



THE CURRENT STATE OF THE NORTH KOREAN ECONOMY¹

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Abstract

The North Korean economy today is characterized by macroeconomic instability, widening inequality and growing corruption. Estimates of contemporary growth rates diverge significantly, but suggest that the economy has yet to re-attain its peak level of output achieved roughly two decades earlier. Inflation remains a significant issue, especially for those without access to foreign currency. The growing affluence of Pyongyang contrasts with chronic food insecurity in the hinterland. Recent months have witnessed a spate of legal and organization changes but the effectiveness of these moves remains to be seen. Given its location in dynamic Northeast Asia, North Korea's economic performance could change quite dramatically with reform. But whether the current leadership has the vision or capacity to initiate such a process is far from obvious.

The year 2012, the centennial of the birth of founding leader Kim Il-sung, is an auspicious date on the North Korean calendar. It is supposed to mark the country's passage through the gate to prosperity, but assessing the country's progress toward this goal presents significant challenges, starting with the dearth of conventional economic data. The North Korean government regards the most commonplace figures—such as the magnitude and composition of international trade—as state secrets. The data that do exist are largely produced by South Korea or international public agencies working under both severe informational constraints as well as institutional contexts that lend themselves to politicization and/or excessive credulity with respect to what data the North Korean government does release. So take what follows with a large grain of salt.

To preview the conclusions of this paper, the North Korean economy today is characterized by macroeconomic instability, widening inequality and growing corruption. Given its location in dynamic Northeast Asia, the situation could change quite dramatically with reform. But the policy preferences and capacity of the new leadership are hard to ascertain.

Macroeconomic Performance and Stability

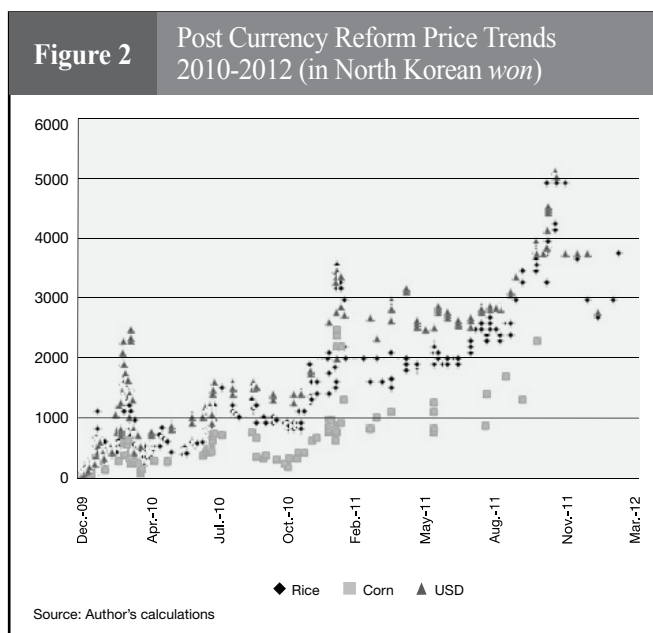
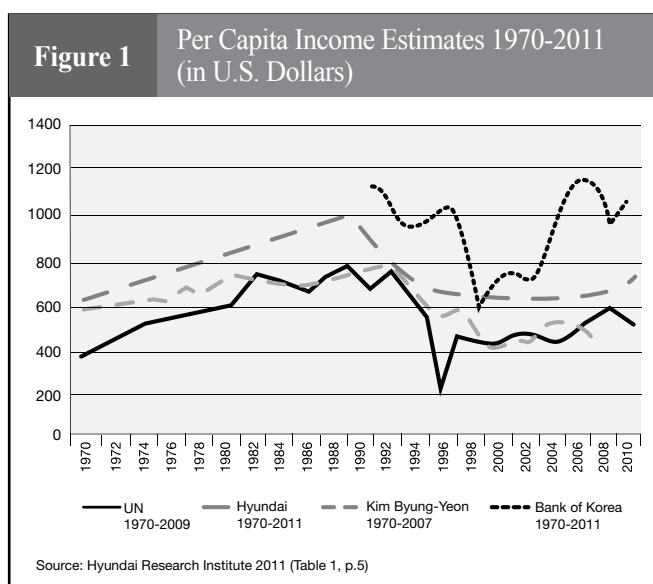
According to the official South Korean government estimates released by the Bank of Korea (BOK), the North Korean economy shrank in 2010, marking the second consecutive year of negative growth. Based on South Korean reckoning, per capita income in North Korea remains 25 percent below its 1990 peak (Figure 1). This conclusion stands in contrast to numerous anecdotal reports of improved living standards in Pyongyang, though is consistent with the less numerous reports of grim conditions in provincial cities. Stephan Haggard has called this phenomenon “Pyongyang illusion” and believes that it may well go beyond typical urban- or capital-bias in governance and represents an attempt by an insecure regime to forestall any Tahrir Square type activity in the capital city.²

