Reunification of the Two Koreas: 
An Economic Agenda

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1. Introduction

If the experience of German unification is any indication, reunification of North and South Korea, if and when it takes place and however this may happen, will not be an easy process. It is now widely recognised that unification of the two Germanies has been very costly in terms of both output and foregone employment: between 1989 and 1992, East Germany suffered a one-third decrease in manufacturing output and a one-half decrease in GDP and employment. This enormous cost does not even include that which West Germany has had to bear in rebuilding the former East German economy (Schmidt and Sander, 1993; Siebert, 1993).

Any structural change of the magnitude that East Germany has gone through — whether it is a change from a Soviet-type, centrally planned economy to a market economy or just a structural change within a market economy — is costly. In fact, the post-World War II conversion from a war-time to a peace-time economy in the United States caused a contraction in output and employment no less severe in magnitude than that suffered by East Germany. Industrial production in the United States decreased by roughly 40 per cent between the fourth quarter of 1944 and the first quarter of 1946, and its employment fell by 30 per cent between the first quarter of 1944 and the fourth quarter of 1945 (Schatz and Schmidt, 1992).

While any major structural change is admittedly a costly process, there are reasons to believe that in the case of German unification the severity of economic contraction has been made worse by some of the policies adopted at the time of unification. If this is true and if better policies could have made unification less onerous, then there are some important lessons that Korea may learn from the German experience.

How Korea should prepare itself for reunification depends on how reunification will be brought about. There are at least two possible scenarios. The first one is the process outlined in "To Build a National Community through the Korean Commonwealth: A Blueprint for Korean Unification" (National Unification Board, Seoul, 1989). It proposes a gradual and deliberate three-stage process and begins with the adoption of a National Community Charter by the two Koreas whereby each recognises the other and both seek coexistence, irrespective of political differences. This stage is then followed by the creation of a Korean Commonwealth, which is neither a union of states nor a federal state but is somewhat closer to the European Community. In this
commonwealth, both governments remain sovereign states. The final stage is reached with the establishment of a Unified Democratic Republic based upon general elections (Seo-Hang Lee, 1992).

Since the mid-1980s, North Korea has carried out various reforms to correct many of the problems typical of centrally planned socialist economies such as the soft-budget constraint and ineffective worker-incentive provisions. These reforms have included a new emphasis on financial accountability, a relative autonomy of state-owned enterprises, and the promotion of foreign direct investment and the non-state sector in consumer goods and service industries. However, these reforms are unlikely to succeed as most of the problems in North Korea have arisen from the contradictions inherent to the centrally planned socialist system; these problems cannot be corrected without fundamental changes in the property system and the incentive structure (Kang and Lee, 1992).

If the reforms in North Korea nevertheless succeed, its economy will be gradually transformed into a market economy. If a Unified Democratic Republic is established at the end of this process, reunification will be then a matter of integrating two market economies. Although such reunification will not be without cost it will be much less so than the reunification envisioned in the second scenario.

The second scenario of reunification follows the possible sudden collapse of the North Korean regime in the near future. If this should happen, reunification would require the immediate transformation of the centrally planned socialist economy in North Korea into a market economy and its integration with the South Korean economy. If the German experience is any indication of the magnitude of the cost that Korea would have to bear, this is a scenario that should be avoided if at all possible. In fact, according to a study on Korea's reunification, if reunification were to take place by the year 2000, the cost would be too high for a reunified Korea to be able to cope with it (Australian National Korean Studies Center, 1992).

This paper deals with some of the economic problems that a reunited Korea will face in the event of the second scenario of reunification. The reason for doing so is not necessarily because we believe this scenario to be more likely than the first, but because its cost would be much greater. Consequently, the cost of any policy mistake will be correspondingly greater in the second scenario. Furthermore, the gradual approach to reunification is an evolutionary process in which 30 years may go by before the two Koreas are in fact reunited. There will therefore be more time to experiment with various policies as the two Koreas work together to reach the final goal of reunification (Keun Lee, 1993).

Section 2 presents a brief outline of the North Korean economy as a baseline for analysing some of the problems relating to reunification. Section 3 then discusses some of these problems; specifically, the method of privatisation, the choice of the conversion rate, and wage policy. Section 4 concludes the paper.

2. The North Korean Economy: A Brief Outline

Soon after Korea was liberated from the Japanese colonial occupation on 15 August 1945, the establishment of a socialist economy began in the northern half of the Korean peninsula. A series of reforms were carried out, socialising
the instruments and means of production. These reforms included: a major land reform; the socialisation of key industries, water and mineral resources; the collectivisation of agriculture, and the restructuring of private enterprises according to socialist economic principles. As a result, state and collective ownership became a dominant form of property ownership in North Korea by 1958.

