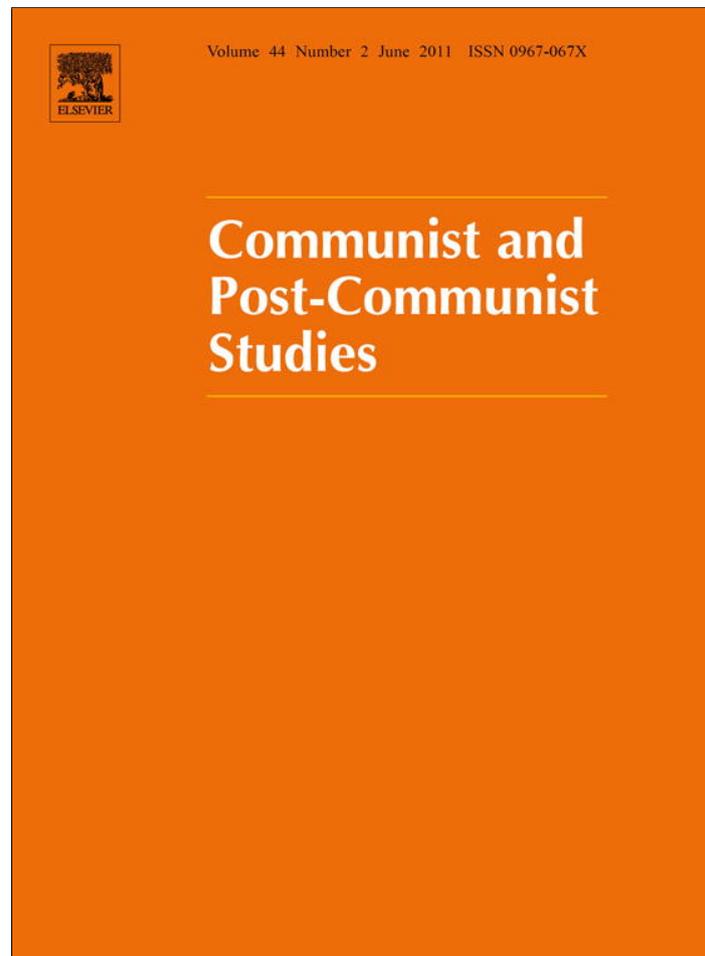


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## North Korea's parallel economies: Systemic disaggregation following the Soviet collapse

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### ABSTRACT

This article aims to introduce the concept of parallel economies to explain the transformation of North Korea's command economy during the 1990s. The article summarises North Korea's pre-1991 command economy, before identifying the collapse of the Soviet Union and the great famine (1994–1998) as causes for the splintering of the old command system into parallel economies—the official, military, illicit, court and entrepreneurial economies—separated from the central planning matrix. It concludes that the existence of parallel economies makes system-wide economic reform unlikely and increases the importance of foreign aid in maintaining the viability of the regime's political architecture. © 2011 Published by Elsevier Ltd on behalf of The Regents of the University of California.

### Introduction

In the years leading up to 1991, North Korea's moribund command system, was extremely vulnerable to disruptions in its input flow, increasingly reliant on imported energy supplies, agricultural inputs and manufactured goods from the Soviet Union and the wider communist bloc. When the Soviet Union collapsed, this vulnerability was exposed and the weakened economy plunged into precipitous decline, splintering into a number of parallel economies through the 1990s, including the huge military economy, the entrepreneurial economy, the court economy, and the illicit economy, along with the remains of the old command system. The military has become the backbone of regime perpetuation under this economic order. In the absence of systemic economic reform, inputs of foreign aid have become crucial to the maintenance of the military-centred system.

The paper begins by summarising the development of the North Korean command economy between 1945 and 1991, documenting trends of increasing inefficiency and bottlenecks throughout the economy over time. Next, the paper describes the impact of the collapse of the Soviet Union and the great famine (1994–1998) on North Korea's economic system, resulting in the splintering of the old command system into a series of five parallel economies. It then identifies these five parallel economies—the official, military, illicit, court and entrepreneurial economies—before outlining their impact on the likelihood of system-wide economic reforms, and the necessity of foreign aid as an input to keep the totalitarian political architecture viable in spite of the fracturing of the economic system.

By understanding the nature of the economic transformation that has occurred in North Korea, it then becomes possible to more accurately gauge the political changes that have, and continue to, taken place. With regard to economic reforms, the centres of power within the underlying economic architecture—the parallel economies—will largely dictate the type of reforms that may be politically feasible. These insights are also important as a leadership transition looms within the Kim regime. The distribution of economic power within the North Korean state will provide a useful indication of the constituencies that Kim Jong-il's successor will have to court to maintain power, and may provide a signpost as to the likelihood that the successor's power can be maintained at all.

## The Pre-1991 command economy in North Korea

Prior to 1991, North Korea's state bureaucracy directed the national economy through a central planning mechanism (Yang, 1994, 228). In concordance with the experience of other socialist states, central planning in the North Korean context was highly inefficient. Because the production targets demanded by the planning matrix were unrealistic, and because supply bottlenecks throughout the system made production targets unfulfillable, lower-level functionaries tended to reduce their output, hoard scarce resource inputs, or expropriate state goods (Seliger, 2004, 80; French, 2005, 83–84). The ideological incentives for individual firms to increase efficiency were often outweighed by the practical advantages of engaging in such illegal practices (Bazhanova, 2000, 65; Yoon, 1986, 56).

