
Preparing for the Economic Integration of Two Koreas: Policy Challenges to South Korea

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Introduction

In November 1989, the Berlin Wall came down. Less than a year later, on 3 October 1990, Germans began to share the same country name. Now, seven years after that historic moment, another historic event is on the horizon. North Korea's recent food crisis and economic difficulties have spurred studies on the possibility that the country may suddenly collapse. Because information about the North Korean regime is sparse and uncertainty is high, analyses of possible Korean unification have led to diverse and manifold scenarios, differing markedly on such questions as the costs of unification.

Nonetheless, there are common policy implications that are relevant and applicable to any scenario. The objective of this chapter is to summarize and analyze key policy agenda for the economic integration of North and South Korea and propose further research to be done in this challenging yet promising area.

The current integration policy of the South Korean government is clear. The government prefers that gradual economic integration precede political integration; it does not desire the sudden collapse of North Korea, although the government does prepare for that possibility. The National Unification Board (NUB) heads these preparations, with relevant ministries contributing to the formulation of sectoral policies.

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Table 1 The North Korean economy: real GDP, GNP, and sectoral growth rates (percentage)

	1990	1991	1992	1993	1994	1995	1996
Real GDP	-3.7	-5.1	-7.7	-4.2	-1.8	-4.6	-3.7
Agriculture	-10.2	2.8	-2.7	-7.6	2.7	-10.5	1.0
Mining	-8.5	-6.8	-6.1	-7.2	-5.5	-2.3	-11.8
Manufacturing	-1.5	-13.4	-17.8	-1.9	-3.8	-5.3	8.9
Electricity, etc.	-2.2	-4.5	-5.7	-8.7	4.2	0.1	-7.8
Construction	5.9	-3.4	-2.1	-9.7	-26.9	-3.2	-11.8
Services	0.3	2.5	0.8	1.2	2.2	1.5	0.8
Real GNP	-3.7	-5.2	-7.6	-4.3	-1.7	-4.5	-3.7

Source: Bank of Korea, *Estimates of North Korea's GDP in 1995 & 1996* (in Korean).

However, more needs to be done in directly addressing the sequence and priority of various policies. In addition, there are virtually no studies on how to coordinate the international community to facilitate Korean integration.¹ We intend to address these tasks. Thus, this chapter is not comprehensive in its scope; instead, it focuses on key issues.

After describing prospects for the North Korean economy, we present scenarios of inter-Korean integration. Our scenarios are contingent on policies of North Korea, as well as those of South Korea and its allies. Then we discuss the policy challenges that economic integration brings to South Korea. In the next section, we cover the role of the international community in financing economic integration. Finally, we summarize the policy implications of economic integration.

Prospects for the North Korean Economy

According to estimates released by the Bank of Korea (1997),² in 1990 the North Korean economy began seven consecutive years of declining income. The size of the economy in 1996 shrank to only about 70 percent of that in 1989 (table 1). Besides the inefficiency of the economic

1. By "the international community," we mean the World Bank, the International Monetary Fund (IMF), the International Finance Corporation (IFC), the Asian Development Bank (ADB), the Organization for Economic Cooperation and Development (OECD), export-import banks of major industrialized countries, international aid agencies, non-governmental organizations (NGOs), international private banks, and private firms around the world.

2. There are several other sources for North Korean income estimates, including Chun (1992), Jeong (1993), Hwang (1993), and Noland (1996). Unfortunately, they all suffer from unreliable and scanty information about the North Korean economy. Its analysis requires more realistic and reasonable estimates of North Korean GDP figures.

Table 2 North Korea's trade: by partner (millions of dollars)

	Export		Import		Total trade			
	1994	1995	1994	1995	1994	Share %	1995	Share %
Japan	322.7	339.7	170.8	255.0	439.7	20.9	594.6	29.0
China	199.2	63.6	424.5	486.2	623.7	29.6	549.8	26.8
India	39.6	76.4	54.3	50.4	93.9	4.5	126.9	6.2
Russia	40.0	15.5	100.0	67.9	140.0	6.6	83.4	4.1
Hong Kong	33.1	23.6	61.1	59.5	94.2	4.5	83.1	4.0
Germany	60.6	42.0	58.8	39.0	119.4	5.7	81.0	3.9
Thailand	1.5	3.0	11.7	57.7	13.2	0.6	60.7	3.0
Poland	14.7	18.0	19.3	31.6	34.0	1.6	49.6	2.4
Singapore	3.0	1.3	23.3	45.5	26.4	1.3	46.8	2.3
Netherlands	3.1	2.7	19.8	36.1	23.0	1.1	38.8	1.9
Others	121.7	150.2	325.1	187.0	500.5	23.7	337.2	16.4
Total	839.2	736.0	1268.7	1315.9	2108.0	100.0	2051.9	100.0

Note: Excludes intra-Korean trade.

Source: Korea Trade Promotion Agency (KOTRA), *North Korea's External Trade in 1995* (in Korean).

system, a major reason for this decline has been a severe deterioration of North Korea's external economic relations following the disintegration of the Eastern Bloc in 1989. The collapse of the former Soviet Union has had particularly adverse effects. Disaggregating North Korea's trade by partner in 1994 and 1995 reveals that China and Japan were its largest export destinations, followed by South Korea (tables 2 and 3). These three countries now account for more than two-thirds of North Korean trade flows, whereas Russia and other former Eastern Bloc countries are no longer primary trading partners.

