

# *Industrial Policy for North Korea: Lessons from Transition*

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## **Abstract**

Possible directions of industrial policy for North Korea are developed in this paper, drawing on the experience of the European transition economies and focusing on privatization and restructuring, new business formation, and export promotion. North Korea at present is largely closed, and its agriculture is relatively over-developed. Through export promotion and other measures of industrial policy the country will be able to raise living standards and greatly improve food security.

**Keywords:** North Korea, economic reform, export promotion, industrial policy, food security

## **Introduction**

In this paper I shall sketch out some ideas for a possible industrial policy in North Korea, drawing where relevant on the experience of Central and Eastern Europe (CEE) since the end of communist rule in

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1989, and of the countries of the former Soviet Union since 1991. This is a timely exercise, since the North Korean government has encouraged some market-oriented reforms in the early years of this decade in the wake of the severe famine that afflicted the country in the mid- to late 1990s.<sup>1</sup> Recently, though, as the food situation has improved, there have been signs of some backtracking on reforms by the North Korean leadership as they have sought to reassert central control over the economy.<sup>2</sup> Nevertheless, it remains of interest to think about possible directions that a future industrial policy might take. Uniquely in the world, North Korea is run as a dynastic and autocratic communist state, with much of the economy being state owned or falling under fairly centralized state control, and with large amounts of standard statistical data about the economy still treated as state secrets. Despite that, data from diverse sources can be used to piece together a picture of the North Korean economy - undoubtedly less complete and accurate than we would like, and with some significant *lacunae* - but nevertheless sufficient to permit some useful analysis.<sup>3</sup>

For my purposes, a rough and ready picture of the economy and recent trends within it will be adequate, and these are presented in Section 2. As a writer with only limited familiarity with North Korea, I have found some features of the country extremely surprising. Also in Section 2, I explain why I think it makes sense to elicit some lessons for North Korea from CEE and other transition economy experience.

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<sup>1</sup> See Stephan Haggard and Marcus Noland, *Famine in North Korea: Markets, Aid, and Reform* (New York: Columbia University Press, 2007).

<sup>2</sup> See ICG, "North Korea: Can the Iron Fist Accept the Invisible Hand?" International Crisis Group, April 2005, Brussels, [www.crisisgroup.org](http://www.crisisgroup.org); Marcus Noland, "The Future of North Korea is South Korea (Or Hope Springs Eternal)," *World Economics*, forthcoming 2007.

<sup>3</sup> Stephan Haggard and Marcus Noland, "North Korea's External Economic Relations," *Working Paper WP 07-7* (Washington, DC: The Peterson Institute for International Economics, August 2007); Dick K. Nanto and Emma Chanlett-Avery, "The North Korean Economy: Overview and Policy Analysis," *CRS Report for Congress* (Washington, DC: Congressional Research Service, 2007).

Section 3 then develops these lessons and examines how an effective industrial policy in North Korea might be conducted, allowing for several possible scenarios. What is feasible, naturally, will depend both on political developments within the North, and on the country's economic and political relationships with major partners, notably South Korea, China, Russia, Japan, and the United States (together with North Korea itself, these countries comprise the 'six parties' involved in negotiations over North Korea's controversial nuclear policies, among other things). Section 4 briefly concludes the paper.

## The North Korean Economy

Even without the recent years of famine, North Korea would have to be regarded as one of the world's most spectacularly failing economies. From a starting point just after the Korean War when the entire Korean peninsula was devastated by years of intense military action, and when per capita incomes in the North were, if anything, somewhat better than in the South (though both were then very low), North and South diverged dramatically. By the year 2000, North Korean per capita income languished at around \$1,000 (in market prices), while that in the South was just over \$16,000 (in market prices).<sup>4</sup> The former figure is rather lower than the estimated \$1,800-\$2,700 per capita income (in PPP terms) for 2005 given in Nanto and Chanlett-Avery (*op. cit.*, footnote 3), this being based on an estimated 2006 population of 23.1 million and total GDP (in PPP terms) in the range \$40-\$68 billion. The corresponding PPP per capita income for South Korea was over \$21,000.

