OVERVIEW AND MACROECONOMIC ISSUES

KOREA'S ECONOMIC PROSPECTS AND CHALLENGES[1]

By Thomas Rumbaugh

Abstract

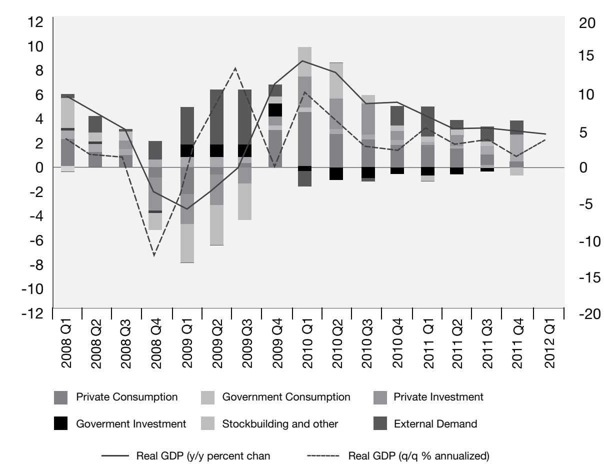
Following a strong rebound in 2010, growth in Korea slowed down in 2011 to 3½ percent due to domestic factors and weakness in the global economy. While recent data suggest that the economy will bottom out in mid-year and strengthen during the course of 2012, on-going weakness in the global economy represent downside risks to this scenario. Additionally, even if the global economy were to deteriorate further, Korea still has ample fiscal space to respond with a fiscal stimulus package similar to what was done in 2008-09, if necessary. At the same time, headline inflation has decelerated in large part due to government measures and favorable base effects and the external vulnerability of the Korean financial system has significantly diminished since 2010. However, households' high indebtedness has been flagged as another important vulnerability for the financial system, with the household debt-to-disposable income ratio now at 135 percent and Korea is still one of the economies in Asia most exposed to foreign bank funding risks. One of the key medium-term policy challenges is to respond to the public's call for more social spending and inclusive growth. Given the medium-term fiscal consolidation plan, the government should carefully calibrate the scope for raising social spending.

Despite Global Headwinds, Korea's Growth Outlook Remains Positive

Despite some uncertainties in the outlook for global activity, economic growth in Asia seems to be maintaining momentum. In the last quarter of 2011, activity slowed markedly across the region, but in the first months of 2012, leading indicators of activity have strengthened. Meanwhile inflation has picked up in some countries, and capital flows to Emerging Asia have rebounded. As reported in the IMF's latest Regional Economic Outlook for Asia and the Pacific (REO) (http://www.imf.org), Asia is projected to grow at 6 percent in 2012 before rising to about 6½ percent in 2013. Korea's economy is projected to follow a similar trend. Growth momentum was accelerating in 2010 and into 2011 before a deterioration in the global economy led to a slowing of growth in the second half of the year. This somewhat slower growth is continuing in the first half of 2012 but momentum is expected to be restored in the second half of the year.

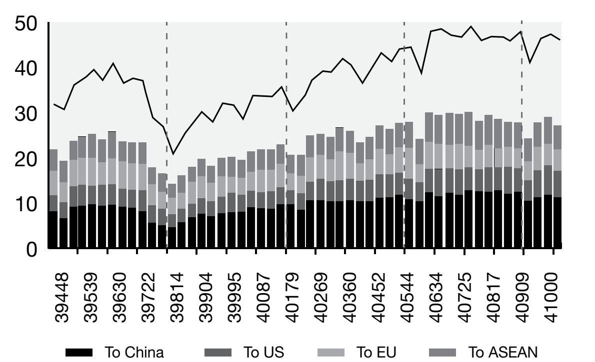
The remainder of this article is organized as follows. The first section focuses on economic developments in 2011 and the outlook for 2012-13. The second section discusses Korea's progress in strengthening financial resilience in the face of global volatility. The third section elaborates on the medium-term challenge of increasing social spending and creating a more inclusive growth model.

Figure 1 Contributions to GDP Growth (as a %)



Source: CEIC Data Company Ltd.; and IMF Staff Calculation

Figure 2 Exports Value by Destination (in U.S. billions)



Sources: CEIC Data Company Ltd.; and IMF Staff Calculation.
Malaysia, Philippines, Thailand, Indonesia, Singapore, and Vietnam included for ASEAN.

Balancing Growth and Inflation

Following a strong rebound in 2010, growth slowed down in 2011 to 3½ percent because of a housing supply overhang, sluggish investment, the withdrawal of fiscal stimulus, the impact of high household indebtedness on private consumption, and weakness in the global economy. Growth surprised on the upside in the first quarter of 2012, with broad-based recovery in domestic demand, but may be slowing again in the second quarter in line with weakness in the global economy. Recent data, and our projections, suggest that the economy will bottom out and strengthen during the course of 2012. Korea's diversified export base will help cushion the impact of weakness in the advanced economies. The recently ratified free-trade agreement with the United States, and Korean exporters' expansion into the growing markets of developing countries, will also help. On the domestic demand side, staff expects investment to recover, and private consumption to return to its trend growth. Accordingly, we have forecast Korea's economy to grow at 3 to 3¼ percent in 2012 before rising to about 4 percent in 2013.

Elevated inflation was a key policy challenge confronting the Bank of Korea in 2011. Headline inflation remained stubbornly high and above the Bank of Korea's (BOK) 2-4 percent target band for most of 2011, despite weak activity in the last quarter of the year. Food price inflation peaked in the middle of the year and fell sharply in the second half, but this decline was not able to offset the inflationary pressures from increasing prices of housing and transportation. A sharp exchange rate depreciation in the third quarter also contributed to elevated inflation.

More recently, headline inflation has decelerated in large part due to government measures and favorable base effects. Headline inflation has come off to 2¼ percent in June 2012, below the midpoint of the target band. However, this reflects temporary measures as the decline was largely driven by government subsidies on childcare and free school meals, as well as base effects. Around one-half of a percentage point of the decline in headline inflation can be attributed to these government measures. Food price disinflation, which contributed to declining inflation earlier, appears to have run its course. Core inflation also fell to 2 percent in March from 2½ percent during the previous month.

Despite the recent moderation in inflation, inflation pressures are projected to resurface in 2013. We expect inflation to be about 3 percent for 2012, slightly above the mid-point of the BOK's target band. Downward movements in headline inflation are unlikely to continue as there are no plans to implement additional administrative measures. Despite the drop in headline inflation, certain components of the Consumer Price Index basket with large weights (such as housing, transport and clothing) continue to see strong increases. Food price-led declines have troughed, implying that food prices will not contribute to a further drop in headline inflation. And despite declining headline inflation, inflation expectations remain close to 4 percent. Furthermore, there are upside risks to the inflation outlook from the need for utility price hikes going forward.

Guarding against risks to growth, while shepherding a soft landing for inflation, requires a delicate mix of policies. The current macro policy mix combines an accommodative monetary policy and a broadly neutral fiscal stance. On the fiscal policy side, the objective is to support growth—including by fully allowing automatic stabilizers to work—while not derailing medium-term efforts to restore fiscal space. The government appropriately chose to front-load 60 percent of its 2012 budget in the first half of the year given the weaknesses in the global economy. Even if the global economy were to deteriorate further, Korea still has ample fiscal space to respond with a fiscal package similar to what was done in 2008-09, if necessary. On the monetary policy side, we continue to believe it will be necessary to resume a normalization of monetary policy through interest rate increases in 2013 based on a forecast closing of the output gap (the difference between actual and potential economic output), continued risks to inflation, and to further build policy space and enhance credibility.

Safeguarding Financial Stability

Korean banks' large external short-term borrowing and their exposure to foreign exchange volatility were key vulnerabilities prior to the Global Financial Crisis (GFC). Korea's exposure to European banks on the funding side is among the highest in Asia. However, since 2008, the external vulnerability of the Korean financial system has significantly diminished, reflecting higher reserves to short-term debt cover, lower reliance on wholesale funding, reduced foreign exchange liquidity mismatches, diversification of the foreign investor base in domestic bond and onshore dollar funding markets, and the adoption of a series of macroprudential measures since 2010. These measures include: a 100 percent cap on the *won*-denominated loan-to-deposit ratio; ceilings on banks' foreign exchange derivative positions; tighter foreign exchange liquidity standards complemented by more frequent stress tests; stricter regulation of domestic foreign currency lending; a macroprudential levy on the foreign currency-denominated non-core bank liabilities; and a withholding tax on foreign investors' interest income on government bonds.