The decade following the Korean War was one of rapid growth and development. Kim Il-Sung's government pursued an economic strategy centred on heavy industry, which saw the combined output of mining and manufacturing increase threefold between 1954 and 1958 (Martin, 2004, 96). This increase was due partially to the Chollima movement, launched in 1957 during the 1957–1961 Five-year Plan. Chollima created an intense atmosphere of battlefield fervour in the workplace to motivate employees to toil more industriously (Lankov, 2002, 104). It initially succeeded during the post-Korea War reconstruction period, when the economy was rebuilt from a low base. North Korea's per capita income increased 13.1 percent annually between 1947 and 1967, while gross industrial production grew at an average annual rate of 41.8% during the 1954–1956 three-year plan and by 36.6% during the 1957–1961 five-year plan, which was fulfilled a full year ahead of schedule (Lee, 1988, 1265–1266; Armstrong, 2007, 67). These figures are undoubtedly exaggerated, but they do reflect the easy productivity gains made through easy-to-achieve post-war rehabilitation.

By the late-1960s, rising energy prices, stagflation pressures and technological advances drove a global shift towards light manufacturing that spelt doom for economies structured around heavy industry (Maier, 1991, 43). As industrialisation matured and the complexity of the economy grew, the basic industrial techniques of a command system and its ideology-based incentive structure began to realise diminishing returns (Seliger, 2004, 80; Chung, 1974, 99). North Korea responded by importing production facilities from abroad in an unsuccessful drive to reinvigorate its stagnating industrial sector during the 1971–1976 Six-year Plan. Misuse of these new acquisitions through technological naivety and ideology-driven mismanagement prevented the North from obtaining a return on its investment. The failure of this initiative pushed the DPRK (Democratic People's Republic of Korea) into a debt crisis that curtailed its ability to trade with and access technology from the West, railroading it into dependence on the Communist bloc for external economic exchange (Armstrong, 1998, 39; Yoon, 1986, 74; Koh, 1978, 38–39).<sup>1</sup>

Similar problems were encountered in the agricultural sector. From 1954, the Kim regime began forcibly transferring farmland from individuals to local cooperatives through a policy of agricultural collectivisation. Two primary reasons undergirded the push for collectivisation: first, its introduction was intended to increase productivity during the post-Korean War reconstruction period according to the principle of economies of scale, as it was believed that output would be greater from large collective farms than from assortments of small family plots (Nam, 2007, 98; Martin, 2004, 102). Second, collectivisation was intended to bolster the bureaucratic power of the state and eliminate private property for ideological purposes (Chung, 1974, 10–16). Large-scale cooperative management incorporated into the central bureaucracy neatly complemented the totalitarian power structure and brought the peasantry into line with other sections of the population in their dependence on the state.

The initial production gains from collectivisation were impressive. In February 1964, Kim Il-Sung's industrialised agricultural development model—the Chongsan-ri farming method—initially produced a steady 2.8 percent annual production growth between 1961 and 1988, though grain yields dropped precipitously at –5.6 percent per year during the subsequent decade (Smith and Huang, 2000, 204; Haggard and Noland, 2007a,b, 26). According to Suk Lee (2003, 158), during the period from 1946 to 1973 agricultural output grew by over 100 times, underpinned by an eight-fold growth in consumption of chemical fertilisers, a five-times increase in mechanically-irrigated land, and a hundred-fold increase in the number of tractors utilised on collective farms.

The production gains realised by *Chongsan-ri* agriculture proved to be ephemeral. The period from 1970 to 1973 saw widespread food shortages as agricultural production declined. In response, the Kim regime launched the Three Revolutionary Teams movement, in which young party members were dispatched to rural areas to teach farmers the latest Juche-inspired cultivation methods through ideologically based cultural and technical education programs. However, this rigid agricultural model actually decreased output, as working groups on the collectives lacked the autonomy to respond innovatively to changing local conditions, inefficiencies or shock events (Haggard and Noland, 2007a,b, 26; Nam, 2007, 102; Koh, 1978, 37).

Because of bottlenecks and systemic waste, annual growth rates consistently declined after the post-Korean War reconstruction period (Kim and Song, 2008, 365–379).<sup>2</sup> Indeed the only way to boost productivity in the command economy was to pump more resources and labour through the system (Lee, 1988, 1267).<sup>3</sup> However, labour tended to

<sup>1</sup> Charles Armstrong estimates that by 1989, North Korea had defaulted on approximately US\$35 billion in foreign debts.

<sup>2</sup> Kim Byung-yeon and Song Dong-ho have calculated the average annual growth rate of North Korea's GNP over this period at 4.4 percent and per capita GNP at 1.9 percent. However, the 4.4 percent annual growth figure during the period 1954–1989 is misleading because of its reliance on addition of labour inputs.

<sup>3</sup> Lee Hy-sang points out that in the years leading up to 1984 North Korea's productivity growth actually averaged –1.7 percent annually when labour productivity is taken into account.

migrate towards unofficial informal economic activities, including black market entrepreneurialism, expropriation of state goods, rent-seeking activities, or private agriculture. North Korean workers and low-level functionaries saw their material benefits erode, devaluing the incentive to increasing output or even participating in the command system at all. As the informal sector began to expand, the central planning mechanism was further distorted by the diversion to the informal sector of resources allocated for the command system (Kim and Song, 2008, 365–366; French, 2005, 92).