The same source estimates North Korean imports in 2005 at \$3.6

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<sup>4</sup>Daron Acemoglu, Simon Johnson, and James Robinson, "Institutions as the Fundamental Cause of Long-Run Growth," chapter 6 in *Handbook of Economic Growth*, volume 1A, Philippe Aghion and Steven Durlauf (eds.) (Amsterdam: North Holland, 2005).

billion (of which about half consists of imports from South Korea), and exports of goods and services at \$1.8 billion, the difference presumably being funded by a mix of aid, loans (though North Korea has almost no access to world capital markets), modest amounts of FDI, remittances, income from illegal/unrecorded transactions (drugs, counterfeiting US dollars, and probably some arms sales), and running down foreign exchange reserves. In their very careful study of North Korea's external accounts, Haggard and Noland (*op. cit.*, footnote 3) come up with even lower numbers for the country's exports and imports. Regardless of the financing arrangements, and possible errors in the basic data, what seems to me most striking about these numbers is simply how small they are, in both directions of trade, exports being not much greater than 5% of the country's estimated GDP at market prices. This low figure stands in marked contrast to the corresponding figures for South Korea about 37% in 2005; Hungary about 68% in 2005 rising to 77% of GDP in 2006; and Poland 37% of GDP in 2005.<sup>5</sup> Thus North Korea is an exceptionally closed economy, and its lack of engagement with the world economy is partly what keeps it poor.

Unlike China, with which it is sometimes compared, and much more like some of the CEE countries and other transition economies of the former Soviet Union, North Korea is already both highly industrialized and highly urbanized. It is not a predominantly rural economy based on low-productivity peasant agriculture. In addition, it is probably the most militarized society on earth, with over a million men under arms. The military are estimated to account for not far short of 20% of the economy. Correspondingly, fixed investment in the productive sectors of the economy can hardly even be 10% of GDP,

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<sup>5</sup> For details, see *Hungary: 2007 Article IV Consultation - Staff Report*, Country Report 07/250 (Washington, DC: International Monetary Fund, 2007); *Republic of Korea: 2006 Article IV Consultation - Staff Report*, Country Report 06/380 (Washington, DC: International Monetary Fund, 2006); *Republic of Poland: 2006 Article IV Consultation - Staff Report*, Country Report 06/391 (Washington, DC: International Monetary Fund, 2006).

barely enough to maintain the existing capital stock let alone to expand it to support sustained economic growth.

Although far less well suited to productive agriculture than the South, North Korea opted early on for a deliberate policy of agricultural self-sufficiency, resulting in the extension of the cultivated area higher up many mountain slopes, the felling of large areas of trees to make way for farming, and the intensive use of chemical fertilizers, insecticides, and so on. This policy made the country much more vulnerable to flooding, as became evident several times in the mid-1990s, and again as recently as summer 2007. It also created the conditions for the famine referred to above. However, it does seem to me that by allowing the famine to develop as it did, and by responding with such callous incompetence, the North Korean government must have lost a great deal of its credibility and authority. Awareness of this might partly explain the regime's recent attempts to reimpose central controls.

The industrial part of this agricultural strategy relied on the continuing availability of highly subsidized oil and other material inputs from the Soviet Union, the latter being North Korea's principal trade partner until 1990 or so. The Soviet Union also purchased large volumes of North Korean industrial production, despite its poor quality and often out-dated technical level (even by comparison with Soviet production). In the relatively favorable period 1954-1989 North Korean economic growth was in any case slow, with per capita GDP increasing by just 1.9% annually.<sup>6</sup> Such poor performance was attributed to low, or possibly negative growth (i.e., a decline) in North Korea's total factor productivity. To a large extent, this reflects poor quality investment and a general lack of innovation in the country.

This strategy of dependence on the Soviet Union fell apart completely with the disintegration of the Soviet Union into 15 separate

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<sup>6</sup>Kim Byung-Yeon, Kim Suk Jin, and Lee Keun, "Assessing the Economic Performance of North Korea, 1954-1989: Estimates and Growth Accounting Analysis," *Journal of Comparative Economics*, Vol. 35(3), 2007, pp. 564-582.

states in late 1991. Unfortunately, the North Korean government never really came up with an effective strategy to enable it to manage this ‘transition shock,’ in which its major market largely vanished. Instead, lacking cheap inputs and the wherewithal to purchase them on commercial terms, industrial output declined, with increasing numbers of factories operating at low levels of production or even standing idle for much of the 1990s. Since 2000 there has been a modest recovery, but growth rates remain slow and output in many sectors remains well below the levels achieved in 1990. One very serious consequence of this industrial collapse is that agriculture no longer receives the volumes of chemicals that it used to, so that even in good years food supplies are much more precarious than they used to be.

In the worst of the famine years, the North Korean government lost control over much of the economy, tolerating the emergence of farmers’ markets, the growth of small-scale private production in agriculture, informal production and trading by urban residents, and cross-border trading with China in the North of the country. To a large extent these were survival strategies followed by desperate people, only belatedly ratified by the regime and referred to as ‘reforms’ as late as 2002. In any event, it has been estimated that 600,000 to 1 million people died during the famine; many more were seriously under-nourished for some years.<sup>7</sup> During the crisis, the state agency that basically distributed food from the state and collective farms to urban residents, the Public Distribution System (PDS), largely ceased to function except to some degree as the agency through which food aid was distributed. Other ‘reforms’ during this period included half-hearted attempts to establish special industrial zones in which foreign direct investment (mostly from South Korea, to date) was to be encouraged; and more active efforts to seek external assistance.