The initial set of post-GFC measures targeted banks' active use of short-term foreign-exchange liquidity and the resulting increase in the maturity and currency mismatches on banks' balance sheets. The underlying concerns reflected banks' strong reliance on non-core liabilities. The introduced measures included: (i) an increase in the ratio of long-term foreign exchange funding to foreign exchange lending, enacted in November 2009 and set at 90 percent; (ii) a cap on the value of forward foreign exchange contracts between banks and domestic exporters, introduced in November 2009 and set at 125 percent of export revenues; and (iii) a maximum loan-deposit ratio of 100 percent for domestic banks, introduced as a guideline in December 2009, and expected to be implemented by end-2013. During this initial phase, the Korean authorities also introduced more stringent capital requirements on bank holding companies to ensure sufficient absorption of potential losses.

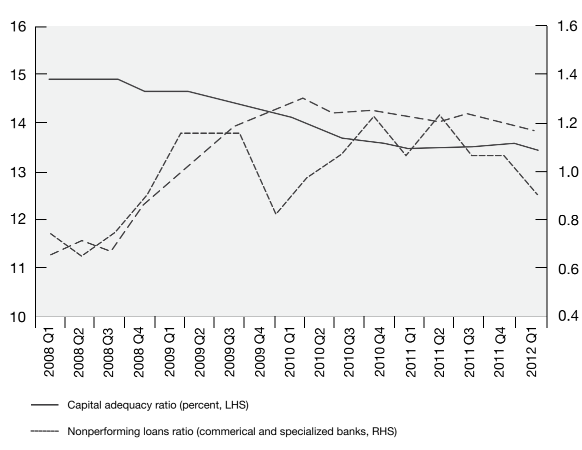
In a second phase, in 2010, the authorities expanded the set of measures to contain banks' short-term foreign currency debt. In October 2010, they established a ceiling on banks' foreign currency derivative positions, including those from foreign exchange forward contracts bought from domestic exporters and asset management companies for currency hedging. The derivatives ceiling was set relative to banks' capital, with domestic banks facing a ceiling of 50 percent of capital and foreign branches 250 percent of capital. The ceilings were subsequently tightened even further in July 2011 to 40 percent for domestic banks and 200 percent for foreign banks. The ratio of forward contracts to underlying export revenues was also reduced to 100 percent. Measures on foreign currency borrowing were bolstered as well. New measures on banks' foreign currency loans were meant to prevent excessive foreign currency leverage in the corporate sector. Taken together, this set of macroprudential measures was meant to reduce the channeling of bank funding to foreign currency forward positions in the domestic market and guard against an abrupt withdrawal of capital. The Korean authorities also re-introduced a withholding tax on foreign purchases of treasury and monetary stabilization bonds in January 2011. In essence, this aligned the tax with the equivalent for resident bond purchases. The only explicit exemption was provided for official investors.

Households' high indebtedness has been flagged as another important vulnerability for the financial system, with the household debt-to-disposable income ratio now at 135 percent, similar to levels in advanced economies such as the U.K. and the U.S. Household exposure to interest rate and rollover risks, therefore, present vulnerabilities despite relatively stable house prices, favorable net asset positions, and low loan-to-value ratios. However, one unique feature of Korea's housing market could lead to inflated levels of household debt. The Jeonse system requires tenants to place a refundable deposit of 50-70 percent of the price of a rented house to landlords at no interest. This arrangement pushes up both household liabilities and assets but has no impact on the net-asset position which remains relatively strong.

The banking system's exposure to foreign exchange liquidity risks has also decreased sharply. This decrease reflects both strengthened regulation of foreign currency liquidity risks and reduction in banks' external short-term borrowing, which had been partly driven by the demand for hedging by Korean shipbuilders and other exporters. Moreover, the foreign investor base in domestic bonds (who also supply dollar liquidity in the onshore swap markets) has broadened to include official investors (notably some regional central banks). The diversification has reduced the risk of market herding behavior, given the low correlation between liquidity risks faced by large global banks (which still dominate the base) and those faced by the regional central banks. Because of these changes, Korea's exchange rate volatility, which tended to surge during the past crises, has become less sensitive to global risk factors: the sensitivity of the exchange rate volatility to changes in indicators of global volatility is estimated to have declined by more than a half since the GFC.

Even though the banking system vulnerabilities have diminished since 2008, it is important to remain vigilant. The negative impact of euro-area bank deleveraging has so far been limited. However, Korea is still one of the economies in Asia most exposed to foreign bank funding risks. In the aftermath of the 2008 crisis, massive capital outflows caused the claims by the Bank of International Settlements reporting banks on Korea to fall by more than 70 billion dollars. As banks were unable to rollover their short-term debt, the Bank of Korea had to intervene with about 65 billion dollars of reserves to cushion the liquidity squeeze on the economy. Even so, the *won* exchange rate fell by 32 percent, from the pre-crisis peak to trough, while stock prices declined by 35 percent. The financial stress also affected the real economy through slower credit growth. Looking ahead, the possibility of rollover difficulties resulting from an intensification of the euro-zone crisis cannot be ruled out.

Figure 3 Capital Adequacy, Nonperforming Loans, and Loan-to-Deposit Ratio



Source: CEIC Data Company Ltd.; FSS; and IMF Staff Calculation
1/ Specialized banks are not subject to loan-to-loan deposit limit.

In the third quarter of 2011, there was a sudden surge in capital outflows (including from the banking sector). This led to some funding pressures causing depreciation of the exchange rate by 10 percent. Since the beginning of 2012, capital inflows have resumed led by both equity and fixed income flows, although banking capital flows remain subdued. Going forward, the downside risks from intensification of the euro-zone crisis appear to be balanced by the high upside risk for capital flows, particularly portfolio flows, if risk appetite recovers. Given the improved financial resilience and macroprudential policies in place, Korea is well positioned to manage any future bouts of capital flow volatility. Flexibility in macroeconomic policy will also remain an important part of dealing with economic shocks as the extensive macroprudential policies put in place are an important complement but cannot be a substitute for appropriate macroeconomic policy settings.

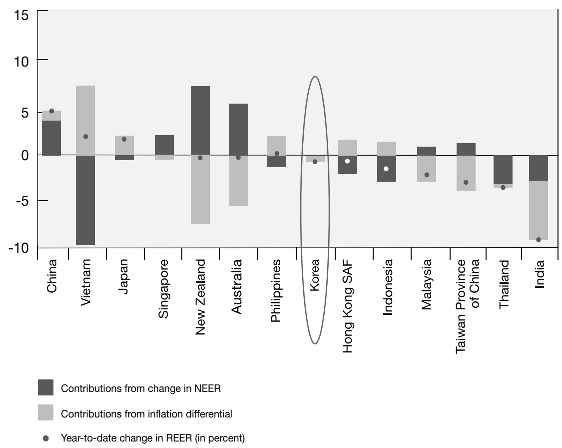
Social Spending and Inclusive Growth

One of the key medium-term policy challenges is to respond, in a careful yet effective way, to the public's call for more social spending and inclusive growth—a particular challenge in this dual election year. Given the medium-term consolidation plan, the government should carefully calibrate the scope for raising social spending; making sure that the bulk of the increase is matched by either additional revenues or cuts in other expenditures. To support this, more work also needs to be done in integrating long-term issues into the fiscal framework. Labor market reforms and raising the productivity of the service sector are key areas of reform to strengthen growth potential.

While Korea has one of the youngest populations in the Organization for Economic Cooperation and Development (OECD), it is projected to shift to among the oldest by mid century, given its low fertility rate and rapid gains in longevity. Although pressures will not show in the near term, given the current age profile of the population, age-related spending will begin to appear in the medium term and accelerate from 2020 with the rapid aging of the population.[2] Meanwhile, during the most recent decade, income inequality has rapidly risen to the OECD average level.

Korea is among five OECD countries singled out for a high degree of inequality originating from the labor market. The

Figure 4 Asia: Contributions to Changes Since Dec 2010 in REER (as a %, Apr 2012)

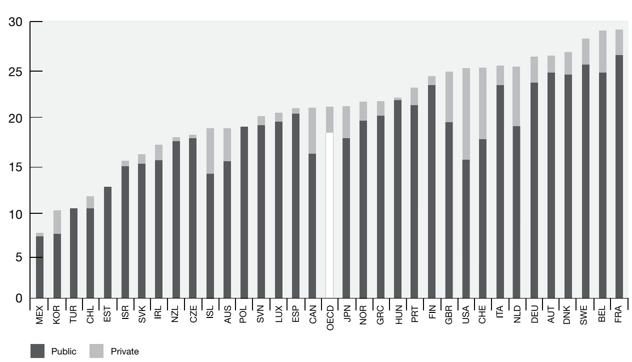


Source: APDCORE; and IMF Staff Calculation.

degree and cost of employment protection for regular workers has gradually risen to a point where companies have begun to shift most new jobs to nonregular workers. As a result, the share of nonregular workers is significantly higher than the OECD average, and they are paid about 40 percent less. The female labor market participation rate (55 percent) is also much lower than the OECD average (62 percent). The government's National Employment Strategy 2010 aims at boosting Korea's employment rate from 63 percent of the working age population in 2010 to 70 percent, including by raising the participation rate of women, the elderly, and youth.