Total trade fell substantially from \$4.72 billion in 1990 to \$1.98 billion in 1996 (table 4), which is less than 1 percent of South Korea's trade volume. According to the Bank of Korea (1997), North Korea has experienced chronic trade deficits of \$500 to \$800 million a year, excluding intra-Korean trade, since 1990. Almost all of its deficits come from trade with China (see table 2). In contrast, North Korea has enjoyed trade surpluses with South Korea since intra-Korean trade began in October 1988, amounting to \$158 million in 1995 and \$112 million in 1996 (see table 3). The remaining deficit of around \$350 to \$650 million has been financed mainly by transfer payments from pro-North Korean residents in Japan. While we do not have an exact official estimate of this transfer, it must be roughly equivalent to the annual trade deficit of North Korea, given that there have been virtually no capital inflows into the North since the collapse of the former Soviet Bloc.

Table 3 North Korea's trade: with South Korea (millions of dollars)

Year	Export	Import	Total trade	Total surplus
1989	18.7	0.1	18.7	18.6
1990	12.3	1.2	13.5	11.1
1991	105.7	5.5	111.3	100.2
1992	162.9	10.6	173.4	152.3
1993	178.2	8.4	186.6	169.7
1994	176.3	18.2	194.6	158.1
1995	222.9	64.4	287.3	158.4
1996	182.4	69.6	252.0	112.8
Total	1,059.2	178.1	1,237.3	881.1

Source: National Unification Board (NUB), South Korea, *Intra-Korean Trade and Cooperation*, No. 75 (in Korean).

North Korea's external debt situation, too, is gloomy. According to South Korea's Korea Trade Promotion Agency (KOTRA), North Korea's accumulated external debt was estimated at \$6.8 billion in 1989, the latest year for which a reasonable figure is available (see table 5). Most of North Korea's external debt is owed to Russia and China (see table 6) and is projected to have increased to around \$12 billion in 1996 (56 percent of GNP). Its debt-to-export ratio was extremely high at 1,644 percent in 1996. North Korea appears to make no debt service payments, owing to severe foreign exchange shortages; with this history of default, it cannot borrow from Paris Club creditors.

These shortages in foreign exchange, in turn, severely restrict the availability of primary and intermediate inputs that North Korea desperately needs for the reconstruction of its economy. Reports from the National Unification Board of South Korea currently estimate the capacity utilization rate of the North Korean manufacturing sector to be around 30 percent—and in the nonmilitary manufacturing sector, it is as low as 20 percent.

Chronic foreign exchange shortages, coupled with the reduction in subsidized energy supplies from China and Russia, have severely hampered oil imports into the North since 1989. The estimates by the NUB show that oil imports have fallen fast (see table 7). There was an increase in 1995, as the United States supplied crude oil in accord with the 1994 North Korea-US Agreed Framework. Nonetheless, oil imports in 1995 were less than half of the 1990 level. Coal and electricity production trends have exacerbated energy shortages in North Korea.

Two consecutive years of the "Great Flood," in 1995 and 1996, have worsened the prevailing food crisis in North Korea. Because of an acute lack of information, it is difficult to estimate the magnitude of North

Table 4 North Korea's trade volume (billions of dollars)

Year	Export	Import	Total trade	Total balance
1990	1.96	2.76	4.72	-0.80
1991	1.01	1.71	2.72	-0.70
1992	1.02	1.64	2.66	-0.62
1993	1.02	1.62	2.64	-0.60
1994	0.84	1.27	2.11	-0.43
1995	0.74	1.31	2.05	-0.57
1996	0.73	1.25	1.98	-0.52

Source: Bank of Korea, *Estimates on North Korea's GDP in 1991, 1993, 1995 & 1996* (in Korean).

Korea's grain shortage with any real accuracy. According to the NUB, in 1996 North Korea was experiencing a grain shortage after imports of around 2.24 million metric tons (see table 8). This year's crop is also expected to suffer from what the North Korean authorities call the "Great Drought of the Century" and "Tidal Waves and the Highest Tide in Scores of Years." The agricultural production base itself is said to be at risk because of these natural disasters. However, in truth, the country's problems are more structural: they are not simply the temporary result of a string of bad luck. Fundamental agricultural reforms are needed; inflows of food aid alone will not cure these problems.

It is obvious that North Korea needs foreign assistance to overcome its current economic difficulties. Recent moves by North Korea suggest that Kim Jung Il's government is now resigned to this need and willing to seek international aid. This was evidenced in North Korea's first-ever open request for food aid, to which the international community responded favorably. North Korea has accepted US and South Korean food aid and participated in preliminary four-way peace talks. Ground-breaking ceremonies took place on 19 August 1997 for the long-delayed light-water reactor project under the auspices of the Korean Peninsula Energy Development Organization (KEDO). On 21 August 1997, after a hiatus of almost five years, North Korea and Japan started talks preparatory to resuming negotiations on normalizing diplomatic relations. In response to an invitation by North Korean authorities, an International Monetary Fund (IMF) "fact-finding trip" was scheduled to visit North Korea in early September. The mission is a "mutual first acquaintance" with the dual objective of fact-finding and providing the North with information about the IMF. Whether the mission is successful or not, it is clearly a step forward in line with recent developments toward engagement with the North Korean economy.