Moreover, in the period 2002-2005, massive price rises were

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<sup>7</sup>Haggard and Noland, *op. cit.*

brought about. In part, some price increases could be seen as a sensible attempt to improve material incentives, to stimulate higher food deliveries to a reviving PDS, for instance. But the more than ten-fold rise in the general consumer price level, surely not necessary to restore some sort of balance to consumer goods markets, is hard to understand except as a deliberate attempt to confiscate the population's savings and traders' profits accumulated during the famine years. North Korean inflation is also, no doubt, linked to the dreadful state of the country's public finances, with normal tax revenues having virtually collapsed.

In late 2005, as the food situation appeared to be improving, the regime made clear how much it disapproved of the marketization of the economy that had been taking place. Thus it attempted to restrict or even ban private trade in grain, shut down many farmers' markets, and took steps to limit or control other market-related activities. Whether such measures will prove to be sustainable, especially in the light of the recent flooding of summer 2007, remains to be seen; some reports already suggest that the reimposition of central controls has not been wholly effective. What is apparent, though, is that the regime has signaled that its marketization to date is not a credible policy. What private sector or 'quasi-private sector' there is obviously cannot (yet?) trust the regime to maintain stable or settled conditions for doing business. This is very different from the corresponding situations nowadays in China and Vietnam, and indeed even in Russia to a large extent.

## **Industrial Policy**

In this extremely difficult environment, what can be said about possible directions of industrial policy in North Korea? It is not even clear yet what reform path might be feasible, but a few basic options or scenarios can be envisaged:

- (a) *Little or no reform.* Then the outlook must be for continuing economic decline, and possibly eventual failure, though sometimes failure can take a long time. This is evident from the experience of other failing economies such as Bolivia and, much more spectacularly, Zimbabwe.
  
- (b) *Gradual reforms under Communist Party control.* What happens then depends on what reforms the current or future leadership can tolerate, how willing/able they are to make credible commitments to support some forms of private sector development, or even market-type developments involving mixed or ambiguous ownership forms. For instance, might the North Korean leadership be prepared to tolerate a gradual, Chinese-style approach to reforms? Currently, this seems doubtful, but it cannot be ruled out.
  
- (c) *Economic/political collapse of North Korea.* Recovery could then come through rebuilding a separate North Korean state, or by moving rapidly towards political and economic reunification with the South. Either way, much more comprehensive reforms could then come onto the agenda.

If we only expect option (a), then there is little to discuss. Hence in what follows I assume that we have either option (b) or (c), in other words some reforms are feasible. Given that, it then becomes important to think about the priorities, drawing on CEE experience as appropriate.

From earlier remarks, it follows that I would be seeking an industrial policy that strongly stimulated manufactured exports, quickly boosting these to at least 25% of GDP, with further strong growth to be expected. Such an export boom would provide the foreign currency to permit substantial regular imports of food on normal commercial terms, with food aid programs running down quite rapidly. Poorer agricultural land



should be withdrawn from cultivation, with some reforestation undertaken to reduce run-off and reduce flood risks in some particularly vulnerable areas. Any workable industrial policy must not only provide employment for most North Koreans - to give them renewed confidence in a future of improving living standards, and to discourage large-scale migration to the South - but it should also facilitate both a scaling down of government, and a gradual demilitarization of the country. These are not easy conditions. Let me now outline how they might nevertheless be achieved.

### ***Initial Steps***

First, it is important to get some markets working, with an assurance that they will be allowed to go on doing so. This entails a mix of positive and negative steps. The positive ones might include legalizing markets, permitting new (small) private firms to be set up, and also the quick privatization of existing small businesses such as restaurants, shops, small traders and the like. This type of measure was fast and very popular in the CEE countries. After all, what is the economic sense in small repair and service businesses (e.g., hairdressers, shoe repairers) ever being state run? In practice, full private ownership is not even necessary for reforms in this area to be successful. There could, for instance, be a mix of management contracts, leases, cooperatives, and other intermediate ownership forms, with some business even retaining links to existing state-owned firms. The key is to create a situation in which, regardless of the formal ownership situation, the state no longer intervenes in any of the above.

