

North Korea's Economic Futures: Internal and External Dimensions¹

November 2005

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1. Introduction: Collapse of Collapse Scenarios?

Since the death of North Korea's paramount leader Kim Il Sung in 1994, many outside observers have speculated about North Korea's impending collapse. Some even attempted to estimate its probability.² In 1999, Nicholas Eberstadt felt so confident about North Korea's bleak prospects that he even wrote a book entitled *The End of North Korea*. Much like Mark Twain's premature obituary, however, the rumors of North Korea's demise have proven greatly exaggerated. Over the past decade, Pyongyang has demonstrated its ability to respond to crisis and ensure the survival of the regime. Moreover, in recent years, Pyongyang has attempted to go beyond stop-gap measures and explore more fundamental changes in economic policy, producing remarkable images that defy conventional wisdom. "Stitch by stitch to a different world," proclaimed an *Economist* article in July 2002, showing a photo of a garment factory in North Korea. "Shop till you drop" was the title of a May 2004 *Far Eastern Economic Review* article on economic changes in Pyongyang, with a smiling image of Kim Jong Il on the cover with the caption "Capitalist Kim." Although some North Korea watchers continue to express ample skepticism about the economic reforms undertaken by Pyongyang, the changes have the potential of transforming North Korea, especially if a peaceful resolution of the nuclear crisis enables North Korea to attract a significant amount of outside capital in the form of economic assistance and investment. In light of these developments, it would be

¹ An earlier version of this paper was presented at the Conference on *Korea: The East Asian Pivot*, organized by the Naval War College, August 26-27, 2004, New Port, Rhode Island, USA. The author would like to thank Jonathan Pollack for his helpful comments.

² See, for example, Marcus Noland, *Korea after Kim Jong-il* (Washington, DC: Institute for International Economics, 2003).

useful to examine a wider range of alternative futures for North Korea, instead of focusing exclusively on the possibility of a regime collapse.

This paper assesses the economic reforms undertaken by North Korea and examines North Korea's alternative futures, using a policy decision forecasting model and a scenario-planning framework as analytic tools. I posit two key drivers for North Korea's future: (1) the extent of economic reform it chooses to undertake; and (2) the degree of external cooperation it is able to attain. The policy outcomes obtained on both fronts will result from the interaction among actors within the system with different preferences and variable amounts of power. Four prototypical economic futures for North Korea are presented: (1) Outward-Oriented Developmental Dictatorship; (2) Half Full, Half Empty; (3) Arduous March; and (4) Neither a Rogue Nor a Tiger.

2. Crisis and Response: North Korea's Economic Reform in Context

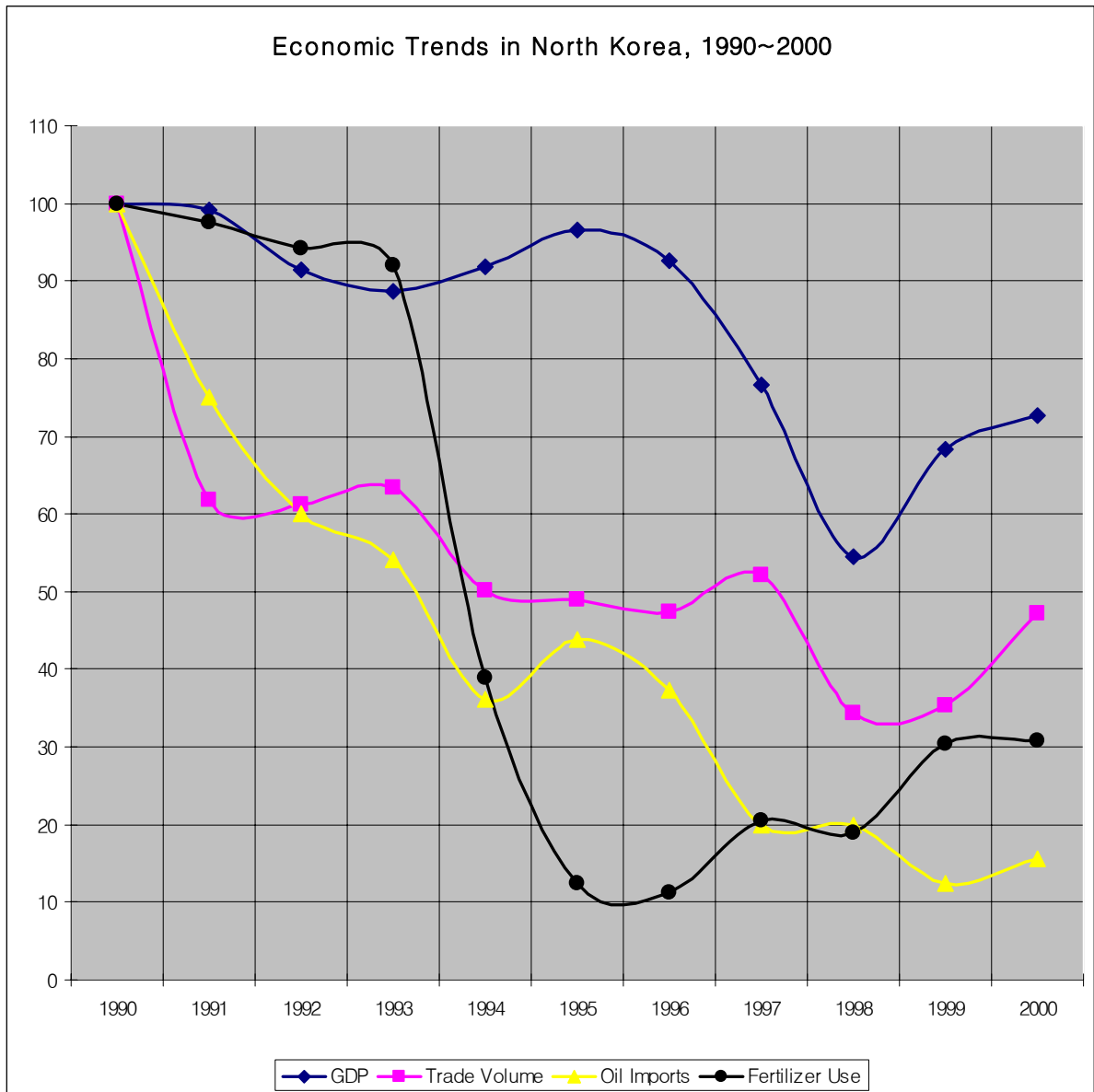
2.1. Economic Shocks and Initial Responses

In the late 1980s and 1990s, a series of external and internal shocks rocked the North Korean economy, forcing Pyongyang to explore non-traditional measures to cope with the crisis and ensure regime survival. In the late 1980s, the breakdown of the Soviet trading bloc made it extremely difficult for North Korea to import essential food and energy inputs, with serious repercussions for the economy as a whole. In 1993-94, North Korea's nuclear standoff with the United States greatly raised tension on the Korean peninsula, aggravating North Korea's economic difficulties. In 1994, the death of Kim Il Sung, who had ruled North Korea since 1945, fueled speculation about impending collapse from political as well as economic instability. In 1995-96, heavy floods devastated an agricultural sector already weakened by unsustainable farming methods. Although North Korea managed to survive these shocks, they left an indelible imprint on its economy. North Korea's economic reforms in recent years should be understood within this context.

As Figure 1 shows, North Korea's foreign trade suffered a catastrophic decline after the collapse of the socialist bloc. The former Soviet Union not only accounted for 60 percent of North Korea's total trade in the late 1980s, but was also providing *de facto* aid

of hundreds of million dollars by running a chronic trade surplus with North Korea. With the disintegration of the Soviet Union, this trade all but vanished. As a consequence, North Korea's trade volume declined by more than 50 percent, from \$4.8 billion in 1989 to \$2.1 billion in 1995. In addition, North Korea no longer could conduct trade on “friendly terms” with China, which now insisted on commercial terms.