### Soviet collapse and the North Korean great famine

Through the 1980s, North Korea had become dangerously reliant on imports, subsidies and direct aid from the Soviet Union. Subsidised trade involved an exchange in which the Soviet Union would provide manufactured goods, fuel and transportation equipment in exchange for rolled ferrous metals, oil and sub-standard North Korean value-added products. In total, two-way trade with the Soviet Union accounted for between 50 and 60 percent of North Korea's total trade volume (Noland, 2003, 4–5; Eberstadt et al., 1995, 98).<sup>4</sup> Much of this occurred on a concessional basis through Moscow's willingness to finance North Korea's ballooning trade deficit, which reached an estimated cumulative figure of US\$4 billion in the period 1985–1990 alone. Pyongyang enjoyed further concessions through subsidised commodity prices, well below international market norms, which saved North Korea approximately US\$400 million on oil and coal purchases between 1980 and 1990 (Eberstadt et al., 1995, 91).<sup>5</sup>

The increase in inputs from the Soviet Union in the late-1980s could not disguise the growing food crisis enveloping the country. Agricultural output began to decline from 1987 as subsidised Soviet imports of key mineral fertilizers and fuel dropped. Initially the regime adapted by bartering rice in exchange for cheaper Soviet grain, while drawing heavily on the national food stockpile and advising the public to consume only 'two meals a day' in a concerted propaganda campaign. In 1990, as its own internal crisis took hold, Moscow rejected the barter system and requested that North Korea pay for goods in hard currency at international market prices. By 1991, two-way trade had collapsed; Soviet exports to North Korea had fallen by over seventy percent from the previous year and by 1993 had collapsed to a tenth of the average import total between 1987–1990 (Noland, 2003, 4–5; Eberstadt et al., 1995, 97).

The maintenance of complex institutions, especially the kind of rigid, monolithic organisations found in North Korea, is reliant on constant inputs of resources, energy and manpower. As a system gets larger and more complex, continually expanding quantities of these inputs are required to keep up the system functioning. This relationship is applicable in the context of the state: governing institutions breakdown when resource, energy and manpower inputs fall below what is necessary for their continued operation. Institutions evolve specific capacities to fulfil certain needs, and each operational program requires nodes of institutional organisation for its execution and maintenance (Homer-Dixon, 2006, 41). These complex networks cannot function without steady provision of resources, energy and manpower commensurate with their minimum input requirements. Institutions must be staffed with trained and salaried recruits, equipment must be powered and repaired, rules must be policed and information recorded. As these tasks multiply within a growing network, so too do their minimum input requirements. Consequently, institutional breakdown is likely where the resource base falls below the level required for systemic maintenance across the spectrum of government institutions, making it difficult for the state apparatus to be maintained at the desired level of complexity.

The declining North Korean economy, reliant on imported energy supplies, agricultural inputs and manufactured goods from the communist bloc, was extremely vulnerable to disruptions to its input flow. The rapid drop in energy availability in 1991 was the trigger event that crippled an already weak system, creating an energy shortfall in North Korea that undermined its command economy and contributed substantially to the economic collapse of the mid-1990s. Today, North Korea continues to depend on foreign oil for its economic survival, which it obtains from China as direct aid and at subsidised trade prices, as well as ad hoc shipments from other regional states granted through deals made in denuclearisation negotiations (US Library of Congress, 2007, 10; Brown, 2006). The DPRK also has a substantial endowment of coal, mined principally at four major mines, and numerous smaller operations around the country. Coal production has increased again after a steep decline during the famine years, when here it fell from 43 to 32.2 million tons between 1989 and 1995 (Aden, 2006, 10; Andrianov 2000, 46). Annual production now ranges between the ROK Ministry of Unification's (2006, 4) figure of 22.8 million tons to the US Energy Information Agency's (2006) estimate of 33.1 million tons.

Similar problems have beset North Korea's electricity grid. Prior to 1991, increasing national electricity demand placed the grid under stress, with overloading of the power network leading to breakdowns that brought the grid offline at regular intervals. By 1999, after the collapse of the North's industrial sector, electricity generation fell to 40 percent of its 1990 capacity due to the absence of backup energy systems, as well as its lack of indigenous petroleum reserves alternative energy sources (French, 2005, 100–101; Moiseyev, 2000, 57). Not surprisingly, every energy bottleneck creates a ripple effect of lost output further down the chain of production. For example, irrigation of rice paddies is driven by thousands of electric water pumps, which run at full capacity in May as the rice is planted, placing a major strain on the power grid (Amnesty

<sup>4</sup> Total imports over the period 1987–1990 increased from US\$83.8 million in 1987 to US\$113 million in 1990, driven by increased purchases of machinery, transport equipment and military-related miscellaneous goods.

<sup>5</sup> Statistics reported by Eberstadt et al are reported in 1990 US dollars.

International, 2004, 6). If electricity shortages cause blackouts, the pumps fail and crop-sowing delays, reduced harvests are inevitable due to the narrow time window available for planting during the short growing season.

The collapse of the Soviet Union in 1991 was a hammer blow, bringing the country to its knees as aid and subsidised inputs that had long propped up the economy began to dry up. The North lacked the foreign exchange needed to purchase imports at market prices because of its minimal export income, resulting in the steep decline of total Soviet-DPRK trade volume from US\$3.2 billion in 1990 to US\$360 million in 1991 (Smith and Huang, 2000, 205). Imports of Soviet crude oil declined precipitously from 440,000 tons in 1990 to only 40,000 tons in 1991, which crippled the North's industrial sector (Kim, 1993, 867). The cessation of machinery imports created a shortage in spare parts, while the fuel scarcity stalled production, incapacitating the decaying industrial infrastructure and thus limiting its ability to produce export goods, the income from which would help to pay for the required inputs on the international market (Eberstadt et al., 1995, 100–102). Consequently, the effect of the import halt on North Korea's industrial sector was proportionally far higher than just the value of the missing inputs themselves.