As a first step to open its economy, North Korea established the Rajin-Sonbong Free Economic and Trade Zone (FETZ) in December 1991, and

Table 5 North Korea's external debt (billions of dollars)

	1975	1980	1986	1989	1992	1993	1994	1995	1996
Total	2.10	3.46	4.06	6.78	9.72	10.32	10.66	11.83	12.00

Source: Korea Trade Promotion Agency (KOTRA), *Guide for Investment in North Korea*, 1993, 1994 & 1995 (in Korean).

it has recently attracted significant foreign investment. At an investment forum held in September 1996, contracts worth \$265 million were signed and an additional \$835 million worth of projects were agreed on (UNDP, *Rajin-Sonbong FETZ Investment Forum Results*, press release, 23 September 1996). As of May 1997, investment projects totaling \$347 million had already started to be disbursed. The United Nations Development Program (UNDP) has projected that disbursement of foreign investment projects in North Korea will increase more than fourfold, from \$37 million as of the end of 1996 to about \$150 million by the end of 1997. Of investment in the Golden Triangle Area (consisting of China's Yanbian, Russia's Primorskiy, and North Korea's Rajin-Sonbong areas), Rajin-Sonbong accounted for 8 percent in 1994, but this is expected to increase to 22 percent in 1998 (*Seoul Maeil Kyongje Shinmun*, 19 August 1997).

Despite all the recent encouraging developments in policies of North Korea, the country's prospects are still clouded by many uncertainties. Thus, it would be wise to present scenarios with a limited number of parameters and contingencies, and then to analyze conceivable paths for North Korea based on these scenarios.

Scenarios of Inter-Korean Integration

Motivated by the recent economic decline in North Korea, many authors have developed various scenarios for Korean unification.³ There are almost too many factors to consider for "forecasting" what will happen on the Korean peninsula with any reasonable accuracy. Drawing on assessments of the current status of the North Korean economy as well as its short-term prospects, we develop scenarios contingent on policies of North Korea as well as those of South Korea and other key players.

3. E.g., see Snyder (1996), Noland (1997b), and Eberstadt (1997). Robert Scalapino (speech at seminar of Korea Institute for International Economic Policy, 1997) visualizes five scenarios for North Korea: early complete collapse; slow, irreversible decline; hunkering down; military conflict; and evolutionary change.

Table 6 North Korea's external debt: by creditor, end 1989 (billions of dollars)

	External debt	Share (%)
OECD countries	2.74	40.4
Morgan Grenfell	0.24	3.5
Anz Bank	0.64	9.4
Japan	0.53	7.8
France	0.23	3.4
Germany	0.35	5.2
Sweden	0.15	2.2
Austria	0.10	1.5
Others	0.50	7.4
Socialist countries	4.04	59.6
Soviet Union	3.13	46.2
China	0.90	13.3
Total	6.78	100.0

Source: Korea Trade Promotion Agency (KOTRA), *Korea Trade Information Services* (internal database).

We consider three parameters, each of which gives rise to two alternative contingencies. First, the policies of South Korea and the United States as well as the “Big Three” in Northeast Asia—namely, Japan, China, and Russia—are classified as providing “full-scale assistance” or “limited assistance.” Full-scale assistance will include the removal of the US embargo against North Korea, North Korea’s membership in major international financial institutions, and the establishment of a North Korean economic relationship with Japan and the United States scaled up to the level that South Korea has attained with China and Russia. Also, it will include North Korea’s receipt of \$5 to \$10 billion from Japan as post-colonial compensation. In contrast, “limited assistance” will mean more or less the status quo: assistance at the level that will help keep the North Korean regime barely afloat.

Second, North Korea’s economic policy can be characterized as one of either “limited openness” or “full openness.” By “full openness,” we will mean pursuit of China-type economic reforms in North Korea, accompanied by a continued opening of its economy. By “limited openness,” we again refer to the status quo on the part of North Korea.

The third parameter to be considered is the stability of North Korea’s political regime. Here, we simply distinguish between a “stable regime” and an “unstable regime.” By “stable,” we mean that the political power elite is able to control its people and political enemies, carrying out its policies with little resistance. “Unstable” refers to a regime in which the elite has lost that power.

Table 7 The energy supply in North Korea

	Coal production (million tons)		Import of crude petroleum (million tons)		Electricity production (billion kWh)	
1990	33.15	–	2.52	(–3.1)	27.7	(–5.1)
1991	31.10	(–6.2)	1.89	(–24.0)	26.3	(–5.1)
1992	29.20	(–6.1)	1.52	(–19.6)	24.7	(–6.1)
1993	27.10	(–7.2)	1.36	(–10.5)	22.1	(–10.5)
1994	25.40	(–6.3)	0.91	(–33.1)	23.1	(4.5)
1995	23.70	(–6.7)	1.10	(20.9)	23.0	(–0.4)

Note: Figures in parentheses indicate percentage of growth over the previous year.

Source: 1990 figures are from National Unification Board (NUB), *Overall Assessment of North Korea's Economy 1991* (in Korean); 1991-95 figures are from Bank of Korea, *Estimates on North Korea's GDP in 1992, 1994 & 1996* (in Korean).

