



**KDI SCHOOL**

**WORKING PAPER SERIES**

---

**KDI** 국제정책대학원

KDI School of Public Policy and Management

# KDI SCHOOL WORKING PAPER SERIES

---

## **The Republic of Korea's Economy in the Swirl of Global Crisis**

Dongchul CHO

*October 2009*

*Working Paper 09-11*



This paper can be downloaded without charge at:  
KDI School of Public Policy and Management Working Paper Series Index:  
<http://www.kdischool.ac.kr/faculty/paper.asp>

The Social Science Network Electronic Paper Collection:  
<http://ssrn.com/abstract=1493027>

# **The Republic of Korea's Economy in the Swirl of Global Crisis**

**April 2009**

**Dongchul Cho<sup>\*</sup>**

---

<sup>\*</sup> The author is the Director of the Department of Macroeconomic and Financial Policies, Korea Development Institute (KDI) and Professor of the KDI School of Policy and Management. This paper was written for the ADBI Conference on Global Financial Crisis at Tokyo in April 2009, and does not necessarily reflect the views of KDI.

# **The Republic of Korea's Economy in the Swirl of Global Crisis**

## **Abstract**

This paper argues that the Republic of Korea (hereafter Korea) is not immune to global crises, but that a more than proportional response of gross domestic product to global crises does not seem to be the general case either. Along this line of reasoning, the Korea's extreme response to current crisis in the 4<sup>th</sup> quarter of 2008 was attributed not only to the crisis in the United States, but also to additional idiosyncratic components, such as the extraordinary collapse of the People's Republic of China's (PRC) imports and the drastic capital outflow from Korea.

The paper also emphasizes the differences of the current recession from the currency crisis period. The currency crisis was mainly attributed to the internal fragility of Korea's financial market, but the current recession was caused mostly by external shocks. This difference was clearly reflected in the different responses of private consumption and exports, and hence employment. In the dimension of macroeconomic policy reactions, monetary policy was far more flexible this time than during the currency crisis period.

From this analysis, two implications are drawn. First, as far as the economic response of the 4<sup>th</sup> quarter of 2008 being more extreme than necessary to rebalance the macroeconomic fundamentals in Korea, it is expected that those economic losses can be recovered relatively soon. Yet, for a more visible recovery of the Korean economy, the recovery of the PRC's domestic demand seems necessary, and a full-blown recovery will be in line with the global recovery. A second implication is that structural aspects are critical for maintaining economic stability as well as employing flexible macroeconomic policies. While the Korean economy plunged into a historic crisis in 1997—triggered by the relatively small external shock of the Thai baht crisis—the economy is expected to remain relatively robust this time even in the midst of the most serious global crisis since the Great Depression.

Key Words: Korea's Economy, Global Crisis, Rebalancing

JEL Codes: E32, F41, E52

# **Table of Contents**

## **I. Introduction**

## **II. Current Recession of Korea's Economy**

**2.1 The Collapse of Economic Activities in the 4<sup>th</sup> Quarter of 2008**

**2.2 Factors for the Collapse in the 4<sup>th</sup> Quarter of 2008**

## **III. Comparison with the Currency Crisis Period**

**3.1 Major Macroeconomic Indicators: Similarities and Differences**

**3.2 Structural Positions of the Economy When the Shock Occurred**

**3.3 Macro-Policy Reactions**

## **IV. Prospects for the Korean Economy**

**4.1 Short-Term Prospects for Growth Rebalancing**

**4.2 Domestic Demand vs. Exports, or Services vs. Manufacturing**

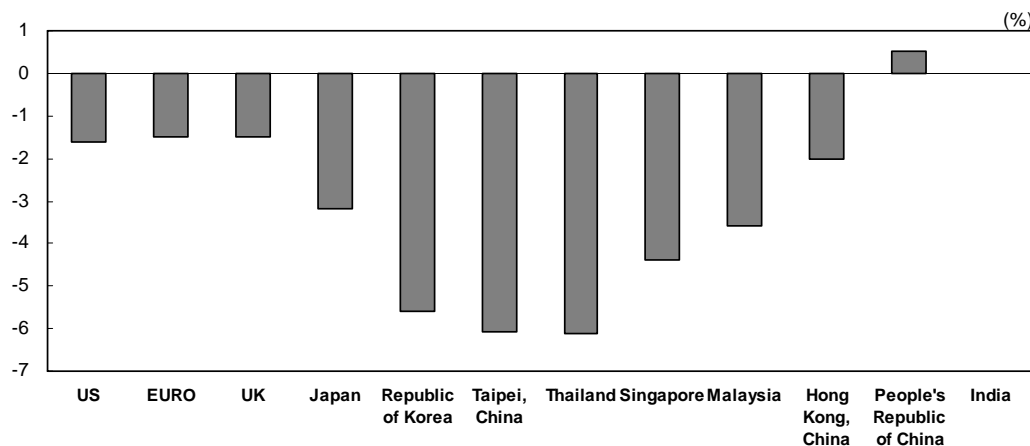
## **V. Concluding Remarks**

## I. Introduction

The financial crisis that began in the United States in the summer of 2007 has turned into the most far-reaching international financial and economic crisis since the Great Depression. Following the September 2008 bankruptcy filing by Lehman Brothers, the global financial market plunged into a panic. Not one country was immune to the negative effects arising from this global financial turmoil and the resulting contraction in demand. The Republic of Korea (hereafter Korea) was no exception.

More precisely, Korea was one of the countries that were most severely hit by the global shock during the 4<sup>th</sup> quarter of 2008. Figure 1 compares the 4<sup>th</sup> quarter growth rates (quarter-to-quarter) of major advanced economies and several Asian economies. A casual look at this figure is likely to give the impression that a devastating crisis broke out in Asia centering on Korea; Taipei,China; Thailand; and Japan, and the adverse effects then spread to other regions such as the United States (US) and Europe. However, the truth is quite the opposite: the current crisis originated in the US, not the Asian economies.

