful owing to North Korea's isolation, the closed character of its economy and the lack of trust in it, and the insufficient experience and poor decision-making capabilities of North Korean "business people," cooperation with South Korea turned out to be a major channel through which to introduce capitalist management. The Kaesong free economic zone, the Mt. Kumgang tourist project, and the upcoming Mt. Paektu tourist project are examples. Recent agreements between the prime ministers of North Korea and South Korea on developing Haeju, cargo traffic, communications in the Kaesong zone, and shipbuilding facilities in the DPRK with ROK assistance are encouraging as they broaden the scope of the South Korea-sponsored market sector in the DPRK's economy. (However, it remains to be seen whether the Lee Myung-bak administration presents new conditions for their implementation.)



Workers in the Kaesong Economic Zone

As to whether this might mean that the ruling elite is ripe to embrace more radical changes, at least there is now a window of opportunity that is affected by a multitude of factors: military, political, economic, and personal.

The Road Ahead

To start meaningful economic changes, North Korea obviously needs comprehensive and irreversible security guarantees.

The main difference between the DPRK and, say, the People's Republic of China of the 1970s and 1980s or Vietnam since the 1990s is that when the PRC and Vietnam started reforms their security was not seriously threatened. Now is a crucial time as international hostility to the DPRK and its isolation has until recently been the most important single factor preventing reform. A diplomatic solution to guarantee North Korea's national security would enable that part of North Korea's elites who understand the need for change to try modernization measures without fear for their future.

It seems that the core of this "new deal" may be Korean nationalism. In recent years the "interests of the nation" have been declared to be more important than the interests of class or ideology. Today "a great, prosperous and powerful country" [26]—kanson taeguk—not a socialist utopia is more and more on the agenda.

The critical issue today still is this: will the leadership dare to embark on comprehensive reform? It is not as monolithic on the subject as is usually supposed. Kim Jong-il seems to have to listen to both "pragmatists" and "conservatives," which makes formulating a coherent policy extremely difficult. So far attempts toward that end have been less than successful, not least because people with economic knowledge have very limited authority in Pyongyang. The top leaders, many of whom formed their perspectives in guerrilla warfare, still try to have their cake and eat it, too, by limiting changes to an essential minimum. They might fear, however, that the logic of the changes could prompt more changes, which would eventually get out of control. Thus, the mission of the international academic efforts might well be to explain to North Koreans their options.

Resolving the nuclear issue by providing security and economic assistance to the DPRK could become a major factor as North Korea's leaders make up their minds on an economic model.

What are the possible scenarios? Setting aside regime change and the absorption of the North by the South, one immediate scenario that cannot be ignored is system conservation. A prolongation of the confrontational military-political status quo or halfhearted security guarantees, especially if the nuclear deal is not finalized under the current U.S. administration, could prompt hard-liners to try to freeze the reforms and eliminate the most obvious "deviations from socialist principles." The system conservation experience during the 1990s could be repeated under more favorable conditions now that Pyongyang feels its immunity is guarded by its nuclear deterrent and it harbors hope for at least some economic aid.

DPRK authorities are already trying to increase centralized control over the state sector of the economy, to revitalize it, and at the same time to limit the spread of market relations. The authorities decided to crack down on markets recently, prohibit "second jobs" (trading) for employees of state enterprises and ordered that "any elements that undermine our system and corrode our socialist morality and culture and our way of life" not be tolerated. The government has been instructed to strengthen centralized control by "concentrating all economic work in the Cabinet and organizing and carrying it out under its unified command."^[27] A large part of the world community, taking into account the not fully resolved issue of weapons of mass destruction and military threats as well as the dangers that might be associated with a North Korean collapse, might in such a case be prepared to pay a comparatively small price for keeping the DPRK quiet and not causing problems. That would mean finding at least some fixes to the North Korean economic crisis by simply "feeding the beast" (even in the absence of meaningful changes in DPRK) to minimize political and security risks.