The policies of North Korea and those of South Korea and others are interrelated. For instance, as long as South Korea, the United States, Japan, and China do not offer North Korea full-scale assistance, it seems to be neither feasible nor probable that North Korea will adopt economic policies of full openness. On the other hand, even if South Korea and other allies do fully assist North Korea, the North may respond by adhering to its policy of limited openness.

Different combinations of contingencies concerning each of the three parameters give rise to four alternative scenarios of what will happen to the North Korean regime: “explosion,” “implosion,” “decay,” and “reform.”

“Explosion” means military conflict, the cost of which will be tremendous to South Korea. This is likely to happen if North Korea adheres to its current policy of limited openness, while South Korea and the United States do not go beyond policies of limited assistance. On the non-economic side, the political power of current North Korean leaders should be stable but “hawkish” to favor this scenario. Military conflict is likely to do massive damage to South Korea. It will not last very long, however, and in the end the South will win.

By “implosion,” we mean the occurrence of a civil war or coup d'état within North Korea, leading to collapse of the regime. This swift collapse will be followed by the South's absorption of the North, and it will entail a massive flow of refugees from the North to the South. This is likely to happen if the North Korean regime is unstable and continues to resist opening up to the world beyond the current level. Under those circumstances, the outside world could do little to prop up the regime in North Korea, even if such support should seem desirable.

The third, and less dramatic, scenario is that of the “decay” of the North Korean regime. This will happen if North Korea continues to resist opening up to the world beyond the current level, and if its politi-

Table 8 North Korea's grain shortage (millions of metric tons)

	Total demand for grain (A)	Supply from previous year (B)	Domestic shortfall (C = A - B)	Import (D)	Shortage (C - D)
1985	–	6.27	–	–	–
1989	–	6.03	–	–	–
1991	6.47	4.81	1.66	1.29	0.37
1992	6.50	4.43	2.07	0.83	1.24
1993	6.58	4.27	2.31	1.09	1.22
1994	6.67	3.88	2.79	0.49	2.30
1995	6.72	4.13	2.60	0.96	1.64
1996	6.73	3.45	3.28	1.04	2.24

Source: National Unification Board (NUB).

cal regime remains stable. In this scenario, the economy continues to weaken until eventually the government dissolves without violence. The border between the North and the South will collapse spontaneously, as there occurs an uncontrollable movement of people from the North to the South. The two Koreas will be unified much in the same way as the two Germans were.

The fourth and final scenario is that of “reform,” which posits that North Korea’s economic difficulties are overcome over time, following a growth path similar to that of the Chinese economy. This can happen if South Korea and the allies assist North Korea on a full-scale basis and, more important, if North Korea adopts economic policies of full openness, while the political situation remains stable.

The current economic policy and political situation in North Korea may be characterized as displaying limited openness and stability, respectively. South Korea and the United States seem to be pursuing policies of limited assistance. This would thus seem to be a dangerous situation, containing the possibility of a North Korean “explosion.” At the same time, though, developments are indicating a change to another combination of contingencies. South Korea and the United States seem to be moving toward broader assistance; and confronted with economic difficulties and international isolation, North Korea seems to be inclining toward greater openness to South Korea and the United States. There are signs that North Korea’s relationships with the United States and Japan, both political and economic, are likely to improve, while the current political regime of North Korea maintains stability, at least for the time being. Noland (1997b) has noted that, unlike countries in Central Europe, there are no institutions in North Korea that may serve to channel mass discontent into effective political action. Under these circumstances and in the short term, there seems to be little chance for North Korea to undertake wide-ranging reforms. But it is also unlikely

Table 9 Alternative scenarios of development in North Korea

North Korea's policy		Limited openness	Full openness
Policies of South Korea and the U.S.			
Limited assistance	Stable regime	Explosion	–
	Unstable regime	Implosion	–
Full-scale assistance	Stable regime	Decay	Reform
	Unstable regime	Implosion	Implosion

that the North Korean regime will collapse. In the longer term, so long as North Korea remains politically stable, it is likely to grow bolder with reforms, especially if South Korea and other countries remain supportive of them. However, if political stability in North Korea begins to weaken as a result of policies of full openness, an implosion is likely to follow. Table 9 summarizes these scenarios.

In all scenarios except that of reform, the end result is the beginning of economic integration between the two Koreas. The process will begin rather abruptly, and the responsibility for managing it will fall on the South Korean government. If there is reform, the two Koreas will likely enter into a period of peaceful coexistence, at least for some time to come. We expect, however, that North Korea's reform will eventually lead to a gradual economic integration with South Korea. In the next section, we discuss policy considerations important to South Korea if such North-South Korean economic integration is to be effected successfully.

Policy Challenges of Economic Integration

We start by characterizing and assessing the German unification model as a reference in order to draw lessons and avoid mistakes. The foremost concern of West German policymakers was to prevent or alleviate a mass migration flowing from the East to the West. In order to make East Germans stay where they were, all policy actions were geared toward bringing East German income and wage levels up to those of West Germany as fast as possible. To achieve this ambitious goal, the government made huge income transfers out of its budget. In the same vein, the notorious currency conversion rate of 1:1 for current contracts (such as wages), which was equivalent to an almost 400 percent appreciation of the East German mark against the West German deutsche mark,⁴ was implemented in July 1990 shortly after the fall of the Berlin Wall.