After 1991, the economy could no longer operate at its former level of complexity without an enormous throughput of energy and resources from the Soviet Union. This institutional disaggregation took place throughout the North Korean command economy during the mid-1990s, visible in the cessation of many government services, as well as in the growth of entrepreneurialism and corruption. The marketised military economy is also symptomatic of reduced organisational complexity, institutionalising a new organisational paradigm in which the North Korean economy has splintered into several parallel economies. What remained of the command economy was a hollowed-out shell, as networks of factories were brought offline or had their production runs severely curtailed, their formerly privileged workers facing starvation as their incomes dried up. Agricultural production, long based on mechanised farming and vast utilisation of chemical fertilisers, also deteriorated as the vast input requirements of this system went unmet. The cessation of imports of fossil fuel feed stocks for fertiliser production decimated the DPRK's large indigenous fertiliser industry, in turn reducing crop yields. By growing crops with significantly less fertiliser inputs, North Korea's farms have effectively been mining nutrients from the soil, continually decreasing the fertility of those soils (FAO, 2003, 2, 5–7). Similarly, the North's transportation infrastructure is heavily dependent on intermittent fuel supplies, hampered by intermittent fuel shipments from China. This presents a critical problem for the distribution of food, because even in a year of good harvests, food may not reach certain parts of the country because of difficulties with transportation.

To compound the catastrophe, floods and then drought wreaked havoc on agricultural production and decimated the state's centralised food distribution apparatus. Without a substantial export sector, the North could not trade for food on the international market, nor was the regime willing to undertake the economic reforms that would allow it to participate in international trade (Haggard and Noland, 2007a,b, 9). By 1993, mortality rates began to climb, a sign that the growing food crisis had evolved into a fully fledged famine. The floods that hit during the summer monsoon were the coup de grace, a trigger that accelerated the famine event already underway in which, according to the most authoritative estimates produced by Goodkind and West (2001, 220), approximately 600,000 to one million people perished between 1995 and 2000. As of 2008–2009, the Food and Agriculture Organisation (2008, 21) estimates an annual cereal deficit of 836,000 tonnes, which has left 32 percent of North Koreans undernourished.

### Partition of the command system: parallel economies

The multi-dimensional crisis set off a fundamental metamorphosis of the North Korean economy, a transformation that is still underway. The concept of *parallel economies* is a useful metaphor for conceptualizing the disaggregation of the old command economy. The idea has its roots in the analysis of the shadowy second economy that existed in the Soviet Union, operating outside of the official command economy. In an important 1977 article on this topic, Grossman (1977, 25) proposed that Soviet citizens engaged with and within the second economy for private gain and in “knowing contravention of the law.” For Dennis O’Hearn (1980, 218), however, the illegality aspect was less important than fact that activity within the second economy occurred outside of the central planning matrix. The latter distinction between activities within and outside of the central planning process is integral to the concept of parallel economies adopted in this paper. The Soviet example also provides clues as to how a shadowy second economy grows out of a command economy until it eventually breaks it apart. Once quasi-market practices penetrated the operations of state institutions, the incentives for state officials to pursue opportunist ventures outside of the formal system increased at the same time as political reforms weakened the monitoring and enforcement capacity of the Party, resulting in a massive exodus of officials from the Party (Kalyvas, 1999, 338–339; Teague and Tolz, 1995, 21). Obviously, in such circumstances, prior levels of organisational complexity could not be maintained.

A similar reduction in organisational complexity was responsible for the disaggregation of the North Korean command economy and its associated second economy during the famine period, when it splintered into a series of parallel economies. The first parallel economy exists amongst the remains of the official economy. The second is the enormous military economy, which incorporates entire production and supply chains to provision the military and generate income through weapons exports and rent-seeking activities. The third is the illicit economy, featuring a basket of criminal activities through which the regime generates a large portion of its foreign currency earnings. The fourth is the court economy, which the leadership uses to provision the wider regime elite with luxury items not available to the wider public. Finally, the fifth parallel economy comprises the entrepreneurial black market in which budding cohorts of people from the lower levels of North Korean society

do business outside of official channels. Participants include those with access to foreign currency who trade in imported goods not available through the official economy, or farmers selling homegrown produce or goods appropriated from the state. There is considerable overlap between the North's parallel economies, yet each is distinct from the others and more importantly from the monolithic command economy that preceded them.

#### *The official economy*

The official economy is the remaining portion of the total economy that is planned and controlled by the state (Holmes, 1993, 75). In North Korea, the official economy is overseen by the People's Assembly and controlled by the State Planning Commission and consists of the remnants of the pre-1991 command economy, including the dilapidated heavy industrial sector. As late as 1990 mining, manufacturing and construction industry accounted for 49 percent of the North Korean economy. By 1997, however, the industrial sector had dropped to 32 percent of the overall economy, clearly affected by the resource shock that accompanied the cessation of imports from the Soviet bloc. In 2003, the industrial sector had recovered somewhat to 36 percent of the economy, growing again to 40 percent by 2007 (Nanto and Chanlett-Avery, 2008, 13). A report commissioned by the *International Crisis Group* (2005, 14) noted that a key factor keeping factories offline was that a large portion of the productive infrastructure was stripped and sold during the famine. State controls have relaxed somewhat over state-owned enterprises, with production quotas and procurement rules having been eased to accommodate material shortages through the system. It is estimated that approximately 20–30 percent of the population relies on incomes from the planned economy, through salaries from official companies and the PDS ration (Park, 2008).<sup>6</sup>

#### *The military economy*

The military economy is by far the most important parallel economy, accounting for up to seventy percent of North Korea's domestic economic output and encompassing all economic activities related to the production, distribution and consumption of materials within the military sphere (Pinkston, 2003, 9). The National Defence Commission (NDC) controls all activity within the military economy, beyond the reach of the People's Assembly, which controls the official economy. The NDC is responsible for planning, financing, production and distribution of military-related equipment and technologies, as well as a large portion of foreign sales of military hardware (Bermudez, 2001, 45–47). The relationship between Kim Jong-Il, the government bureaucracy and the military is still highly symbiotic, with institutional economic relationships mirroring the political co-dependence between regime, party and military.