Labor productivity growth is also being held down by rigidities in the service sector. Productivity growth in the service sector has been about 1 percent a year on average since 2001 compared to 6 percent in the manufacturing sector. The government can address this issue by enhancing competition, including in the education and health sectors; expediting bank-led restructuring of small- and medium-enterprises, the bulk of which are in the service sector; and eliminating preferential tax treatment of the export sector.

Figure 5 Public and Private Social Expenditure in Percentage of GDP in 2007



Source: OECD

The Korean government is targeting a balanced central government budget (excluding social security funds) by 2013-14, as part of its fiscal consolidation plan, which is already well advanced. Within this framework, the 2012 budget envisages a 20 percent nominal increase in social welfare spending. The Direction for the Preparation of the 2013 Budget, which was recently approved, also maintains workfare and sustainable growth as core themes. The government's National Fiscal Management Plan for 2011-15 lays out several areas to increase revenues. Going forward, better clarifying medium-term fiscal targets and linking them more directly to future liabilities, including those related to aging, would help ensure that the fiscal objectives are consistent with long-term sustainability. This would also help make them more binding and guide prioritization among fiscal measures. The key policy tools to address these medium-term fiscal challenges include pension and healthcare reform, broadening of the tax base, improved tax administration and some reallocation of public expenditures.

Conclusions

The global economy still remains fragile. Given its high global interconnectedness, Korea must remain vigilant. The main short-term risks to the outlook are the potential re-escalation of the euro crisis and possible increases in energy prices from geopolitical risks in the Middle East.

A re-escalation of pressures in heavily indebted economies in Europe could lead to further deleveraging by European banks, which if disorderly and large scale, could have serious implications for Korea. However, since 2008, the external vulnerability of the Korean financial system has diminished, reflecting higher international reserves, lower reliance on wholesale funding, reduced foreign exchange liquidity mismatches, the entry of new foreign investors in domestic bond and onshore dollar funding markets, and the introduction of macroprudential instruments. The Korean economy is also susceptible to energy price shocks, which could boost inflation and further weaken private consumption.

Korea continues to be one of the most dynamic economies in the most dynamic region of the world. It is, therefore, well placed to take up the challenges that could arise from a volatile global economy. Unlike many other countries, including the most advanced ones, Korea has ample policy space to deal with global shocks, thanks mainly to its low public debt, exchange rate flexibility, comfortable international reserve buffers, and use of macroprudential measures. Overall growth prospects remain favorable, and with the right policy settings, Korea can successfully navigate the still dangerous waters to a path of sustainable growth.

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1 Prepared by Thomas Rumbaugh, Division Chief, Asia and Pacific Department, International Monetary Fund. The views expressed are those of the author and not necessarily those of the IMF.

2 A previous IMF study shows that government gross debt will begin to grow from around 2020 as the initial asset accumulation phase of Korea's still young pension system (which is fully funded) matures. See Feyzioglu, Skaarup, and Murtaza (2008), "Addressing Korea's Long-Term Fiscal Challenges," IMF Working Paper 08/27 (Washington: International Monetary Fund) (http://www.imf.org/external/pubs/cat/longres.aspx?sk=21595.0).

THE POLITICAL ECONOMY OF SOUTH KOREA UNDER THE NEW INTERNATIONAL ORDER

By Pyo Hak-kil

Abstract

The political economy in South Korea changed immensely through a series of internal and external events in 2011 and 2012. At the same time, actual economic performance was disappointing and far less than the 7 percent that President Lee Myung-bak had envisioned. The economic picture also worsened for households and businesses as households saw consumer prices rise by 4 percent, while businesses faced increasingly higher prices for oil. At the same time, household debt surpassed 900 trillion *won* and all of the indicators of income inequality worsened. The National Assembly elections saw both political parties push for increased welfare spending. However, the proposals put forward by both parties may not be feasible due to constraints on the government's total budget. With the global economic condition, continued fiscal troubles in Europe, and a slowdown of economic growth in China, Korea also faces reduced expectations for economic growth in the year ahead.

Introduction

In 2011, the landscape of the political economy in South Korea changed immensely through a series of internal and external events. The earthquake and its aftermath in Japan and the fiscal crisis in Europe were two external events, while the new political syndrome after the election of a new progressive mayor in Seoul and the sudden death of Kim Jong-il were two remarkable events within the Korean peninsula. In early 2012, U.S.-North Korea bilateral talks were initiated by President Obama and North Korea's new leader Kim Jong-un, with an accord made on February 29 to limit North Korea's nuclear activities. But on April 14, less than six weeks after the accord was signed, the new North Korean regime launched a long-range missile equipped with a satellite without regard for a U.N. resolution and paying no heed to the United States and even to its biggest patron, China.

The timing of the missile launch was deliberately chosen to inaugurate Kim Il Sung's 100th birthday on April 15; to celebrate the appointment of Kim Jong-un as the First Secretary of the ruling Workers' Party, the de facto leader of the regime at a special conference on April 11; and to disturb general elections in South Korea on the same day. But the missile launch failed in the early morning of April 14, and there is wide-spread speculation this failure would increase the likelihood of a follow-up nuclear detonation as a face-saving effort. South Korea must face the new realities of this international political order. Instability in the North Korea regime as demonstrated by the failed missile-launch may signal violent confrontation ahead.

In South Korea, the governing New Frontier Party has won the general election with a narrow margin (152 seats) against the opposition coalition of Democratic United Party (127 seats) and United Progressive Party (13 seats). When independent winners are included, the number of conservatives (158 seats) is slightly larger than the number of progressives (142 seats). The opposition coalition gained many more seats in this general election than the previous one in 2008 which was held just after the inauguration of President Lee Myung-bak. The Lee government lost popularity, particularly among younger generations and voters in the Seoul metropolitan area. While the government has claimed that South Korea has escaped from the global financial crisis of 2007-2008 with relatively better recovery than most other nations, public sentiment has been against the claim.

Macroeconomic Performance During 2008-2011

The actual economic performance (3.1 percent average growth of real GDP and 0.45 percent average growth of real investment) during 2008-2011 has been disappointing and far less than the campaign vision of 7 percent real GDP growth. The only bright side of the economic performance was a strong export performance. The f.o.b.-based export amount increased at the average annual rate of 11.7 percent while the c.i.f.-based import amount increased by 12.8 percent. It was largely due to the depreciation of *won* from 938.2 *won* per dollar at the end of 1997 to 1,257 *won* per dollar at the end of 2008 after the global financial crisis and to 1,153 *won* per dollar at the end of 2011. The OECD Economic Surveys (2010)[1] state that the sharp depreciation of the *won* helped to trigger Korea's rebound by significantly improving its international competitiveness, and thus raising Korea from the world's 12th largest exporter in 2008 to ninth in 2009. In summary, the average GDP growth rate of 3.1 percent during the last four years of the Lee government was maintained by export performance through the depreciation of *won* against the dollar and *yen*. But the extra export earnings were not fully channeled to the non-exporting sectors and therefore, the growth of GNI after being adjusted by unfavorable terms of trade effects through increased oil prices remained stagnant. One of the reasons is the concentration of high export performance in a few IT-related products. During the period of 2000-2009, higher IT-intensity manufactures' real exports have increased at the annual rate of 10.06 percent while lower IT-intensity manufactures' real exports increased at the annual rate of 4.09 percent. During the same period, the annual growth rates of real GDP in two sectors were 5.10 percent and 3.78 percent respectively, which implies that export-output ratio was much larger in higher IT-intensity sectors than in lower IT-intensity sectors.

According to 2011 National Accounts (preliminary) released on March 30, 2012 by the Bank of Korea, 2011 was a disappointing year for both businesses and households. The per capita Gross National Income (GNI) in 2011 was estimated to be $22,489, which is only a 1.5 percent increase due to the worsening terms of trade by increased oil prices and CPI (4.0 percent) and reduced semiconductor prices. The net savings rate by households continued to decline from 4.1 percent in 2009 to 3.9 percent in 2010 and 2.7 percent in 2011. Gross fixed capital formation declined by 1.1 percent from 2010 with construction investment (-5.0 percent) and equipment investment (3.7 percent), which recorded a drastic decline from 2010 (25.7 percent). The growth rate of real GDP in 2011 was 3.6 percent with manufacturing (7.2 percent), construction (-4.6 percent) and services (2.6 percent).