Indeed, the level of East German real wages had already attained 81

4. Before the currency integration, the commercial conversion rate was about 4.4:1.

Table 10 East Germany's economy, 1991-96: percentage of West German levels

	1991	1992	1993	1994	1995	1996
Real GDP per head	31	43	51	53	54	na
Real GDP per employed person	31.0	43.1	51.6	54.3	55.2	56.0
Nominal GDP per head	31.0	39.0	45.0	49.0	52.0	na
Capital formation per head	65.0	89.0	115.0	135.0	148.0	na
Consumption per head	50.0	59.0	64.0	67.0	69.0	na
GDP growth rate (%)	-31.4	7.8	8.9	9.9	5.3	2.0
Sectoral productivity						
Manufacturing	19.6	32.1	42.5	49.0	50.7	na
Construction	48.4	60.5	65.0	73.4	77.1	na
Transport, communications	22.1	22.6	28.5	32.5	34.3	na
Services	46.1	50.2	53.7	54.1	53.9	na
Gross wages per employee ^a	48.0	62.0	70.0	73.0	75.0	na
Net real wages per employee ^a	55	67	75	78	81	na
Unit labor cost ^b	151	141	133	133	133	na

a. Domestic concept.

b. Unit labor cost = Gross labor remuneration divided by real GDP.

Sources: Germany Federal Statistical Office (1996), Council of Economic Advisors (1996), DIW (1996), Ifo-Institute (1995).

percent of the West German level by 1995, while the productivity level of East German manufacturing workers was only 51 percent of their West German counterparts (see table 10). The productivity gap—that is, the difference between wages and productivity—has been the main culprit of the sudden collapse of the production base in East Germany and the main cause of mass unemployment. Because the incidence of unemployment in East Germany was much larger than envisaged before unification, more budgetary transfer payments were required to support the rapid catch-up policy: the result was a huge fiscal deficit. This was the route that Germans followed, which need not be emulated by Koreans.

We begin discussing the policy challenges of Korean economic integration by acknowledging that the reconstruction of the North Korean economy, which has suffered severely from the inefficiencies of state control and the long-standing focus on self-sufficiency, should be the core task in achieving Korean economic integration. To accomplish this task, special emphasis needs to be placed on promoting both South Korean and foreign investment in North Korea. Any intentional high-wage policy should be avoided, and wages should be set in accordance with productivity.

An enormous income gap, whatever the source or estimation method used, would induce a significant migration of workers from the North

to the South, if labor markets were permitted to integrate.⁵ Certainly, migration of a size beyond the absorptive capacity of the South Korean economy is a definite negative. However, the impact of this population flow on the South Korean economy depends critically on differences in the skill structure of the two economies. Also, the extent of migration depends on the probability of being employed, as well as on the expected wage differences.

After German unification, migrants from the East to the West were mostly young skilled workers with high-level education and vocational training. It is true that huge income transfers into the East particularly discouraged migration of unskilled and poor workers. More important, however, there was very little possibility for unskilled workers to find employment in the West, where that demand was already being filled by other foreign workers. At the time, about 8 percent of workers in West Germany came from abroad.

In South Korea, on the contrary, currently there is a significant shortage of unskilled workers. Moreover, the number of foreign workers is negligible. Even after successful structural adjustment, demand for unskilled service workers is projected to increase further (Park 1996). Thus, unlike Germany, South Korea has ample room for absorbing additional unskilled workers and can benefit from the migration. Since the technology level of North Korea is estimated to be that of South Korea in around 1980 (Ministry of Science and Technology 1995; Korea Development Bank 1995: cited by Park 1996, 40-41), the probability of employment for North Korean skilled migrants would be low. Thus most migrants from the North to the South would be unskilled workers, in which case the cost of migration would not be very large. Of course, we do not deny the negative impact of unexpected migration flows from the North to the South, but we want to underscore the benefits of migration between North and South Korea as well.

Another point that most analysts have neglected, though it deserves due focus, is the immense needs that migration from the South to the North will meet. Incentive policies to attract experienced, skilled professionals to the North must be formulated. The demand for experts and specialists in various areas related to system transition—such as economists, teachers, professors, civil servants, lawyers, bankers, business administrators, agricultural specialists, and distributors—will be tremendous.

5. From October 1989 to 1993, 1.35 million East Germans moved to West Germany, equivalent to about 8 percent of East Germany's population in 1989. During the period, 340,000 West Germans moved to East Germany. This emigration imbalance virtually ended in 1993, less than five years after the German integration. Since then, the proportion of emigrants in East Germany has been similar to the proportion of migrants moving within West Germany. By projecting the same percentage onto North Korea's population in the year 2000, we calculate that about 2 million people would emigrate.

In contrast, the supply of experts and specialists from the North would be negligible at the time of initial integration and would not increase as needed. Policies to encourage emigration from the South should receive proper attention.