**Figure 1: (Quarter-to-Quarter) Growth Rates of the 4<sup>th</sup> Quarter of 2008**



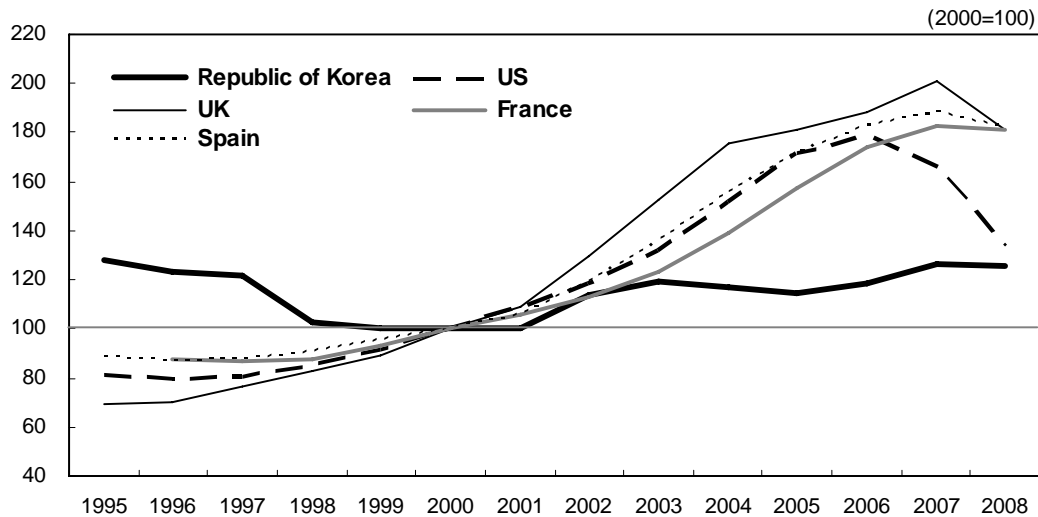
Note: For the countries (Taipei,China; Thailand; Malaysia; Singapore; People's Republic of China (PRC); and India) in which official quarter-to-quarter growth rates are not available, estimations were made by the formula,  $g_t = G_t - G_{t-1} + \bar{g}_{t-4}$ , where  $g_t$  is quarter-to-quarter growth rate,  $G_t$  is year-on-year growth rate, and  $\bar{g}_{t-4}$  denotes the average quarterly growth rate of the past three years.

Data source: Bureau of Economic Analysis (US), EUROSTAT (EURO, UK), Cabinet Office (Japan), Bank of Korea (Republic of Korea), Bloomberg (Taipei,China; Malaysia; India), Singapore Department of Statistics (Singapore), Census and Statistics Department (Hong Kong, China), National Bureau of Statistics of China (People's Republic of China),

These recent events surprised many commentators who believed that the adverse impacts from the developed countries on Asia would be contained within a manageable range. Asian economies experienced painful restructuring processes during the recovery from the crisis that broke out in the late 1990s, and their economic structures were believed to have become sounder as a result. For example, the large foreign currency reserves in the region have often been referred to as comfortable safeguards against

external shocks. As for the housing price bubble, which directly caused the current global crisis, the problem was far milder in Asia than in the US and Europe. Figure 2 shows that house prices in Korea have been far more stable than those of developed countries, excluding Japan.

**Figure 2: Real House Prices**



Data source: Kookmin Bank (Republic of Korea), Standard and Poor's, S&P/Shiller Case (US), National Institute for Statistics and Economic Studies (France), Banco de Espana (Spain), Nationwide (UK).

Having observed the current collapse of Asian economies some experts, for example Takatoshi Kato (2009), have declared that myths about Asian economies like “business cycle decoupling” have been dismantled. For the Korean economy in particular, the worse than expected performance of the 4<sup>th</sup> quarter of 2008 raised many issues. Should this collapse of economic activities be interpreted as a signal of another crisis like the one that hit Korea 10 years ago? Has Korea learned any lessons from the previous financial crisis? If so, why was Korea hit so severely by this global shock? How different are the policy responses this time from the previous crisis? What are the short-term prospects for the Korean economy? Will it be affected by the global rebalancing process?

It is impossible to rigorously answer all of these questions in a single paper. However, this paper will attempt to sketch the arguments related to these important issues with some circumstantial evidence. Following this introduction, Section 2 briefly explains the current situation of the Korean economy, focusing on what happened in the 4<sup>th</sup> quarter of 2008. Section 2 also discusses several factors that can help explain why Korea was hit so severely. Next, Section 3 compares the current recession with the currency crisis period from various perspectives, such as the depth of the recession, the structural aspects of the economy, and macroeconomic policy reactions. Section 4 discusses the prospects for the Korean economy, including the issue regarding exports vs. domestic demand and domestic savings rate. Section 5 summarizes the paper with some comments.

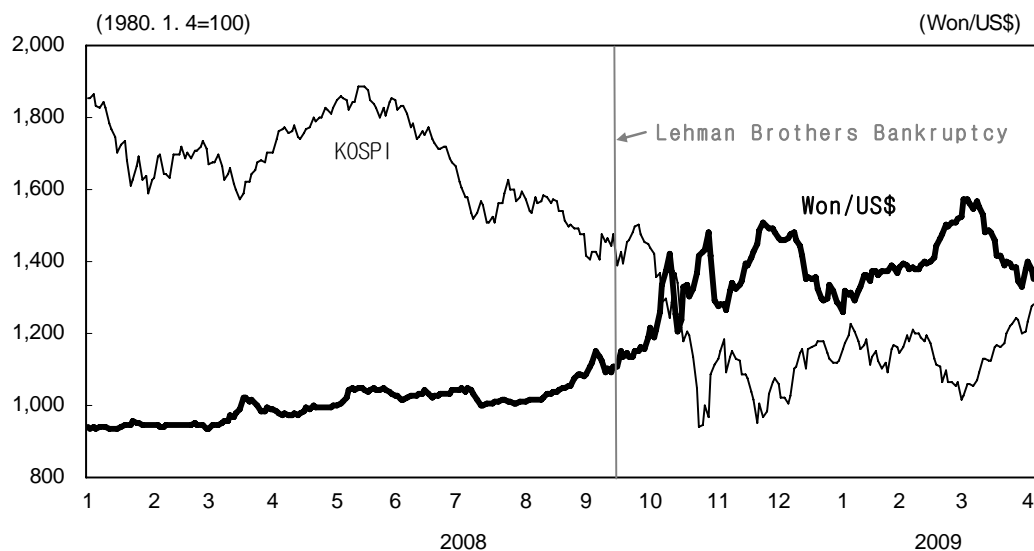
## II. Current Recession of Korea's Economy

### 2.1 Collapse of Economic Activities in the 4<sup>th</sup> Quarter of 2008

Despite the global slowdown caused by the US sub-prime mortgage crisis, the Korean economy maintained a reasonable pace of growth until the 3<sup>rd</sup> quarter of 2008. Domestic demand gradually slowed in the 3<sup>rd</sup> quarter, mainly due to soaring oil prices and the resulting loss of purchasing power, but exports had maintained a solid expansion rate. In fact, 3<sup>rd</sup> quarter exports increased by 27% compared to the same quarter of the previous year.

However, the Korean economy plunged into a severe recession in the 4<sup>th</sup> quarter, following the panic in the global financial market. From the second half of September 2008, stock prices collapsed and the won/dollar exchange rate soared (expressing a sharp currency depreciation of the won). Credit markets became significantly crunched and the resulting impacts on domestic demand began to appear in October. Equipment investment collapsed and private consumption declined by a substantial margin.