The North Korean economy is a system of centralised planning, implemented administratively through commands and extensive, detailed instructions (Chung, 1974; Dernberger, 1985). Subordinates in this hierarchical organisation provide information and suggestions that may influence planning and its implementation, but they are bound by commands once these are issued. This highly centralised, hierarchical system is in turn directed and controlled by the Communist Workers’ Party. It is the Secretariat of the Party’s Central Committee, however, that carries out the directives of the party through various organisations in the central government as well as in the provincial and local administrations.

Agriculture

In 1946, the North Korean government carried out a major land reform. The land that had been owned by the Japanese and Korean absentee landlords was distributed to landless peasants, and even some of the land owned by “rich” farmers was redistributed to peasants having little or no land. The effect of this land reform was to make small-scale, private ownership a dominant form of landownership in North Korea.

In North Korea, agriculture was to perform a supportive role for industry by providing it with food, raw materials, and labour. However, privately-owned small-scale farms were found incapable of performing this function satisfactorily, and in 1955 the process began of replacing them with agricultural co-operatives and socialist collectives. This process of agricultural collectivisation was completed in August 1958, but collectivisation was not comprehensive as small-scale parallel markets for home-produced commodities, i.e., farmers’ markets, were allowed to exist.

The farmers’ market is a specially designated place where collective farms and farmers with sideline production can sell part of their agricultural and livestock products. Each county (koon) is allowed to establish one or two farmers’ markets to be held three times a month. Much of the trade that takes place on the farmers’ market is legal, but there are some illegal transactions involving, among others, theft and sale of Socialist properties, use of company time for private activity, illegal production (such as engaging in prohibited trade), and corruption.

Industry

The Law of the Nationalisation of Key Industries, which was promulgated in 1946, brought into state-ownership 1,034 private enterprises, more than 90 per cent of all the enterprises in North Korea. State-owned and collective-owned enterprises thus accounted for 72.4 per cent of the total industrial output while private enterprises — mostly in light industries — accounted for only 27.6 per cent. In 1949, these percentages changed to 90.7 per cent and 9.3 per cent respectively, with state- and collective-owned enterprises
dominating every industry. By 1958, socialisation of privately owned businesses was complete, and all the self-employed, hand-craft producers and private industrial and commercial enterprises were converted into collective ownership.

As part of the policy of Juche (self-reliance) the North Korean government adopted a development policy encouraging local industries. The policy promoted the use of locally available raw materials, fuels, and labour to meet the local demands for industrial goods such as textiles, food products and other consumer goods (Merrill, 1991).

Under the system established soon after World War II, each province was in charge of providing enterprises with producer goods. Since there was no agency in the central government that was responsible for the allocation of producer goods nationwide, there was little co-ordination between provinces in the production and distribution of producer goods. This problem was remedied with the introduction of the Dai-An allocation system in the early 1960s.

The Dai-An system of allocation is a hierarchical system consisting of one central state agency and an agency for each of the provinces, localities, and enterprises. The state agency controls the allocation of producer goods for the purpose of promoting national economic development. The provincial agency is responsible for ensuring the supply of production materials to the enterprises within the province and distributing their products. The local agency is responsible for allocating production materials to the enterprises in its locality and distributing their products. The functions of the enterprise agency, which is located within an enterprise, are to ensure the supply of production materials needed by the enterprise and thus free its managers for decisions relating to production activities.

The strategy of the Dai-An system of allocation has been to concentrate on investment in capital-goods industries such as engineering and heavy industries. The rationale for this is the socialist principle that investment in the capital goods sector expands the capital equipment of the consumer-goods sector and thereby its output. It should be noted, however, that behind this strategy for heavy industrialisation was the aim of establishing an armaments industry (Merrill, 1991).

The establishment of heavy industrialisation in North Korea came at the expense of light manufacturing, agriculture and services. By 1989, this imbalance became so severe that the government adopted a three-year plan for the development of light-manufacturing industry and designated 1989 as “the year of light industry”. However, due to shortages of resources, the actual output of light-manufactured goods seems to have fallen far short of planned targets.

**Natural Resources**

In 1947, the process of socialising natural resources such as minerals, forests, and water resources began with the Law of the Nationalisation of Minerals, Forests, and Water Bodies. The policy of self-sufficiency in natural resources was also instituted for the purpose of better utilising the country’s natural resources and building an independent economy. North Korea is now able to provide over 75 per cent of the domestic demand for natural resources.
North Korea has well-developed industrial capabilities for ferrous and non-ferrous metals, fuel and electric power, and chemicals. These capabilities have provided an impetus to the development of the machinery and construction industries.

In allocating natural resources among various industries, the North Korean government has given priority to industry over agriculture, heavy industry over light industry, mining industry over manufacturing, and industrial-goods production over consumer-goods production. This priority system is based on the socialist economic principle that the growth of industrial-goods production will lead to the development of the consumer-goods industry. This same principle has led to the priority of heavy industry in resource allocation, which is then expected to bring about the development of light industry and agriculture by providing them with capital goods.

**Distribution**

In 1946, state- and collective-owned trade organisations were established to improve the distribution of consumer goods and to restrict speculative activities. The number of these organisations was 104 in 1947, increasing to 275 by the middle of 1948.