In such a case, economic assistance would be based on the shopping lists provided by North Koreans and would not do much to modernize the country. Russia has already had this experience. Its economic assistance to North Korea in the 1960s and 1970s sucked the USSR into a downward spiral of increasing North Korea's requests while being unable to help solve its long-term economic problems. The above scenario really cannot be a long-term solution. Sooner or later the DPRK will have to transform its economic theory and practices. Otherwise it will collapse or, at best, fall further and further behind the rest of humanity.

It can be assumed that because of political considerations the role of the state in economic activities will remain much larger than in other classic transitional countries at early stages of reform. Especially intriguing are Kim Jong-il's remarks, reported in the Korea Times of 28 October 2007, about his intention to follow the Vietnam-style *doi moi* economic reform and openness policy because of the supposition that the Vietnamese example is closer to the needs of the DPRK than the Chinese one. The *doi moi* reforms, because of the smaller size of the Vietnamese economy and its export orientation based on cheap labor, would be more suitable for North Korea from the point of view of preserving stability. The recent declaration of the principle of "ensuring the greatest possible profitability and the principle of developing external economic relations ..." is especially interesting in this context.^[28]

North Koreans have also been known to study the South Korean experience. The South Korean development model is quite relevant to North Korea in that, in the 1960s and 1970s it was based on state planning, strong macroeconomic control, introduction of foreign capital and export orientation, with big business conglomerates as the driving force of economic growth. This model cannot be imitated, but it can provide a reference for DPRK modernization.

The international community now has a unique opportunity to influence the DPRK's process of selection and implementation of economic policy. The long history of developed countries' aid to developing countries suggests that aid can be futile, even counterproductive, in the absence of complementary reforms.^[29] Therefore, economic assistance to the DPRK as part of the package for the solution of the nuclear problem should be aimed at assisting system transformation, not at conservation of the outdated model by uncritically satisfying North Korean requests.

A program to that effect, based on a desirable prognosis for North Korean economic development, should be prepared jointly by prospective donors on a coordinated basis in the framework of the six-party talks. It should of course be acceptable to the DPRK authorities, but it should be made clear to them that assistance will not be granted uncritically and automatically, but only in accordance with the agreed strategy aimed at achieving the country's modernization and economic integration.

The critical issue, as the examples of other transit economies show, is creating a class of proprietors and owners. In the DPRK, creeping privatization is already happening—lots of foreign trade and production companies operate in different areas of the country under the military, the party, local government organs, and security services, and the party, military, and security bureaucracies benefit from this system. This process must be tacitly guided from the top (unlike in Russia, where it was chaotic and controlled by rival factions and criminal circles). Privatizing state property entities "in bulk" could in the long run result in the creation of economic conglomerates resembling South Korea's *chaebol*, but with a greater state role. This is already happening—quite large conglomerates are emerging, like "Korea Pungang Corporation" with capital around \$20 million and an average annual volume of business around \$150 million ^[30] They could be welcome partners for South Korean investors and the engines of an export and innovation drive. Such new economic entities that would depend on the foreign markets for supply and sales would break the country's isolation.

Structural Priorities and the Market

A modern economic structure has to be established. To integrate into the international and regional division of labor, North Korea will have to rely on the comparative advantages it possesses—cheap and comparatively well-educated labor, mineral resources, and location. The structure of the DPRK economy could change tremendously. Russian researchers suggest that certain outdated industries—especially machine building and the chemical industry—should be liquidated, while others such as metallurgy should be rebuilt on a selective basis. To solve the inevitable unemployment problem (which is already a fact of life), the workforce should be retrained and employed at new productive facilities.^[31]

The modernization of the DPRK's existing economic structure, with its heavy reliance on industry, cannot be achieved solely by the invisible hand of the market. Ideological reasons for protecting the nation's sovereignty might result in placing a high priority on inefficient branches, especially to the military-industrial complex. North Korea's modernization needs strong government regulation of industry and a coherent structural policy supporting priority industries in which the DPRK is internationally competitive.