The negative steps include closing down or massively restricting the role and scope of central planning and resource allocation administrative structures. This need not preclude retaining some central control over a few firms/sectors or even a region or two - but much of the economy has to be freed up. It is worth noting here that in China,

there has been no such reform of central planning simply because the center already controls so little, probably under 20% of production. In contrast, in North Korea as in the CEE countries before 1990, state control formally encompasses almost the entire economy. Hence North Korean official assurances about allowing markets to function will initially not be believed, but in time the government can regain some credibility if it manages to restrain its instinct to reimpose controls.<sup>8</sup>

Second, the macroeconomy must be stabilized to restrain inflation, and to keep the government budget deficit and the balance of payments under control. I expect this to be a very tricky area to manage, since I suspect that the North Korean government has a very poor understanding of the conditions and policies that need to be in place for stabilization to work. Under the right conditions, though, plentiful technical assistance could be provided through the IMF and other international organizations, as was done for the CEE countries for some years. Associated with such stabilization efforts, there are natural concerns over employment levels, and also an urgent need to prevent a total collapse of investment from its existing already low levels. I comment further on these concerns below.

If measures along these lines were implemented rapidly, shortages and queues in consumer goods markets could disappear fast, as in CEE, but the real wage might well be lower for a time, before starting to rise quite quickly. Also, while government spending (including on the military) should probably be cut back to reduce the state share in the economy, taxes are still needed to pay for the remaining spending. Hence just as in CEE, there will almost certainly be a need for tax reform to stabilize government revenues at a new, reduced share of GDP.

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<sup>8</sup> János Kornai, *Economics of Shortage* (Amsterdam: North Holland, 1990); János Kornai, *The Road to a Free Economy* (New York: W.W. Norton, 1980).

### ***What then Needs to be Done?***

Here I list some of the key measures that must be considered especially important for North Korea, then discuss selected measures in more detail.

- *Agriculture*. Break up state farms or allow family or larger work-units to produce on a leasehold basis, with long enough leases to make new investment worthwhile; and output - above some minimal level to be supplied to the state at fixed prices - freely marketed. Farmers should be largely free to choose what to produce, food surpluses being exported or used to build up reserves, deficits being filled by imports on normal commercial terms. This approach ends the country's current economically foolish over-emphasis on agricultural self-sufficiency.
- *Scale down the share of the military in GDP*. This will impact on employment, and on the demand for military goods and services (uniforms, trucks, weapons, etc.). Hence it will be important to offset the resulting political and social impact through the creation of many new firms plus employment on diverse construction and infrastructure projects (see next two points).
- *Develop and repair the very poor infrastructure - including IT and telecoms, plus basics like electricity supply, water, other energy; also transport, including roads, railways, ports, airports, etc.* This area might in due course attract FDI, but initially there is likely to be a big role for the government. Since it is impossible to renew everything at once, it will be essential to prioritize by identifying key infrastructure bottlenecks that are genuine barriers to growth, and start by dealing with them. In the CEE countries, much EU funding (via Structural Funds and through the European Investment Bank) and EBRD funding focuses on

improving infrastructure. Some of this funding is in the form of non-repayable grants, much is long-term loans, usually at attractive interest rates. North Korea could expect to obtain comparable support if it became a member of the Asian Development Bank and the World Bank.

- *Legalize various forms of private, quasi-private and cooperative business and encourage new businesses to start up.* In several CEE countries, this step contributed far more to building the new private sector and creating many new jobs than privatization of the existing state-owned enterprises (SOEs), contrary to many experts' initial expectations. This might well be the most difficult step for North Korea. It might be made politically easier by introducing these measures first in two or three selected districts or regions, as an experiment. Then it could be extended more widely if perceived to be a success.
- *Encourage the restructuring and privatisation, or at the very least the commercialization of most SOEs.* This is one of the more complex reform steps, so I elaborate further on it below. It is always politically 'delicate,' since it involves job losses, and anxious governments often seek to avoid these.
- *Bank reform to create a two-tier banking system is urgent, the central bank forming the new top tier, commercial banks the lower tier.* The central bank should concern itself only with the conduct of monetary policy and supervision of the rest of the banking system. The commercial banks should take deposits and provide credit for investment on the basis of expected profitability. This commercialization of the banking system entails an early end to state-directed credits, often used to support poorly performing enterprises. In the CEE countries, ending such credits and dealing with the stock of non-performing credits proved very difficult. In some countries, budgetary measures to

write off the debts, intended to be one-off operations, often lacked credibility, and such expensive rescue operations were sometimes carried out two or even three times before they finally worked - both banks and their borrower firms needed to change their business behavior, and at first this was either not fully understood or not accepted. Most CEE countries have by now privatized the bulk of their banking systems, and the best performing banks are usually those with significant foreign participation. Interestingly, Russia, with an extremely bad banking system, is resisting pressure from various trade partners to open up its banking system to foreign investment as part of its negotiations over WTO membership. In my view, Russia is mistaken.