**Figure 3: Stock Prices and the Won/Dollar Exchange Rate**

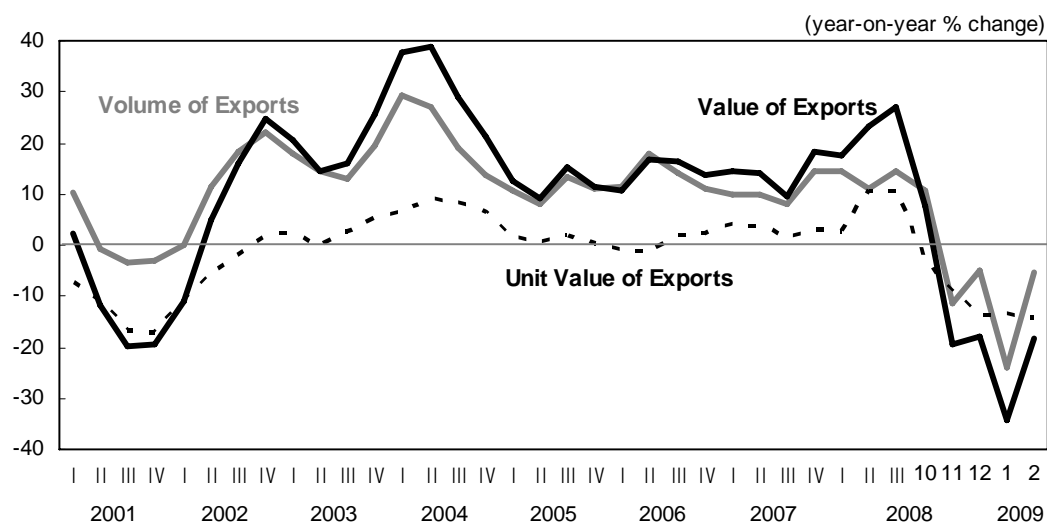


Data source: Bank of Korea (Republic of Korea).

On top of the contraction in domestic demand, exports also began to collapse in October 2008. Though export demand was expected to contract due to the global crisis, its rate of contraction during the 4<sup>th</sup> quarter was truly shocking. The year-on-year (month-to-month) growth rate of exports collapsed from 27.6% (-3.1%) in September to 7.8% (-2.6%) in October and further to -19.5% (-22.2%) in November. Although a substantial portion of the export collapse was due to the global deflation in the prices of traded goods, this collapse in export revenue raised concerns about Korea's capability to earn hard currencies and aggravated already unstable investor sentiment in the currency market. As a result, in the 4<sup>th</sup> quarter the Korean economy recorded a growth rate that was much worse than expected.



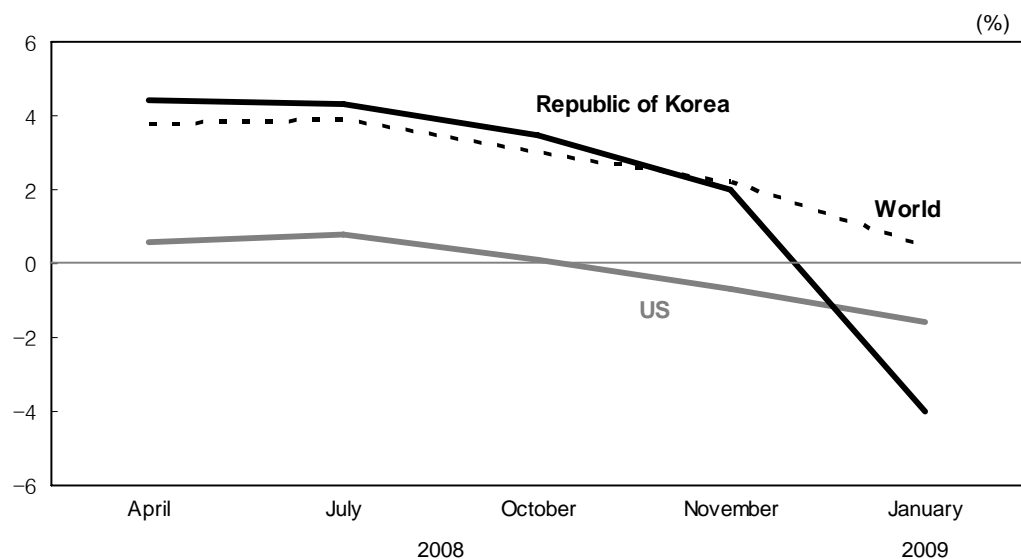
**Figure 4: Export Growth Rate**



Data source: Korea Customs Service, Ministry of Knowledge Economy, Bank of Korea (Republic of Korea).

Upon the announcement of the 4<sup>th</sup> quarter growth rate (-5.6% quarter-to-quarter), the International Monetary Fund (IMF) substantially downgraded the forecast for Korea's 2009 growth rate from 2.0% in November 2008 to -4.0% in January 2009, while downgrading other countries' growth rates more mildly. The drastic downgrade of Korea's growth forecast showed the surprise with which the Korean 4<sup>th</sup> quarter growth rate was received.

**Figure 5: Revisions of IMF's Forecasts on 2009 Growth Rates**



Data source: IMF World Economic Outlook April, July (update), October, November (update), January (update).

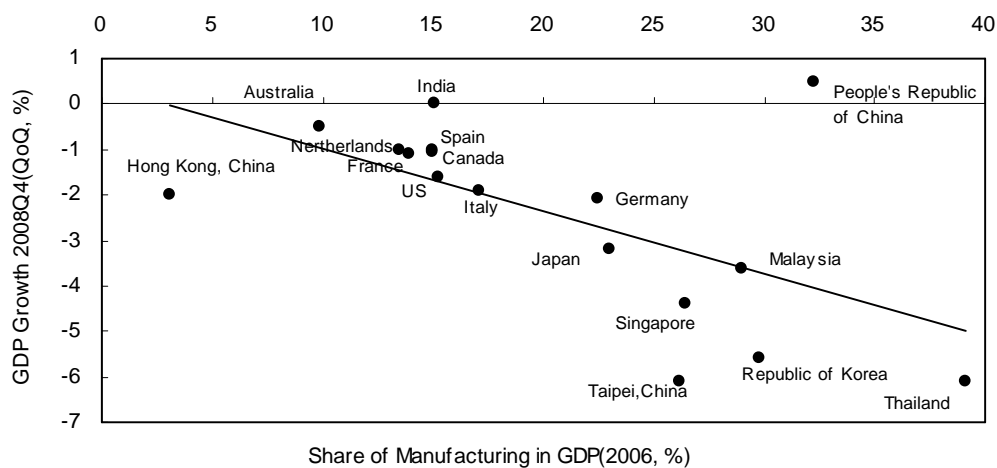
## 2.2 Factors for the Collapse in the 4<sup>th</sup> Quarter of 2008

### Korea's High Dependence on Trade Sectors

The most plausible explanation for the Korean economic collapse in the 4<sup>th</sup> quarter of 2008 is the economy's heavy reliance on exports, or more precisely, trade sectors. A leading example for this line of explanation is the IMF's position note written by Martin Sommer (2009). Using the portion of (high-tech) manufacturing industries in a country's gross domestic product (GDP) as a proxy variable for the country's dependence on exports, he established a strong negative relationship between this variable and the 4<sup>th</sup> quarter growth rate, and provided a straightforward but convincing interpretation.

