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North Korean Paradoxes

Circumstances, Costs, and Consequences of Korean Unification

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Prepared for the Office of the Secretary of Defense

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Summary

The research on which this monograph is based addresses the circumstances, costs, and consequences of Korean reunification. All three of these issues involve large conceptual as well as empirical problems. The total costs of reunification would be dependent on how unification would occur, including, for example, the costs of meeting humanitarian demands, stabilization requirements, the needs of human capital reeducation training and replacement, and the demands of social integration.

Our focus here is on the capital costs of doubling the North Korean GDP in a short period of time (four to five years). This target is based on the arguable premise that such a rapid improvement would provide sufficient hope among the populace and stability in the polity to allow the embryonic unified regime to endure despite the persistence of substantial income and other disparities between North and South.

This premise does not deny that the regime would confront a wide range of other formidable challenges, burdens, and costs. A new government of a unified Korea would have to carefully manage these challenges and the continued existence of disparities to avoid excessive instability. We cite numerous examples and precedents in which unified, sovereign countries have managed to function and endure, notwithstanding the presence of enormous economic, social, and ethnic disparities and disharmonies.

Employing an aggregate, economy-wide simulation model, we find that the capital costs could vary widely from about $50 billion to

$670 billion (in 2003 dollars). Other costs mentioned above could vary even more widely, leading to large additional costs.

The report begins by examining the puzzles and paradoxes that obscure the North Korean system, how it functions, and how it manages to survive. Although it is one of 191 members of the United Nations, the lack of reliable information about it is unique among that group, not incidentally because the North Korean government ceased publishing information and data in the mid-1960s.

While the preeminent position of Kim Jong Il is apparently unchallenged, other aspects of North Korean politics remain obscure, including the relationship and interaction between Kim at the pyramid's top and the next levels in the military, technical, and managerial elites, and the respective roles and relative influence of these elites and of those of the North Korean People's Workers Party.

The North Korean economy is no less shrouded in obscurity than is the North Korean polity. The obscurities include whether the size of the North Korean economy is 1/50 or 1/25 the size of South Korea's economy or something in between, and whether annual GDP growth in the North has ranged between –6 and +6 percent, possibly averaging about –2 percent over the past dozen years, or instead has stagnated for most of this period.

Perhaps less obscure but still puzzling is North Korea's ability to maintain a huge military establishment including a consequential weapons development program and an overdeveloped defense industrial base, in the midst of the pervasive poverty and weak performance of the North Korean economy.

The monograph begins with an analysis of the North Korean economy based largely on data provided by South Korean sources. We estimate the size of the North Korean economy in 2002 at about US $17 billion at nominal foreign exchange rates or about $23 billion at purchasing power parity rates, compared with corresponding figures of $477 billion and $818 billion, respectively, for South Korea. Per capita income in North Korea in 2002 is estimated at $762 in nominal exchange rates and $1,021 at purchasing power parity rates, compared with figures of $10,000 and $15,500 per capita, respectively, in South Korea.

A central part of the North Korean economy's structure is the overdeveloped military sector, which includes the million-plus armed forces, defense research and development of nuclear and other weapons of mass destruction, and industrial production of conventional and unconventional weapons. In relation to the size of its population, North Korea's armed forces are the largest in Asia. In absolute terms, its armed forces are exceeded only by those of China, approximately matching those of India. Military spending and production by military industry represent between 15 percent and more than 30 percent of North Korea's GDP.[1]

Reflecting North Korea's priorities, military spending per active North Korean military personnel is between \$3,900 and \$5,500 depending on whether conversions are made at nominal exchange rates or purchasing power parity rates, respectively. The corresponding range for nonmilitary product per nonmilitary personnel is between \$500 and \$700. While military outlays are generally capital-intensive, the 8:1 ratio between per capita outlays for the military and nonmilitary population in North Korea is extraordinarily high—about 50 percent higher than the roughly comparable figure in the United States.