- *Seek to attract large volumes of FDI both from South Korea and elsewhere - to bring access to markets, including export markets; better technology; and stronger management.* Especially for the small, highly trade dependent CEE countries, such a policy has proved very successful, with over 70% of Hungary's exports of goods and services now emanating from firms with significant foreign participation. As in the Chinese case, this policy could start with the creation of one or two special economic zones (SEZs) in which FDI was especially welcomed - indeed North Korea has already done this in a very modest way. But in a small country, with a relatively weak administration, it is probably best to go for simple rules on FDI applying to the entire country.
- *Promote exports and find new external markets - probably ahead of a more general trade liberalization that would make imports 'too easy' if implemented too early.* The FDI strategy just referred to has a major role to play in fostering trade expansion. To secure the food supply, as noted above, it is vital to earn enough foreign exchange to be able to import food as needed. In the medium-term, North Korea should seek full

membership of the World Trade Organization (WTO).

- *For sustained growth, high rates of investment - probably exceeding 20% of GDP (cf. China's investment at 41% of GDP in 2005; South Korea at 30% of GDP in 2005; Hungary at 24% of GDP in 2005; Poland at 19% of GDP in 2005) - are essential, and this investment should mostly be directed at competitive sectors and the infrastructure that supports them.* It is important to stress that high fixed investment is necessary but not sufficient for sustained growth, as is evident from the 1980s experience of the former Soviet Union; investment was then around 25% of estimated GDP, growth close to zero. Thus it is also crucial to make sure that most of the investment undertaken is efficient and productive, with few economically useless 'white elephants.' For the most part, investment should not be determined or directed by the state, since the latter has an exceptionally poor record of making efficient choices.

I now elaborate on two of the above points: (a) restructuring and privatization; and (b) export promotion. These are key to the success of a new industrial policy for North Korea, in my view.

### ***Restructuring and Privatization***

After several decades of state-directed production and investment, mostly involving little reference to any sensible market signals about costs and profitability, it can be expected that a high fraction of North Korea's industrial production capacity will be fundamentally uncompetitive, incapable of surviving in a market environment. The experience of the CEE countries and the former Soviet Union suggests that in the best case, perhaps 25% of industrial production capacity will be essentially worthless. If the situation is worse than that, as it was in

some of the CIS countries, then as much as half of the initial industrial capital stock might need to be scrapped. This sounds like a terrible starting point for a program of economic reform and renewal, but two features of North Korea make it less bad than it appears. First, a good deal of the industrial capital stock has already lain idle for some years, so part of the adjustment has already happened; second, the North Korean workforce has a pretty decent basic education and is willing to work hard, and that is what really matters most for future economic success.

The Eastern European capital stock was in poor shape for two major reasons, both of which apply to North Korea. Irrational pricing was the first reason, with energy prices, land rents, and freight charges all artificially subsidized, other prices often distorted for spurious social reasons, and with no account taken of the prevailing world market prices. Thus to the extent that investment choices paid attention to prices, they were the wrong ones, and many very inefficient choices were made: factories were poorly located, they used far too much energy, and they occupied too much space by treating land as effectively a free good. The second reason had to do with the uncompetitive economic/business environment, and the consequential lack of interest in innovation, either in production processes or product ranges. Firms under socialism generally wanted to invest, but normally just to replicate what they already had rather than to innovate. Despite huge networks of research institutes and impressive looking ‘innovation plans,’ actual innovation in an economically worthwhile direction was extremely weak, and got worse through the 1970s and 1980s. This is why, when socialism collapsed, the transition economies found themselves lagging so far behind the developed market economies. North Korea will be no better.

At the moment we cannot be sure quite what scale of restructuring North Korean industry will require, so an early task would be to carry out some form of audit, at least in a rough and ready way, to classify firms

into, say, three basic categories: (a) no hopers, namely firms whose output is of such poor quality or whose production is so inefficient that they are beyond any realistic hope of rescue; (b) firms that could potentially be restructured into profitable entities; and (c) firms already capable of operating profitably, at least in the domestic market.