Figure 6 reproduces the negative relationship found in Sommer (2009) with the portion of high-tech manufacturing industries substituted by the whole manufacturing sector. Clearly, Korea, along with other Asian countries, was heavily reliant on the manufacturing sectors and was most severely hit in the 4<sup>th</sup> quarter 2008.

**Figure 6: Growth Rates in the 4<sup>th</sup> Quarter 2008 and the Share of Manufacturing**



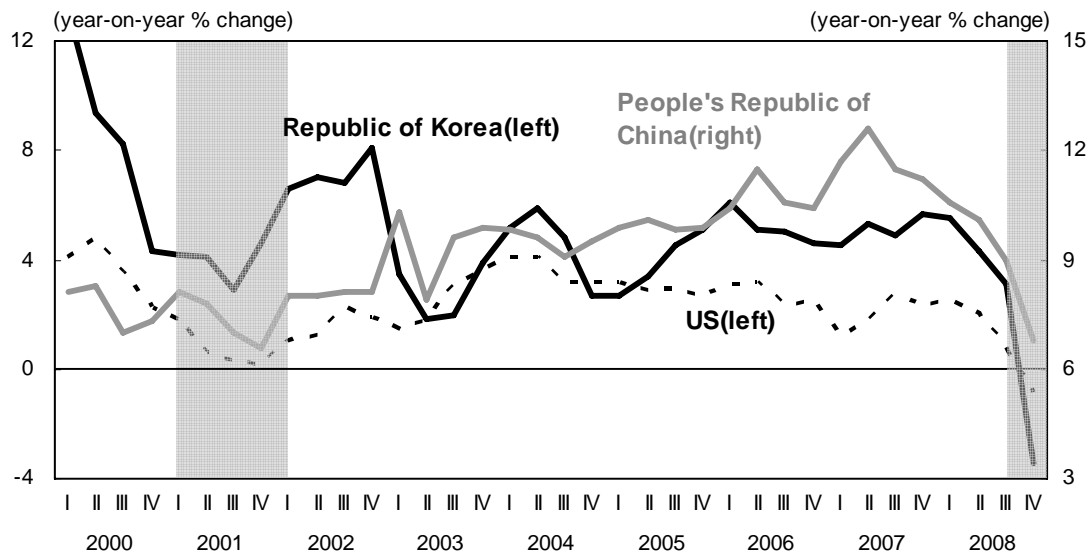
Data source: OECD (Canada, France, Germany, Italy, Japan, Netherlands, Republic of Korea, Spain, US), Cabinet Office (Japan), Census and Statistics Department (Hong Kong, China), Singapore Department of Statistics (Singapore), Bloomberg (People's Republic of China; India; Malaysia; Taipei, China; Thailand).

Nevertheless, the question still remains: could it be expected, *ex ante*, that Korea's GDP would contract three times as much as the crisis-originating countries, considering its heavy dependence on exports? Formal analyses indicate that there are no clear reasons to expect developing countries to respond more than proportionally with respect to the crisis of developed countries through trade channels alone. An estimate by the IMF (2001: 80) shows that "a 1.0% change in real GDP growth in the G-7 countries is associated with a 0.4% change in growth in developing countries." As for Korea, simulation exercises conducted by the Korea Development Institute (KDI) using a macro-econometric model produced the result that Korea's GDP shrunk by approximately 0.8% when world GDP declined by 1.0% (KDI, 2008). If Korea is twice as exposed to tradable manufacturing sectors as the average developing country, then this result appears to be consistent with the conclusions of the IMF report. In fact, the

regression coefficient is close to one for the data set in Figure 6, indicating that the growth response to a trade shock doubles when the share of manufacturing sectors doubles. Nonetheless, past experiences do not seem to systematically explain the more than proportional response of the Korean economy to the global financial crisis.

A simple reading of Figure 7 also does not yield the impression that Korea should respond more than proportionally to the US recession. In fact, Figure 7 shows that the recession in 2001 seems to be relevant to the current situation. The recession in 2001 was triggered by the information technology (IT) bubble bust in the US, while the housing price bubble bust in the US triggered the current recession. The recession in 2001 was also accompanied by a contraction of global trade that severely affected Korea's export sector. More specifically, the 2001 recession saw a deep contraction in demand for IT products, a major export item of Korea as well as other Asian countries. Nevertheless, in 2001, Korea managed to maintain a reasonable 4.0% growth rate in spite of the sharp contraction in exports, which was far higher than those of advanced countries.

**Figure 7: Growth Rates of Korea, the People's Republic of China, and the US**



Data source: Bank of Korea (Republic of Korea), Bureau of Economic Analysis (US), National Bureau of Statistics of China (People's Republic of China).

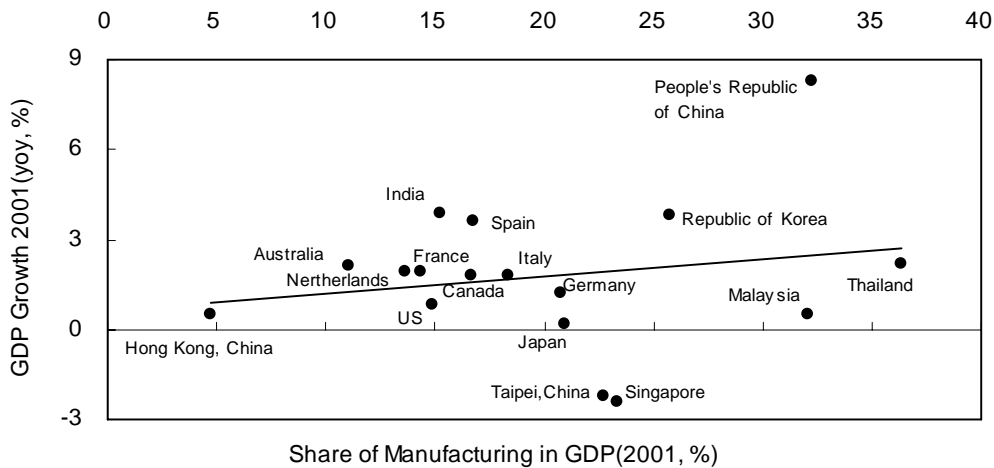
**Additional Factor #1: The Collapse of the Chinese Economy**

So why was Korea hit so severely this time? Figure 7 provides a potential clue to this question, namely the factor of the People's Republic of China (PRC), which is by far the largest trading partner of Korea and most Asian economies. The Chinese growth rate was not greatly affected by the global recession in 2001. However, with the current crisis the PRC's growth rate collapsed along with its trade, and the adverse effects spread to the neighboring Asian economies, including Korea.

A casual explanation for the sharp contraction of the Chinese economy in the 4<sup>th</sup> quarter of 2008 is that the recession in the US triggered the collapse of the PRC's export sector, which in turn caused the collapse of the PRC's growth as well as imports. This

explanation, however, can hardly answer the same question—why not in 2001? Figure 8 reproduces Figure 6 with the growth rate in the 4<sup>th</sup> quarter of 2008 against that in 2001. This figure shows that it is not a general rule for Asian countries to respond more than proportionally to a US recession, even though their portions of GDP from manufacturing sectors are relatively large.