It is unclear how the South Korean government calculates these figures. The estimate is apparently constructed by applying estimated North Korean value-added weights of unknown derivation to estimates of North Korean output obtained through classified methods such as satellite imagery and possibly human intelligence. Ergo, this estimate may differ significantly from the true underlying figure due to the inadequacy of the calculation method, and in any event, it is not subject to any verification by outside analysts. The BOK figure is then subject to interagency discussion and it is widely acknowledged that at times it has been subject to a high degree of politicization. Once a consensus is reached, it is announced to the public via the BOK.

In March 2012, the Hyundai Research Institute (HRI) released a study that came to a quite different conclusion, estimating that the economy grew by 4.7 percent in 2011 (Figure 1). Careful examination of the HRI methodology gives one pause, however.

Kim Chun-gu estimated a panel cross-country regression of per capita income levels on infant mortality data, and then combined the estimated regression coefficients with the North Korean figures to derive a counterfactual projection. Since the United Nations only publishes the infant mortality data at five-year intervals, the HRI researcher used grain harvest data, which has a correlation with infant mortality of -0.69 to interpolate the missing data. As one can see from Figure 1, this technique generates an oddly smooth per capita income series.

Whatever the particulars of recent growth performance, if one steps back, what is really striking about Figure 1 is that all of the sources estimate that North Korean per capita income today is lower than it was twenty years ago. Indeed, according to the HRI estimate, North Korean per capita income first reached the level it attained last year in 1974!



In short, these estimates of growth performance are highly uncertain and in any event, the aggregate figures may obscure very different developments in different parts of the country or among different socio-economic groups.

Our grasp of the situation may be a little better with respect to inflation. Figure 2 reproduces data on prices for rice, corn, and the black market exchange rate for the U.S. dollar since January 2010 (i.e. after the huge step-jump in real prices in December 2009 following the currency reform). A simple regression of the prices (technically their logarithmic values) against time suggests that since the beginning of 2010, inflation on an annualized basis has averaged 131 percent for rice and 138 percent for corn. The won has depreciated against the dollar at a 136 percent annualized rate. A monthly breakdown of price movements suggests that while remaining high, the rate of inflation has attenuated, declining in 2011 relative to 2010.

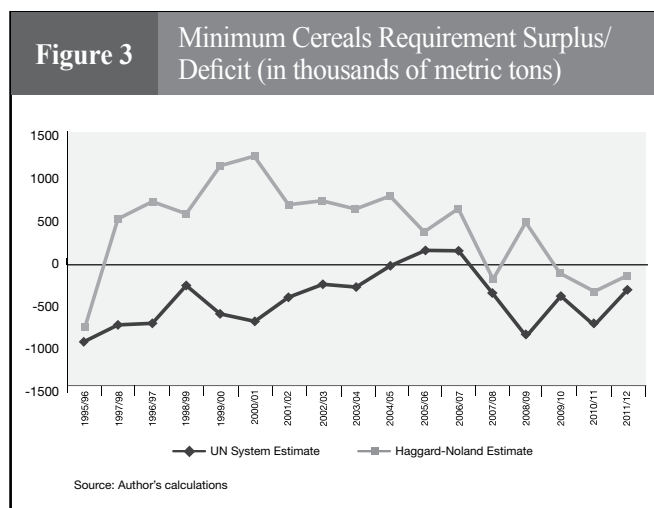
The co-movement of the black market exchange rate and grain prices would be consistent with a small, open economy in which prices are roughly constant in hard currency terms, but are skyrocketing in terms of the rapidly depreciating domestic currency. In the extreme this could depict an economy that was effectively becoming dollarized.