In 1946, the percentage of socialised trade as a share of total domestic retail trade was only 3.5 per cent, but it increased to 56.5 per cent by 1949. In order to increase socialised trade, the state supplied consumer goods to cities and the countryside through the socialised distribution network at prices lower than those prevailing in free markets. To achieve further socialisation, the government created retail trade organisations in 1954, and in August 1958, it succeeded in completely socialising the distribution of consumer goods throughout the country. These trade organisations now exist throughout North Korea and are co-ordinated by a central state organisation.

The distribution of consumer goods is carried out jointly by wholesale trade organisations managed by the central government and retail trade organisations managed by local governments. Wholesale trade organisations distribute the goods produced by enterprises to retail trade organisations, and the latter in turn distribute them to consumers through state-owned stores and farmers' markets.

North Korea maintains a contract system for consumer goods. The local retail trade organisation estimates the consumer needs for various commodities on the basis of information on sales, inventories and market investigation. It then forwards a request to a higher-level wholesale trade organisation which in turn enters into a purchase contract with an enterprise. When the contracted commodity is produced, it is sent to the local retail trade organisation by way of the wholesale trade organisation. The local retail trade organisation then distributes the commodity to the final consumers through various retail outlets.

There is another system of distribution called a direct selling system. Under this system, enterprises producing light manufactured goods are allowed to sell their products directly to consumers without going through the distribution system described above.
3. Economic Issues in Korean Reunification

Korean reunification, according to the second scenario described in Section 1, will entail two separate, but related economic problems: transforming the centrally planned socialist economy in North Korea into a market economy and integrating it with the already well-established market system in the south.

The transition from a centrally planned socialist economy to a market economy will require more than dismantling the socialist system. In its place, a system of private properties and markets will have to be established, but doing so will be a costly, time-consuming process as evidenced in the Eastern European countries (Winiecki, 1992).

The union of the two economies will entail problems as difficult as the harmonisation of economic institutions, the choice of the conversion rate between the North Korean won and the South Korean won, and the movement of capital and labour between the two Koreas. How many of the North Korean enterprises will survive the shock of reunification may depend on how these problems are handled upon reunification.

Some indication of which North Korean industries would survive reunification may be obtained by examining the present pattern of North Korea’s comparative advantage. One could argue then that those industries in which North Korea has a comparative advantage now, would have a better chance of surviving than those in which it does not.

This exercise has been carried out by Yeon and Chun (1993), who calculated the revealed comparative advantage (RCA) and trade-specialisation coefficient (TSC) — the percentage of net exports of country $i$ in the total trade of product $j$ — for North Korea, on the basis of trade statistics between North Korea and OECD countries. According to their calculation, the likely exports from North to South Korea are mostly agricultural and forestry products, some minerals, some iron and steel, and a few manufactured products (e.g., horizontal lathes and electronic calculators).

What the exercise by Yeon and Chun demonstrates is that if North Korea opens its economy to world competition now, most of its manufacturing sector will collapse. If opening the economy on the basis of its current factor prices and technology is bad enough for North Korea’s manufacturing sector, it is not hard to imagine what will happen to it if an inappropriate conversion rate is chosen for the North Korean currency and if, upon reunification, wages increase rapidly in North Korea, as occurred in East Germany.

The German reunification experience seems to indicate that there are three policy decisions relating to reunification that will have a decisive influence on the survivability of North Korean manufacturing industries, thus on the cost of reunification. These are (1) the method of privatising state- and collective-owned properties, (2) the choice of the conversion rate between the North Korean currency and the South Korean won, and (3) wage policy.

Privatisation

The ultimate purpose of privatising the state-owned enterprises and the collective farms is to transform the North Korean economy into a market system. However, privatising the state-owned enterprises — top-down
privatisation — is only one of the twin privatisation processes that must take place in such a transformation. The other is bottom-up privatisation, i.e., the expansion of the private sector with the establishment of new private enterprises.

**Bottom-up privatisation**

Bottom-up privatisation in northern Korea will take place with investment from the south and the rest of the world as well as with investment by some northern Koreans. The latter will be in a handicapped position as, having lived in a socialist planned economy, they will be likely to lack the necessary know-how and perhaps even the inclination for entrepreneurial activities. They may also lack access to the credit necessary for investment.

A successful case of bottom-up privatisation is found in China where the most dynamic sector since 1984 has been non-state-owned small industrial firms based mostly in rural areas (McMillan and Naughton, 1992; Perkins, 1992). According to McMillan and Naughton, rapid expansion of these enterprises has diminished the importance of the state-owned enterprises in the Chinese economy and has forced improvement in their performance. This Chinese experience, as they see it, has led them to conclude that “[R]apid privatisation need not be the centrepiece of a reform policy”. However, there are reasons to believe that the Chinese experience will not be replicated with the same degree of success in North Korea.