Figure 1



Source: North Korea’s GDP, trade (excluding inter-Korean trade), oil imports, and fertilizer use estimates are provided by the Bank of Korea, Kotra, Korea Energy Economics Institute, and FAO, respectively.
 Note: Level values are converted to index numbers and normalized at 100 in base year 1990. Base-year values are as follows: GDP, \$23.1 bil.; trade volume, \$4.2 bil.; oil imports, 18.5 mil. barrels; and fertilizer use, 832,000 tons.

This drove up the prices of energy and food imports, delivering a crushing blow to the economy as a whole. Crude oil imports plummeted from 18.5 million barrels in 1990 to 8.1 million barrels in 1995 and 2.9 million barrels in 2000, a whopping 84 percent decline. Although North Korea tried to maximize the use of domestic energy resources such as coal, its primary energy supply declined from 24.0 million tons of oil equivalent in 1990 to 17.3 million in 1995 and 15.7 million in 2000.³ Food imports, which used to account for as much as 20 percent of total food consumption in 1990, also plummeted; domestic food production suffered a significant decline as well, due primarily to the lack of critical inputs such as fertilizers.⁴ According to estimates by the Food and Agriculture Organization (FAO), North Korea's fertilizer use declined from 832,000 tons in 1990 to 104,000 tons in 1995.⁵

Unable to generate a sufficient amount of hard currency to finance the imports of raw materials and critical inputs, the North Korean command economy broke down. Local plant managers and workers could no longer rely on central authorities and had to fend for themselves. The public distribution system, the very symbol of the socialist economy, could no longer provide food on a consistent basis, and many citizens had to engage in various "illegal" activities to obtain food. These activities included cultivating private plots and crossing the border to China to obtain food. Economic activities outside the plan increased, and these unsystematic improvisations on the part of individuals served as both a complement and a threat to the dysfunctional command economy.⁶

Pyongyang was clearly aware that it faced a severe economic crisis. Kim Il Sung's last policy speech, on July 6, 1994, was filled with references to North Korea's economic

³See Northeast Asia Energy Database, Korea Energy Economics Institute, at <http://www.neasiaenergy.net>.

⁴ See Phillip Wonhyuk Lim, "North Korea's Food Crisis," *Korea and World Affairs*, Winter 1997, pp. 568-585.

⁵ See FAOSTAT data, updated Feb. 2005. The URL for this statistic is rather long and as follows: <http://faostat.fao.org/faostat/servlet/XteServlet3?Areas=116&Items=1818&Elements=151&Years=2003&Years=2002&Years=2001&Years=2000&Years=1999&Years=1998&Years=1997&Years=1996&Years=1995&Years=1994&Years=1993&Years=1992&Years=1991&Years=1990&Format=Table&Xaxis=Years&Yaxis=Items&Aggregate=&Calculate=&Domain=LUI&ItemTypes=Fertilizers&language=EN>.

⁶ On the growth of the informal sector in North Korea in the 1990s, see Hong-Tack Chun, "The Second Economy in North Korea," *Seoul Journal of Economics*, Summer 1999, pp.173-194.

troubles, especially in the area of infrastructure and basic industries. He made three policy suggestions: (1) expand trade with any country that is willing to engage in economic exchanges with North Korea; (2) devise ways to sell manufactured goods overseas instead of exporting labor; and (3) eradicate bureaucratism and learn from the people. He seemed to understand that North Korea needed to expand economic exchanges with the outside world in order to fill the vacuum left by the collapse of the socialist bloc.

However, actual policy measures adopted by Pyongyang in the first half of the 1990s were halting and tentative, producing largely disappointing results. For example, Pyongyang established a free trade zone in the Rajin-Sonbong area in December 1991, one of several such zones it planned to open. Other free trade zones with a more promising location and business environment did not materialize, however. Far removed from major cities in the northeastern corner of North Korea, with inadequate infrastructure for an industrial park, the Rajin-Sonbong free trade zone indicated that Pyongyang was still more interested in isolating the effects of economic experiments than in ensuring their success.

Disillusioned by Pyongyang's half-hearted measures, North Korea watchers began to doubt if Pyongyang had the political will to undertake major economic reforms. More skeptical observers, such as Nicholas Eberstadt, saw Pyongyang's efforts as little more than "tactical and opportunistic improvisations." Eberstadt argued that fundamental reforms would require Pyongyang to embrace "bold new answers" to three enduring issues that defined the character of the state: the problem of "ideological and cultural infiltration"; the problem of weapons of mass destruction (WMD) and regime survival; and the problem of South Korea's legitimacy.⁷ As suggested by the title of his subsequent book, Eberstadt argued that North Korea would have to stop being North Korea to undertake major reforms.⁸ The hereditary succession of power in Pyongyang

⁷ See Nicholas Eberstadt, "If North Korea were Really 'Reforming,' How Could We Tell— And What Would We Be Able to See?", *Korea and World Affairs*, Spring 2002, pp. 20-46.

⁸ See Nicholas Eberstadt, *The End of North Korea* (Washington, D.C.: American Enterprise Institute Press, 1999). By contrast, Aidan Foster-Carter has argued that one of the possible modes of North Korea's "collapse" could take the form of North Korea's peaceful transformation. See Aidan Foster-Carter, "All Roads Lead to Collapse: All the More Reason to Engage Pyongyang," in Marcus Noland

appeared to make it even more difficult for North Korea to adopt major reforms. Many North Korea watchers argued that Kim Jong Il, as the eldest son of Kim Il Sung and a top decision maker in his own right for more than two decades, would not be able to repudiate the policies that he and his father had long advocated.

2.2. Policy Dilemmas and Challenges

By the late 1990s, it had become clear that half-hearted measures would not end North Korea's economic troubles. The old command economy had broken down, and the regime had to condone informal economic activities and allow ordinary citizens to do whatever they could to obtain food. The informal sector began to play an increasingly important role in the food distribution chain. Although only vegetables and minor non-grain agricultural products were supposed to be bought and sold in farmers' markets, corn and rice produced on private plots or obtained through illegal channels were increasingly traded in these markets. According to an estimate by South Korea's Ministry of Unification, ordinary citizens in North Korea obtained as much as 60 percent of their food in the informal sector in the late 1990s.⁹ Farmers' markets also began to play an increasingly important role in the distribution of consumer goods.

Although the growth of the informal sector helped to alleviate economic difficulties for ordinary citizens, it created serious financial problems for the state because of the increasing gap between informal and formal prices. In the informal sector, prices were largely set by market mechanisms. By contrast, prices in the formal sector were fixed by fiat. Although there were serious shortages in the formal sector, prices did not adjust to balance supply and demand. As a result, the increasing gap between prices in the formal and informal sector created huge arbitrage opportunities. For instance, rice was supposed to be procured at 0.80 won and sold at 0.08 won per kilogram in the formal sector; whereas, the price of rice was around 40 to 50 won per kilogram in the informal sector in

(ed.), *The Economic Integration of the Korean Peninsula* (Washington, D.C.: Institute for International Economics, 1998), pp.27-38.

⁹ This is based on an unpublished Ministry of Unification survey of defectors from North to South Korea and visitors to North Korea (cross-border merchants, etc.). The 500-person survey was conducted in January 1999.

2002. If farmers siphoned off rice from the formal sector to the informal sector, they could profit handsomely. As shown in Table 1 in Appendix 1, the situation was similar for other “basic necessities” for which generous public subsidies were provided. The result was a financial hollowing out of the state.¹⁰

Central planners in Pyongyang were faced with a serious dilemma. To arrest the deterioration of public finance and rehabilitate the formal sector, planners had to either crack down on the informal sector or accommodate changed economic realities and transform the formal sector; otherwise, there was little alternative but to throw in the towel and give up any semblance of planned economy. Yet each of the policy choices carried significant risks. Cracking down on the informal sector could cause serious disruptions, because it was no longer a negligible part of the economy. Ordinary citizens had come to rely on farmers’ markets for much of their food, and closing these markets might cause a policy-induced food crisis. Transforming the formal sector by adopting market-oriented measures also carried its share of risks. Measures taken to transform the formal sector could create a number of adjustment problems without producing tangible benefits, at least in the short term. Closing the formal-informal price gap could lead to dangerous inflation. Finally, throwing in the towel was not a realistic option when it was unclear what would replace the old economic order.