While the Consumer Price Index (CPI) increased by 4.0 percent last year, the price of agriculture, fishery and cattle increased by 9.2 percent. As a consequence, the Engel coefficient which measures the proportion of household expenditure on food and non-alcoholic beverages in total household expenditure, increased from 13.8 percent in 2010 to 14.6 percent in 2011 according to the National Statistical Office of Korea. The Engel coefficient of the first docile (the lowest 10 percent income group) increased from 22.5 percent to 23.5 percent which is a record high and ten percentage points above the average Engel coefficient for the entire household.

Household Debt Overhang and Growth with Inequality

The Bank of Korea announced that total household debt had surpassed 900 trillion *won* by the end of 2011, which reached beyond 70 percent of nominal GDP and 160 percent of total wages and salaries. The switch of commercial loans from the indebted corporate sector to the mortgage-backed household sector by both the primary and secondary banking sectors after the financial crisis of 1997-1998 has been the main cause of the households' debt overhang. Fueled by the low interest rate policy by the government, the real estate market had a boom and a bust during the last decade. The government introduced a set of regulations on real estate loans in order to curb housing inflation and many households are squeezed by inactive real estate transactions and mortgage-backed household loans. According to a report by the Seoul Policy Development Institute, the household debt of Seoul residents is estimated at about 204 trillion *won* and about 60 percent of Seoul households are currently indebted. The ratio of household debt was lower (58.0 percent) when annual household income was above 60 million *won*, compared to household income of 20-30 million *won* (65.4 percent).

According to the National Statistical Office's report on Household Expenditure Survey in 2011, all of the indicators of income inequality have worsened. The relative poverty ratio, which is defined as the ratio of households including one-man households and farm households whose income is less than 50 percent of the median household income, has increased from 14.9 percent in 2010 to 15.2 percent in 2011. The decile distribution ratio, which is defined as the ratio of the top 20 percent income to lowest 20 percent income, has increased from 5.66 to 5.73. In terms of market income, the ratio reached its highest level of 7.86 since this statistic first was complied in 2006. The Gini coefficient has also slightly deteriorated from 0.310 to 0.311. However, the report points out some mixed evidence on income inequality by non-farm households with two-persons and above. The monthly household income in 2011 reached 3,842,000 *won* which increased by 5.8 percent from 2010. But because of a high inflation rate (4.1 percent), the real average monthly income only increased by 1.7 percent. On the other hand, the average monthly consumption expenditure was 2,393,000 *won*, an increase of 4.6 percent from 2010 but only by 0.5 percent in real terms which indicates very little incremental real consumption.

A recent study by OECD (2011) reveals that income inequality among elderly citizens (age 65 and older) in South Korea is the third highest among major economies and that the country's pension system remains relatively insufficient to support retirees. The Gini coefficient for those aged 65 and older in Korea is 0.409: lower than Mexico (0.524) and Chile (0.474) but higher than the U.S. (0.386), Japan (0.348), France (0.291), Germany (0.284) and the Czech Republic (0.188). The Gini coefficient for the age group 18 to 65 in Korea is estimated to be 0.300 lower than most of countries: Chile (0.496), Mexico (0.469), Turkey (0.403), U.S. (0.370), Israel (0.359), Portugal (0.347), Australia (0.324) and Japan (0.323). The large gap in the Gini coefficients between Korea's working generation and senior citizens indicates that there is lack of post-retirement pension fund and therefore, there is a major welfare problem. It reflects that parents of the baby boom generation spent too much money on their children's education, and saved too little money for their own retirement.

Welfare Expenditure Spree and Vision

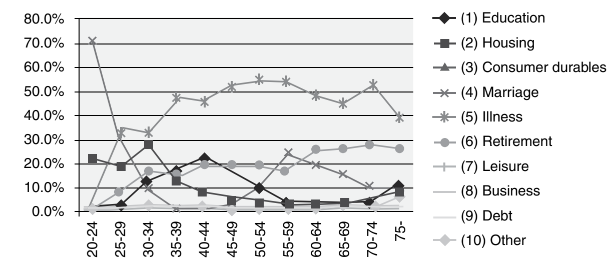
The welfare expenditure level in 2007, just prior to the Lee government, was about 61.4 trillion *won* which accounted for 25.9 percent of total government expenditure. However, welfare expenditure in 2012 will increase to 92.6 trillion *won*—28.5 percent of total government expenditures. The government's third Welfare Task Force forecasts a total minimum of 268 trillion *won* (53.6 trillion *won* per year) will be required to fulfill welfare visions made by both the ruling party and the opposition party before the general election. Since the total government budget in 2012 is 325.4 trillion *won* and the welfare budget in 2012 is 92.6 trillion *won*, the next government would need about 82.4 percent of the total budget in 2012 over the next five-year period. It also implies that the total government budget and the welfare budget need to be increased by 16.5 percent and 57.9 percent respectively, which makes the welfare vision simply unfeasible. The Korea Institute of Public Finance's report on the impact of aging and population reduction on public finance forecasts that the government debt would reach 102 percent of GDP by 2050 even without such a welfare budget increase. The only options available to the incoming government would be to increase welfare taxes or to issue government bonds but both of these options would undermine the economy's long-term potential and increase the likelihood of a euro zone type fiscal crisis in the future.

In a recent report published by the National Pension Research Institute (Pyo, Kim and Lee 2012)[2], we analyzed the national pension system in Korea which was introduced in 1998 and now has over 18 million subscribers. South Korea has become one of the fastest aging nations among OECD countries. The proportion of population age 65 and above was 11.0 percent in 2010, but is estimated to reach 38.2 percent by 2050. During the same period, the elderly dependency ratio which is defined by the age 65 and above population divided by the age 15 to 64 population, is estimated to increase from 15 percent to 72 percent by almost five times. The revised National Pension Act of 2007 stipulates a target to reduce the income substitution ratio by half a percentage point from 50 percent in 2008 to reach 40 percent by 2028. We have recommended three policy options to make the national pension plan self-sustainable: (1) reduce income substitution ratio even after 2028; (2) increase the national pension tax rate and; (3) the government subsidy. Since other social safety net programs are strong—childcare, education and poverty reduction—none of these three options seems politically feasible. However, the only way of ensuring feasible welfare programs in a fast aging society is to increase welfare-related taxes or reduce the coverage and benefits of diverse welfare measures. Another consideration in many discussions is the contingency welfare plan when unification with North Korea occurs. Even though the current welfare standard (welfare expenditure/GDP ratio) of South Korea is relatively low among OECD nations, the speed of aging in South Korea and the potential burden of the contingent unification require more prudent welfare policies in the times ahead. Marcus Noland stated that "standard models of the costs of unification suggest that the amount of investment needed to raise North Korean per capita incomes to 60 percent of the South Korean level, are in excess of $1 trillion, or roughly equal to South Korea's annual national income."[3] Regardless of the estimates, no doubt the cost of reunification will be huge, and South Korea will be unable to absorb the economic cost itself.[4]

Saving Rates and Motives in Korea

I have examined the motives of household savings from the data of Korea Labor Income Panel Study (KLIPS) (1998-2008) in a recent paper (Pyo, 2012).[5] I have found that retirement, education and medical concerns due to illness, are the most significant motives for savings throughout all age groups (See

Figure 1 Proportion of Households Saving for Selected Motives by Age Group of Household Head



Sources: KLIPS Data

Table 1 and Figure 1). The concern for illness and therefore savings motivation for medical expenses are the largest for those in their 40s and 50s and reflects a precautionary motive. Saving for education was strong during the 30s and 40s. On the other hand, the savings motivation for retirement came on strong rather late, age 60 and above, for household heads.