Export-oriented growth is already undergoing a test in the Kaesong foreign economic zone; it has had many difficulties, but they stem from the country's continuing isolation, not the concept itself. With wages much lower than in China, North Korea could be a future site for South Korean and even Chinese companies to relocate production of simple consumer goods, including textiles, footwear, simple electronics, and household goods. Already Chinese and South Korean capital compete in the North Korean economy and the ROK is determined to take the lead. Shipbuilding and other capital- and raw material-intensive industries could become areas of specialization. Information technologies and outsourcing could also provide employment provided that limitations on the export of dual-use technology are lifted as normalization proceeds.

Another sector that could survive international competition is natural resources—the mining of ferrous and nonferrous metal ores (including uranium); nonmetallic minerals; primary production of iron, steel, copper, zinc, lead, and building materials (cement, magnesite); fisheries and forestry. Traditional industries oriented toward the end user that have an immediate stimulating effect on the consumption market should also be modernized and helped out of stagnation. These include food processing, clothing, building materials and similar activities. To make use of the country's competitive transit potential and its capacity to become a recreational and tourist (especially eco-tourist) destination, the systems of transportation and communication will have to be fundamentally rebuilt, including new roads and railroads, ports, airports, communication facilities, and hotels.

Infrastructure projects should be developed on a non-commercial basis, probably using official development assistance (ODA). DPRK entry to international financial organizations will be important, although many difficulties remain to be overcome.

Massive education and training programs for North Korea's economic managers should be put in place. These could start with distance education via the Internet:

Those in training would then not need to leave the country, making it cheaper and, in the eyes of the DPRK leadership, protecting the trainees from ideological contamination. Such training, which would be much more useful than energy or food aid, could be the first joint action of multilateral economic assistance to the DPRK. Armed with this knowledge, North Koreans could formulate and implement the variant of the market economy best suited to the specifics of the country and its geopolitical situation.