According to McMillan and Naughton, the high profitability of non-state enterprises was due more to their capturing a part of the monopoly rent created by artificial state pricing policy than to their having superior efficiency. For them to capture a part of the monopoly rent, the domestic market had to be protected from foreign competition. Otherwise, the demand would have been diverted to imports, and both state-owned and budding non-state-owned enterprises would have suffered. In other words, the successful bottom-up privatisation in China depended on (1) artificially high prices for industrial products and (2) the closure of most of the domestic markets that prevented the diversion of demand from state-owned enterprises to imports from the rest of the world.

The experience of East Germany was quite the opposite. Upon reunification, the market for its manufacturing products collapsed and, as a result, there wasn’t much bottom-up privatisation. There are three reasons for that. The first is the unravelling of the Council for Mutual Economic Assistance (CMEA) and thus the collapse of export markets for East German goods. The second is the diversion of demand from state-owned enterprises to western German imports and not to emerging private eastern German enterprises. After the opening of the Berlin wall (even well before reunification on July 2, 1990) western German goods began to flood eastern German markets. Furthermore, western German firms contracted with former East German retail outlets for the distribution of their own products and by doing so, crowded out potential eastern German competitors from the buildings and space that were available in limited supply (Bryson, 1992). The third reason is obviously the end of state pricing-policy upon reunification, and thus the disappearance of any monopoly rent that could have been captured by new private enterprises.

The bottom-up privatisation that will take place in northern Korea upon reunification will be closer to the German than to the Chinese experience. In a unified Korea, as in the unified Germany, the rule of one price would prevail for all tradable goods as markets in northern Korea would be open to
competition from the south as well as the rest of the world. In such a situation, the two conditions that have made the rapid growth of non-state enterprises in China so successful will be absent, and consequently bottom-up privatisation by northern Koreans are not likely to be successful. There may be some exceptional cases in non-tradable services.

As a Soviet-type, centrally planned economy, the North Korean economy has an overdeveloped industrial, but an underdeveloped service sector. Upon reunification the service sector in northern Korea will grow rapidly. This growth will provide expanding room for bottom-up privatisation in non-tradable services as the demand for them will not be diverted to imports from the south and the rest of the world. To make certain that northern Koreans take advantage of this opportunity it may be necessary to limit the bottom-up privatisation in those services only to northern Koreans, providing them with subsidised credit and training in business management.

*State-owned enterprises*

Upon reunification, one of the first things that must be done in northern Korea will be to privatise most of the state-owned enterprises. Privatisation experiences in eastern Germany and Poland point out that although privatising small-scale enterprises, especially in the service sector, is relatively easy, there are several obstacles to privatising large state-owned industrial enterprises.

Privatising large state-owned industrial enterprises in northern Korea will run into various obstacles. Experiences in other former Socialist countries show that many state-owned enterprises are overstaffed and perform poorly. Furthermore, the claims made by dispossessed previous owners and the lack of capital market institutions have hindered speedy privatisation (Schmieding, 1992b).

Uncertainty regarding property rights (i.e., ownership) has been identified as a main cause for the lack of investment and, worse, for the depletion of the existing assets in eastern Germany (Sinn, 1992). However, the establishment of a clear ownership title can be a costly process for reasons such as the difficulty in distinguishing between the ownership of a firm and the ownership of land, incomplete and neglected records, the administrative bottleneck in processing claims applications (1.2 million applications in the case of Germany), and multiple ownership claims when a firm has added pieces of land and buildings over time (Siebert, 1991).

In Germany, until March 1991 any attempts at privatisation by the *Treuhandanstalt* were frozen whenever claims by previous owners were announced. A 23 April 1991 decision by the German Constitution Court has reduced, but not eliminated, the role of restitution. The Court ruled that restitution does not have to be the only solution for expropriation that took place after 1949. The decision has thus separated, in principle, the issue of the claims of dispossessed previous owners from the issue of compensation.

In North Korea, disputes over ownership may not be a serious obstacle, as most of the private enterprises that were socialised in 1946 had belonged to the Japanese colonists who were expelled from Korea in 1945. Many of the enterprises that were established after 1946 were created by the state or local authorities, and consequently there would not be any private claims for restitution or compensation against them. But even in these cases, potential disputes could arise over the ownership of the land on which state-owned enterprises were established. To prevent such disputes from stalling the
privatisation process, Korea should, from the beginning, establish compensation, not restitution, as a general rule for settling ownership disputes. With this policy in place, enterprises can be privatised rapidly with the compensation by the state made at a later date whenever ownership disputes are settled. (For these cases, some of the proceeds from privatisation should be set aside by the state to be used for later compensation. See Figure 1.)

Figure 1. Privatization of state-owned enterprises

Once compensation, not restitution, is adopted as the method of settling ownership disputes, privatisation becomes a matter of choosing between the sales and give-away approach. The German Treuhand approach is basically a variant of the sales approach, whereas the voucher scheme used in the former Czechoslovakia is a variant of the give-away approach.