Nevertheless, South Korea should prepare for the sudden, mass inflow of refugees and excessive migration. The basic policy should focus on differential treatment of social security systems between the North and the South. In other words, we suggest that North Koreans who stay where they are should be eligible for preferential treatment over those who migrate to the South. Ownership of houses and farmland should be given only to those who reside in North Korea over a certain period after economic integration. On top of these incentives, additional benefits such as unemployment compensation and cost-of-living support should be introduced in North Korea, while no special treatment should be given to emigrants to the South.

The suggested policies for tackling the potential migration problem are different from those implemented by Germany in that they require less substantial fiscal transfer payments, no intentional high-wage policy, and a separate social security system. Most of all, to prevent “excessive migration,” we believe that reconstruction of the North Korean economy is the best solution. The fundamental policy guideline should focus on long-term economic development of the North Korean economy, rather than a short-term restriction of emigration from the North.⁶

Economic integration will inevitably require restructuring North Korean industries. Although there is no consensus on how to do it, we may observe that immediate restructuring of industries has resulted in a sudden collapse of East Europe’s production base and mass unemployment; thus a more gradual approach is appealing for Korean integration. Reform of state-owned enterprises (SOEs) should be carried out in a similar vein. First, SOEs should be categorized as suited either for immediate shutdown, privatization, or (temporarily) maintained state control, pursuant to further privatization in due course. North Korea’s industries, which currently concentrate too intensely on heavy ones, should be transformed to labor-intensive light manufacture. But North Korea’s agriculture sector needs immediate reform, partly because the process is relatively uncomplicated and partly because its payoff will come much earlier than that of industrial reform.

6. In order to facilitate these policies, North Korea may need to be treated separately from South Korea on a temporary basis. One option may be to consider North Korea a “Free Economic Zone” under special administration in order to attract foreign investment. This policy may need to be considered because South Korea is not as rich as West Germany and cannot finance most unification costs domestically. Also, North Korea is not as relatively advanced as East Germany and thus cannot be technologically integrated in a very short time period. Legal considerations regarding such a “Special Administrative Zone” may also need to be taken into account.

Labor policy in North Korea should focus on maintaining employment. North Koreans have been long accustomed to “full employment.” An important related issue that needs to be handled carefully is the treatment of industrial labor unions in North Korea. After economic integration, North Korean workers will be interested in what labor unions can do for them; therefore, an appropriate policy needs to be prepared.

Price decontrol is the essence of any market-based economy. However, debates over the appropriate speed of price liberalization continue. In addition, the timing of currency integration is an unresolved issue.⁷ One option is maintaining a two-currency system, which requires two separate but not necessarily independent administrations, for a certain period until North Korea transforms sufficiently into a market economy. A flexible exchange rate between North and South Korean currencies could act as a shock absorber and improve chances for a more gradual adjustment of North Korea’s economy (Hufbauer 1996). Again, the German experience tells us that the conversion rate between the two currencies at the time of currency integration should be based on market forces and the competitiveness of the two regions.

To reconstruct the North Korean economy, one of the most urgent and expensive tasks is to expand infrastructure. Rehabilitation and construction of roads, ports, railroads, and buildings are critical to attracting investment in the North. Since infrastructure requires time and money, it is essential to rank projects by importance. Priority should be given to expanding the transportation and telecommunication systems linking North and South Korea. The role of domestic and foreign private sectors and international financial institutions would be large in this area.

Financing Korean Economic Integration

Table 11 succinctly compares differences between East and West Germany as of 1989, when the Berlin Wall fell, with those between North and South Korea as of 1996. North Korea’s population is about half of South Korea’s, while East Germany’s population was about one-quarter the size of West Germany’s. The per capita income of East Germany was estimated to be around one-fourth to one-fifth of that of West Germany. In contrast, North Korea’s per capita income is estimated to be less than one-tenth of South Korea’s. This suggests that the “burden” of unification to South Koreans, however measured, is likely to be far higher than it was to West Germans. This assessment is reinforced

7. For the German experience, see Akerlof et al. (1991). For a discussion of experiences from Eastern Europe and China, see Chun (1996).

Table 11 Two Koreas (1996) and two Germanys (1989): comparative economic indicators

	Unit	S. Korea (A)	N. Korea (B)	A/B	Unit	W. Germany (C)	E. Germany (D)	C/D
1. Population	Millions	45.5	23.6	1.9	Millions	61.7	16.4	3.8
2. Nominal GNP	US\$ b.	480.4	21.4	22.4	DM b.	2,260	230-300	9.8-7.5
3. GNP per capita	US\$	10,548	910	11.6	DM	36,629	14,024-18,293	2.6-2.0
4. Total trade	US\$ b.	280.1	1.98	141.5	DM b.	1074.9	82.25	13.1
Export	US\$ b.	129.7	0.73	177.7	DM b.	609.9	41.11	14.8
Import	US\$ b.	150.3	1.25	120.2	DM b.	465.0	41.14	11.3
(Trade/GNP)	%	58.3	9.3	–	%	47.6	35.8-27.4	–
5. External debt	US\$ bn.	104.5	12.0	8.7	US\$ b.	106.7	22.0	4.9
(External debt/GNP)	%	21.7	56.1	–	%	4.7	9.6-7.3	–
(External debt/export)	%	80.6	1,643.8	–		17.5	53.5	–
6. Economic structure								
Agriculture	% of GDP	6.3	29.0	–	% of GDP	na	9.2	–
Industry	% of GDP	26.1	28.0	–	% of GDP	na	59.4	–
Services	% of GDP	67.6	43.0	–	% of GDP	na	31.4	–
7. Employment structure								
Agriculture	%	na	na	na	%	10.8	3.9	2.8
Industry	%	na	na	na	%	50.4	39.7	1.3
Services	%	na	na	na	%	38.8	56.4	0.7
8. Public expenditure	US\$ b.	97.1	19.0	5.1	US\$ b.	547.7	61.8	8.9
(Public exp./GNP)	%	20.2	88.8	–	%	24.2	26.9-20.6	–
9. Defense spending	US\$ b.	5.1	14.3	0.4	US\$ b.	28.5	11.2	2.5
(Defense spending/ GNP)	%	1.1	66.8	–	%	1.3	5.0-3.7	–