Clearly, firms in group (c) require no immediate intervention. On the other hand, they are the firms likely to prove easiest to privatize, and if privatized the new owners - whether the existing managers and workers as was the case for many Russian firms, or new 'outside' owners as was more often the case in Hungary and Poland - will have incentives to operate the firms as going concerns. If firms of type (a) are privatized, the new owners will not have paid much as the businesses are worth almost nothing, and their only incentive will be to asset-strip as fast as possible, transferring what they can to new viable businesses or simply selling assets for personal profit. In principle, I have nothing against people getting rich, but in Eastern Europe this sort of unregulated asset-stripping generated a great deal of hostility to the whole idea of privatization. In this sense it was politically quite unwise. It might have been better for the various governments not to privatize these really bad firms, but rather to sell off their assets directly, including land, vehicles, buildings and the like; that is how I would advise North Korea to proceed.

The group (b) firms are the most interesting ones from a policy perspective. With some restructuring, they probably have a viable future, so the question is how best to organize the restructuring process. The first aspect of this, controversial in Eastern Europe, is whether restructuring should be undertaken while the firms are still SOEs, or only later, once they have been privatized. Since the state has a history of running firms badly, my view was always to favor post-privatization restructuring, since it was never clear to me how the state might suddenly become capable of doing the job. However, at times I would concede that the state could make sensible decisions, such as hiving off from a



given firm some largely unrelated business. Thus in the UK, hotels formerly owned by the state railways were hived off and privatized long before the main railway privatization - and the hotel privatization is generally regarded as a success, while the railway privatization is not (the chosen model was much too complex). Some firms in North Korea might usefully be split in this way prior to privatization.

The second aspect of dealing with these firms is how to manage their relations with the state. Here what is required is a substantial degree of disengagement, with firms no longer receiving budgetary support, directed credits, price ‘favors’ and so on, and instead facing what are referred to in the literature as hard budget constraints.<sup>9</sup> These firms will lobby actively for government support to ‘help them restructure’ and the government has to learn to resist such pleas in most cases. In particular, no firm should be helped by the state until it has made visible efforts of its own to improve its financial position, and even then, any help should be strictly time-limited, and preferably subject to some competition. For example, suppose the state wants to encourage restructuring and productivity improvements in firms making noodles for the consumer market. The state should not care which firms succeed and which fail, so it could encourage firms to submit bids for restructuring aid based on clear business plans and measurable performance targets. It would then allocate funds to achieve the best value for money, with firms that subsequently fail to meet their agreed targets being allowed to exit from the market. Regardless of what is happening to existing firms, there should be no barriers to new firms being established in any line of production, and no barriers to trade between different parts of the country - as was common, and very inefficient, in parts of Russia, as each region sought to protect its ‘own’ firms. In contrast to the Russian story, such competition between regions and provinces in China has been one of the factors stimulating such fast growth and fast

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<sup>9</sup> See Kornai, *op. cit.*, 1980.

productivity improvements there.

The third aspect of restructuring and privatization concerns the possible impact on employment. Both failing firms and restructuring ones are likely to shed many workers, as part of their problem is usually a high degree of over-manning. However, some existing firms that are already profitable and others that restructure successfully and then start to grow rapidly will quickly generate new jobs. Although helpful, this will probably not be enough to maintain near full employment, especially if, as suggested above, both agriculture and the military establishment are also reducing their manpower demands. This is the point at which improvements in the business environment become absolutely critical, since the way through this impasse is via the formation of many thousands of wholly new businesses. Moreover, the state can play almost no role in determining which sectors these new firms should belong to. Many will be in diverse types of services, both consumer-related and business-related, since these sectors are always under-developed under socialism, and North Korea is no exception. Some new firms will be in manufacturing, either in branches that already exist in the country, or in completely new activities. Again, especially near the start, no one can say which new branches will prove successful for the country - this will largely depend upon the skill and luck of the new entrepreneurs.

Even in the best case, some unemployment is likely in the early years of restructuring, and so North Korea, like other countries, will need to put in place suitable systems of social protection, essentially forms of income support for the early losers from restructuring. This in turn requires taxes to finance the social support, which gives rise to another dilemma. For the faster the pace of restructuring, the more unemployed people there will be, requiring higher taxes to finance their social benefits, and finally the higher taxes can be expected to slow down the emergence and growth of new private sector businesses (or force new firms to operate in the informal sector). Hence if

restructuring proceeds too quickly, the resulting higher taxes could slow down private sector growth and job creation, leading to very high unemployment. But if it proceeds too slowly, perhaps because the state continues to protect bad firms in various ways, that too might deter many potential new firms from setting up, since new firms will perceive that the business environment unfairly favors the established ones. Thus a difficult balance has to be struck in order to find the most suitable rate of restructuring<sup>10</sup>; finding it might require some experimentation with alternative policies, possibly with some regional or sectoral differentiation initially.