In deciding which privatisation approach to use, Korea may consider the three criteria, proposed by Blanchard and Layard (1992) — speed, fairness, and efficient control.

Clearly, speed is an important factor in privatisation. As pointed out by Blanchard and Layard, speed hastens arrival; it prevents reversal; it removes uncertainty; it protects the government budget from being siphoned off to support inefficient firms, and it may help fairness by minimising the danger of insider privatisation. Given that the Treuhandanstalt, which in effect began privatising East German assets in June 1990, still has some assets to privatise (as of August 1993), one can easily conclude that for speedy privatisation, give-away is superior to sales.

To achieve fairness in privatisation, i.e., a fair distribution of the assets of the state-owned enterprises, Blanchard and Layard advocate giving them away via a distribution of shares or vouchers.

An additional argument in favour of give-away is that sales would favour the former nomenklatura as they are the ones with liquid assets and can thus
purchase the usually undervalued assets in the transition economy. In the case
of Korea, it is likely that a majority of North Korean assets will be purchased
by South Korean residents and businesses and not by the North Korean
nomenklatura. Furthermore, with the inflow of money and businesses from
the south, it is unlikely that assets will remain undervalued for long in northern
Korea once privatisation begins. Fairness can be then achieved through the
distribution of privatisation proceeds among the northern Koreans in equal
amounts.

In considering fairness in the context of Korea, we need to pay special
attention to the question of regional balance between north and south. If most
of the North Korean assets are purchased by South Koreans and the sales
revenues are distributed to the northern Koreans, the pattern of social structure
that will emerge in the north will be a dualistic one consisting of southern
“capitalists” and northern workers. In a society where, for more than 45 years,
capitalists have been pictured as exploiters of the working class, economically
prosperous southern “capitalists” would be an object of envy and hatred,
especially if unification brings about large unemployment in the north as
severe as that in eastern Germany. Given the fractious regionalism that has
plagued its long history, Korea cannot afford to ignore the possibility of such
regional imbalance and conflict emerging from privatisation.

For achieving a regional balance, the give-away approach is a preferred
method of privatisation. A free distribution of shares or vouchers would give
the northern Koreans a clear title to properties in the north and, with a proper
education, a sense of being themselves capitalists. Certainly, there will be some
people who would like to sell their shares or vouchers to increase their current
consumption. Trading in shares or vouchers for cash can be, however,
justifiably prevented for a year or so until northern Koreans become better
informed of the nature of vouchers and shares and of the workings of the
capitalist market economy, especially the workings of the stock market. Lack of
such knowledge clearly constitutes a case of market imperfection, especially in
an economy where markets are newly introduced. In such a situation, the
banning of trading in vouchers or shares, except in the manner discussed
below, for a year or so seems fully warranted on the basis of equity as well as
economic efficiency.

The third criterion for choosing a method of privatisation is efficient
control of assets. The sales approach is then superior to a free distribution
of shares or vouchers as it is simple in administration and leads to good corporate
governance. The voucher system has some serious drawbacks in efficiency as
share ownership will be widely diffused among a large number of people and
consequently the interest of owners cannot be adequately protected.

As a way of getting around these drawbacks, Blanchard and Lanyard
propose mutual funds or holding companies that will own a controlling block
of shares in a certain number of enterprises. Citizens will then be given shares
in each of these mutual funds or holding companies.

There are, however, problems in trying to impose efficient control over
enterprises through mutual funds. To prevent possible fraud, mutual funds will
have to be supervised by the government. Such supervision may, however, lead
to indirect government control over the enterprises, and privatisation may turn
out to be only in namesake (Schmieding, 1992a). Furthermore, there is a more
basic question as to whether mutual funds are the best instrument through
which the enterprises can be efficiently managed.

Given that in the case of Korea the influx of money and businesses from
the south will minimise the possibility of undervaluing the North Korean
assets, a combination of sales and give-away may be the best alternative for privatisation. This combined approach, which takes into account some of the lessons from the German privatisation experience (Schatz, 1992), may work in the following manner (Figure 1).

The government establishes an independent institution, a trust fund, to which all the properties to be privatised are transferred. A controlling block of shares in each of the enterprises to be privatised will then be sold to an investor (an individual or a firm) who offers the highest price. The investor will then be in control of the enterprise and thus in charge of necessary restructuring.

An equal number of vouchers, which are claims against the trust fund, will be given to every northern Korean. These vouchers will then be used to purchase shares in a special account to be established in every mutual fund currently in operation in southern Korea. This special account will be only for the northern Koreans, with its assets consisting solely of the shares in the former North Korean state-owned enterprises. If the experience of German unification is any indication, the shares of some of these enterprises may not command any positive value.

The vouchers, now in the hands of the northern Koreans, can be exchanged for shares in one or several mutual funds. They will then be used by the mutual funds to bid for the remaining shares in the privatised enterprises still held by the trust fund.