In seeking new directions for economic policy, Pyongyang also faced three interrelated challenges. First, Pyongyang had to provide ideological and political justifications for any major departure from “the one and only system.” Second, Pyongyang had to decide how to strike a balance between the formal sector and the informal sector, whose relative importance had increased significantly during the crisis years. In theory, policy makers could crack down on informal economic activities or accommodate changes that had occurred, perhaps even giving up on central planning. In practice, Pyongyang had to condone informal economic activities to a certain extent to

¹⁰ According to an internal document circulated in October 2001, titled “On improving and perfecting socialist economic management in line with requirements for building a strong and prosperous nation,” Kim Jong Il talked about these problems as follows: “Because official prices set by the state are lower than farmers’ market prices, there aren’t enough goods in the formal sector, but individuals have stocked up goods ranging from rice to automotive parts.... The state is producing goods, but most goods and money end up in the hands of individuals.... Frankly, the state has no money, but individuals have two years’ budget worth.”

compensate for the woeful performance of the formal sector, but it had to limit arbitrage opportunities that existed between the formal and informal sectors. Third, faced with limited domestic resources, Pyongyang had to create an investor-friendly environment at least in some special zones to attract capital and technology from the outside world, but at the same time, it had to manage risks associated with “foreign infiltration” and economic inequality.

2.3. Ideological and Institutional Groundwork for Economic Reform

Pyongyang used a number of ideological and institutional innovations to justify changes in its economic policy. When Kim Jong Il officially assumed leadership in 1998, he presented the vision of “a strong and prosperous nation” as his blueprint for the twenty-first century. While this slogan apparently gave equal weight to military strength and economic prosperity, official explanations made it clear that the emphasis would be on the latter task. Kim also proclaimed military-first politics as the cornerstone of North Korea’s security. However, the weakening of the Korean Workers’ Party and the de-politicization of economic decision-making in the cabinet was more decisive than the provocative rhetoric of military-first politics.

In exploring alternative economic policy, Pyongyang put forth pragmatism and “new thinking” as guiding principles.¹¹ Kim Jong Il personally endorsed these principles on many occasions, including on his January 2001 visit to the Pudong area in Shanghai, which he said had been transformed beyond recognition in a decade. On January 4, 2001, in a striking pronouncement in *Rodong Sinmun*, the official newspaper declared: “Things are not what they used to be in the 1960s.... We should bring about technical modernization by boldly doing away with what needs to be abolished, instead of being shackled by ready-made ideas or hanging on to the old and outdated conceptions.”¹² Although the same newspaper had frequently warned against the dangers of “the imperialists’ ideological and cultural infiltration,” it no longer defended old practices as

¹¹ See Chae-Ki Sung, “An Evaluation and Forecast of New Economic Policy Directions in the Kim Jong Il Era,” *KDI Review of the North Korean Economy*, October 2002, pp. 11-30 [in Korean].

¹² The title of the article may be roughly translated as follows: “The 21st century is a century of grand transformation, a century of creation.”

eternal truths. It acknowledged that new times would call for new ideas, as long as they do not belong to the domain of the imperialists.

Several ideological innovations were offered to support these guiding principles. One was to stretch the definition of socialism. Another was to implement substantive changes without explicitly repudiating what the Kim family had done in the past, by simply declaring that times had changed. Major economic reforms were introduced as measures to “improve and perfect socialism,” rather than dismantle and repudiate socialism.¹³ Performance-based rewards were declared to be the essence of the socialist distribution principle, and rampant “average-ism” by which everyone was paid equally regardless of the quantity and quality of work was condemned as an anti-socialist principle. By redefining socialism in line with market principles, Pyongyang cleared an ideological hurdle. Also, by implementing changes without rejecting the past, Pyongyang ensured that the hereditary succession of power would not get in the way of reform.

These ideological innovations were accompanied by institutional and generational changes that were designed to facilitate economic reform. For instance, a constitutional amendment in September 1998 freed technocrats from oversight of the Central People’s Committee, a body dominated by conservative party ideologues. Subsequently, Pyongyang reduced the number of salaried Workers’ Party members by 20 to 30 percent and redeployed these members in various industries. Pyongyang also promoted a number of managers in their 30s and 40s to top posts.¹⁴ In addition, Pyongyang introduced or amended major economic laws to allow more flexibility in the drafting of the central

¹³ For example, Kim Jong Il’s talk on economic reform on October 3, 2001, was titled “On improving and perfecting socialist economic management in line with requirements for building a strong and prosperous nation.” In his talk, Kim Jong Il observed: “There was too much average-ism in distribution. Socially there were too many freebies. In providing food to residents, billions of won were spent annually at the expense of the state.... Because the socialist distribution principle was not properly observed and because there was socially an excess of freebies and average-ism, it had the effect of promoting hoodlums and discouraging workers’ efforts.”

¹⁴ For instance, the chairman of the External Economic Cooperation Promotion Committee is 47 years old, the governor of the External Trade Bank is 44, and the chief executive officer of the Chollima Steelmaking Company is 40. The recruiting procedure for public officials was also changed from a recommendation and interview system to an examination system in January 2004. For details, see Young Yoon Kim and Soo Young Choi, “North Korea’s Economic Reform Trends” (Seoul: Korea Institute for National Unification, 2005), p.12 [in Korean].

economic plan, promote small work teams in agriculture, and recognize the inheritance of personal property such as houses, automobiles and savings.¹⁵

2.4. Price and Incentive Reform, Decentralization, and Marketization

With the ideological and institutional groundwork undertaken, Pyongyang turned to striking a balance between the formal and informal sectors. By adopting measures to improve economic management on July 1, 2002, Pyongyang appears to have chosen the middle road. Instead of cracking down on “underground” market activities or “throwing in the towel,” Pyongyang chose to transform *and* rehabilitate the formal sector by accommodating changes that had taken place in the informal sector.¹⁶ The July 2002 reform package consisted of three components: reduction of double-distortions in prices, increase in and differentiation of wages based on performance, and decentralization of enterprise management.

To recover the costs of production and prevent a further financial hollowing out of the state, Pyongyang adopted far-reaching price reforms. It reduced distortions in relative prices between goods in the formal sector by raising the prices of “basic necessities” which had been heavily subsidized. The price of pork was increased from 7 won to 180 won per kilogram, and the price of electricity was raised from 0.03 won to 2.1 won per kilowatt-hour. Pyongyang also reduced the price gap between the formal and informal sectors so that undue arbitrage opportunities would not be created. For example, as Table 1 in Appendix 1 shows, the sales price of rice per kilogram in the formal sector was raised from 0.08 won to 44 won, and the procurement price was increased from 0.80 won to 40 won so that the state would no longer have to incur losses on rice transactions. Even in principle, the public distribution system no longer provided the most essential of

¹⁵ For details, see Kim and Choi, “North Korea’s Economic Reform Trends,” p.11.

¹⁶ In assessing the significance of the July 2002 reforms, some observers have tended to focus on the “transformation” aspect while others have emphasized the “rehabilitation” aspect of the policy package. For an example of the former, see Yeon-Chul Kim, “The Nature and Outlook of North Korea’s Economic Management Reform,” in Yeon-Chul Kim and Sun Song Park (eds.), *A Study on North Korea’s Economic Reform*, (Seoul: Humanitas, 2002) [in Korean]. For a more conservative interpretation emphasizing the rehabilitation of the formal sector, see Dongho Jo, *Prospects for Changes in North Korea’s Economic Policy and the Role of Inter-Korean Economic Cooperation* (Seoul: Korea Development Institute, 2003) [in Korean].

goods nearly free of charge. All transaction would be monetized. Moreover, the new procurement price was to be set close to the market price.

To give workers sufficient purchasing power to buy goods at new prices in the formal sector, their wages were raised. On average, workers' wages were increased by 18 times to 2,000 won per month. This wage increase was based on the assumption that two people in a typical four-member household would work and monthly living expenses of 4,000 won would be needed. Perhaps more significant than the wage raise was the increase in income differentiation based on skill level and performance. The wage gap between highly skilled and unskilled labor was doubled. Performance-based incentives were strengthened as well.