Notes: Items 7 and 8 for South/North Korea are 1995 figures.

Sources: National Unification Board (NUB), *Comparison of North and South Korea's Economies, 1997* (in Korean); Bank of Korea, *Estimates on North Korea's GDP in 1996* (in Korean); Federal Statistical Office of Germany.

by another observation: the structure of the North Korean economy, which is arguably the most closed economy in the world, appears to be far more distorted than the East German economy was before unification.

Many economists have tried to estimate the cost of Korean integration; they have produced a very wide range of estimates, ranging from \$40 billion to \$2.24 trillion (e.g., see Bae 1996; Noland, Robinson, and Scatasta 1997; Noland, Robinson, and Liu 1997).⁸ These differences are due to different definitions and coverage of integration costs (e.g., political, economic, cultural, or social integration), the timing and method of economic integration, the level of economic development of North and South Korea at the time of integration, the target level of economic convergence, the number of years required to achieve the target level, and so on (see Bae 1996). Although it is not impossible to produce reasonably realistic cost estimates whatever the definition used, such exercises are extremely difficult and impractical with very scanty and inadequate knowledge about the North Korean economy. Thus, we approach the financing aspect of North-South Korean integration by suggesting what methods are feasible and desirable for financing the costs of economic integration, however they are defined, without making an effort to correctly estimate them.

Broadly, there are three methods of financing: increase in current taxes, issuance of government bonds, and foreign financing, including foreign investment. Bond issuance and foreign borrowing can be regarded as ways of deferring the burden from current to future generations. Since German unification, total German government expenditures pouring into the former East Germany amounted to more than DM1 trillion as of March 1997, averaging around DM150 billion per year. Notwithstanding other expenses, this government expenditure alone has been equivalent to about 5 to 6 percent of West German GDP per annum. Comparing the relative sizes of East and West German economies in 1989 with the current North and South Korean economies in 1996 (see table 11) suggests that South Korea would have to spend relatively more than West Germany has done in order to provide North Korea with a magnitude of income transfer similar to that from West to East Germany. As the previous sections made clear, we do not suggest following the ambitious German target of rapid income convergence through fiscal transfer payments.

The German experience reveals that the budgetary cost of unification has been much larger than originally envisaged because the economic

8. On the other hand, there are potential benefits of unification, such as savings from reduced defense spending, economies of scale, and supply responses. Interestingly, Jo (1997) suggest that economic benefits of earlier unification may exceed economic costs of later unification.

difficulties of East Germany before unification were severely underestimated.⁹ Unlike West Germany, however, South Korea does not have much room for domestic financing through government expenditure reductions or tax increases. Tax revenue in 1996 already accounted for more than 20 percent of South Korean GDP. Moreover, Korean capital markets are not adequately developed to absorb such a huge supply of government bonds. Thus, the financing needs from Korean integration should be satisfied by foreign financing to a much larger degree than in the German unification case.

Methods of foreign financing include attracting foreign investment as well as grants and borrowing from major industrialized countries and from international financial institutions (IFIs) such as the World Bank, the IMF, and the Asian Development Bank. In this regard, South Korea should start discussing with major IFIs and donor countries the possible impacts and consequences of Korean economic integration, preparing itself early by seeking to learn what assistance will be feasible.

How much in bilateral and multilateral contributions can be obtained to reconstruct and develop North Korea? Hufbauer (1996) projected that it will probably not exceed \$30 billion altogether, basing his estimate on the cases of East Germany and Albania.¹⁰ Studies on Korean integration costs indicate that the expected financial assistance from IFIs will probably not fill a major part of the financing gap. However, as suggested above, Korean-style economic integration will require that both South Korean and foreign private firms take an active role in investing in North Korea. Without assurance from IFIs, in particular from the IMF and the World Bank, foreign private firms will not invest in North Korea and bear the high risk solely by themselves. Hence, the importance of the role of international financial institutions should not be underestimated.

A recent report by the World Bank (1997) provides guidelines for the timing and scale of World Bank involvement in countries in conflict. According to these guidelines, in the case of North Korea, the World Bank is currently not even entering the first stage, a "watching brief." A watching brief is necessary for a country in conflict, where no active World Bank portfolio is possible, to keep track of developments and build a knowledge base useful in preparing effective and timely involvement

9. IMF (1990) also in a sense underestimated the medium-term implications of German unification. Two scenarios in the study used to estimate investment needs over the next ten years did not catch the more dismal reality (see Wegner 1996a).