The rise in the relative price of corn to rice would be consistent with a deteriorating situation in which households are shifting demand away from the preferred staple (rice) toward the cheaper, less preferred grain, corn. This pattern could signal belt-tightening by households, which would be consistent with recent FAO-WFP and U.S. government assessments documenting continuing food availability problems.

Most worrisome, however, are recent post-harvest observations. Unlike 2010 when, as would be expected, the price of rice fell after the harvest, the rice price has been rising continuously since the harvest. Corn prices, which tend to fall even more dramatically after the harvest, for example by nearly 50 percent in the three months following the harvest in 2010, have also continued to rise since the harvest.

These trends—sustained inflation, the rise in the relative price of a less preferred grain, and continued food price increase immediately following the harvest—do not augur well for North Koreans without access to hard currency.

These conclusions are reinforced by examination of the quantitative grain balances (Figure 3). Both estimates produced by the UN system, as well as an alternative series that I constructed with Stephan Haggard, indicate that North Korea is below the minimum human needs line. Indeed, our estimate of the shortfall is quite similar to the U.S. government’s 240,000 metric ton assessment of North Korean needs. From this perspective, the apparent



failure of the “Leap Day Deal” to resume humanitarian aid in return for concessions on the nuclear front does not bode well for chronically food-insecure North Korean communities.

These trends of growing scarcity do not appear to be confined to staples. During the winter, the press reported growing anxiety over rising coal prices (used for winter home heating), although these reports are impossible to substantiate. Some observers attribute the scarcity of coal in local markets to the diversion of domestic coal supplies to the Chinese export market, and it was reported that North Korea had suspended anthracite coal exports to China precisely over concerns about spreading internal shortages.³

There have also been reports of increased irregularity in the supply of electricity and water in Pyongyang, though the interpretation of these stories is problematic. Under conditions of significant excess demand, outages are a function of both the level of production (and efficiency in distribution) as well as rationing among alternative users. These allocation choices are subject to at least a certain degree of political control. Factories may go without power if the needs of Pyongyang residents are considered more essential. Similarly, outages in Pyongyang may imply that other user needs are being prioritized. The same story can play out at the local level, and such conflicts over distribution reportedly occur among local actors and with the central authorities. Moreover, conditions tend to deteriorate in winter, when some communities, which have detached from the unreliable national grid by relying on local mini-dams to generate hydropower, re-attach themselves to the grid as local rivers and streams freeze rendering the dams unusable. However, one source suggests that power shortages reduced the regime’s capacity to jam foreign radio broadcasts—even stations operated by the South Korean intelligence service and the Ministry of National Defense, as well as keep their own foreign radio service on the air.⁴ Of course these reports of

deteriorating conditions have to be set against the claim that Orascom now has one million cell phone subscribers, and anecdotal reports of traffic jams in Pyongyang.

In sum, while there is considerable uncertainty regarding macro-economic performance, it does not appear to be particularly strong. What can be established with greater confidence is that inequality is on the rise, and a considerable share of the North Korean population is economically insecure regardless of the headline growth number.

Policy Changes

North Korean economic policy is not unchanging, though there are questions as to its aims and effectiveness, deepened by the recent leadership transition and uncertainty regarding both the policy process and the regime's underlying preferences.

The new corporation law, which apparently does not apply within the special zones or with respect to foreign-invested companies, retains vestiges of central planning.⁵ In Article 21 it specifies corporate hierarchy, defining the roles of manager, chief engineer, and assistant manager, and indicates that the assistant manager is to report to the manager and the chief engineer, while the chief engineer reports to the manager. Articles 29 and 30 indicate that written plans must be submitted to the authorities annually, and this plan must be followed on a daily, monthly, quarterly, and index basis. Article 44 states that "the appropriate amount of labor is scientifically determined and managed based on socialist distribution principles and a precise socialist wage system must be implemented." Sales must be based on supply plans and contracts. "Those sales that do not follow the plan and contract cannot be sold" (Article 42). Ultimately, the state is in charge: "the managing organization has the jurisdiction to close down corporations for unreasonable or lack of prospects that does not meet the standards and demands of the national policy and reality" (Article 18).