Finally, Pyongyang gave greater autonomy to local plant managers. Pyongyang depoliticized economic decision-making at the local level by transferring managerial rights from party cadres to plant managers. The scope of central planning was reduced to major indicators such as total industrial output, construction investment, electricity and steel production; and the authority to formulate detailed production plans (including labor management) was decentralized. Pyongyang sought to strike a balance between the plan and market, reminiscent of the "dual-track" strategy adopted by China in its early reform years.¹⁷ Enterprises were now allowed to produce and dispose of their products in markets, so long as they met general production targets. In other words, as long as enterprises satisfied their production obligations, they were allowed to produce and sell what they wanted. Enterprises could also start new businesses. For example, an enterprise operating hotels, restaurants, and shops set up a new company producing buttons. Before the reform, enterprises could not freely procure inputs and dispose of their products outside the plan, but now they could legally engage in market transactions. As long as enterprises had cash reserves (i.e., retained earnings), they no longer had to worry about running out of raw materials and inputs, unlike under the extensive command-and-control system. Some enterprises even took loans from merchants and

¹⁷ For details on China's dual-track strategy, see Lawrence J. Lau, Yingyi Qian, and Gerard Roland, "Pareto-Improving Economic Reforms Through Dual-Track Liberalization," *Economics Letters*, 1997, pp.285-292. See also Justin Yifu Lin, Fang Cai, and Zhou Li, *The China Miracle: Development Strategy and Economic Reform*, Revised Edition (Peking: The Chinese University Press, 2003).

other more moneyed individuals to expand their business.¹⁸ In addition, Pyongyang also allowed local enterprises to engage in external trade under the guidance of the Ministry of Trade, instead of giving exclusive rights to specialized agencies.

The July 2002 economic reforms were initially accompanied by an official attempt to crack down on the informal sector. The authorities in Pyongyang apparently wanted to phase out farmers' markets and force commercial transactions to take place in the "transformed and rehabilitated" formal sector. When disruptions proved to be significant, however, the authorities changed their approach in March 2003. Instead of cracking down on the informal sector, they decided to expand farmers' markets into general markets and collect taxes and fees on transactions. In other words, Pyongyang decided to bolster public finance in return for the legalization and expansion of farmers' markets.

Cabinet Resolutions No. 24 and No. 27, dated May 5, 2003, officially recognized existing markets and stipulated the establishment of new markets as well, with a view toward setting up more than 300 general markets around the country. The Cabinet Resolutions also allowed state-run enterprises and cooperatives to make use of general markets. While the authorities are supposed to set price ceilings in general markets, these price ceilings are updated regularly to reflect changing demand and supply conditions. The authorities collect "market user fees" from merchants and "contributions" (income tax) based on their earnings.¹⁹

2.5 Economic Opening

Although the July 2002 reform package was hailed as a groundbreaking initiative at the time of its introduction, it did not deliver spectacular results. As shown in Table 2 in Appendix 1, the combination of price and wage increases produced some inflation. However, it would be an exaggeration to claim that the July 2002 reform package triggered "hyperinflation." Pyongyang opted for limited monetary accommodation, avoiding a price-wage spiral. The limited supply response was perhaps more

¹⁸See Moon-Soo Yang, "North Korea's General Markets: Realities, Repercussions, Character and Significance," *KDI Review of the North Korean Economy*, February 2005, [in Korean], pp.19-21.

¹⁹ For details, see Yang, "North Korea's General Markets."

disappointing than the price trend. While the July 2002 reform package provided incentives largely based on market principles, its effectiveness was limited because of the shortage of raw materials and critical inputs. A simple growth accounting exercise could show that there was only so much North Korea could achieve in the absence of resource inflows from the outside. North Korea's labor was stretched thin; and its division of labor had broken down. Due to the lack of hard currency and previous defaults on foreign loans, North Korea had only limited access to capital. Productivity improvement from embodied technology was limited as a result.

Table 1. Comparative Factor Prices in Kaesong, China, and South Korea

	Unit	Kaesong (A)	China (B)	South Korea (C)	A/B	A/C
(Minimum) Monthly Wage	USD	57.5	100-200	423	0.29-0.58	0.12
Working Hours Per Week	hrs.	48	44	44	1.1	1.1
Corporate Income Tax Rate	percent	10-14	15	23-28	-	-
Land Price Per Pyong (36 Sq. Ft.)	KRW	150,000	50,000	407,550	3	0.37

Source: Bank of Korea

North Korea did try to address this problem by attracting outside investment. In August 2002, to make the prices of domestic goods reflect economic realities, Pyongyang drastically raised the official exchange rate from 2.2 to 153 won to the dollar. Subsequently, the authorities set up currency exchange booths in general markets applying the market-determined exchange rate. North Korea also tried to create an investor-friendly environment at least in some special zones to attract capital and technology from the outside world, targeting South Korea in particular. In September 2002, Pyongyang announced the establishment of the Shinuiju Special Administration Zone,²⁰ and two months later, it promulgated the Kaesong Industrial Zone Law in

²⁰ Although the Sinuiju venture was quite remarkable in that Pyongyang ceded administrative authority in the zone to a foreign businessman, it failed mainly due to China's concerns about the border city's plans to set up casinos.

addition to the Mt. Kumgang Tourist Zone Law. Also, it created an umbrella body under the cabinet to oversee the development of special economic zones.

Among North Korea's economic opening measures, the Kaesong Industrial Zone generated the greatest amount of interest. It was regarded as a project that would not only accelerate North Korea's economic reform but also push inter-Korean economic cooperation to the next stage. Pyongyang made serious efforts to ensure the success of the project. As shown in Table 1, wage and tax rates in Kaesong were set at competitive levels in comparison with China. According to the Bank of Korea's estimate, for North Korea, the annual output from the Kaesong Industrial Complex is expected to contribute 0.3 percent of North Korea's 2003 GNI in four years and as much as 12.4 percent of North Korea's 2003 GNI in 17 years. For South Korea, its contribution is estimated to increase from 0.4 percent of South Korea's 2003 GNI in four years to 3.1 percent in 17 years.²¹ Due to the eruption of the second nuclear crisis in October 2002, however, the progress of the Kaesong Industrial Complex has been slower than originally expected.

3. Alternative Futures for North Korea

Although North Korea has adopted a number of economic reform measures over the past several years, there is a great deal of uncertainty regarding its economic prospects. Will North Korea remain on the reform path? Will the external environment faced by North Korea improve or deteriorate, especially in regard to the nuclear issue? These questions go to the heart of the problem. The method of scenario planning allows systematic consideration of alternative futures. There may be many factors, or drivers, that shape the future; however, for visual purposes, two axes representing two key drivers are typically drawn in a scenario planning exercise. If there are M possibilities for the first key driver and N possibilities for the second key driver, there would be M x N outcomes. Again, for simplicity, the various possibilities are presented in a 2 x 2 framework, producing four prototypical outcomes.²²

²¹ For details, see Bank of Korea, "An Analysis of the Economic Impact of Establishing the Kaesong Industrial Complex," July 2004 [in Korean].

²² On the fundamentals of scenario planning, see Peter Schwartz, *The Art of the Long View: Planning for the Future in an Uncertain World* (New York: Doubleday, 1991) and Liam Fahey and Robert M.

As noted previously, two key drivers for North Korea's future are the extent of economic reform it chooses to undertake and the degree of external cooperation it manages to attain. Conceptually, the extent of economic reform can vary from retrogression (i.e., reversion to a closed command economy) to full-fledged market-oriented reform based on private property rights; the degree of external cooperation can range from military conflict to complete normalization of relations. I posit that the policy outcomes related to economic reform and external cooperation are obtained as a result of interaction among actors with different preferences. A policy decision forecasting model is outlined in Appendix 2. It is assumed that actors within North Korea largely determine the extent of economic reform; whereas external actors and the North Korean leadership determine the degree of external cooperation jointly.