### ***Export Promotion***

It was emphasized above that North Korea needs to increase its exports several-fold, to enable it to import more goods and services, including foodstuffs to stabilize, finally, the population's food supply. Virtually all the countries that have grown out of extreme poverty in the past 50 years or so have done so on the back of huge increases in exports, so it is relevant here to consider how they have managed this.

Sometimes it is suggested that the fortunate countries are those possessing vast reserves of natural resources, such as oil and gas, coal, metal ores, and other minerals in high demand around the world. However, empirical studies have shown that, on average, countries that have these resources grow more slowly than those that are less well endowed.<sup>11</sup> Many reasons can be cited for this surprising finding, but the most significant have to do with the linkages between resource

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<sup>10</sup> In the CEE context, this issue was analyzed quite formally in Blanchard (1998). See Olivier Blanchard, *The Economics of Post-Communist Transition*, Clarendon Lectures in Economics (Oxford: Oxford University Press, 1998).

<sup>11</sup> See, for instance, Thorvaldur Gylfason, "Resources, Agriculture and Economic Growth in Economies in Transition," *Kyklos*, Vol. 53(4), pp. 545-580, 2000; Jeffrey Sachs and Andrew Warner, "Natural Resources and Economic Development: The Curse of Natural Resources," *European Economic Review*, Vol. 45, 2001, pp. 827-838.

wealth, rent-seeking behavior, corruption, and governance. Oil-rich countries like Angola and Nigeria, for instance, have diverted many billions of dollars into the bank accounts of political leaders and other corrupt individuals, to the detriment of their country's development. It is only in relatively well-governed countries such as Norway and the UK where wealth generated by oil and gas has not been dissipated so unproductively. From this perspective, North Korea might consider itself fortunate not to have major natural resources.

Likewise, only a few countries such as New Zealand and Denmark have done well economically on the basis of their agricultural exports, and North Korea will not be another such country. It is not that agriculture cannot be profitable, for of course it can. But many of the agricultural products bought by the more developed countries - e.g. coffee, tea, bananas and other tropical fruit, rice, and so on - are subject to vigorous competition *between the supplying countries*, and this seriously limits the gains to individual farmers in any given country. The latter do better if they are able to identify a niche in the market for which there are few or no competing suppliers, but this is usually difficult. Moreover, many agricultural markets are subject to greater price instability from one year to the next than most manufactured goods, and agriculture offers fewer opportunities for innovation and productivity gains. Given these difficulties, it is perhaps just as well that North Korea's future does not lie in striving to become an agricultural exporter.

That leaves services and manufacturing as candidates for a North Korean export drive. I suspect, though, that decades of dictatorship and repression will not exactly have bred a vibrant 'service culture' in the country, and in any event North Korea has so little experience of insurance, modern financial services, business services, IT services and the like, that it can hardly expect to be a credible player in these major sectors of the modern world economy. More likely, as the country starts to develop through marketization, it will need to import

such services on quite a large-scale. Accordingly, if North Korea is to succeed in export markets, at least for first decade or two of renewed development, it will be through the expansion of manufactured exports. Let us therefore consider how such success might be brought about.

What North Korea needs from manufacturing is a broad mix of improved management (including managers who know something about finance and marketing, two areas usually missing from the profiles of socialist managers), new technology, funds for new investment, and improved access to markets. The last is in some ways most critical. However, regardless of North Korea's non-membership of the WTO, traditional partners such as China, Russia, Japan, and South Korea could easily choose to open up their markets more fully to North Korean goods. While South Korea's current relationship with the North is largely non-commercial, based on various forms of aid, it is highly doubtful whether sophisticated consumers and firms in the South would purchase much from the North unless the goods on offer met appropriate quality and technical standards. At present, there is rather little that does. Likewise, there is little prospect of any new trade with the other three neighbors being conducted on anything but the strictest of commercial terms.

It seems to me that there are two main ways for North Korea to improve what it offers onto the world market. The first involves partnership with foreign firms involving FDI and, most likely, significant ownership stakes in North Korean business, both in existing firms undergoing privatization, and in wholly new firms established to use the available labor force in the North. Then the expertise and market access of the partner firms will be available to upgrade North Korean production.