In 2010, North Korea published revised regulations regarding the existing Rason special zone, and last year released new ones for the Hwanggumpyong and Wihwa Island special economic zones under development. There has long been a compelling case to develop Rason, primarily as a port serving Northeastern China (Noland and Flake 1997). After languishing for years, it now appears that the zone is on the verge of meeting at least some of its promise. The Chinese are surfacing the dirt road linking Hunchun with Rason and the Russians are refurbishing the rail link. The next priority would be to dredge the harbor. North Korea also claims that China will build a 600,000 kilowatt coal-fired power plant, but corroboratory evidence regarding that claim is elusive. In the meantime, transmission lines are being built to bring electricity in from China (Abrahamian 2012).

So progress is evident; the deeper question is whether this initiative will be a catalyst for broader development. One simple leading indicator would be if off-ramps are built on the road between the port and China. If they are, the road could become the main artery of a growth corridor in that part of North Korea. If not, the highway would be a metaphorical tunnel from China to the sea. North Korea will make money off the port, but the project will effectively be an enclave, and not a catalyst for broader development.

But as a recent review of the uneven history of special economic zones around the world released by the World Bank concluded, it is important to distinguish between political support and the primacy of political objectives in the design of such projects which must have a clear commercial rationale to succeed (Farole 2011). Successful zones embody clear and transparent rules and regulations administered by a capable management authority, and are integrated into the broader national economy. In the case of Rason, the law gives extraordinary power and discretion to the Rason City People's Committee, though relative to the previous rules, which gave more authority to the central government, the localization of decision-making may encourage greater pragmatism. Backwards and forwards linkages to the rest of the economy have been slight, but this could change if the development of the refurbished transportation links are managed properly.

With regard to the Hwanggumpyong and Wihwa Island zone, China reportedly rejected the initially decreed rules, complaining about problems relating to taxation, accounting, the security of investment, management autonomy, and the remittance of profits, despite the fact that the terms under discussion for Chinese activities in the zones (the right to use Chinese currency and cell phones; the establishment of independent banks; internet access; and the right to lend and sub-lease leased land) compared favorably to either those that exist at the South Korea-oriented Kaesong Industrial Complex (KIC) or at Rason. Indeed, a comparison of the Rason and the Hwanggumpyong and Wihwa Island zone rules implicitly reveal China's influence on the latter. The Hwanggumpyong and Wihwa Island regulations are far more detailed, more clearly delineating the responsibility of the zone's management committee, the provincial People's Committee, and the central government, as well as affording foreign investors greater investor rights.

KIC enjoys broad political support in South Korea and has remained relatively insulated from the downturn in North-South relations. It has expanded steadily and approximately 50,000 North Koreans are now employed in the zone.

In 2000 North and South Korea reached an agreement on double taxation (as well as pacts on account settlement, repatriation of profits, and dispute settlement), and the North

has concluded double taxation treaties with a number of other countries including Egypt, home to its biggest foreign investor, Orascom Telecom, but apparently it has not reached a similar agreement with its largest trade and investment partner, China. Given the country's demonstrated ability to reach such agreements with other countries, presumably it is just a matter of time. That said, an unprecedented survey of Chinese enterprises found that fear of expropriation does in fact deter investment in North Korea (Haggard, Lee, and Noland 2012).

In parallel to these legal changes, there have been shake-ups in some of the bodies that intermediate North Korea's foreign economic relations. In late 2011, the government announced a decision to initiate a "10-Year State Strategy Plan for Economic Development" and to set up a new agency called the State General Bureau for Economic Development, out of the state price bureau. The government also designated a supra-cabinet body to oversee foreign direct investment under the 10-year plan. The Taepung Group is effectively a holding company for joint ventures and other initiatives outside the central plan. It has been headed by a Chinese-Korean businessman with ties to the North Korean military and has a board consisting of regime heavyweights. This decision put this group effectively into competition with the Joint Venture and Investment Commission (JVIC), something akin to a conventional inward investment promotion agency. Now rumors are circulating that the two organizations will be merged as part of an economic development plan to be announced during the Kim Il-sung centenary.⁶ If this does in fact take place, the implications are unclear. The positive interpretation is that it would establish a one-stop shop for investment approval. The more cynical view is that it would further consolidate the gate-keeping role of the Taepung Group and enhance that body's capacity for the extraction of rents from foreign investors.

Corruption

The preceding possibility leads quite naturally into a consideration of corruption more broadly. Surveys of North Korean refugees and Chinese enterprises operating in North Korea depict it as an increasingly corrupt place, and in the most recent Transparency International survey, North Korea placed dead last, tied with Somalia in 182nd place (Haggard and Noland 2011, Haggard, Lee, and Noland 2012).⁷ The situation not only represents a drag on growth, but could impair the regime's capacity to govern, as the parochial interests of corrupt officials diverge from the policy preferences of Pyongyang.