This survey data indicates that the high burden of education costs fell on those in their 30s and 40s, which in turn has made them less prepared for their own retirement: the over-investment in education and under-investment in retirement. The high medical cost sits in the middle, inducing households to save little for their retirement. When I estimated returns to schooling and examined the savings rate and motives of households, I found that there is a likelihood of over-investment in education and under-investment in retirement, causing a welfare-related social issue. The estimated marginal returns to years of education using KLIPS (Korea Labor Income Panel Study) data is 0.07 (7 percent) in household income and 0.08-0.09 (8-9 percent) in individual income which is lower

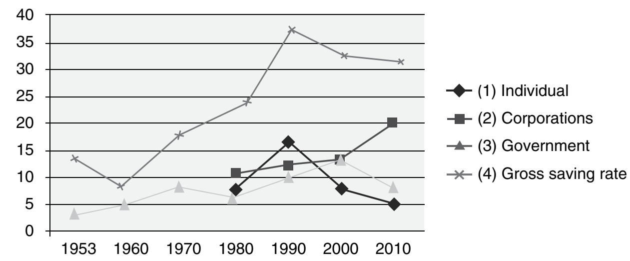
Table 1 The Proportion of Households Saving for Selected Motives by the Age Group of the Household Head

	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-
(1) Education	0.0	2.7	11.4	16.9	21.9	19.2	9.7	2.2	1.8	3.3	3.7	10.2
(2) Housing	21.4	19.2	26.5	13.4	7.8	4.4	3.3	2.5	2.3	3.3	1.2	8.2
(3) Consumer durables	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(4) Marriage	71.4	31.5	9.0	2.5	1.0	3.9	10.8	24.3	19.8	16.0	11.1	10.2
(5) Illness	0.0	33.6	31.9	46.8	45.2	51.6	54.6	53.6	48.4	45.3	51.9	38.8
(6) Retirement	0.0	8.2	15.8	16.5	20.4	19.5	19.2	15.8	25.3	26.0	28.4	26.5
(7) Leisure	7.1	1.4	0.2	0.2	0.0	0.5	0.0	0.0	0.0	2.7	2.5	0.0
(8) Business	0.0	0.0	0.7	0.4	1.0	0.2	0.8	0.3	0.5	0.7	0.0	0.0
(9) Debt	0.0	0.7	1.2	1.9	1.3	0.5	0.5	0.3	0.5	0.0	0.0	0.0
(10) Other	0.0	2.7	2.7	1.0	1.5	0.2	1.0	0.9	1.4	2.7	1.2	6.1

Sources: KLIPS Data

than the world average and the Asian average (0.10, 10 percent). Korea's estimated returns to schooling in earlier studies were 0.09-0.14 for high school graduates. It was mainly due to the baby boom factor, but it calls attention to the role of private versus public education. While Korea's educational attainment is remarkable, the resulting issue of how to support the retirees in a fast-aging society remains as a challenging issue. Estimates of returns to schooling indicate the marginal returns to schooling have started to decline. There was a likelihood of over-investment in education and under-investment in retirement by baby boom parents in Korea. Since there is a strong motive for savings to prepare for large medical expenses, the private pension system needs to be combined with the private medical insurance system.

Figure 2 Trend in Saving Rates in Korea (1953-2010)



Sources: The Bank of Korea, National Accounts, (selected years)

Trend in Savings Rates and Its Decomposition

I have examined the overall savings rate and its trend in Korea to identify simultaneous effects of education and household savings. As shown in Table 2 and Figure 2, the gross savings rate was only 9 percent in 1960, with a private savings rate of 5 percent and government savings rate of 4 percent. But both gross savings rate and private savings rate increased sharply to reach their peaks of 37.5 percent and 29.2 percent respectively in 1990. The increase in private household savings rate has been instrumental to educational expansion because the role of private education has dominated that of public education in Korea.

According to Horioka (1994)[6], Japan reached a net national savings rate of 23.6 percent in 1990 ranking third among 24 OECD countries, and a net household savings rate of 14.3 percent in 1989 ranking fourth among 18 OECD countries. He concludes that Japan's saving rate would still be higher than average even if all measurement problems such as the treatment of capital consumption allowances could be resolved. Korea seems to have reached Japan's level during the 1980s, earlier than 1990. However, Korea's private household savings rate started to fall rather rapidly after 1990 and returned in 2010 to the same level (5 percent) as it was in 1960. It was substituted by the corporate savings rate (20.2 percent) in 2010. One of the reasons behind Korea's rather rapid household savings rate during the 1980s seems to lie in the need to save for children's education. On the other hand its rather rapid decline during the late 1990s and 2000s seems to reflect high costs of medical expenses and education through the two financial crises of 1997-1998 and 2007-2008.

In addition, there are two other factors which have worked jointly to increase households' consumption and decrease their savings. One is the development of financial markets which provided wider choices of payment methods, including credit cards and debit cards, so that households' consumption has been rapidly increasing, including internet banking transactions. The other factor was the cumulative effects of market-opening for foreign goods since joining WTO and OECD in the mid-1990s. The influx of foreign goods through large retail chain stores have opened up consumption opportunities of the households and their conspicuous consumption. The financial crises have also induced firms to retain more savings crowding out household savings.

South Korea and the United States launched a ministerial consultation channel on implementing their bilateral free trade agreement by forming a joint committee on May 17, 2012.

Table 2 Trend in Saving Rates in Korea (1953-2010)

	1953	1960	1970	1980	1990	2000	2010
Gross saving rate	13.1	9.0	19.0	24.4	37.5	33.0	32.0
Private	11.1	5.0	11.9	19.1	29.2	21.4	25.2
(Individual)				(8.3)	(16.7)	(8.6)	(5.0)
(Corporations)				(10.8)	(12.5)	(12.8)	(20.2)
Government	2.0	4.0	7.1	5.2	8.3	11.6	6.8

Sources: The Bank of Korea, National Accounts (selected years)

The joint committee is mandated under the KORUS FTA, which took effect in March 2012. The ministerial mechanism is tasked with supervising the operations of 19 subcommittees and working groups aimed at the smooth implementation of the accord, including solving disputes over interpretations of the terms. South Korea's opposition parties claim this investment safeguard mechanism undermines South Korea's legal independence by allowing U.S. companies to take action against Seoul's policy decisions. They demand Seoul address the concern by altering relevant clauses that they argue unfairly favor American firms with long experience in legal battles against a foreign government. On the investor-state dispute clause in the KORUS FTA, Korean Trade Minister Bark Taeho said it will be handled in the service and investment committee. In early May, South Korea announced the start of FTA talks with China. At a trilateral summit meeting in Beijing, the leaders of South Korea, China, and Japan agreed to launch negotiations on a three-way FTA this year.

Prospect for Sustainable Growth

Economic forecasts for the Korean economy in 2012 by global investment banks (JP Morgan, Deutsche Bank and Nomura) have been adjusted downward from their forecasts of real GDP growth of 3.0-3.6 percent at the end of 2011 to 2.7-3.3 percent in March 2012. This is based on their projections of sluggish export demands due to the continuing European fiscal crisis, higher oil prices and reduced Chinese economic growth. Citigroup forecasts Korean export growth as limited to 6.6 percent and 7.5 percent during the first two quarters of 2012, and Goldman Sachs forecasts a yearly export growth of 5 percent. The most recent forecast by the Asian Development Bank released in April 2012 is 3.3 percent, which is lower than the government's target economic growth rate of 3.7 percent. They also point out that domestic demand including both household consumption and corporate investment will be sluggish due to household debt, as well as the uncertain investment environment in 2012 with both the assembly general election in April and the presidential election in December.

The public has been disappointed by the failed vision by the Lee Government and the net consequence of very minimal increase in their real earnings. It has created room for increasing welfare demands and a progressive agenda for big conglomerate (*Chaebol*) reforms. The result of the general election on April 11 will influence the presidential election in December 2012 and many experts are predicting a very tight presidential race. In addition, if North Korea attempts another nuclear detonation or military adventure, it will also affect the presidential election in South Korea. In this respect, the political economy of South Korea will inevitably depend on the prospect of the new international political order in Northeast Asia.

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DEVELOPING A NEW GROWTH MODEL FOR KOREA

By Randall Jones

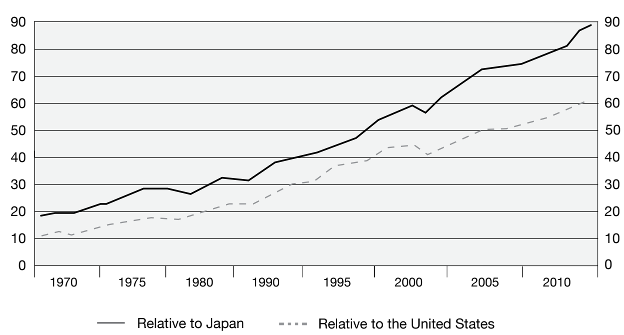
Abstract

Korea's rapid economic development has boosted its per capita income to within two-thirds of the U.S. level. The focus on exports, though, has made Korea vulnerable to external shocks while reducing productivity in the service sector, increasing income inequality and boosting energy intensity. Consequently, Korea's export-led strategy should be balanced by policies to ensure that growth is environmentally and socially sustainable. First, the service sector should be made a second engine of growth by leveling the playing field with the manufacturing sector, strengthening competition in services and expanding openness to foreign competition. Second, market instruments that put a price on carbon, primarily through a cap-and-trade emissions trading scheme, complemented by a carbon tax on small emitters, are needed to achieve the government's vision of "Low Carbon, Green Growth." Third, well-targeted increases in social spending would promote social cohesion, accompanied by reforms in the labor market and education system to address the fundamental causes of inequality. One urgent task is to reduce the share of non-regular workers. Fourth, increasing labor force participation, notably of women, youth and older workers, is essential to mitigate demographic pressures.