10. To overcome the Mexico peso crisis in 1994, a total of \$49.8 billion in financial assistance was given to Mexico by the international community: \$20 billion from the United States, \$17.8 billion from the IMF, \$10 billion from the Bank for International Settlement (BIS), and \$2 billion from neighboring Latin American countries. For the Thailand crisis in 1997, more than \$16 billion in financial assistance has been sought.

once such intervention becomes feasible.¹¹ For the World Bank to enter this stage is believed to be the first priority of international cooperation.

Even before economic integration, loans from IFIs can be an option for mobilizing international funds to help North Korea overcome its current economic difficulties and invest in infrastructure. IMF membership is a prerequisite to receiving aid and loans from the World Bank. Membership will require North Korea to report accurate, transparent, prompt, and full data on national and external accounts, prices, external debts, budgets (including military), and monetary statistics. Furthermore, after formal membership is granted, in most cases the country needs to “discuss and negotiate” with the IMF and the World Bank its medium-term policy framework and to accept IMF surveillance procedures. These conditions may not be acceptable for North Korea. However, there are several precedents for compromise. Before formal membership to the IMF and the World Bank was granted, Russia, Bosnia and Herzegovina, and West Bank and Gaza were able to receive financial assistance through establishing Special Trust Funds.¹²

As part of its preparations for possible economic integration, the South Korean government may want to take the initiative to provide the international community as soon as possible with long-term blueprints for the reconstruction of North Korea; these blueprints should contain guarantees for facilitating foreign investment in North Korea to shore up investors’ confidence. South Korea should also take the lead in organizing an international task force or consortium comprising major international financial institutions, NGOs, international aid agencies, and think tanks that will develop a framework for international cooperation on possible Korean integration.

Conclusion

We have discussed the policy challenges to the South posed by the economic integration of two Koreas. The German unification experience offers us many lessons. In particular, German policymakers were too

11. The second stage is preparation of a transitional support strategy as soon as some resolution is in sight; the third is the process of early reconstruction activities as soon as field conditions allow; the fourth is postconflict reconstruction (under emergency procedures); after that, it is finally possible to return to normal World Bank operations.

12. In another example, Eritrea was a part of Ethiopia when Eritrea applied for an International Development Association (IDA) credit to the World Bank. Certainly, Eritrea was a member of neither the World Bank nor the IMF. Nonetheless, it could get financial assistance from the World Bank under Economic Recovery Credit with the help of Ethiopia’s guarantee. Having gained independence and become a member country, Eritrea has taken over the responsibility of paying off the credit. Likewise, South Korea might guarantee North Korea’s borrowings from the World Bank.

Table 12 Comparison of German and proposed Korean policies for economic integration

	Germany	Korea
Objective	Economic integration at lowest possible costs	Economic integration at lowest possible costs
Basic concept	Big-Bang	Gradualism
Migration	Prevention of migration from the East through income transfer	Prevention of "excessive" migration from the North through income creation by investment; promotion of immigration into the North from the South
Wage and employment	Intentional high-wage policy; mass unemployment	Wage policy based on productivity; priority on employment
Social security system	Immediate integration of the systems	Two separate systems temporarily; eventual integration
Financing of integration costs	Mainly through federal budget	Focus on private investment and the role of IFIs
IFIs	Little help	Substantial role expected
Currency	Immediate currency integration; substantial overvaluation of East German currency	Two-currency system on a temporary basis; gradual integration at the prevailing market rate
Privatization	Immediate	Gradual and sequential
Property rights	Return of property rights to original owners in the West	Ownership granted only to those who stay in North Korea for a certain required period

wary of the flow of mass migration from the East to the West. Thus, all policy actions were geared toward bringing the income and wage levels of East Germans up to those of West Germans as fast as possible. This objective was indeed achieved with all conceivable speed, but the costs were and continue to be huge. South Korea will not be able to bear that much cost. Most German unification costs have been financed from the budget in the form of transfer payments, a pattern that South Korea cannot follow.

We have, thus, suggested "Korean-type" economic integration policies (see table 12). To be sure, the final objective of our suggested policy agenda is the same as that of the German unification case: namely, complete economic and social integration at the lowest possible cost. But we want to underscore a smoother transition in general than offered by the German-type "big bang" model.

Instead of resorting primarily to budgetary income transfers to increase the standard of living, we stress income creation through promoting investment in North Korea. We also emphasize the immense task of encouraging migration from the South to the North. The role of

the international community, including the foreign private sector, cannot be overemphasized if the reconstruction of the North Korean economy is to succeed. As a first step, South Korea should take the lead, aided by the major international agencies and institutions, in developing a framework for effective international cooperation toward this end.

In preparation for the prospective economic integration, intra-Korean economic relations need to be strengthened. The South Korean government needs to develop a “blueprint,” a consistent and coherent set of policies of engagement toward North Korea that can be applied in various contingencies. It also needs to allow a larger role for the private sector. The South Korean public should be allowed greater involvement in policy debates to build consensus on unification issues such as burden sharing. More sophisticated analyses on the benefits of unification as well as its costs are needed. As we stressed at the beginning of this chapter, South Korea’s scarce resources make it imperative to continue research into setting priorities for and sequencing actions. In this context, the role of the international community, including the foreign private sector, needs to be investigated further.

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