One characteristic that is unique is what we have labeled North Korea's "rent-seeking" economic system. As a rent-seeking economy, the system relies on extracting some form of quasi-monopoly profits (or "rents") from its dealings with the rest of the world. While rent-seeking behavior is not unprecedented by other countries and business organizations, what is unique about North Korea's rent-seeking is that it focuses on specific activities insulated from normal market competition because the activities themselves are formally illegal, although enforcement of the laws is lax. Such are the circumstances surrounding North Korea's exports of drugs, counterfeit currencies, and various categories of weapons including missiles and nuclear weapons-related technology. North Korea's rent-seeking has perenni-

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[1] The range reflects North Korean and foreign sources, respectively, with the upper end of the range from foreign sources, inclusive of some transfers to the military of fungible resources acquired from abroad.

ally followed a pattern of finding and exploiting these off-limits, extra-market niches. Data presented in this monograph suggest that North Korea's hard-currency rents from these various sources are relatively large. These rents provide centrally controlled resources whose disposition by Kim Jong Il ensures the fealty and support of the military, bureaucracy, and technocracy elites at the top of the system's pyramid. In turn, these elites exercise pervasive control over the masses of North Korea's population of approximately 22 million through a combination of repression, fear, and occasional benefactions.

Our summary of the North Korean system and how it operates serves as background for consideration of how the system might unravel. Especially since the demise of Kim Il Sung in 1994, observers have periodically conjectured that the North Korean regime's survival might be imperiled. However, in recent years these conjectures have receded for two reasons: First, North Korea's durability throughout this period seems to belie the credibility of scenarios envisaging the system's unraveling; second, the focus of external attention has drastically shifted away from conjectures about unraveling, concentrating instead on such immediate concerns as North Korea's repeated announcements and threats that it would reprocess spent nuclear fuel and/or enrich natural uranium to produce nuclear weapons.

In prior years, serious consideration was given to the possibility that the North Korean regime might collapse and reunification might impend. Observers were regularly surprised that this did not occur. Now, when relatively little attention is focused on possible unraveling and unification, surprise might be experienced in the reverse direction.

With this possibility in mind, we briefly consider three scenarios through which unification might occur:

- unification through system evolution and integration
- unification through collapse and absorption
- unification through conflict.

The monograph next turns to estimating the costs of possible Korean reunification, using for this purpose a simple simulation model with eight key parameters. The costs of reunification as estimated in this study are narrowly defined, focusing on the *incremental capital requirements* for doubling North Korea's GDP in a four- or five-year period. While this would be an ambitious and dramatic target, it cannot be construed as a proxy for all the challenges and problems that the newly configured government of a unified Korea would face. Nor would the capital costs of reaching this target suffice as an estimate of the total cost burden that a unified Korean government would face. As noted above, the noncapital costs would include the demands of humanitarian relief, political and job reeducation, administration replacement, and political and social integration. Moreover, these other costs could vary even more widely and lead to a larger burden than that imposed by capital costs alone. At the same time, as previously mentioned, it should be noted that many countries and governments have functioned and endured as unified entities with tolerable levels of stability while at the same time confronting deep political, cultural, religious, and economic burdens and disparities. Resolving these problems should not therefore be considered a precondition for unification.

It has been generally and not implausibly presumed that Korean reunification would impose larger relative cost burdens than have materialized in the case of German reunification. Reasons for this presumption are that relative income levels are much lower and the relative populations are much larger in the North Korean-South Korean comparison than in the East German-West German instance. Per capita GDP in North Korea is probably between 6 and 12 percent of that of South Korea, compared to 25–33 percent of East Germany's per capita GDP relative to that of West Germany in 1990.