The economic development of Korea since 1960 has been among the most rapid ever achieved, transforming it from one of the poorest countries in the world to a major industrial power. Life expectancy has increased from 52 years in 1960 to nearly 80 years, while per capita income rose from 12 percent of the U.S. level in 1970 to 63 percent in 2010 and is now within 10 percent of that of Japan (Figure 1).

Rapid economic development was led by exports, allowing Korea to overcome its lack of natural resources and its small domestic market. Exports increased from less than 5 percent of Korean GDP in 1960 to 32 percent by the time of the 1997 Asian financial crisis. Reforms to develop a more market-oriented economy and increase openness to imports promoted Korea's recovery from the crisis and its further integration in the world economy. Exports were again the key driver of Korea's strong rebound from the 2008 global financial crisis, aided by a sharp depreciation of the won. In sum, net exports (exports minus imports) directly accounted for more than one-quarter of output growth since 1997, while Korea has maintained a current account surplus averaging more than 3 percent of GDP over the past 15 years. Korea is now one of the major producers of ships (first in the world), cars (fifth) and steel (sixth), and has two of the top ten semiconductor firms in the world. By 2010, Korea's share of global exports was 3.1 percent, the seventh largest in the world, and exports as a share of Korean GDP had surpassed one-half.

Figure 1 Korea's Per Capita Income is Converging to the Most Advanced Countries (as a %)



1: Using 2005 purchasing power parity exchange rates.
Source: OECD, *Going for Growth 2012*

While exports will continue to play an important role, Korea must develop new growth engines to ensure that growth is sustainable and reduce vulnerability to external shocks. This article begins by exploring some of the side effects associated with export-led growth. It then considers the challenge of sustaining Korea's convergence to the high-income countries and then offers strategies aimed at ensuring that growth is socially and environmentally sustainable.

The Negative Side Effects of Export-Led Growth

Some negative aspects of the focus on exports have become apparent in recent years:

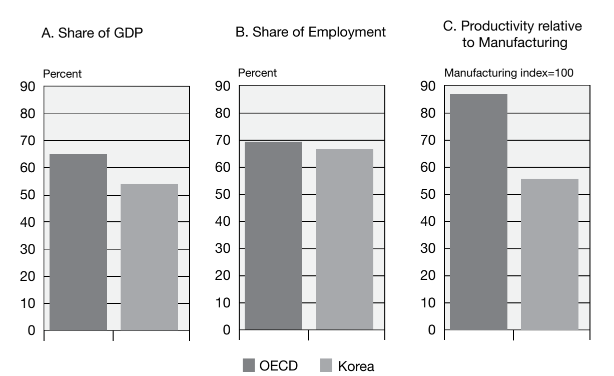
- It has stunted the development of the service sector, which has relatively low productivity.
- It has contributed to the significant rise in income inequality and poverty since 1997.
- It has resulted in a high level of energy intensity and rising greenhouse gas (GHG) emissions.

A Low-Productivity Service Sector

Although the share of the service sector increased from 50 percent of GDP in 1990 to 57 percent in 2008, it is well below the OECD average (Figure 2). Only four of Korea's 30 largest enterprises are in services. The share of employment in services in Korea is closer to the OECD average (Panel B), reflecting the sector's role as a de facto safety net for older workers forced to retire from firms at a relatively young age. However, labor productivity growth in the service sector has consistently lagged behind that in manufacturing, slowing = from an annual rate of 2.6 percent during the 1980s to 1.2 percent between 1997 and 2007, in contrast to nearly 9 percent growth in manufacturing. Consequently, by 2008, service-sector productivity was only about half of that in manufacturing, the largest gap in the OECD area (Panel C).

Korea's economic structure is the legacy of a development strategy that focused on exports and manufacturing, thereby siphoning capital, talent and other resources away from services. For example, R&D investment in services accounts for only 7 percent of total R&D by Korean firms, compared to an average of 25 percent in the G7 economies. Moreover, the government allocates only 3 percent of its R&D budget to services. Manufacturing firms also benefit from a range of policies, including tax benefits and lower electricity charges.

Figure 2 The Service Sector (in 2008, based on 2005 prices for value added)

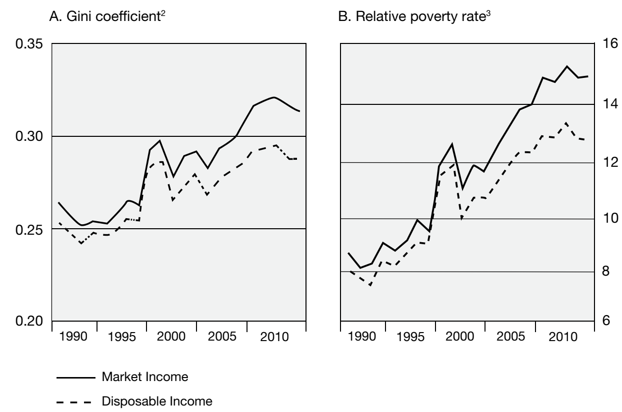


Source: *2012 OECD Economic Survey of Korea*

Rising Income Inequality and Poverty

Income inequality has become a major concern in Korea as in many other OECD countries. Until the 1997 Asian financial crisis, Korea's income distribution stood out as one of the most equitable among developing countries. However, income inequality, as measured by the Gini coefficient, increased significantly between 1997 and 2009 (Figure 3), when it reached the OECD average. Moreover, the ratio of the top quintile to the bottom is 5.7, above the OECD average of 5.4. Meanwhile, relative poverty – the share of the population living on less than half of the median income – rose to 15 percent in 2008, the seventh highest in the OECD area.

Figure 3 Inequality Has Been Increasing in Korea[1]



1: For urban households with at least two persons.
2: The Gini coefficient can range from 0 (perfect equality) to 1 (perfect inequality).
3: Relative poverty is defined as the share of the population that lives on less than half of the median income.
Source: Statistics Korea

The rising trend in income inequality and relative poverty is explained in part by the increasing share of services in employment. First, wage dispersion in the service sector is relatively wide, ranging from business services and the financial sector at the high end to hotels and restaurants. Second, the wage gap between services and manufacturing is widening. The average wage in services, which was nearly equal to that in manufacturing in the early 1990, fell to only 54 percent in 2009. Meanwhile, an increasingly capital and technology-intensive manufacturing sector reduced its share of employment from 28 percent to 17 percent over that period. In short, the employment impact of exports is decreasing, reducing its trickle-down effect on the rest of the economy.

The low wages and productivity in the service sector is closely linked to small and medium-sized enterprises (SMEs), which account for 80 percent of output and 90 percent of employment in services. The deteriorating wage performance in services has thus widened the gap between large and small firms. In 1990, workers in firms with 10 to 29 workers earned 24 percent less than workers at companies with 300 or more workers. By 2008, the gap had widened to 43 percent. The incidence of low wages (defined as less than one-half the national median) falls from 39 percent of women employed in firms with less than five workers to 4 percent for companies with more than 1,000. Consequently, the problem of "working poor" is concentrated in small companies.

Other factors besides the problems in the service sector are contributing to widening inequality. First, Korea's dualistic labor market results in high inequality in wage income. Non-regular workers, who account for about one-third of employment, earn only 57 percent as much per hour of work as regular workers. Second, the large share of private spending in education and health increases the impact of socio-economic factors on educational and health outcomes. Third, social spending, which plays an important role in reducing inequality and poverty in most OECD countries, amounted to only 7.6 percent of GDP in Korea in 2007, well below the OECD average of close to 20 percent.[2] Nevertheless, public social spending has been increasing at a double-digit rate in real terms as the population ages and social insurance systems mature.