Three competitive markets will emerge in this privatisation process: (1) a market for the controlling block of shares in the enterprises being privatised by the trust fund, (2) a "pseudomarket" for the vouchers held by the northern Koreans in exchange for shares in the mutual funds, and (3) a pseudomarket for the remaining shares held by the trust fund in exchange for the vouchers now held by the mutual funds.

As a result of privatisation, each northern Korean will typically obtain cash from the trust fund and shares in a mutual fund. The price of the share will be in terms of the voucher, however, and is unlikely to have a market value convertible into cash for a while. Only when the mutual fund has used all of its vouchers to acquire some of the remaining shares held by the trust fund will there be cash offers for mutual fund shares, and only then will northern Koreans be able to convert their shares into cash.

Given the great uncertainty regarding the viability of many of the newly privatised enterprises, as evidenced in the case of East Germany (International Herald Tribune, 12 July 1993), it may be economically rational to ban trading in mutual fund shares for a year or two. Such time may be needed for the necessary restructuring by the privatised firms and for corresponding portfolio adjustment by the mutual funds. A management fee schedule directly proportional to the price of the share will give the mutual fund a strong incentive to maximise the value of its portfolio for the time when trading in shares will be allowed.

The process of privatisation outlined above will be rapid, as the trust fund functions solely as a privatising agency not involved in the restructuring task. It has the advantage of putting the privatised enterprise under the direct control of a single individual or firm. It also has the advantage of turning the northern Koreans into "capitalists" (for some, at least for a short period of time until they sell their mutual-fund shares). It transfers the task of evaluating privatised enterprises from northern Korean individuals to the mutual funds; it is far easier for the northern Koreans to shop around for a mutual fund with a
track record to show than for a proper mix of shares in the enterprises just recently privatised. The trust will be dissolved once the shares held by it are exchanged for vouchers offered by the mutual funds by a specified future date.

**Land and collective farms**

Four types of land ownership will have to be dealt with in privatising the collective farms in North Korea. The first is the ownership of land that belonged to the Japanese colonists until 1945; the second, the ownership of land that was expropriated from “rich” or absentee Korean landowners under the 1946 Law of Land Reform; the third, the ownership of land that was distributed to cultivators under that law and held by them until 1958 when collectivisation was completed, and the fourth, the ownership of land that was held by small cultivators until 1958.

In the first case, neither compensation nor restitution to the former Japanese colonists will be necessary. In the second case, restitution to previous owners would be unnecessary, given that similar land reforms, redistributing land from absentee landowners to cultivators, had also been carried out in the south. Compensation will have to be made, however, for the land that was expropriated in 1946 and its primary purpose would be to reaffirm the principle of private property in the unified Korea. Since these so-called “rich” or absentee landowners are probably no longer alive, compensation may be made in nominal sums to their descendants who now reside in the south. In the third case — the ownership of land given to cultivators in 1946 but later turned into collective farms — restitution may be a preferred solution as the land reform of 1946 was probably not that different, except for the matter of compensation, from the land reforms carried out in the south. In the fourth case, where land was expropriated from small farmers, restitution should be made to the previous owners. (For reasons of equity, the farmers who receive land will have to be disqualified from receiving cash and vouchers from the trust fund.)

The above method of privatising the collective farms will in effect re-establish the pattern of landownership — “Land to the tiller” — brought about by the 1946 Law of Land Reform. It may, however, no longer be appropriate in Korea, where industrialisation has so altered its economic structure that agriculture accounts for a relatively small share of GDP. In such a case it may be more rational to make no distinction between collective farms and state-owned industrial enterprises and between farmers and industrial workers. Collective farms will then be privatised by the trust fund in the same manner as state-owned enterprises.

**Choice of the conversion rate**

How reunification will affect the enterprises in North Korea and thus their output and employment will depend on the conversion rate between the North Korean currency and the South Korean won. At a conversion rate favourable to the former — an overvaluation of the North Korean currency — the wage rate for northern Korean labour will be higher in terms of the won than at a less favourable rate. Given their generally low productivity due to the “overstaffing” and obsolete technology that are typical of enterprises in a socialist economy, a favourable conversion rate will have an adverse effect on
the competitiveness of northern Korean enterprises and will thus bring about a
contraction in their output and employment\textsuperscript{15}.

Furthermore, whatever the conversion rate may be, reunification will put
northern Korean enterprises at a competitive disadvantage vis-à-vis southern
Korean firms as the latter would probably have better and more competitive
products\textsuperscript{16}. Consequently, northern Korean enterprises will suffer contraction in
demand for their products, and a favourable conversion rate will simply make
the matter worse.

In Germany, the Treaty on German Economic, Monetary and Social Union
of 1 July 1990 established the Deutsche mark as the only currency and the
Deutsche Bundesbank as the only central bank in the unified Germany. It also
transferred all the civil, commercial and public laws of West Germany to East
Germany and set a conversion rate averaging 1.81 ostmark for one Deutsche
mark\textsuperscript{17}.