The vehicle for the growth of the military sector has been Kim Jong-Il's doctrine of Songun (military-first) politics, first proclaimed in 1998. The ultimate goal of Songun politics is to create a self-sustaining defence sector in which military activities generate more resources and economic goods than they consume (Eberstadt, 2006, 288–289). Estimates of annual military expenditure range from US\$1.7 billion to US\$5 billion, or between 15.7 and 27.2 percent of North Korea's GNP (2007). Yet these figures alone understate the size of the wider military economy, which commands preferential allocation of the country's materials, resources and labour force. Not only does it subsume provision of supplies and armaments for the KPA, it incorporates many other aspects of the civilian economy, making it dissimilar from the military–industrial complexes of other countries (Moon and Takesada, 2001, 377).

The military has come to control a number of powerful trading enterprises that are in charge of the internal distribution of food, uniforms and weapons throughout the military. These large military firms are also able to provide a labour force for many important infrastructure projects, such as land reclamation, road building, agriculture, housing construction, and mining (Haggard and Noland, 2007a,b, 54; Pollack, 2005, 144). By providing manpower for important social functions such as these, the military is adding value to the economy beyond its security role and thus places less of a burden on the wider society. The military operates total production chains, incorporating railways, the best mines, farms, fisheries, and textile factories, from which it sells surplus materials for profit (Park, 2008).

No single production chain is more important to the military economy than arms exports, with military-run enterprises producing products including small arms, artillery, and light tanks for export. The regime has sold ballistic missile systems to Iran, Pakistan and Syria, along with alleged sales to Iraq (prior to 2003), Nigeria, Libya and Egypt. Earnings from weapons exports reportedly net North Korea up to US\$1 billion annually, approximately half of which came from the sale of missile systems. In 2001, Pyongyang received approximately US\$580 million in payments for missiles, which almost equals the North's civilian export income of US\$650 million for the same year (Pinkston, 2003, 5; Noland, 2002, 173). Sheena Chestnut (2007, 98) believes the regime has used front companies to facilitate the export of missile technology to Iran and Pakistan. However, some defectors—including Cho Myung-Chul, a former professor at Kim Il-sung University—have testified that revenue from weapons sales and crime is channelled directly to the military, bypassing the government (*International Crisis Group*, 2005, 8).

The key distinctions that separate the military economy from the old command economy are its compartmentalisation from the rest of the official economy, run by and for the military exclusively, its separation from the central planning matrix,

<sup>6</sup> Public Distribution System (PDS), the rationing system that was supposed to ensure food security. Park In-ho is a journalist for the Seoul-based online news website *Daily NK* covering stories related to North Korea.

and its largely market-based procurement and profiteering practices. The military economy has become so pervasive, and the official economy so small, that the military economy has come to dominate most sectors of economic activity (Park, 2008). However, no official statistics exist to quantify its exact size. Nonetheless, the regime has consistently leveraged the nuclear program in denuclearisation negotiations to obtain key inputs for the military economy that are not available indigenously and is employed regularly as a tool to legitimise the transfer of economic power to the KPA.

#### *The illicit economy*

North Korea has exhibited a consistent pattern of state involvement in criminal activities over a long period. Sheena Chestnut argues that drug production, drug trafficking and counterfeiting activities operate within sensitive, closely-surveilled areas of the government and exist on a scale large enough to require cross-institutional coordination and support (Chestnut, 2005, 103–104). Any factory can run a drug production operation alongside its ordinary productive functions, which for some factories may be the only thing keeping them open (Park, 2008). Activities of this kind could not have been possible without direct oversight from the highest echelons of the regime leadership via the penetration of all work teams by KWP cadres.

Contributions from state-sanctioned criminal enterprises represent an alternative foreign income source that operates outside of the command system. The fall of the Soviet Union and the end of subsidised imports badly exposed North Korea's lack of foreign currency income. As Russia and China began to demand payment for goods in hard currency, illegal activities became one of the few realistic sources of income for the North (French, 2005, 99). The first documented case of official North Korean involvement in criminal activity dates back to the 1970s, when DPRK embassy officials in Norway, Sweden, Finland and Denmark were found to be using their diplomatic tax exemption to buy bulk quantities of alcohol and cigarettes for resale on the black market, while allegations surfaced of embassy involvement in drug smuggling (Noland, 2006; Koh, 1977, 61).

In the present day, a number of international investigations have implicated the regime in a number of illicit activities, including the production and distribution of narcotics, counterfeiting, smuggling, and money laundering (Chestnut, 2007; Asher, 2005; Asmolov, 2005). Illicit exports may account for 35–40 percent of the North's total exports, contributing to an even larger slice of total earnings. Profit margins on illegal activities are often as high as five hundred percent, far beyond those earned by conventional trade, which is one of the reasons why criminal activity is so lucrative. Regime criminal activity is systematic and likely to be an important source of hard currency, with speculative estimates of illicit income ranging from US\$500 million to US\$1 billion annually (Perl and Nanto, 2007, 2; Asher, 2005). It is likely that these lucrative criminal activities have become entrenched and even diffused beyond the control of the upper echelon of regime leadership. In the long run, it may be impossible for the regime to move beyond illicit revenue streams as a source of income.