The second route is via the creation of many hundreds, indeed ideally many thousands, of new small firms in virtually all sectors, new and old. Many of these firms will no doubt fail quite rapidly, as is normal in well functioning market-type economies, but some will

survive to become the big firms of the future, providing employment, incomes, and exports to North Korea. This model is not unlike the Chinese experience with TVEs, starting in the 1980s. In the Chinese case, the firms initially had very unclear ownership status, being forms of cooperative or joint venture/partnership supported by the relevant local authorities. They thrived basically because the central government didn't interfere (and was probably quite surprised to see how successful the TVEs quickly became), and because the local authorities saw them as a source of local tax revenue to help fund local public services, local infrastructure and so on. For the most part, TVEs received no subsidies or other special support, and if they were unprofitable (and so generated no tax revenue) they were quickly closed down. In this sense, the TVEs clearly operated right from the start with hard budget constraints, and in an increasingly competitive environment that spurred them to invest, to innovate, and to seek new markets. They did so amazingly successfully. This idea of creating many new firms was also stressed under the heading of 'restructuring,' above, since these firms are key to solving two problems simultaneously: employment creation, and export growth.

North Korea would be well advised, in my view, to follow both the above routes in order to foster a massive and rapid expansion of manufactured exports. To succeed, though, some additional measures will be needed. The state at national level needs to resist the temptation to interfere in new business activity, either in larger firms involving FDI, or in smaller, more locally significant firms. For the existing North Korean state, this will be exceptionally difficult, and initially - given its track record of interference - promises not to intervene will completely lack credibility. But in time, investor confidence should slowly revive. More positively, the business environment needs drastic improvement, both in terms of procedures (bureaucracy, controls, inspections, availability of business premises, etc.) and in terms of physical infrastructure (as emphasized above).

Last, additional measures that specifically help to promote exports

are needed. This includes developing a commercial role for North Korean embassies around the world, so that their core task becomes the gathering of market information in various countries and conveying it back to the North Korean business community. The banking system needs reform to facilitate the international financial transactions associated with foreign trade - this was quite slow to develop in some countries of the former Soviet Union after 1991, and much trade was lost as a result. And the government should establish a scheme of export credit guarantees, of the sort that most successful trading nations operate. All these services, new for North Korea, must be modern, efficient and quick.

### ***Sequencing Reforms***

The above list of desirable policy measures to support an effective industrial policy for North Korea is lengthy and quite complex, so it is probably unrealistic to do everything at once. Instead, I would suggest that it is better to start with reforms that can deliver quick and tangible benefits to the population, hence securing their support for further reforms. For instance, liberalizing the conditions for FDI would simultaneously start the process of modernizing production and increasing export capacity, while relaxing the foreign exchange constraint and so permitting food imports on a sufficient scale to achieve complete food security for the population. In the early stages of reform, it is also desirable to take some steps that would not be easy to reverse without high political cost, signaling the state's commitment to the reform process. This would accelerate the process of building credibility and confidence.

## Conclusions

The North Korean economy is performing badly, and is an almost closed economy with a relatively over-developed agriculture placing too much emphasis on self-sufficiency. Since the collapse of the Soviet Union in 1991, formerly the country's economic 'lifeline,' North Korea has failed to develop a credible economic strategy. In my view, the country will remain poor - and vulnerable to further food shortages - unless it undertakes a major reform program, including an extensive opening up to the world economy. This paper has sketched out some ideas for the industrial policy component of such an economic reform strategy, drawing on the lessons and mistakes of the countries of Central and Eastern Europe. Of course whatever their problems, the CEE countries were in a rather different political position than North Korea when transition started. Some had already started cautious, market-oriented economic reforms during the 1980s, and all had abandoned communist government and moved to multi-party democracy by the early 1990s, albeit with varying degrees of commitment and enthusiasm. Politically, North Korea is closer to China in that the communist government is still firmly in place, but it is unlike China economically, in that it has not yet shown the same flexibility and willingness to experiment with market-oriented reforms, or to tolerate successful private business activity.

Further, I have argued that an effective industrial policy for North Korea should focus strongly on export promotion, supported by a variety of other measures including the encouragement of substantial inflows of FDI. In parallel, employment creation should be promoted through the formation of large numbers of new small businesses, as happened surprisingly rapidly in the more successful CEE countries as well as in China.

Finally, it might be argued that North Korea is somehow 'different' from other countries and would not respond significantly to



the sorts of reform measure studied and proposed in this paper. This is an argument that I have encountered many times in Central and Eastern Europe in the early phases of reforms, and it was always wrong. North Koreans, too, will respond to sensible market prices and incentives, and will rapidly take steps to enrich themselves when they are allowed to do so. Moreover, at a more formal level, Computable General Equilibrium (CGE) models of North Korea developed by Robinson and Noland show very clearly how the economy can be transformed along a range of possible development paths, in line with the main proposals advanced in this paper, lifting the country out of its present dire poverty.<sup>12</sup> North Korea need no longer be poor.

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<sup>12</sup>Marcus Noland, *Avoiding the Apocalypse: The Future of the Two Koreas* (Washington, DC: The Peterson Institute for International Economics, 2000).