3.1. Driver I: Economic Reform

The extent of economic reform is only a *proximate* cause of economic change in North Korea. It is shaped in turn by a political mediation process involving North Korea's policymakers but also participants in the informal sector as well as external actors. To what extent can economic reform be realistically implemented in North Korea? To answer this question, it is necessary to extend the framework of Bueno de Mesquita and Mo and combine a policy decision forecasting approach with economic analysis.²³ Under this extended framework, major players in North Korea and the outside world are specified. The framework also includes "the real world" as a player in order to account for the feedback mechanism between policy decisions and outcomes. Major players in North Korea would include those in the formal sector (e.g., Kim Jong Il, ideologues, military, technocrats, etc.), but also producers and merchants in the informal sector. Significant players in the outside world would include national governments as

Randall, *Learning from the Future* (New York: Wiley, 1998). For an applied example of scenario planning in a geopolitical context, see National Intelligence Council, *Mapping the Global Future: Report of the National Intelligence Council 2020 Project* (Washington, DC: Government Printing Office, 2005).

²³See Bruce Bueno de Mesquita and Jongryn Mo, "Prospects for Economic Reform and Political Stability," in Thomas Henriksen and Jongryn Mo (ed.), *North Korea after Kim Il Sung: Continuity or Change?* (Stanford, CA: Hoover Institution Press, 1997), pp.13-31.

well as corporations. Analysis would then hypothesize the policy position and political clout of these players. A “real world” policy position, for example, might maximize social welfare and minimize the probability of regime collapse, depending on the ultimate objective of the North Korean leadership. Its level of influence would largely depend on the sensitivity of the leadership to social welfare and the political implications of policy decisions. Instead of bringing in “the real world” as an actor, an alternative approach might account for possible changes in the policy position of major players, as they adapt to the effects of previous policy decisions on the economy and regime stability.

North Korea’s economic policy since the collapse of the socialist bloc shows that economic realities matter as much as ideological inclinations in policy decisions. Concerned with potentially adverse political implications of economic changes, Pyongyang’s official propaganda channels, as well as Kim Jong Il himself, strongly denounced market-oriented reform and vowed to defend socialism in the early 1990s. However, when North Korea was faced with a serious famine in the mid-1990s, Pyongyang had to condone, if not encourage, informal economic activities and explore various reform measures, including far-reaching price reform. If the ultimate goal of the North Korean leadership is to maintain their grip on power, it would be unwise for them to risk regime collapse just for the sake of ideological purity. As illustrated by North Korea’s ideological innovations in recent years, *juche* may not be as serious a stumbling block as initially feared.

However, once reform is launched, it may not be easy to apply the brakes, even if improved economic conditions no longer require “change-to-survive” measures. Reform may benefit not only the general population but also the ruling elite, many of whom are likely to enjoy privileged access to profit opportunities arising from increased exchanges with the outside world. While more ideologically rigid members of the elite may prefer reform with a satiation point, others may opt for further reform. There is also a possibility that conservatives may change their minds if they can receive benefits from economic reform. For example, the military may be asked to undertake important economic functions. This political process is likely to be played out in North Korea over the next decade.

3.2. Driver II: External Cooperation

The degree of external cooperation is the other key driver of change. Unlike economic reform, which is largely determined by actors within North Korea, external cooperation is shaped by interaction between the North Korean leadership and external actors. Understanding the motives of major players would be essential to accurate policy decision forecasting. As the nuclear problem on the Korean peninsula has had a great influence on international relations in Northeast Asia, it may be useful to look at this issue from the perspective of each of the major players. The stance of different actors on the North Korea nuclear crisis reflects their thinking on the larger issue of creating a new order in Northeast Asia.

North Korea's nuclear program seems to serve three major policy goals: a deterrent against security threats; a useful bargaining chip in diplomatic negotiations; and an important element of indigenous energy development utilizing 26 million tons of natural uranium in North Korea. In 1994, North Korea's nuclear program was mainly used as a bargaining chip, but the Bush Administration's tough policy toward North Korea has brought about a significant change. Perhaps believing North Korea's threat to "demonstrate" the existence of nuclear weapons is not credible given the potential reactions by neighboring states, the Bush Administration first sought to ignore North Korea's attempt to use its nuclear program as a bargaining chip.²⁴ Although North Korea's long-range artillery serves as an effective deterrent against South Korea, North Korea increasingly seems to regard nuclear weapons as a possible deterrent against the U.S., especially in light of the Iraq War. Unless the U.S. credibly abandons what North Korea believes is "hostile policy" toward it, there is very little chance that North Korea will give up its nuclear program. More specifically, North Korea may try to improve relations with the outside world without completely dismantling its nuclear program, instead offering to safeguard nuclear materials within its borders and cease production of nuclear weapons or fissile material. Unless the United States is willing to engage and test North Korea through serious negotiations, it is impossible to know how North Korea will

²⁴ Responding to North Korea's bargaining tactics, George W. Bush once allegedly said: "You're hungry and you can't eat plutonium."

respond. This is the challenge that Washington confronts in relation to the Six Party Talks.

Why has the United States been so long unwilling to engage North Korea and improve relations with it? First, North Korea's track record does not make it a trustworthy partner, and despite the pledge to improve bilateral relations contained in the Agreed Framework, there is a natural inclination to proceed slowly. Moreover, many Americans seem to have a serious problem with North Korea's tough negotiating style. For them, the thought of the world's only superpower getting "jerked around" by what they regard as a "rogue state" is too much to accept. More hawkish policymakers may even prefer regime change in North Korea. Other U.S. policymakers, however, may see a strategic value in keeping North Korea as a rogue state. The United States can use an "irredeemable" North Korea not only as a convenient justification for weapons programs such as ballistic missile defense (BMD), but also as a useful tool to keep Japan and South Korea from pursuing a more independent foreign policy.²⁵ Instead of seeking a new order in Northeast Asia after the end of the Cold War, some policymakers may be content to prolong the *status quo*. As long as North Korea faithfully plays the role of a rogue state, this policy of "malign neglect" might prove effective. However, if the United States, not North Korea, is perceived as the stumbling block in the resolution of the nuclear problem, such a policy might lead to a nationalist backlash against Washington.²⁶

Other players in Northeast Asia have different perspectives on the issue, depending on their perceived national interests. China's priority is to continue its rapid economic growth and its "peaceful rise" as a global power. Until very recently, China has acted in a cautious manner in international affairs, so as not to attract unnecessary scrutiny from its neighbors as well as the United States. China does not want a rapid escalation of

²⁵ Jonathan Pollack notes that faced with South Korean and Japanese moves to improve relations with North Korea in 2002, the Bush Administration might have seen "a real possibility that its options on the [Korean] peninsula would be increasingly driven by the policy agendas of others." See Jonathan D. Pollack, "The United States, North Korea, and the End of the Agreed Framework," *Naval War College Review*, Summer 2003, Vol. LVI, No. 3, pp.10-49.

²⁶ On this point, see Desaix Anderson, "Who is Losing Asia?", mimeo, 2004. Desaix Anderson gave a similar speech on March 20, 2003 at the Croft Institute of International Studies, University of Mississippi, Oxford, which was later published as a Policy Forum Online piece (PFO 03-25) on Nautilus (www.nautilus.org). The title of the speech is "Crisis in North Korea: the U.S. Strategic Future in East Asia."

hostilities on the Korean Peninsula that may disrupt its economic growth and threaten its position in Northeast Asia. Building on the strength of its rapid economic growth, China is engaging in proactive economic diplomacy on all fronts.

Japan is interested in becoming a more “normal country,” freeing itself from the legacies of World War II. However, there is some debate on what is the best means to achieve this objective. Many Japanese conservatives seem to be content to go along as “a junior partner” of the United States at least for the foreseeable future and use the North Korean threat as a justification for re-militarizing Japan. By contrast, more liberal-minded Japanese call for a tighter integration with Northeast Asia on the basis of historical reconciliation. To them, normalizing relations with North Korea is an integral component of this strategy.²⁷

Russia’s priority in Northeast Asia is to re-establish its influence in the region and develop the Russian Far East. Russia believes that multilateral diplomacy on the North Korean nuclear issue will enable Moscow to take a more proactive role in Northeast Asia. A comprehensive solution to the problem is likely to involve energy assistance to North Korea, supporting Russia’s plans to develop energy resources and promote economic development in the Russian Far East.