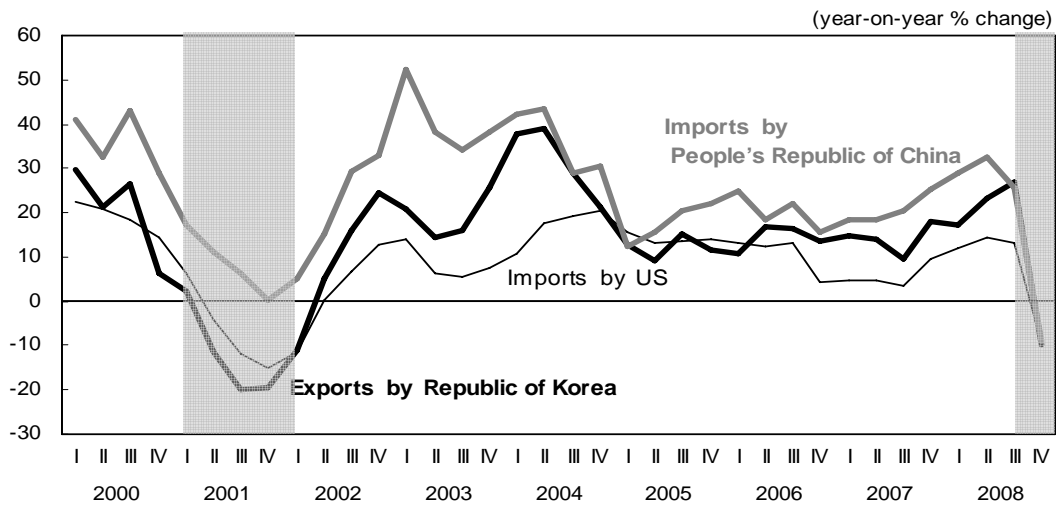
**Figure 8: Growth Rates in 2001 and the Share of Manufacturing**



Data source: OECD (Canada, France, Germany, Italy, Japan, Netherlands, Republic of Korea, Spain, US), Cabinet Office (Japan), Census and Statistics Department (Hong Kong, China), Singapore Department of Statistics (Singapore), Bloomberg (People's Republic of China; India; Malaysia; Taipei,China; Thailand).

If the sharp decline of the PRC's growth rate in the 4<sup>th</sup> quarter of 2008 was not entirely induced by the recession in advanced countries, there must be an autonomous factor for it. The trend of the PRC's growth rate suggests a possible hypothesis, namely the overheating of the PRC (Figure 7). While there was no symptom of overheating in the PRC before the 2001 global recession period, it appears that the Chinese economy had overheated before the current global recession, particularly in 2006 and 2007 when the growth rates were over 10%. It may then be conjectured that, having accumulated internal fragility due to the overheating, the Chinese economy hysterically responded to the global shock this time, while it did not in 2001. The hysteric response of the Chinese economy provided an additional factor for the collapse in Asia's intra-regional trade in the 4<sup>th</sup> quarter of 2008. In fact, with respect to the basically same sort of trade shock from the US in 2001, the PRC's trade did not contract as rapidly as that of the US. However, it did contract even more rapidly this time, suggesting a correction of the PRC's domestic economy from an overheated state (Figure 9). As a reference, the export volume of the US contracted by 5.4% in 2001, but the PRC's export volume in the same year expanded by 9.6%.

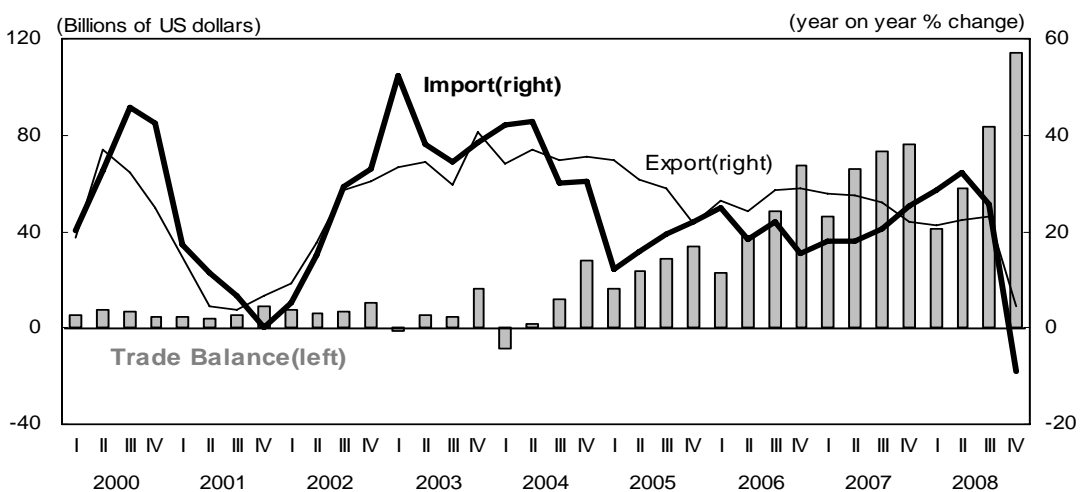
**Figure 9: Growth of Exports by Korea and Imports by the US and the People's Republic of China**



Data source: Korea Customs Service (Republic of Korea), Foreign Trade Statistics (US), National Bureau of Statistics of China (People's Republic of China).

Another piece of evidence for this hypothesis is the expansion of the PRC's trade surplus in the 4<sup>th</sup> quarter 2008 (Figure 9). While the PRC's exports collapsed, its imports declined even more rapidly, boosting its trade surplus to its largest size ever during the 4<sup>th</sup> quarter. Apart from a terms-of-trade gain, the widening of a trade surplus is usually interpreted as a sign that domestic demand sectors have contracted more rapidly than export sectors. Thus, the increase in the PRC's trade surplus may have been surprising to many economists since the PRC, as an important counterpart to the US in terms of the global imbalance, was expected to experience a reduction in the trade surplus.

**Figure 10: Growth Rates of Export and Import, and Trade Balance of the People's Republic of China**



Data source: National Bureau of Statistics of China (the People's Republic of China).

If there were an autonomous factor for the sharp decline of the PRC's growth rate and imports, it would help explain the more than proportional contraction of the growth rates in Asian economies, including Korea. A simple reduced-form regression of the Korea's export growth rate (year-on-year) shows that, even after controlling for US imports, the PRC's imports maintain independent explanatory power, while those of the Eurozone and Japan do not:

$$EX_{Korea} = 0.98IM_{US} - 0.20IM_{Euro} - 0.05IM_{Japan} + 0.41IM_{China} + residual$$

(7.66)      (-1.94)      (-0.52)      (7.49)

In the above equation,  $EX_i$  and  $IM_i$  are exports and imports of economy  $i$  (year-on-year growth rate), and numbers in parentheses are t-ratios. This result seems to suggest that at least the PRC's imports are not entirely induced by the economic fluctuations of the US. Also, the coefficient estimate for the PRC's import growth rate appears to be sizable in determining Korea's exports, in that it is almost a half of that for the US. All in all, the surprisingly drastic collapse of Korea's growth and exports in the 4<sup>th</sup> quarter of 2008 seem to be attributable not only to the import contraction of the US, but also to that of the PRC.