A High Level of Energy Intensity

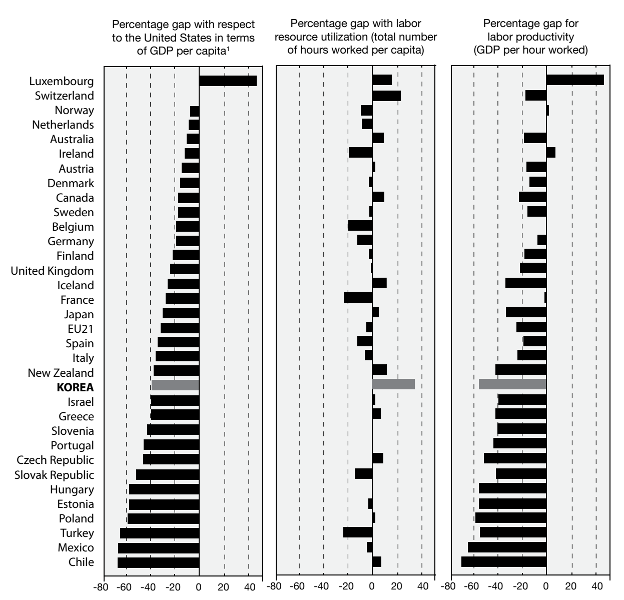
Despite falling since 1997, Korea's energy intensity is about a quarter above the OECD average and the fifth highest in the OECD area, reflecting its concentration in energy-intensive industries. High-energy intensity creates a number of problems. First, Korea is exceptionally dependent on imported energy; net imports accounted for 86 percent of total primary energy supply in 2009. The reliance on imported oil makes Korea vulnerable to external shocks and has contributed to large terms-of-trade losses, averaging 3 percent a year since 1994, thus suppressing national income growth. Second, Korea's greenhouse gas emissions doubled between 1990 and 2008, far outstripping the 24 percent rise in global emissions. Third, the high level of energy consumption in Korea has contributed to environmental problems. The air quality in Korean cities, especially in Seoul, is poor compared to major cities in other OECD countries and absolute levels of air pollutants in Korea are far higher than those of other OECD countries.[3]

Sustaining the Convergence to the High-Income Countries

The per capita income gap with the United States, which was 37 percent in 2010, can be divided into labor inputs (Figure 4, the middle column) and labor productivity (the right-hand column). Labor inputs in Korea, relative to population, are by far the largest in the OECD area, reflecting long working hours that are one-fifth above the OECD average. However, working hours have been declining at a 1.5 percent annual rate since 2000 and are likely to continue falling in line with the government's goal of reducing them to 1,800 hours per year by 2020, close to the OECD average. More importantly, Korea is projected to experience the most rapid population aging among OECD countries. Korea, currently the third-youngest country in the OECD area, is projected to be the second oldest by 2050,[4] reflecting its fertility rate of only 1.2, one of the lowest in the world. The ratio of the working-age population to the elderly will thus fall from six in 2010 to 1.3 in 2050, implying that rising public social spending will pose a heavy burden on a shrinking labor force.

Declining labor inputs will reduce Korea's growth potential and make it harder to narrow the income gap with leading countries. At the same time, there is significant scope for productivity gains, as Korea's labor productivity per hour of work is less than half of the U.S. level (Figure 4, right-hand column). Nevertheless, the Korea Development Institute estimates that the potential growth rate will fall to 1.7 percent during the 2030s. In per capita terms, the fall in potential will be more gradual – from 4.0 percent during the current decade to 2.2 percent in the 2030s – given the decline in population. In sum, increasing labor force participation to mitigate the impact of population aging and raising productivity are the keys so supporting the potential growth rate.

Figure 4 Explaining Differences in Income in 2010



1: Using 2010 PPP exchange rates.
Source: OECD (2012), *Going for Growth 2012*

A New Growth Strategy for Korea

In addition to the negative side effects of focusing on exports, maintaining Korea's convergence to the highest-income countries based on an export-led growth model will become increasingly difficult in the context of expanding globalization and increasing competition from other Asian countries. Korea may face the same challenges as Japan, which has seen its share of world trade drop by half from almost 10 percent in 1993 to around 5 percent in 2010. Meanwhile, China's share rose by a factor of five, from 2 percent to 10 percent over that period. Moreover, the heavy reliance on exports has increased Korea's vulnerability to external shocks. Consequently, Korea's export-led strategy should be balanced by greater emphasis on four priorities:

- Making the service sector a second engine of growth, which would also enhance social cohesion.
- Promoting green growth to make sure that development is environmentally-sustainable.
- Enhancing social cohesion through reforms in the labor market and the education system.
- Increasing labor force participation to mitigate the impact of demographic trends.

Making the Service Sector as a Second Engine of Growth

The service sector's share of GDP is likely to continue rising toward the OECD average (Figure 2). The large and increasing weight of services and its impact as an input in other parts of the economy make it a key determinant of economic growth. Over the past 25 years, nearly 85 percent of GDP growth in high-income countries has come from services.[5] Developing the service sector would also create more high-quality jobs that would better utilize Korea's large supply of tertiary graduates. As noted above, low service-sector productivity is the legacy of an export led growth strategy that attracted the most productive resources into manufacturing. The top priority, therefore, is to level the playing field by removing preferences granted to manufacturing based on a comprehensive quantification of the various forms of explicit and implicit support. In addition, a stronger *won* would promote the development of non-tradable services by boosting domestic demand. In early 2012, the won was still a quarter below its 2007 level in real, trade-weighted terms.

Policies to strengthen competition in services are particularly important, given that "overly strict regulations are obstructing investment and competition," according to the government.[6] The keys to stronger competition include eliminating domestic entry barriers, accelerating regulatory reform, upgrading competition policy and reducing barriers to trade and inflows of foreign direct investment (FDI). The government has reduced entry barriers, as reflected in the improvement in Korea's ranking in the "cost of starting a new business" from 126th in the world in 2008 to 24th in 2011,[7] although there is scope for further reform. In addition, competition policy should be further strengthened. First, even though financial penalties have risen, their deterrent effect is still weaker than in most other OECD countries, indicating a need for further increases. In addition, criminal penalties, which are rarely applied, should be used more frequently. Second, the investigative powers of the competition authority, the Korea Fair Trade Commission, need to be expanded. Third, the number of exemptions from the competition law, including for SMEs, should be further scaled back.

Greater openness to the world economy is another priority to boost productivity in services. The stock of FDI in Korea, at 13 percent of GDP, was the third lowest in the OECD area in 2010 and the share of inward FDI in services was less than half. Consequently, the stock of FDI in services in Korea was only 6 percent of GDP, compared to an OECD average of 37 percent. Strengthening international competition requires reducing barriers to FDI, including foreign ownership ceilings, and liberalizing product market regulations. In addition, it is important to foster a foreign investment-friendly environment, thereby encouraging more cross-border M&As, enhance the transparency of tax and regulatory policies, and reform the labor market.

As noted above, the problems in services are closely linked to those of SMEs. While the major business groups, known as chaebol, were forced to restructure aggressively in the wake of the 1997 crisis, the government essentially bailed out SMEs through increased public subsidies and guarantees, which were not fully scaled back once the crisis had passed. Consequently, the SMEs have not been as aggressive in reforming their business model and their performance has lagged behind that of large firms.[8] In 2009, the government further increased assistance to SMEs by: i) sharply raising guarantees by public financial institutions for lending to SMEs; ii) advising banks to automatically roll over loans to SMEs; iii) creating two initiatives to aid SMEs in distress; and iv) doubling government spending to assist SMEs. While expanded financial support to SMEs prevented some bankruptcies and job losses, it has also exacerbated moral hazard problems by increasing the reliance of SMEs and banks on public assistance. Supporting non-viable SMEs poses a drag on Korea's growth potential.

Achieving the Vision of "Low Carbon, Green Growth"

In 2008, President Lee Myong-bak proclaimed "Low Carbon, Green Growth" as the vision to guide Korea's development over the next 50 years. One of the goals of the Green Growth Strategy is to "attain energy independence," which implies a fundamental transition in Korea's economic structure, given the large share of imports in its energy supply. While such a shift would have great potential for creating new industries, it would also impose heavy transition costs. In addition, Korea set a target to reduce its GHG emissions by 30 percent relative to a business-as-usual baseline by 2020, which implies a 4 percent cut from the 2005 level. Achieving the transition to a low carbon economy and reducing GHG emissions requires a policy framework that provides appropriate incentives to induce the necessary restructuring in a cost-effective way.

The Five-Year Plan for Green Growth

The Five-Year Plan (2009-13) contains about 600 projects and a total budget of 108.7 trillion *won* (10 percent of 2009 GDP), of which public R&D accounts for 13 percent. In 2009, private firms were involved in nearly two-thirds of the nearly 5,000 R&D projects in the Plan, although their financial contributions amounted to only 8 percent of total outlays. Greater involvement by business enterprises is needed to advance green research and make it a driver of private-sector innovation.