A divided land bridge in Northeast Asia, South Korea has much to gain from ending North Korea’s isolation and building energy and transportation networks that connect different parts of Northeast Asia. To resolve North Korea’s nuclear problem and to promote peace and security in Northeast Asia, South Korea is pushing for the construction of infrastructure networks in the region, facilitating economic development not only in North Korea but also in China’s northeastern provinces and the Russian Far East. Such investment projects will also create business opportunities for firms from this region as well as from the outside, and allow them to share in the benefits of increased regional integration. Ultimately, to achieve reunification, South Korea must maintain good relations with all its neighbors as well as the United States, and build an “optimal” level of national strength so that a unified Korea would be viewed as neither a pushover nor a threat.

²⁷ See, for example, Haruki Wada, *A Northeast Asian Common House*, translated from Japanese to Korean by Won-Duk Lee (Seoul: Ilchogak, 2004).

To South Korea, inter-Korean economic cooperation is a particularly useful tool in this regard. Such cooperation would create mutually beneficial business opportunities for involved companies, but it would also have even more significant political implications. First, it would help North Korea to see a way out its current predicament as a rogue state. Through economic exchanges, North Korea would be able to earn money the old-fashioned way rather than through questionable transactions involving narcotics or weapons. Also, by helping North Korea to get accustomed to market principles, inter-Korean economic cooperation would have the effect of facilitating and consolidating North Korea's economic reform. Second, it would help South Korea to undertake industrial restructuring in a less painful manner. In particular, labor-intensive small and medium-size enterprises (SMEs) faced with increasing competition from China and other late-developing countries have welcomed North Korea's economic opening. Third, inter-Korean economic cooperation would have the strategic significance of counterbalancing China's increasing influence in North Korea. As Table 2 shows, China's share in North Korea's trade volume has exceeded 30 percent in recent years.

Table 2. Composition of North Korea's Trade

	1990	1995	2000	2001	2002	2003	2004
Total	4.18	2.34	2.40	2.67	2.90	3.06	3.56
China	0.48 (11.5%)	0.55 (23.5%)	0.49 (20.4%)	0.74 (27.6%)	0.74 (25.4%)	1.02 (33.4%)	1.39 (39.0%)
Japan	0.48 (11.4%)	0.60 (25.4%)	0.46 (19.4%)	0.48 (17.8%)	0.37 (12.7%)	0.27 (8.6%)	0.25 (7.1%)
South Korea	0.01 (0.3%)	0.29 (12.3%)	0.43 (17.8%)	0.40 (15.1%)	0.64 (22.1%)	0.72 (23.6%)	0.70 (19.6%)

Source: Kotra (www.kotra.or.kr)

Note: Figures in parentheses represent percentage shares in North Korea's total trade volume.

While North Korea's neighbors have somewhat different policy priorities in Northeast Asia, they share some very important common interests. One is to prevent the outbreak of war on the Korean peninsula. The other is to prevent any one of North Korea's neighbors from dominating North Korea in such a way as to cause a significant change in regional balance. A U.S. surgical strike against North Korea is flatly unacceptable to North Korea's neighbors. First, as the location of North Korea's alleged highly enriched uranium (HEU) program is not known, the target of a surgical strike is

not clear. Second, a limited surgical strike would not be construed in these terms by North Korean leadership. For Pyongyang, there is certainly no guarantee that a U.S. surgical strike would not be followed by a decapitation campaign. North Korea will almost certainly retaliate against an initial strike in a “use it or lose it” mode, and South Korea and Japan would suffer devastating losses as a result. China and Russia, for their part, will not find it in their interest to see the United States dictating the course of the war and postwar settlement on the Korean Peninsula.

North Korea’s strategic location enables it to play its neighbors off against one another. South Korea cannot afford to allow North Korea to become overly dependent on China, especially in light of the 2004 controversy over the Koguryo dynasty.²⁸ Russia, seeking to correct its shortsighted disengagement from the Korean Peninsula during the Yeltsin era, has made serious efforts to strengthen relations with North Korea in recent years. Japan has also made diplomatic overtures to North Korea, influenced by traditional geopolitical thinking that sees the Korean peninsula as a dagger aimed at Japan and a bridge connecting to the Asian heartland. Given the small amount of money required to keep North Korea afloat, its neighbors appear to be willing to provide aid to North Korea so as to maintain their influence. As a result, imposing multilateral sanctions on North Korea is a very difficult proposition.

Against this background, the outline of a solution to the nuclear problem should be reasonably clear. The U.S. and North Korea should address the security concerns of each other. The U.S. should end what North Korea regards as “hostile policy” toward it. North Korea should freeze and then dismantle its nuclear program under inspection. Through various programs to assist North Korea’s economic development, the

²⁸ Given China’s efforts to present itself as a benign and non-hegemonic power, its handling of the Koguryo controversy was something of a surprise. With its territory extending from the northern half of the Korean peninsula to Manchuria, the ancient kingdom of Koguryo had the potential to develop into a contentious issue between Korea and China for some time. A major controversy erupted in 2004 when the Chinese Foreign Ministry decided to remove Koguryo from the ancient history of Korea in the country profile section on its website. When South Korea protested, China responded by deleting the entire pre-1948 history of Korea. The only consolation to Koreans was that China was at least fair enough to do the same to Japan. Given North Korea’s dependence on China, some Koreans interpreted Chinese actions as an attempt to do the historical groundwork to expand its influence into the Korean peninsula. The Chinese could have said that Koguryo was a multi-ethnic ancient kingdom whose rulers were Korean but whose cultural heritage was shared by China and Korea, but the Chinese Foreign Ministry decided to go well beyond that. The Koguryo controversy led many Koreans to take a second look at China.

international community should convince North Korea that a non-nuclear future for Pyongyang would be better than a nuclear one. As the U.S. and North Korea have both been criticized by their failure to uphold the Agreed Framework, top leaders from both sides, joined by other concerned parties, should make personal commitments and take a series of steps to show that they are implementing the agreement in good faith. Whether the Six Party Talks can reach such a settlement remains to be seen.