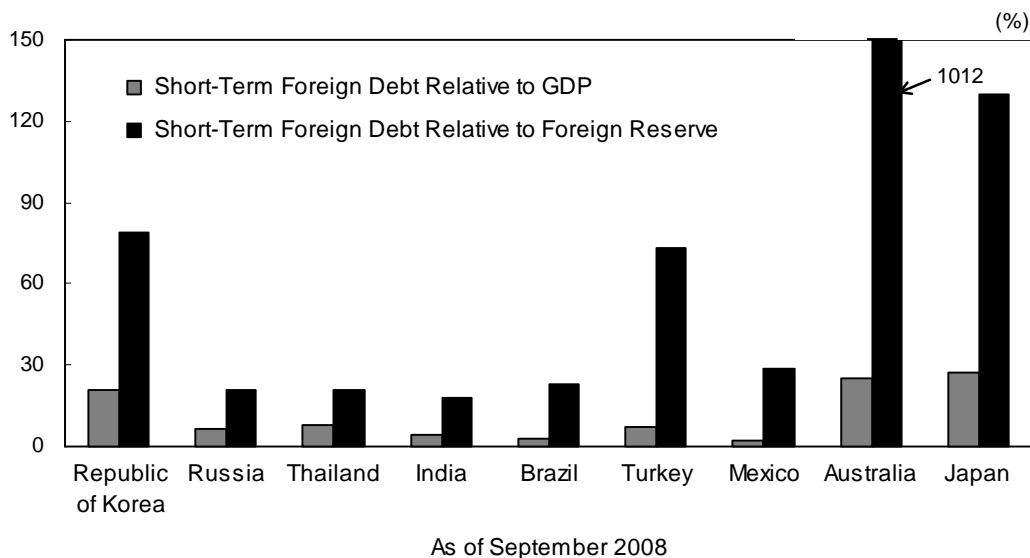
## Additional Factor #2: Massive Capital Withdrawal from Korea

While the PRC factor may help explain the hysteric response of Asia's trade to the US crisis, it does not seem to be sufficient in explaining why Korea in particular was hit so hard. For this question to be answered, Korea-specific factors accounting for the collapse in the 4<sup>th</sup> quarter of 2008 need to be identified, in addition to the aforementioned PRC factor.

The abrupt capital withdrawal through the financial channel appears to be a plausible candidate for the Korea-specific factor. An enormous amount of foreign capital flowed out from Korea in the 4<sup>th</sup> quarter of 2008, depreciating the Korean won by more than 30% vis-à-vis the US dollar. This magnitude of depreciation was the largest among the Asian currencies.

The main reason for this drastic withdrawal of financial capital seems to be the Korean economy's heavy reliance on short-term foreign debt. While Korea holds the sixth largest official foreign reserves in the world, the size of short-term foreign debt is so large that its ratio to foreign reserves is greater than those of other emerging economies (Figure 11).

**Figure 11: Short-Term Foreign Debt Relative to GDP or Foreign Reserve**



Data source: Joint External Debt Hub (BIS, IMF, OECD, World Bank), Global Insight.

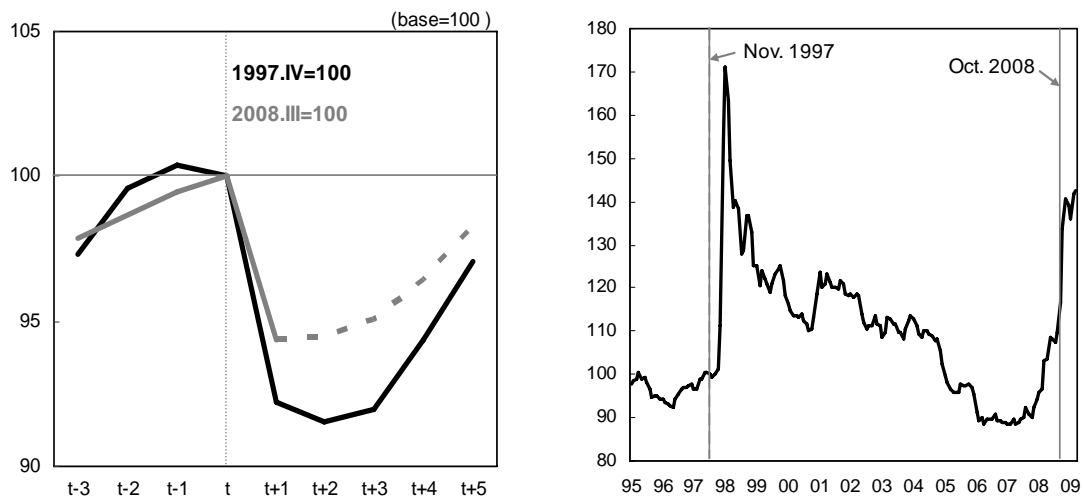
With this relatively fragile foreign liquidity front, the panic of the global financial market was directly transmitted to the Korean market through the abrupt reversal of foreign capital flow since October 2008. In fact, the size of financial capital withdrawn on net for just October 2008 was US\$25.5 billion (more than 3% of annual GDP) which was far larger than the US\$6.4 billion in December 1997, the worst month during the Asian crisis. This flight of capital caused Korea's asset prices to collapse and credit to become severely crunched. Apart from the collapse of exports, disturbances in the financial market provided an additional shock to the Korean economy, particularly with respect to domestic demand such as private consumption and equipment investment.

### III. Comparison with the Currency Crisis Period

#### 3.1 Major Macroeconomic Indicators: Similarities and Differences

On surface, the current recession in Korea appears to be similar to the currency crisis period: in both periods, the growth rate and the currency value collapsed simultaneously. Figure 12 compares the recent fluctuations of the GDP level (in terms of the indexes that normalize the pre-crisis level at 100) and currency value (in terms of real effective exchange rate) with those during the currency crisis period. The quarter-to-quarter growth rate in the 4<sup>th</sup> quarter of 2008, -5.6%, was the second worst in the economic history of Korea since 1970 which was approximately two thirds of the worst record, -7.8%, in the 1<sup>st</sup> quarter of 1998. The degree of recent currency depreciation was also approximately two thirds of that during the currency crisis period.