The government is pursuing various approaches to supply funds and overcome financial constraints. Bank loans to green industries amounted to 2 percent of their corporate lending during the first half of the Five-Year Plan, with state-owned banks accounting for three-quarters of the loans. Such lending was encouraged by large credit guarantees provided by public institutions. Meanwhile, investment in green industries through the venture capital market nearly doubled between 2009 and 2011, rising to around half of total venture capital investment. Public funds were invested in 83 venture businesses. Such efforts should be pursued cautiously to limit the risks inherent in "picking winners," which could lock Korea into inferior technologies. Korea should channel more of these funds through existing market-based systems and commercial institutions, thereby reducing the role of state-owned banks and public funds.[9]

Introducing Market Instruments to Promote Green Growth

The most important tool to promote green innovation is a market instrument that puts a price on carbon, primarily through a cap-and-trade emissions trading scheme (ETS), complemented by a carbon tax on small emitters. In May 2012, the National Assembly approved a bill to launch an ETS in 2015, which will cover about 500 firms that account for around 60 percent of total emissions. Less than 5 percent of the permits may be auctioned, with the allocation of the remainder yet to be decided. Grandfathering permits would be problematic as it would provide scope for windfall profits for existing firms, potentially resulting in unfair competition for new entrants. The ETS should include a timetable for shifting to an auction system, which would generate revenue that could be used inter alia to offset the impact of the ETS on firms and consumers, reduce more-distorting taxes or achieve fiscal consolidation. While the ETS will control the emissions of large emitters, a carbon tax is needed to cover smaller and more diffuse sources of pollution, such as households and small firms. It is important, though, to minimize overlap and complicated interactions between an ETS and a carbon tax, which would raise costs and uncertainty about the overall outcome.

Another priority is to reform electricity pricing, as Korea's low price increases energy use and GHG emissions. Indeed, electricity consumption per unit of GDP in Korea in 2009 was 1.7 times higher than the OECD average. Moreover, prices vary significantly between sectors, creating significant distortions. Electricity prices should fully reflect their production costs in each sector.

Promoting Social Cohesion through Reforms in the Labor Market and Education System

It is important to address the fundamental causes of inequality and poverty, notably labor market dualism. Given the lower wages paid to non-regular workers, more than a quarter of full-time workers in Korea earn less than two-thirds of the median wage, the highest in the OECD area, thus fueling inequality. In addition, only about 40 percent of non-regular workers are covered by the social insurance system, including unemployment insurance. Firms hire non-regular workers because of the lower labor costs and to enhance employment flexibility. However, labor market dualism creates serious equity problems as a significant portion of the labor force works in precarious jobs at relatively low wages and with less protection from social insurance. It is important to adopt a comprehensive approach to break down dualism, including reduced employment protection for regular workers and improved social insurance coverage and expanded training for non-regular workers.

Several aspects of education–low investment in pre-primary education, heavy reliance on private tutoring, particularly in hagwons, and the high cost of university education–raise equity issues. In particular, the proportion of 15-year-olds participating in after-school lessons in Korea is more than double the OECD average, in part to help students gain admission to prestigious universities. The severe competition to enter the top universities is driven by academic credentialism–the emphasis on where a person studied rather than on their abilities, accomplishments and potential. However, the reliance on private tutoring places heavy financial burdens on families and is cited by families as a key factor explaining Korea's extremely low birth rate. Moreover, the amount of spending is positively correlated with family income, as is the quality of the university attended, thus perpetuating inequality. Private tutoring has a number of other negative impacts. First, it competes and overlaps with public education, thus raising total expenditures on education unnecessarily. Second, it reduces the effectiveness of schools, which have to cope with students of widely differing educational levels. Third, it makes for very long days for children, thus hindering their development. To reduce the role of private tutoring, further measures are needed to improve the quality and diversity of schools and de-emphasize the role of the standardized exam in the university admission process.

There is also a role for well-targeted increases in social spending. The government should move cautiously and incrementally in developing social welfare programs that are carefully designed to achieve their intended objectives, while avoiding wasteful spending and negative externalities. One priority should be the elderly, given that nearly one-half of the over-65 age group lives in relative poverty. However, there is a need for caution as public social spending is already increasing at the fastest rate in the OECD area. Under current policies, population aging alone is projected to boost public social spending from 7.6 percent of GDP to around 20 percent, the average of OECD countries, by 2050. Rising social spending should be financed by tax increases that limit the negative impact on economic growth. This suggests limiting the increase in labor taxes to maintain work incentives, while relying primarily on the VAT and environmental taxes as the primary sources of additional revenue. Keeping Korea's sound fiscal position and low level of government debt is a priority, given the country's rapid aging and the uncertainty about the eventual costs of economic rapprochement with North Korea.

Increasing Labor Force Participation to Mitigate the Impact of Population Aging

Rapid population aging implies a substantial fall in Korea's labor force. If participation rates were to remain at their current levels for each age group and gender, the labor force would peak at 27.2 million in 2022 and then fall by one-fifth, to around 21.5 million, by mid-century. By that point, there would be only 1.2 persons in the labor force per elderly person, compared with 4.5 in 2010, imposing a heavy burden on workers to finance social spending. One option is to increase immigration. At present, Korea has around 0.7 million foreign workers, accounting for only about 3 percent of the labor force, well below the shares in most other OECD countries.

The most important strategy to mitigate demographic change would be to increase the female labor force participation rate. For women between the ages of 25 and 54, the rate was 62 percent in 2010, the third lowest in the OECD area. If the female participation rate in Korea were to converge to the current level for males for each age group by 2050, the labor force would only decline to around 25.6 million, almost 19 percent higher than in the case of unchanged participation rates. Raising the female participation rate requires a comprehensive approach. First, the gender wage gap, the highest in the OECD area, should be narrowed by reducing the high share of non-regular employment and making greater use of performance-based pay. Second, the availability of affordable, high-quality childcare should be increased. Third, maternity leave should be lengthened from 90 days and the take-up of maternity and parental leave increased. Fourth, expanded flexibility in working time would make it easier to combine paid employment with family responsibilities, given that total working hours in Korea are the longest in the OECD area.

Korea's participation rate for young people is also one of the lowest in the OECD area. Although this partly reflects the large share in tertiary education, it is also a result of the mismatch between the skills taught in school and those demanded by firms. Upgrading vocational education would boost employment and reduce labor shortages in SMEs. According to a 2011 government survey, 43 percent of small firms said that they currently face a labor shortage and 40 percent expect to face one.

In addition, there is some scope to increase the participation rate for older workers, or at a minimum, prevent a decline as the pension system matures. It is also important to more effectively utilize older workers, who tend to retire from firms by age 55. More than one-third become unemployed. Moreover, one-third of workers over age 50 are self-employed, compared to 13 percent of those under that age, primarily in services with low productivity. Given strict employment protection for regular workers, firms set mandatory retirement ages so that they can dismiss older workers once their seniority-based wages surpass their productivity. Establishing a minimum age at which firms can set mandatory retirement and then gradually raising it would put pressure on firms to adjust wages in line with productivity as workers grow older. The ultimate goal should be to abolish firms' right to set a mandatory retirement age, as has been done in some other OECD countries.

Conclusion

While Korea's economy remains one of the fastest growing among OECD countries, rapid population aging and other challenges will make it difficult to reach the level of the highest-income countries. Changes in economic policy to diversify away from exports are needed to sustain economic growth. Such a strategy should aim not only at the rate of growth, but also at ensuring that it is environmentally and socially sustainable, while maintaining a sound government financial position. Such a policy should include measures to develop the service sector and promote green growth, accompanied by reforms to promote social cohesion and greater labor force participation.

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[1] According to a 2011 OECD study, *Divided We Stand: Why Inequality Keeps Rising*, inequality in the OECD area is at its highest level in the past 50 years.

[2] The causes of income inequality and poverty are discussed in the *2012 OECD Economic Survey of Korea*.

[3] Pollution and other urban issues are analyzed in *Urban Policy Reviews: Korea*, OECD (2012).

[4] Based on the elderly dependency ratio, defined as the number of persons over age 65 as a share of the population aged 20 to 64. Similarly, the total dependency ratio – the number of persons under 20 and over 64 as a share of the working-age population – is projected to double from 52 percent in 2010 to 105 percent in 2050, the third highest in the OECD area.

[5] See "South Korea: Finding Its Place on the World Stage," McKinsey Quarterly, April 2010.

[6] The Ministry of Strategy and Finance, "Detailed Plans to Nurture the Service Sector," Economic Bulletin, May 2009.

[7] This ranking is by the World Bank, *Doing Business 2011*.

[8] The problems of SMEs are discussed in detail in the 2008 OECD Economic Survey of Korea.

[9] The financing of green business is discussed in Kim Hyoung-Tae, *System Architecture for Effective Green Finance in Korea*, Korea's Economy 2011, Korea Economic Institute, Washington, D.C.