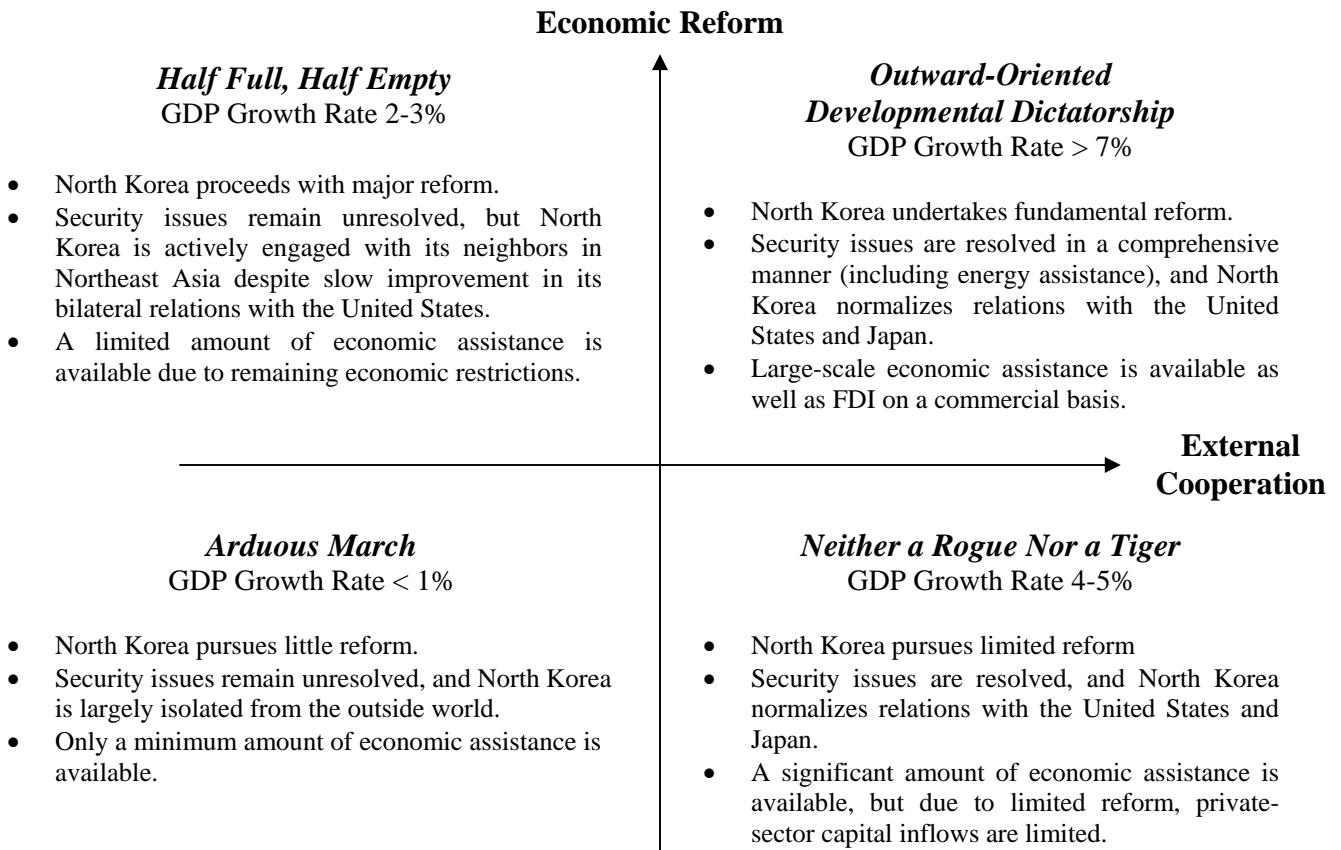
3.3. Prospective Outcomes

As demonstrated in Figure 2, combining different levels of economic reform and external cooperation produces four prototypical outcomes or scenarios. The northeast quadrant shows the “outward-looking developmental dictatorship” scenario, in which North Korea adopts fundamental market-oriented reform and normalizes its relations with the United States and Japan. North Korea is supposed to follow a similar path as China and Vietnam in this outcome, with an annual economic growth rate of well over 7 percent. The southeast quadrant shows the “neither a rogue nor a tiger” scenario. Here North Korea is no longer regarded as a rogue state after a comprehensive resolution of security issues at the Six-Party Talks, but it pursues only limited reform and fails to transform itself into another East Asian tiger. The “half full, half empty” scenario in the northwest quadrant closely resembles the current situation in North Korea. In this outcome, North Korea embarks on major reform to modernize its economy, but due to a stalemate over security issues, there is only limited improvement in its external environment, especially in its bilateral relations with the United States. The “arduous march” scenario in the southwest quadrant is the worst possible outcome short of war. Here North Korea does not actively pursue internal reform or external engagement perhaps due to concerns about regime stability. The economy is likely to contract, as it indeed did in the mid-1990s.

None of the four potential scenarios is based on the extreme case of military conflict or renewed Sovietization. International relations in Northeast Asia and economic conditions in North Korea seem to make these extreme policy choices unrealistic, unless major actors are willing to stake their political as well as personal lives for a potential catastrophe in the form of war or famine. The possibilities for economic reform and external cooperation are bound by a realistic consideration of alternatives, informed by

what has transpired in and around North Korea over the past decade. A more detailed description of each of the four hypothesized outcomes follows.

Figure 2. North Korea's Alternative Futures



Outward-Oriented Developmental Dictatorship

This is the best possible outcome for North Korea in this scenario planning exercise. While maintaining its monopoly on political power, the North Korean regime undertakes fundamental reform building on economic management improvement measures it adopted in July 2002. Not content to depend indefinitely on foreign aid, Pyongyang tries to enhance North Korea's economic independence by adopting market-oriented reform

and engaging actively with the outside world. The key is that Pyongyang escapes from the so-called “mendicant mentality,” much like South Korea did in the 1960s.²⁹

The United States realizes that it risks becoming isolated in Northeast Asia if it were to take an uncompromising position on the nuclear issue. In this scenario, Washington decides to address North Korea’s security concerns in return for the dismantlement of North Korea’s nuclear program. Based on a credible program of mutual threat reduction between the U.S. and North Korea and backed by North Korea’s neighbors, a comprehensive solution to security issues leads North Korea to give up its nuclear program in exchange for the normalization of relations with the U.S. and Japan as well as economic assistance from the international community. Energy provision is a key component of the economic package. A significant amount of foreign direct investment (FDI) also becomes available.

This settlement enables North Korea to expand the scope of economic reform and reap tangible benefits from an outward-oriented development strategy. The ruling elite, many of whom have personally benefited from economic opportunities, gain popular support for further reform as outward-oriented industrialization brings “rapid shared growth,” as in the case of tiger economies in East Asia. In line with the previous experiences of tiger economies, North Korea is projected to record an annual GDP growth rate of well above 7 percent. Benchmarks for this outcome include South Korea in the 1960s, China in the 1970s, and Vietnam in the 1980s. Determined to enhance economic independence, South Korea launched major economic reform in the 1960s and took full advantage of the rapidly expanding global market. The normalization of relations with Japan in 1965 helped South Korea to have better access to foreign capital and technology. China in the 1970s also secured a favorable external environment and launched fundamental economic reform.

Vietnam is a particularly illuminating case because it was not long ago that Vietnam was considered both an economic basket case and a military threat to its neighbors, much like North Korea. After achieving unification by force in 1975, Hanoi sovietized the former South Vietnam and invaded Cambodia three years later, provoking hostile

²⁹ On South Korea’s political and economic transition in the 1960s, see Wonhyuk Lim, “The Origin and Evolution of the Korean Economic System” (Seoul: Korea Development Institute, 2000).

reaction from China and the United States. Due to the ensuing economic embargo and policy failures, food shortages and rampant inflation were threatening to destroy the very fabric of the society. Recognizing the grave consequences of their actions, the Vietnamese launched comprehensive economic reform at the end of 1986. After taking measures to liberalize trade and encourage joint ventures with foreign companies, the Vietnamese Communist Party dissolved collective farms, freed food prices, and cut off subsidies to state enterprises in 1988. When Vietnam withdrew its main forces from Cambodia in 1989, foreign investment began to flow into the country, albeit slowly at first. Although Vietnam lost large-scale Soviet aid, it was able to expand trade with market economies and record an average growth rate of around 10 percent per year during the 1990s. Thus, it took less than 10 years of systematic reform for Vietnam to make a leap from the depths of economic troubles and become one of the rising stars among late-developing countries.

Neither a Rogue nor a Tiger

In this scenario, the North Korean leadership undertakes partial reform by incorporating into the formal sector many of the changes first introduced in the informal sector. For fear of causing major disruptions in the economy, Pyongyang refrains from rolling back such measures as price liberalization and marketization. At the same time, however, concerned with political instability, Pyongyang chooses not to go further with reform. Externally, the Six Party talks reach a comprehensive settlement. North Korea agrees to freeze and then eventually dismantle its nuclear program in return for multilateral security assurances and the end of enmity between North Korea and the United States.

The combination of limited economic reform and improved external relations produces an outcome somewhat inferior to the outward-looking development dictatorship scenario. Although the comprehensive settlement of the nuclear issue and subsequent normalization of relations with Japan and the United States would bring economic assistance to North Korea, private-sector capital inflows are limited due to North Korea's

half-hearted reform.³⁰ Economic assistance available after the resolution of security issues provides “a shot in the arm,” but economic growth is constrained by limited reform and inadequate private-sector capital inflows. As a result, North Korea’s economic growth under this scenario is likely to be slower, perhaps around 4 to 5 percent per year. However, the North Korean leadership may not be disappointed with this outcome, because they may well feel that the combination of moderate growth and limited exposure to foreign capital is more conducive to stability.

Half Full, Half Empty

In this scenario, although Pyongyang embarks on economic reform, external cooperation is limited because of a continuing impasse over the nuclear issue. The North Korean leadership is reluctant to explore solutions to the nuclear problem, unless there is a signal from the United States that it is committed to normalizing relations. At the same time, North Korea tries to play its neighbors against each other so as to avoid total isolation and to secure valuable economic assistance. The U.S., for its part, is content to keep North Korea as a rogue state as long as it does not cross the red line of transferring nuclear materials to the outside world, or test a nuclear weapon. This impasse limits the effectiveness of reform: A shortage of capital and limited access to foreign markets constrain economic growth. Capital-strapped, with only a limited amount of economic assistance available, North Korea’s efforts to modernize its economy prove inadequate to produce rapid economic growth. With little increase in the available amount of labor and capital, growth has to come almost entirely from productivity improvement, but productivity improvement itself is limited due to lack of capital goods imports (embodied technology). This outcome roughly corresponds to North Korea’s current situation. Annual economic growth cannot be much more than 2 or 3 percent per year.