All contracts concerning the current income were converted at a rate of
1:1. Overnight, this adversely impacted the profitability of East German
enterprises. A conversion rate significantly below that would have been
necessary to render East German firms viable; but then, eastern wages would
have been less than one third of West German wages (Schmidt and Sander,
1993). At that difference in wages there could have been a mass exodus from
eastern to western Germany although, according to a survey of East Germans,
it is the lack of work for a sufficiently long period, not wage differentials, that
would induce them to migrate to western Germany (Akerlof et al., 1991).

In the final analysis, however, one is led to the conclusion that what
determined the conversion rate was not economic rationality but the political
imperative of unification (Hasse, 1993). The conversion rate determined the
extent of income and wealth transfer from West to East Germany. This was a
political decision and a favourable term of conversion might have been
necessary to get sufficient East German votes for unification. Furthermore, it
would have been symbolically unacceptable to have maintained two different
currencies for the newly unified Germany. The same political imperative may
also dictate the choice of the conversion rate in a unified Korea.

\textit{Wage policy}

What made the contraction in output and employment worse in East
Germany was a wage-cost explosion that far exceeded the market-clearing level
(Akerlof et al., 1991)\textsuperscript{18}. Starting even before the currency union, wages began to
rise in anticipation of the favourable terms of conversion. Between the fourth
quarter of 1989 and the second quarter of 1990, wages rose by 20 per cent
(Schmidt and Sander, 1993).

The work force in the old Socialist firms and the trade unions, which had
spread quickly from West to East Germany, pressed for higher-wage contracts.
The old Socialist management did not resist the pressure for higher wages and,
moreover, had every incentive to agree to the demands of the workforce in the
hope of gaining its goodwill (Schatz and Schmidt, 1992). In other words,
during the transition from a centrally planned to a market economy, the
interest of the owners was not adequately represented at the wage bargaining

\textit{table}. There was not even a soft-budget constraint on the demands by the
management and labour as the government completely abstained itself from
wage negotiations.

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The opportunistic behaviour of the workforce and management of the old Socialist enterprises was further abetted by the self-interest of both western German trade unions and employers' associations. As they saw it, low eastern German wages would have put downward pressure on western German wages and would have given new or restructured enterprises in eastern Germany a competitive edge against the established firms in western Germany. Thus, from the very beginning, western German unions and employers' associations supported their eastern German counterparts in the determination of wages (Bofinger and Cermohorsky, 1992).

As a way of preserving existing jobs and speeding new job creation, Akerlof et al. proposed a programme of "self-eliminating flexible employment bonuses". This would presumably have eliminated the gap between the high private cost of labour caused by high eastern wages and the low marginal product of eastern German labour. As pointed out, however, by Schmidt and Naujokes (1993), such a scheme would have discriminated against viable eastern German enterprises, would not have given adequate incentives for adjustment, and could have easily degenerated into a self-perpetuating mechanism for subsidies.

Manifestly, the absence of the ownership interest at the wage-bargaining table was a major cause for the wage-cost explosion in eastern Germany; rapid privatisation would have had a dampening effect by firmly establishing the ownership right. The lesson for Korea is clear: it should privatise as quickly as possible, and in the cases where that is not possible, the government should represent the ownership and act firmly in its interest. In addition, it will be necessary to adopt some form of income policy during the transition period.

4. Conclusion

North Korea is a Soviet-type, centrally planned economy organised along the principle of juche, whereas South Korea is basically an open, capitalistic market economy although its development has been strongly influenced by the government. Reunifying such two radically different Korean economies will be a costly process that will require all Koreans to make sacrifices, whichever part of the peninsula they may reside.

Policies will be a significant factor in making this reunification more or less onerous, and the purpose of this paper is to contribute to a policy debate on reunification so that the cost will be minimised. In particular, this paper has discussed three policy issues that Korea will have to face immediately upon reunification: privatisation, the choice of the conversion rate and wage policy.

South Korea should devise a method for rapid and efficient privatisation based on the proposal outlined in this paper. Studies will have to be made on productivity differences between North and South Korea so that an economically rational conversion rate can be calculated, and some sort of income policy will also have to be determined to regulate the rate of wage increases in northern Korea. In the end, however, politics may dictate the choice of the conversion rate and the rate of wage increases in northern Korea, but even then, political decisions made in full cognizance of their economic implications will be better than those made in ignorance.

Of course, all these measures would not be sufficient for a painless integration, given the extreme disparity of the two economies on the Korean peninsula. In addition, there must be a comprehensive regional development
plan that can help make the privatised enterprises viable and create new enterprises and employment. Such a plan should include plans for transferring market institutions from the south and developing human capital that can function effectively with these institutions. It may even be necessary to limit the privatisation of small-scale state- and collective-owned enterprises to northern Koreans and support the newly emerging entrepreneurs with subsidised credit for a finite period of time. Such tasks cannot be left to the market alone, they will have to be carried out by the government. The transformation of the centrally planned economy in the north into a market economy and its integration with the economy in the south will therefore require, ironic as it may seem, an active role by the government.
1. I would like to thank Pearl Imada-Iboshi, Klaus-Werner Schatz, Klaus-Dieter Schmidt and Ha-Cheong Yeon for their helpful comments on an earlier version of this paper.