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Notes

- [1] Rodong Shinmun, 1 January 2008
- [2] Choson Ilbo, 4 October 2008
- [3] Kim Il-sung's slogan was "Our party's line of building an independent national economy is the embodiment of the juche idea in economic construction." See Kim Il-sung, "Answers to the Questions Raised by Foreign Correspondents" (Pyongyang [Russian edition], 1974), p. 179.
- [4] Hwang Do Young, *The Post-War Reconstruction and Development of People's Economy of DPRK*, Moscow (Pyongyang: Political Literature Publishing House, 1958), pp. 9–10.
- [5] Kim Il-sung, *Selected Works [English edition]*, vol. 3 (Pyongyang: Foreign Languages Publishing House), p. 399.
- [6] Kim Il-sung, *Selected Works [English edition]*, vol. 4 (Pyongyang: Foreign Languages Publishing House), p. 558.
- [7] Genaro Cheka, *Rice and Steel [Russian ed.]* (Pyongyang: 1977), pp. 117–118.
- [8] *Cooperation of Russia with East Asian Countries in the 90s*, (Moscow: Institute of International Economic and Political Studies, 1999), pp. 122–23.
- [9] Russian researchers argue that in the past the subordination of the economy was justified by military-political circumstances, but now inertia rules; see I. Bogdan, "North Korean Economy in the Modern World," in *Korean Peninsula: Myths, Expectations and Reality*, vol. 1 (Moscow: IFES, 2001), p. 53.
- [10] Rodong Shinmun, 1 January 2008
- [11] Kim Il-sung, in *Selected Works*, vol. 4, page 40, argued: ". . . a formerly backward agrarian country like ours has no other way but to draw a certain amount of funds for socialist industrialization from the countryside."
- [12] Bradley O. Babson, "[Economic Perspectives on Future Directions for Engagement with the DPRK in a Post-Test World](#)," The Stanley Foundation: Policy Analysis Brief (December 2006).
- [13] By early 1997, the average production of major plants in North Korea was, according to optimistic South Korean estimates, a mere 46 percent of capacity, while some Russian experts presumed in 1998 that it was only 20–25 percent of capacity; see *Cooperation of Russia with East Asian Countries in the 90s*, p. 122.
- [14] [Database](#), Humanitarian Development Resource Center for DPR Korea (HDRC), 2004.
- [15] Some say up to 2 million, potentially 10 percent of the 1995 population (see Marcus Noland, "[Famine and Reform in North Korea](#)" [working paper (WP 03-5), Institute for International Economics, Washington, D.C., 2003, pp. 12–13], ; also Sue Lautze, "[The Famine in North Korea: Humanitarian Responses in Communist Nations](#)" (Tufts University, School of Nutrition Science and Policy, Feinstein International Famine Center, June 1997), P. 10
- [16] William Brown, in "North Korea: How to Reform a Broken Economy," in *North Korea: 2005 and Beyond*, ed. Philip Yun and Gi-Wook Shin (Stanford: Walter H. Shorenstein Asia-Pacific Research Center; Washington, D.C., distributed by) Brookings Institution Press, 2005, p. 64, observed that by 1996 or 1997 North Korea's economy, if not its political system, had indeed collapsed. An economy, by one definition, is a social system that allows the specialization of labor. By the late 1990s, specialization of labor had essentially ended for millions of farmers and industrial workers. Hungry coal miners abandoned their mines and scratched bark off trees to find something to eat while freezing farmers abandoned their fields and combed the hillsides for heating fuel. Without the "great leader" or a central plan to tell them what to do, and with markets and money strictly illegal, trade between coal miners and the farmers simply stopped.
- [17] According to KIEP data released in September 2007, in 2004, GNP in North Korea was estimated to have grown by the equivalent of \$458 million, while overall foreign aid was \$419 million.
- [18] Legal changes included the laws on free economic zones (8 April 1990), foreign investment (10 December 1992), foreign enterprises (10 December 1992), contract joint ventures (10 December 1994), foreign investment and commercial enterprises and individual taxation of foreigners (8 April 1993), foreign currency regulations (8 April 1993), banks with foreign participation (10 December 1993), customs (10 December 1993), and foreign trade (March 1998).
- [19] M. Trigubenko, T. Neelova, and G. Levchenko, "Problems of Korean Peninsula," in *Russian Diplomacy in Korea in 1990s* (Moscow: Institute of International Economic and Political Studies, 2000), p. 15.
- [20] Georgy Bulychev, *The Political Systems of the Korean Peninsula States [in Russian]* (Moscow: MGIMO Publishers, 2002), p. 95.
- [21] Prices for food, fuel, and electricity rose 26-fold, on average, and prices for rice rose 550-fold. Public transport fares increased by up to 20-fold. The new rate of exchange for the DPRK won—150 won to \$1.00—was introduced; the rate was based on the world market price for rice in dollars.
- [22] "[Recent Changes in North Korea](#)" (Seoul: Ministry of Unification, 2005).
- [23] T. Lezhenina, *East Asia: Tendencies, Contradictions, Conflicts* (Moscow: Institute of International Economic and Political Studies, 2001), pp. 193–95.
- [24] Andrei Lankov, "[North Korea: De-Stalinization from Below and the Advent of New Social Forces](#)," *Harvard Asia Quarterly* vol. 9, no. 4 (Fall 2005).
- [25] Some estimates suggest that approximately 150,000 state security service operatives use their education, knowledge of how the state operates, and privileged access to contacts and transportation to benefit from illegal operations, including smuggling, customs evasion, and assistance to those illegally entering China; see Hazel Smith, "[Brownback Bill Will Not Solve North Korea's Problems](#)," Jane's Information Group, 21 January 2004.
- [26] Rodong shinmun, 1 January 2008.
- [27] Ibid.
- [28] Ibid.
- [29] Stephan Haggard and Marcus Noland, "[Economic Implications of Summit Agreement](#)," Policy Forum Online 07-082A (San Francisco: Nautilus Institute, 30 October 2007).
- [30] [Daily North Korea](#).
- [31] *The Problems of Korean Peninsula and Russian Interests* (Moscow: Institute of International Economic and Political Studies, 1998), 21, p. 142.