The situation is exacerbated by the macroeconomic imbalances discussed at the outset of the paper. In the two years since the November 2009 currency reform, North Korea has experienced high and sustained inflation. One implication is

the ever-widening gap between the official and black market exchange rates, and understandable reluctance of foreign exchange earners to convert their revenues into North Korean won at the official rate. One press report claimed that the Chosun Trade Bank was offering the carrot of better-than-official rates to obtain foreign currency deposits, while the regime was also brandishing the stick of special inspections of units suspected of hoarding foreign exchange. One response by enterprise managers has been to stash foreign exchange earnings into local trade banks where bank officials are bribed to disguise the magnitude of the deposits and to maintain access to foreign exchange loans. The reputed consensus among market participants was that deposits in banks controlled by the central government were subject to seizure in the run-up to the Kim Il-sung centenary.

Uncertainty following the death of Kim Jong-il seems to have intensified these contradictions. IFES reports that "the DPRK government is forcing businesses and trading companies to deposit all foreign currency earned in the trade bank. However, most companies prefer to hold on to their foreign reserves to avoid complex deposit and withdrawal processes."⁸ IFES continues, "They also seem to be using private money brokers to exchange money...Recognizing this, North Korean authorities have been cracking down on such illegal 'private money exchangers' every year." In other words, the North Korean banking system is being drained of reserves as fearful depositors hoard foreign exchange.

According to more recent reporting, this pressure to Hoover up hard currency has now extended to households. Authorities have allegedly banned foreign currency transactions, though Pyongyang banks are now issuing foreign currency denominated debt cards which can be used, creating an incentive for people to turn in their foreign exchange.

While the scheme might work at the retail level, it is harder to imagine it working at the wholesale level, especially in so far as the actual wholesale purchases of consumer goods are largely done in China and there is no particular reason to expect that Chinese merchants would readily accept this form of payment. The net result is likely to be disrupted supply and worse financial terms for the North Korean importers. Previously, a similar attempt to ban the use of foreign exchange in the aftermath of the 2009 currency reform was quietly shelved.

Conclusion

Today's North Korean economy is characterized by macroeconomic instability, an uneven track record on policy change, and growing inequality and corruption. Given North Korea's location in one of the most dynamic regions in the world, the economy could potentially respond quite dramatically to reform. Whether the current leadership has the vision or

capacity to initiate such a process is far from obvious. Some of the policies described in the previous section have allegedly been ascribed to Kim Jong-il's "dying wish" and it would not be at all surprising if more policies in the future were legitimated in this way. But at some point Kim Jong-un and the new leadership will have to take ownership of policy. That transition may well have begun on April of this year, the centennial of the birth of Kim Il-sung.

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¹ Paper prepared for Korea's Economy 2012.

² Stephan Haggard, "The Pyongyang Illusion," North Korea: Witness to Transformation blog, 5 November 2011, <http://www.piiie.com/blogs/nk/?p=3488>.

³ Institute for Far Eastern Studies (IFES), "Anthracite Export to China Suspended Temporarily," November 24, 2011 http://ifes.kyungnam.ac.kr/eng/FRM/FRM_0101V.aspx?code=FRM111124_0001.

⁴ Martyn Williams, "DPRK radio disappears," North Korea Tech blog, 24 February 2012, <http://www.northkoreatech.org/2012/02/24/dprk-radio-disappears/>.

⁵ IFES, "North Korea Enacted the First 'Corporate Law'," January 12, 2012. http://ifes.kyungnam.ac.kr/eng/FRM/FRM_0101V.aspx?code=FRM120112_0001.

⁶ IFES, "North Korea to Announce New Economic Development Plan and Organizational Restructuring," February 29, 2012. http://ifes.kyungnam.ac.kr/eng/FRM/FRM_0101V.aspx?code=FRM120229_0001.

⁷ <http://cpi.transparency.org/cpi2011/results/>.

⁸ IFES, "Unstable Prices Continue After Kim Jong-il's Death," December 28, 2011. http://ifes.kyungnam.ac.kr/eng/FRM/FRM_0101V.aspx?code=FRM111228_0001.

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