**Figure 12: Similarities of the Current Recession with the Currency Crisis Period**  
GDP (Index) Real Effective Exchange Rate



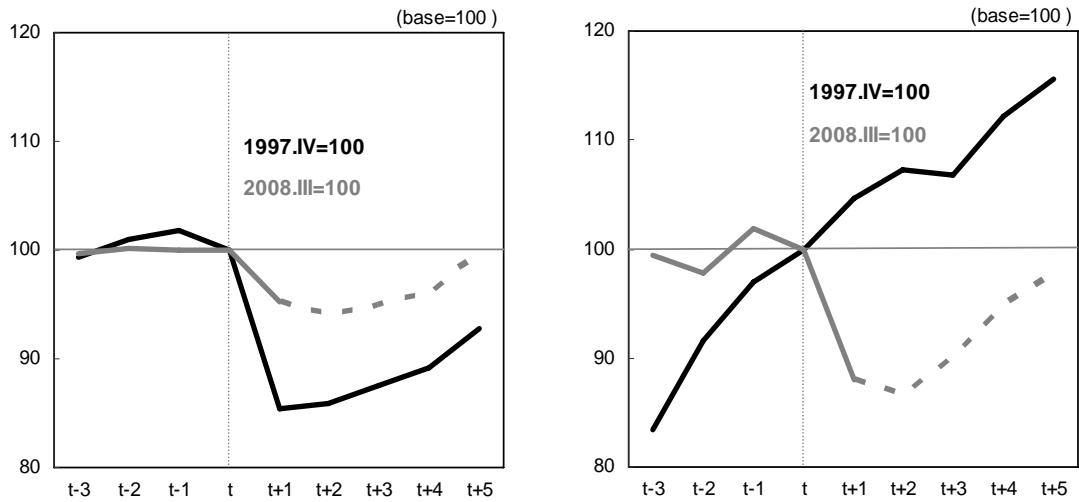
Note: Dotted line denotes author's projection.

Data source: Bank of Korea (Republic of Korea), Korea Development Institute.

Though the fluctuations of GDP and currency value appear to be similar, the current recession is qualitatively very different from the currency crisis period in many respects. Above all, the responses of domestic demand and exports are totally different (Figure 13). During the currency crisis period, domestic demand drove the collapse of GDP, while export demand continued to expand. This time, however, it was export demand that drove the economic recession, while the contraction in domestic demand was relatively mild. This sharp contrast in the response of the economy clearly reflects the difference in the source of shocks. While the currency crisis was triggered by the implosion of the internal financial market, the current recession was mainly triggered by the explosion of the external financial market.



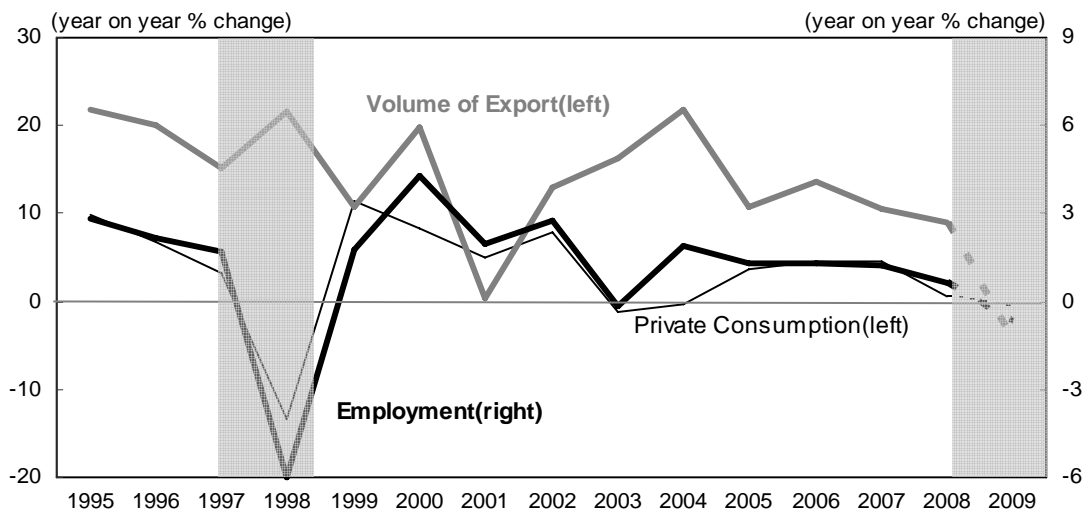
**Figure 13: Differences of the Current Recession from the Currency Crisis Period**  
Private Consumption (Index)      Export Volume(Index)



Note: Dotted line denotes author's projection.  
Data source: Bank of Korea (Republic of Korea).

The difference in the responses of demand components has many important implications. Among them, probably the most important is its implication regarding employment. Previous research, for example Shin and Kim (2008), showed that most short-term employment fluctuation is determined by domestic demand, particularly private consumption, while the effect of export fluctuation is minimal or almost non-existent. Figure 14 clearly shows this pattern. This seems to be the main reason that the loss of employment remains within a manageable range in the current recession, while it explosively expanded during the currency crisis period.

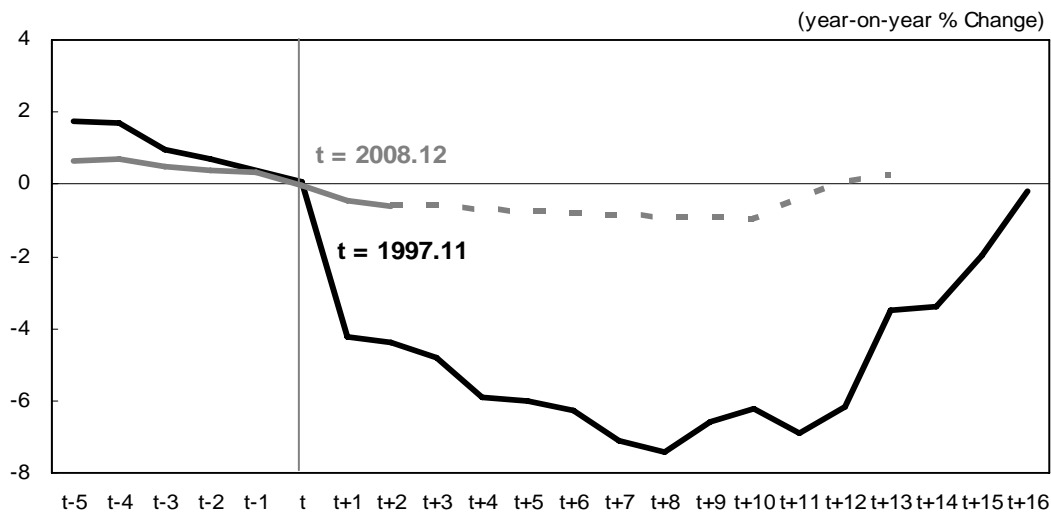
**Figure 14: Employment in Relation to Private Consumption and Export**



Data source: Bank of Korea (Republic of Korea), National Statistical Office

For example, right after the currency crisis broke out, approximately 870,000 jobs (more than 4% of the total number of workers) were lost during the month of January 1998. The employment situation continued to be worsened until August 1998 when approximately 1.6 million jobs (7.4% of the total) were lost compared to the same month of the previous year. During the current recession, however, the loss of jobs has been relatively mild (Figure 15).