#### *The “court” economy*

It is typical of communist states to develop a “court” economy in which senior and middle-ranking officials can exclusively access goods and services not legitimately available to other citizens (Holmes, 1993; Oh and Hassig, 2000, 66). North Korea is no exception in this regard, with the overwhelming majority of aid granted as cash is funnelled directly into the court economy, allowing Kim Jong-il to lavish the regime's upper echelon with material largesse (Park, 2008; Oh and Hassig, 2000, 66). The black market and the court economy are both outgrowths of shortage and inefficiency in the command economy. The North Korean elite enjoy their own cloistered court economy, within which foreign market transactions secure imported goods such as cars and liquor via unaccountable financial, industrial and trading companies that exist outside the oversight of the financial bureaucracy. These companies satisfy the needs of exclusive groups—the army, special services or Kim Jong-il's immediate leadership core—rather than contributing to the government budget. Party bodies often set up economic departments in key institutions as a cover for these clandestine enterprises (Asmolov, 2005, 39).

#### *The entrepreneurial economy*

A further parallel economy exists beyond the penetration and involvement of the state. It is not uncommon in communist states for an entrepreneurial economy, the colloquial black market, to exist within which individuals and independent traders sell all manner of consumer goods (Holmes, 1993, 75). In North Korea, it is estimated that more than forty percent of the population derive their income purely from private black market business activities as traders, smugglers or shopkeepers. A further ten to twenty percent of the population supplement their income in the official economy with revenue from private business activities (Park, 2008).

Most noticeable of these in the North Korean context are the farmers' markets that became ubiquitous during the famine, where individuals could sell crops siphoned from collective farms, as well as surplus from kitchen gardens and expropriated food aid in informal private farmers markets. There is also evidence of an extensive black market in military surplus goods, operated for and among lower level military personnel (FAO, 2008, 23–26; Kang and Rigoulot, 2001). The marketisation of the lower levels of North Korean society has also seen an explosion in small-scale organised business activities such as restaurants, small shops, beauty parlours and other commercial activities. The “semi-illegal marketers” that operate these new businesses have been able to advance up the social ladder as those formerly privileged industrial proletarians have seen their fortunes deteriorate (Haggard and Noland, 2007a,b, 214; Asmolov, 2005, 45). Often these new entrepreneurs are former

members of the hostile class, who through their links to relatives abroad have access to foreign currency. This places them in a highly advantageous position to capitalise on opportunities available within the entrepreneurial economy.

### The likelihood of economic reforms

Foreign observers often state that North Korea needs to fully marketize its economy and integrate into the global economy to ensure the regime's long-term survival. This would require a change in ideological discourse leading to changes in economic policies to restructure the labour system, overhaul wage incentives for worker and prioritise profit seeking amongst productive entities (Chung, 2004, 286). What has occurred instead has been limited reform within the remnants of the command system, involving procedural tinkering to increase efficiency within the existing ideological and economic framework. The nuclear program has been instrumental here as a lightning rod for crisis escalation by the Kim leadership. The aid, concessions and development assistance bargained from regional states in return for de-escalation has been critical in plugging holes in the system and allowing the regime to avoid substantive economic reforms.

The first signs of embryonic systemic reform in the DPRK came in 1984 with the enactment of the Joint Venture Law, which called for improved economic ties with foreign countries leading to technical cooperation and joint venture development projects within the DPRK (Kihl, 1985, 69–70). By 1991, 85 joint venture projects had been proposed and 39 actually implemented, though most of those projects turned out to be loss making (Beck and Reader, 2005, 9; Lee, 1988, 1273). These were not impressive numbers; given the choice of investing in North Korea, with its small domestic market, political rigidity, economic stagnation and history of debt default, or the newly opened and more investor-friendly China, it rapidly became clear which country was the preferred destination for foreign capital.

In August 1984, Kim Il-sung unveiled a program aimed at producing and selling small consumer items outside of the central planning system. Kim's plan called for small home-based work teams to manufacture necessity goods and sell them directly to consumers at unregulated prices, in officially sanctioned market places in every district of North Korea's major cities. By 1986, the number of officially sanctioned markets had reached over 200, while the number of work teams had topped 14,400 (Lee, 1988, 1268). However, this program was less a reform measure and more a reflection of the regime's unwillingness at the time to reallocate resources away from the heavy industrial sector, an attempt to plug a hole in the planning matrix using local materials and mobilising untapped labour reserves. Marketisation of these transactions was incidental to the overarching goal.

In 1996, the regime introduced the work squad system as a response to the famine. Under this initiative, if a work squad on the state-run farms produced a harvest in excess of its production quota, the government would reward it with a matching sum and allow it to sell the surplus at farmers markets, where prices were 65–350 times higher than for the same goods in state-owned stores. Theoretically, this should have provided a huge incentive for farmers to increase production, but because of severe food shortages in the military the government began seizing surpluses from farmers for distribution within the KPA (Nam, 2007, 108–110). As a result, farmers again began to protect themselves from confiscation through the measures described above.

A series of reforms were launched in 2002, which, though falling well short of the systemic transformation hoped for by foreign observers, were unprecedented in the history of the Kim dynasty. The first measure adopted was a two-tiered price reform where state-owned enterprises began paying market prices for resource inputs, while the price of merchandise in state-owned stores was adjusted to reflect the price of goods in the farmers markets (Li, 2006; Woo, 2005, 54). Market pricing led to a hyperinflation, which saw the cost of consumables and other goods rise dramatically. The regime attempted to accommodate inflation with across the board wage increases, which rose by an average of 1818 percent (French, 2005, 140). Inflation was evidently the trade-off for official toleration of the private markets and with the PDS still largely dysfunctional, the regime had little choice but to allow market trading in consumables and food. The regime also allowed farmers to increase the size of their private plots and set up a leased private cultivation system on state-owned land, from which farmers could sell any surplus, which is estimated doubled grain production from the previous year (Kim, 2006a,b, 68; Cumings, 2004, 183). A new class of wholesalers, vendors and intermediaries emerged as the informal private markets became the primary mechanism through which North Koreans sourced their food.