2. Expecting a high cost of immediate economic unification, many West and East German economists argued in favour of a unification taking place only after effective reforms in East Germany had been made. Political demands by the East German population, however, made such a gradual approach impossible (Bryson, 1992).


4. It should be noted that North Korea followed the Soviet Union and China in adopting the strategy of heavy industrialisation for economic development. This strategy, however, had the effect of shifting labour and materials away from agriculture, small-scale industry, and services and thus retarded their development.

5. Yeon and Chun selected as likely exports from North to South Korea those commodities for which (1) North Korea’s export to OECD countries exceeds $100 000, (2) RCA exceeds one, and (3) TSC exceeds zero.

6. Given that trade was not based on North Korea’s comparative advantage but controlled by the state, RCA and TSC may not be a good indicator of what would happen to North Korea’s trade and its industry once the economy is open to the rest of the world. Nevertheless, given that they share the same structural characteristics as those of the former East German state-owned enterprises, there is no reason to expect that North Korean industries would fare better than their East German counterparts upon reunification.

7. This paper does not address longer-term issues such as financing of “consumption smoothing” and investment in the northern part of a unified Korea, and dealing with an increase in labour supply which will have an effect on the rate of convergence between the two economies (Dornbusch and Wolf, 1992).

8. Winiecki (1992) argues that even in a competitive setting state ownership is not as efficient as private ownership as there is much more room for opportunistic behaviour on the part of managers of state-owned enterprises.

9. China has protected the domestic heavy industries and infant consumer-goods industries from foreign competition. Only since 1992, when China decided that joining GATT would help its economy, did it begin to open domestic markets to substantial imports (Shirk, 1993). Here we need to make a distinction between China’s success in bottom-up privatisation and its relative success in reforming its economy. In addition to the success of bottom-up privatisation, Woo (1993) lists four factors that account for China’s relative success in transition. These are China’s unusually high household saving rate, favourable initial conditions such as a relatively small industrial sector and widespread unemployment in the countryside, the Cultural Revolution, which weakened the hold of the central bureaucracy, and finally, the overseas Chinese network which brought capital and outside information to China.

10. According to estimates carried out by Russia, 22.3 per cent of the North Korean population was in agriculture, 61.3 to 62.3 per cent in industries (manufacturing plus construction), 4.5 to 5 per cent in communications and transportation, and 11 to 12 per cent in commerce and others in 1990. The North Korean population in 1990 was 23 million (Korea Development Institute, 1991).

11. An exception would be state-owned enterprises that have substantial market power like water and electricity. The evidence suggests that whether they are
owned publicly or privately makes little difference to efficiency of their operation (Vickers and Yarrow, 1991).

12. Privatisation of small commercial and industrial firms was rapidly carried out in Poland. Financing them, however, seems to be a major problem as the banking system appears to have difficulty in appraising small firms headed by new entrepreneurs (Fischer and Gelb, 1990). This is another reason for establishing special development banks in North Korea.

13. The Treaty on German Economic, Monetary and Social Union of 1 July 1990, which formalised the economic union of the Federal Republic of Germany and the German Democratic Republic, established the Treuhandanstalt ("trust fund") to help privatise the state-owned enterprises while restructuring and supporting them temporarily.

14. This proposal is in a way similar to a scheme proposed by Fischer (1992). He advocates distributing shares in mutual funds directly to individuals and allowing the mutual funds to trade in the shares of individual companies. Individuals would be then allowed to sell mutual-fund shares after a specified period of, say, two years. A major difference between the two is, however, that in our proposal a controlling block of shares is held by an individual investor or firm.

15. If wages were completely flexible, the choice of the conversion rate would not matter as wages will adjust to their equilibrium level after the economic union. However, this seems to be an unlikely scenario.

16. After the currency union, East Germans almost completely stopped buying East German goods, and since 1991, East German imports have exceeded private consumption (Bofinger and Cernohorsky, 1992).

17. The main conversion rates agreed upon in the Treaty on the Creation of a Monetary, Economic and Social Union between the Federal Republic of Germany and the German Democratic Republic (approved by both parliaments 20 September 1990) are:

   a. Salaries, retiring pensions and housing rents 1:1;
   b. Credits of enterprises and individuals 2:1;
   c. Liabilities of enterprises and individuals 2:1;
   d. Savings of citizens of the GDR up to certain amounts depending on their ages 1:1;
   e. All savings above these ceilings and cash 2:1;
   f. Claims of individuals living outside the GDR 3:1.

The average conversion rate calculated by the Deutsche Bundesbank is 1:1.81 (Hasse, 1993).

18. A secondary reason is a sharp drop in demand for East German goods as West German goods became available to East Germans and as experts to CMEA (Council for Mutual Economic Assistance) countries declined drastically.

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