³⁰ While the Marshall Plan provided “seed money” in the postwar reconstruction of Western Europe, it was private-sector capital that accounted for the lion’s share of new investment. On this point, see J. Bradford De Long and Barry Eichengreen, “The Marshall Plan: History’s Most Successful Structural Adjustment Program,” in Rudiger Dornbusch, Wilhelm Nolling, and Richard Layard (ed.), *Postwar Economic Reconstruction and Lessons for the East Today* (Cambridge: The MIT Press, 1993).

Arduous March

This outcome is more in the past than in the future. In this scenario, North Korea does not undertake internal reform, since it is convinced that it confronts a serious risk of political instability and faces a hostile external environment. Contraction of the economy creates a great deal of suffering among unprivileged people. North Korea found itself in this position in the mid- to late-1990s. In many ways, North Korea's recent reform is in response to this costly experience. North Korea is unlikely to revert to the policy choices that led to the arduous march, but this outcome cannot be completely precluded.

Over the past decade, North Korea has moved from the arduous march to the "half full, half empty" situation. Pyongyang is unlikely to revert to the traditional planned economy, but its commitment to far-reaching market-oriented reform remains to be seen. On the external front, unless the United States decides to truly move beyond the Cold War in Northeast Asia and craft a new order, it is likely to maintain its policy of malign neglect toward North Korea. In turn, North Korea is likely to engage in a series of provocative actions to escalate the crisis to the boiling point and draw attention from the United States. If and when the nuclear crisis is resolved, North Korea will then have to decide whether it is prepared to move toward full pursuit of economic integration with the outside world.

Appendix 1: North Korea's Price Reform

Table 1. Official Prices Before and After July 1, 2002

Item	Before (B)	After (A)	A/B
Rice (kg)	(Buy) 0.80 (Sell) 0.08	(Buy) 40 (Sell) 44	50 550
Corn (kg)	(Buy) 0.49 (Sell) 0.06	(Buy) 20 (Sell) 24	41 400
Peas (kg)		(Buy) 40	
Pork (kg)	(Buy) 7	(Buy) 170	24
Chicken (kg)		(Buy) 180	
Pyongyang-Chongjin Rail Fare	16	590	37
Bus, Subway Fare	0.10	2	20
Tram Fare	0.10	1	10
Coal (ton)	34	1,500	44
Electricity (thousand kWh)	35	2,100	60
Coking Coal, Light Bulbs, Steel Plate, Rubber			45
Petroleum (ton)	923	64,600	70
Sneakers	18	180	10
Facial Soap	3	20	6.7
Laundry Soap	0.50	15	30
Soybean Paste (kg)		17	
Soybean Sauce (kg)		16	
Vegetable Oil (kg)		180	
Food Additive (kg)		300	
Soju		43	
Fish (kg)		100	
House Rent (Monthly / 60 m ²)		78	
Heating Bill (Monthly / m ²)		175	
Songdowon Beach Entrance Fee	3	50	17
Choson Literature (Magazine)	1.2	35	29

Table 2. Price Trends in Farmers' Markets

(unit: North Korean won)

Group	Item	Unit	'98	'99	'00	'01	'02	'03
Grain	Rice	kg	77.0	64.0	46.6	49.5	52.5	156.1
	Corn	kg	39.6	32.6	27.2	31.8	35.0	115.6
	Peas	kg	77.5	48.1	43.4	42.0	44.0	160.0
	Wheat Flour	kg	61.0	44.5	43.1	42.4	47.5	175.6
Meat and Fish	Pork	kg	181.0	160.0	130.1	138.4	165.0	538.9
	Chicken	-	240.0	478.6	404.7	369.3	325.7	1100.0
	Sausages	-	25.0	18.4	26.2	24.0	24.3	92.2
	Eggs	-	16.0	13.0	11.8	10.0	10.0	46.3
	Fish	-	32.0	40.9	35.0	82.6	25.0	198.9
Vegetables and Fruits	Cabbage	-	9.0	20.0	24.6	14.1	27.5	75.0
	Dried Sea Weed	kg	31.0	30.6	67.1	70.0	200.0	225.6
	Apples	-	23.0	33.1	22.9	31.6	50.0	94.3
Food Additives	Salt	kg	19.3	14.6	19.3	13.8	21.3	93.3
	Cooking Oil	500g	136.0	147.6	126.0	120.8	75.0	622.2
	Taste Enhancer	Pack	199.0	242.9	206.7	261.9	200.0	911.1
	Vegetable Oil	kg	255.0	163.1	194.6	202.6	200	475.0
	Red Pepper Powder	kg	273.8	239.4	273.8	240.6	190	1083.3
Other Food Items	Bread	-	19.0	15.0	11.7	17.1	18.8	88.9
	Rice and Soup	Bowl	162.0	142.5	150.0	94.0	80.0	411.1
	Wonton	-	10.0	22.9	10.1	11.9	13.3	60.0
	Spring Water	Bottle	3.0	17.5	30.9	13.3	25.0	134.3
	Beer	Bottle	78.0	68.2	52.5	35	51.4	197.1
Non-Food Items	Dress Shoes	-	1489.0	900	1180	700	316.7	6000.0
	Soap	-	92.0	66.3	64.4	82.5	60.0	394.4
	Toothpaste	-	50.0	55.0	38.4	50.6	28.3	66.0
	Shirt	-	400.0	472.3	613.8	394.9	275.0	861.1

Source: Ministry of Unification, "Analysis of Price Trends in North Korea," various years [in Korean].

Appendix 2: Policy Decision Forecasting Model

The policy decision-forecasting model is based on the premise that a policy outcome is obtained as a result of competition among interest groups with different preferences. The model predicts policy outcomes based on three variables: the *potential power* and *policy position* (preference) of each actor on each issue examined and the *saliency* each actor associates with those issues.³¹ Although this model is powerful in predicting the (short-run) policy outcome as a political bargaining process, it is largely silent on the issue of the stability of this outcome. In a sense, the model overlooks the feedback process through which policy decisions impact the real world and *vice versa*.

For the case of economic reform in North Korea, Bueno de Mesquita and Mo identify major players in the North Korean policymaking circle (e.g., Kim Jong Il, ideologues, military, economic planners, diplomats, etc.) and surmise their positions on economic reform (ranging from reversion to a closed command economy to privatization). For example, even when Kim Jong Il is assumed to prefer Chinese-style reform, the forecasting model predicts that the policy outcome will be close to the *status quo*, as hard-liners build coalitions to gain the upper hand. Kim Jong Il is forced to side with these hard-liners lest he be reduced to a figurehead.

It is unclear, therefore, whether this policy outcome is stable given North Korea's economic conditions. Without serious reform, North Korea's economic conditions will almost certainly deteriorate and force policymakers to propose an alternative policy decision. Depending on how they respond in this subsequent round of political bargaining, North Korea may be headed toward an economic recovery, a palace coup, or a popular revolt. Hard-liners may win the immediate political battle, but if they cannot improve the economy, they cannot win the war. Consequently, the long-run policymaking dynamics may be very different from the short-run outcome. Changes in

³¹ The term *saliency* refers to the degree of importance or relevance that each actor attaches to a particular issue. Note that the importance of a particular issue (e.g., economic reform, abortion, foreign policy, etc.) is not uniform across all interest groups. In policy decision forecasting models, the index number associated with the *power* of an actor is multiplied by the index number for the issue *saliency* to measure the influence of the actor over that issue.

economic fundamentals affect the policy position and political clout of interest groups and ultimately the outcome of the political bargaining process. In short, it seems clear that political forecasting should be complemented by an analysis of the fundamentals if it is to predict accurately the evolution of policy outcomes.