The 2002 reforms may represent the regime's conscious attempt to regain control in the midst of challenging economic conditions. There is reason to believe that the regime induced inflation to undercut the black market and reincorporate the sale of consumables into the formal economy. The price gap between the black market and the state-run distribution network was leading to a spillage of goods from the state sector into the black market, draining away the wealth of the state. The inflation thus had the effect of reducing the purchasing power of those who had accumulated wealth by selling government produce on the black market, forcing them to transfer their resources back to the state. The toll on ordinary citizens was telling, as most families had to spend up to 80 percent of their income on food alone, while for others sustenance was beyond their means (Beck and Reader, 2005, 6; Woo, 2005, 54).

If the regime leadership did decide to take more dramatic action, the scale of systemic reform is likely to be staggering. It would require land redistribution and decollectivisation, marketisation, industrial restructuring and legal reform, forcing the redeployment of millions of workers to other sectors, or risk unemployment (Noland, 2002, 182). The general population would experience the process as one of great social upheaval, a development that would have great political implications. Social controls, including the rationing system, information controls, travel restrictions, and work groups, would have to be loosened. Reform will open North Korea to foreign information and ideas, which could further undermine the regime's

political control. It is the very existence of these controls, and the presence of bureaucrats to enforce them, which provide the environment in which rent-seeking can take place. Systemic reform would undermine the fundamental conditions that gave rise to the entrepreneurial economy in the first place.

Successful reform programs require a committed leadership, but as the Soviet case illustrates, systemic transformation will not succeed by mere dictate from the top. Timothy Colton (1987, 149) has identified several requirements for successful economic reform: a strongly pro-reform leader; a core elite united around the reform program; a bureaucracy receptive to the reform program and willing to execute it; intelligent advice and practical reform suggestions coming from advisors; and a population broadly supportive of such measures. In the context of parallel economies, such a broad-based consensus may be impossible. Regime elites may fear losing their privileged positions if reforms bring about wide systemic change. Of most importance to Kim Jong-Il's leadership is the maintenance of the privileged position of the military within the Songun system. The true test will come if changes begin to impact on the entrenched privileges of regime elites. Indeed, it may be politically difficult to change an arrangement in which elites already have entrenched interests outside of the old command system.

The position of the regime bureaucracy may be more complicated. Mid-level functionaries are probably well aware of the problems with the system, but not ready and willing to execute a reform agenda. Bureaucrats may hesitate to undertake adventurous tasks because of the limited window of independent action within which they could operate while maintaining their loyalty and fidelity to the existing system. As such, they may feel politically safe in shunning innovative ideas for the well-worn path of the Juche line. One reason for this conservatism may relate to the world view of party cadres; Juche has guided the personal and professional lives of party cadres for over forty years, a conformist pressure that has not equipped officials with the intellectual knowledge or practical experience necessary to direct a wider reform program (Kim, 2006a,b, 24, 80; Cumings, 2004, 189; Buzo, 1999, 245). Conversely, official corruption has exploded as officials have used rank and social position to derive privileged personal benefit from emerging market mechanisms and illicit activities (International Crisis Group, 2005, 16). The involvement of mid-level bureaucrats in rent-seeking activities of their own may dampen their enthusiasm for compliance with systemic changes that would remove those opportunities within the entrepreneurial economy.

Even if the regime was willing to implement change, there is no example of reform suitable for North Korea. Observers often offer the Vietnamese and Chinese experiences as relevant examples of successful reform. However, the Vietnamese and Chinese models may not work because gradual reform of a command economy enjoyed favourable conditions that cushioned restructuring in the heavy industrial sector, including a relatively large rural agrarian population and a small heavy industrial sector, which allowed both countries to initiate reforms in the agricultural sector. Price liberalization spurred rapid gains in efficiency, freeing up poorly productive surplus agricultural labour for absorption by the emerging non-state and semi-private light manufacturing and service sectors (French, 2005, 85; Noland, 1997, 111). North Korea, with its largely urban proletarian population, could suffer far more wrenching social instability during the reform process, creating greater political risk for the Kim regime.

### Foreign aid: propping up the system

North Korea has received large amounts of foreign aid because of the regime's bargaining success in denuclearisation negotiations and because of the potential risk that regional states associate with the North's collapse. Massive injections of foreign aid during the late-1990s were significant in heading off the total failure of state institutions and maintaining the system to the present day. International largesse comes in a variety of forms: food aid, energy supplies, fertilisers, development assistance and direct cash payments. For example, South Korea contributed US\$794.9 million worth of food aid to North Korea in the period 1995–2004, along with US\$387.9 million in fertiliser shipments. The United States has been the largest contributor to the World Food Program's (WFP) operations in North Korea, contributing over half of the 4.2 million metric tons of food the WFP had delivered to DPRK up to 2005. China contributes an annual cereal concession of 250,000 metric tons, supplemented by shipments of fertiliser to help boost farm productivity. Between October 2007 and September 2008, 657 tons of fertiliser were delivered to North Korea by international donors (Nanto and Chanlett-Avery, 2008, 33; Manyin and Nikitin, 2008, 10; FAO, 2008, 14). Food aid strengthens the military economy because the KPA has priority access to incoming shipments and can sell the remainder for profit on the open market. This is cold comfort for citizens outside of the military; food aid tends to reach them via the market, favouring those who have secondary income sources beyond the official economy. For the KPA, its priority access to foreign food aid is a source of tremendous power within North Korean society (Beck, 2008).