However, several countervailing considerations may reduce the relative costs of Korean reunification and make them less forbiddingly high and gloomy than the foregoing story might imply. For example, the economic burden on North Korea from its huge military establishment has been vastly greater in relative terms than were the costs of East Germany's military establishment preceding German reunification. Thus, reunification in Korea might provide an opportunity for realizing resource savings by linking the *building-down* of the North Korean military to *building-up* the relatively small and deprived civilian capital base in North Korea. Moreover, it is probably true that prevailing attitudes and low labor productivity among the North Korean population as well as impediments imposed by Korea's physical geography would conduce to more limited population movement from North to South than that which preceded and accompanied German unification after the wall between East and West Germany came down. Hence, the anticipated surge of East Germans toward the West imposed a greater urgency on relieving the disparities between West and East German per capita income than might be necessary in the corresponding circumstances accompanying Korean reunification.

The simulation model used in this study to estimate the capital costs of rapidly doubling North Korea's GDP has been run several hundred times with varying combinations of the parameters reflecting differing aspects of the reunification scenarios referred to above. To reflect the huge uncertainties involved in estimating reunification costs, we allow for a range of different values for the key parameters: the pre- and postunification levels of GDP and military spending in the North and the South; the incremental capital-output ratio (ICOR) relating the investment requirements for raising output and income; the effectiveness of institutional reform encompassing marketization, property rights, and the rule of law; and whether the stipulated target for doubling GDP in the North is set at four or five years.

The capital costs of Korean unification as derived from the simulations and based on the stipulated economic growth target cover a range between $50 billion to nearly $670 billion in 2003 U.S. prices. If North Korea's initial GDP is as large as 8 percent of that of the South, then the capital costs of unification will tend toward the higher end of this range because the capital requirements for doubling output will be higher. If the initial North Korean GDP is lower relative to that of South Korea, the corresponding capital requirements for doubling output in the postunification North will be reduced. If the ICOR is as high as 5, the corresponding costs will be raised toward the higher end of the range. If the preunification military spending share of North Korea's GDP is relatively higher but is substantially reduced after reunification, then the savings from military build-down will be somewhat larger, and the residual capital costs of reunification will be lowered. Furthermore, these costs will vary inversely with whether the institutional reform strategy accompanying reunification is assumed to be effective, moderately effective, or relatively ineffective. If median values are posited for the various parameters, the estimated capital costs would be approximately $350 billion.

The monograph next considers various possibilities for distributing the resulting capital costs, dividing them among four components: private capital flows from South to North Korea; private capital flows from the rest of the world; public transfers from South Korea; and public transfers from the rest of the world. If, for example, private and public capital transfers from South Korea made up, say, one-third of the capital cost burden, the burden on the South's economy would span a range between $17 billion and $223 billion, representing between 0.9 percent and 11 percent, of South Korea's cumulative GDP over a four- or five-year period. The remaining capital costs could plausibly be shared among private and public sources in the United States, Japan, China, the European Union, and the international financial institutions. To further limit the cost burden, we briefly discuss an idea for demobilizing large elements of the North Korean military into a "civil construction corps" to provide a contract labor pool available for commercial and public employment by both private direct investors in North Korea and by the reunified Korean government.

While our estimates of the capital costs of reunification span a wide range, this range is narrower in dollars, and its absolute dollar magnitudes are substantially smaller than estimates made by other institutions and analysts. Those other estimates—no less fallible than our own—vary widely in the economic targets they adopt, the time horizons they cover, their baseline data assumptions, and the methodologies they employ. Consequently, they are not strictly comparable to our own or to one another, although each purports to measure something broadly construed as “the cost of Korean reunification.” Their variation extends from \$290 billion (an estimate made in 1994 and posited over a 32-year period) to \$3.2 trillion (estimated in 1997 and extending over a 10-year period).

The monograph also assesses the relevance and nonrelevance of Germany’s unification in the 1990s and that which might impend in Korea. This assessment suggests that the dissimilarities between the two cases are profound and pervasive, especially as concerns their economic and cost dimensions; some aspects of Germany’s experience with military unification may have more relevance for the Korean case.

Finally, the monograph concludes with a brief consideration of some problems that a unified Korea would confront relating to possession of weapons of mass destruction, its relations with neighboring countries, especially China, and its alliance with the United States.