Energy aid has been a feature of international assistance to North Korea since the Agreed Framework in 1994. Under the Agreed Framework, the United States pledged to deliver 500,000 tons of heavy fuel oil annually until the two light-water reactors to be built by KEDO (The Korean Peninsula Energy Development Organization, 1994) came online.<sup>7</sup> As these deliveries went unfulfilled through the late-1990s, Chinese oil grants partially filled the void; between 1998 and 2003, China delivered 129,000 tons of crude and diesel oil to the DPRK, along with 492,000 tons of coking coal (Lee, 2009, 54). As part of the 2007 nuclear freeze agreement negotiated in the Six Party Talks, regional states committed to ship 1 million tons of heavy fuel oil to the DPRK, of which half was delivered by December 2008 (Manyin and Nikitin, 2008, 5–6).

<sup>7</sup> See Article 1.3 of the Agreed Framework for the heavy fuel oil pledge.

China is North Korea's most important source of foreign assistance. Chinese support to North Korea comes via three forms—grant-type aid, trade, and investment—which are sometimes difficult to delineate and often overlap. For example, the petroleum component of Chinese energy assistance is delivered as (a) direct aid grants, (b) sold at “friendship prices” below the international market price, and (c) in barter exchange for North Korean mineral resources, which Chinese firms help to extract. Between 1996 and 2001, direct aid grants averaged 9.4 percent per annum of total Chinese exports to North Korea, however from 2002 to 2006 the aid component had dropped to only 3.38 percent of total exports (Lee, 2009, 51–53). The drop in aid is attributable to the expansion of barter exchanges of oil for mineral ores with the expansion of Chinese investment in North Korea's energy sector (Nanto and Chanlett-Avery, 2008, 22–23).

South Korean cash payments and development assistance have been extensive. Kim (2005, 58) has argued that cash payments made by the Hyundai group to the regime during 1999–2000 amounted to approximately twenty percent of its total foreign exchange earnings, a timely injection of funds as the regime struggled to overcome the famine. South Korea under Lee Myung-bak has ceased to provide the North with cash handouts, which now come for the most part from the Chinese government. During the period 1995–2004, the South Korean government provided Pyongyang with US\$435.1 million in development assistance, including US\$90.6 million for the development of the Mount Kumgang tourist resort, US\$21.8 million for the Kaesong industrial complex, and US\$322.7 million to building road and rail links across the DMZ (Nanto and Chanlett-Avery, 2008, 33). From 1995 to 2004, net total development assistance from OECD countries for North Korea came to \$US 1529.6 million, including \$US 1.151.1 million receipt from France, \$US 142.3 million from the United Kingdom, and \$US 56.5 million from the United States. In 2005, however, this figure dropped to \$US 148.7 million as the nuclear dispute escalated, falling further to \$US 59.6 million in 2006 as North Korea made significant repayments of previously received grants (Nanto and Chanlett-Avery, 2008, 31). The OECD figures however do not include assistance provided by South Korea or China.

The court economy subsumes the overwhelming majority of aid granted as cash, allowing Kim Jong-il to lavish the regime's upper echelon with material largesse, which is integral to the leadership's ability to buy the loyalty of important members of the elite (Beck, 2008). International aid is therefore vital to the continued functioning of *Songun* politics as the mechanism and legitimising paradigm of the Kim regime. North Korea's ability to influence the aid donation decisions of foreign governments through coercive diplomacy is likely to bear direct relevance on its ability to prolong the avoidance of systemic economic reform.

## Conclusion

The command economy splintered into a number of parallel economies through the 1990s, as an unregulated coping response to maintain the command economy following the Soviet collapse and three consecutive years of natural disasters. What remained of the command economy, the heavy industrial sector, was a hollowed-out shell, as network of factories brought offline or in severely curtailed production, its formerly privileged workers facing starvation as their incomes dried up. Agricultural production, long based on mechanised farming and vast utilisation of chemical fertilisers, also deteriorated. Pyongyang did not look to procure food on the international market, due to its commitment to maintaining the crumbling command system and its lack of hard currency. The regime's devotion to central planning in the face of these developments led to the gutting of the industrial sector and the onset of famine. The splintering of the North Korean economy into a number of parallel economies was a systemic readjustment to a new equilibrium based on curtailed resource inputs. The official economy contracted to a small fraction of its former size. As the military and court economies expanded, so too did a new entrepreneurial economy on the margins, operating as a completely unregulated market system through which those with the means were able to survive the famine period.

Kim Jong-il realigned his power base to incorporate the KPA through the *Songun* politics doctrine. By giving the military priority access to the state's resource base, Kim ensured that the key institutions of the state would be maintained. Kim has also provided high officials with access to luxury goods through the court economy, a further measure to buy the loyalty of the regime elite and ensure their commitment to maintaining the system. The explosion of an illicit economy generated a new income stream for the regime, further strengthening key institutions and individuals within the military and court economies. The nuclear weapons program has been vital to this strategy, opening up alternative revenue and input streams that would not otherwise be available.

The strengthening of the military and court economies had allowed Kim Jong-il to preserve the foundations of the totalitarian political system. Still, the revenue stream was inadequate to maintain the remnants of the totalitarian political architecture. Foreign aid is the final piece in this puzzle. Food aid is funnelled to mid and upper-ranking figures of the KPA, allowing this group to avoid the food shortages that plague the rest of the population. Similarly, foreign energy supplies power the military's vast industrial complex while the factories of the official economy continue to decay. Cash transfers are channelled directly into the court economy to fund the lavish expenditures that buy the ideological commitment of the elite. International largesse is thus vital to the continued operation of the *Songun* system as the functional mechanism and legitimising paradigm of the Kim regime.

This system is inherently unstable. North Korea's multi-headed economies would function more efficiently and could be reintegrated into a whole national economy if the regime undertook system-wide economic reforms. However, such reforms are likely to unleash a political transformation that could ultimately bring down the regime. Its ability to extract aid from the

international community is therefore the key to regime longevity. If the aid flow slows or dries up, the political system will come under severe strain and may even lead to the full breakdown of the remaining totalitarian architecture.

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