**Figure 15: Employment Growth, Current Recession and Currency Crisis Period**



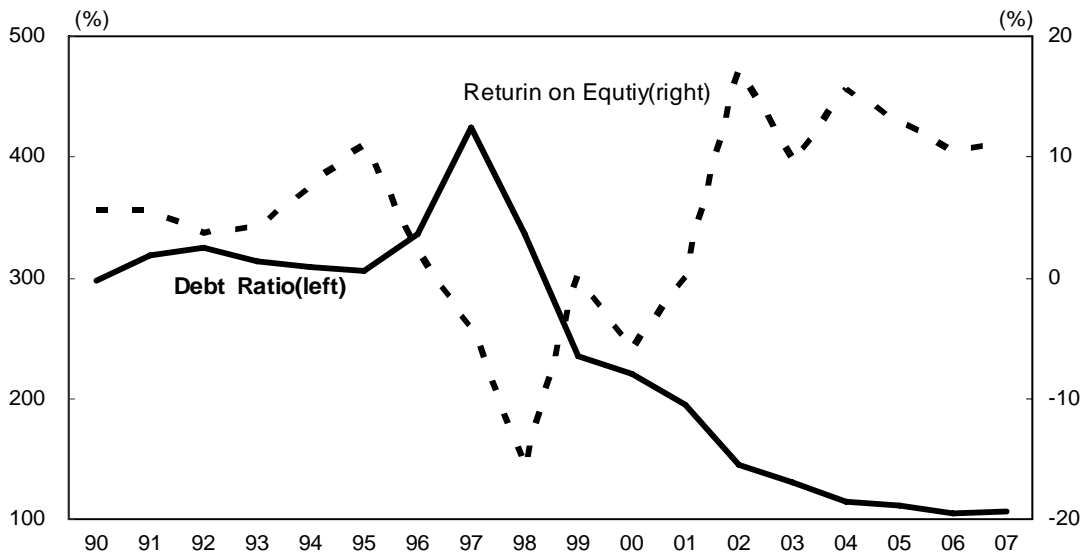
Note: Dotted line denotes author's projection.  
Data source: National Statistical Office (Republic of Korea).

### 3.2 Structural Positions of the Economy when the Shock Occurred

Both the currency crisis and the current recession were triggered by external shocks, such as the Thai baht crisis in 1997 and the Lehman Brothers bankruptcy in 2008. However, the severity of the two external shocks is not comparable: the latter was far more severe than the former. Yet despite the disparity in severity, the Korean financial market saw a meltdown in 1997 but not in 2008. For example, in the current crisis no Korean banks have received public money. In fact, this improvement in financial market stability seems to work as a critical element to support domestic demand this time, despite the drastic contraction in export demand.

The improvement of financial market stability can be attributed to the restructuring efforts since the currency crisis. First, the financial positions of the corporate sector were substantially improved in comparison with those during the currency crisis period. The average debt-to-equity ratio of the manufacturing sector was reduced from 424.6% in 1997 to 106.5% in 2008 and profitability of the corporate sector was also greatly improved (Figure 16).

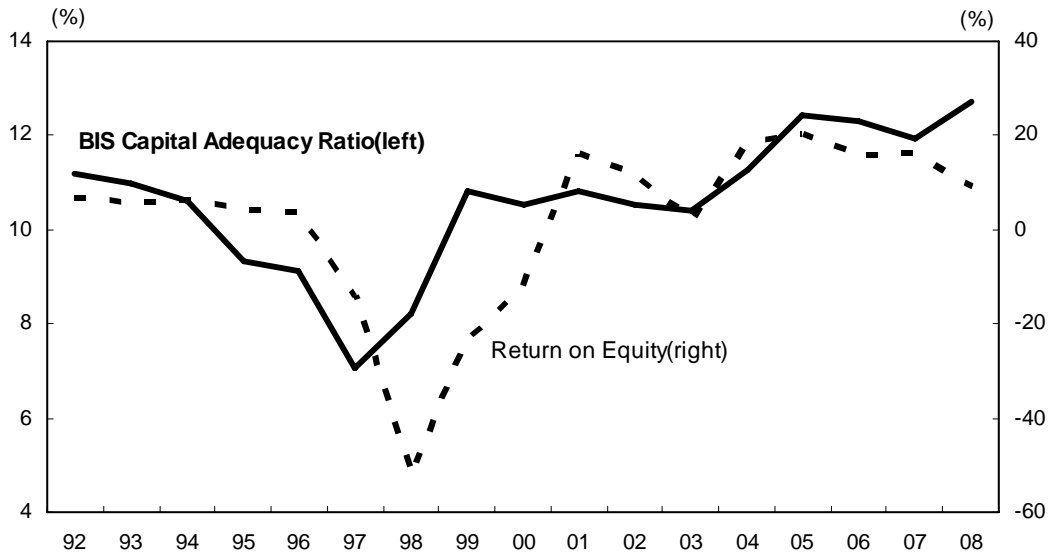
**Figure 16: Debt-equity Ratio and Profitability of the Corporate Sector**



Data source: Bank of Korea (Republic of Korea).

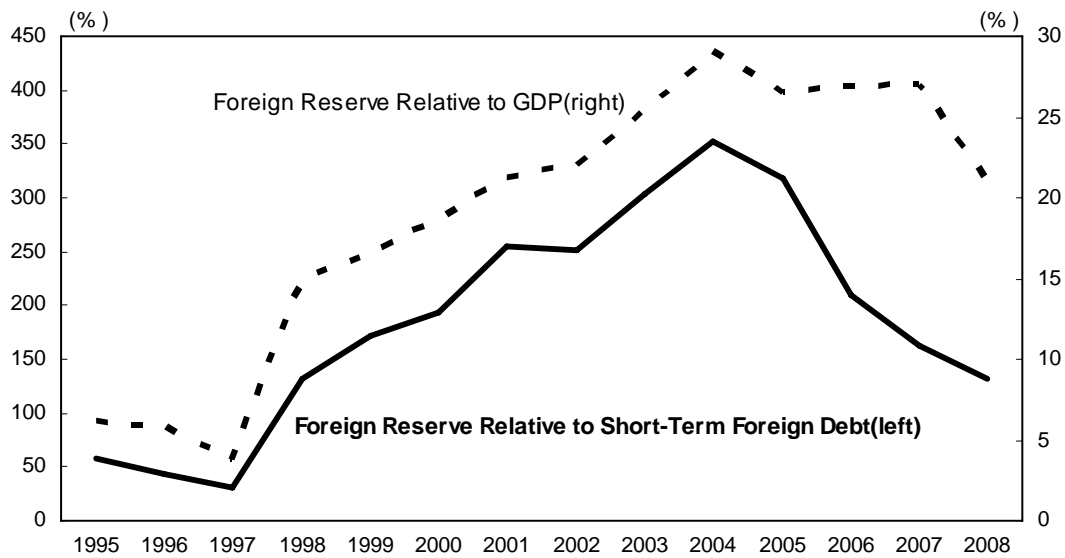
Second, the soundness of financial institutions also strengthened. The average capital adequacy ratio (BIS ratio) of the banking sector was greatly improved, providing financial buffers to the system. Although the BIS ratio has been reduced since the global crisis, no Korean banks have yet received public money. There has been much progress in terms of profitability of the banking sector as well (Figure 17).

**Figure 17: BIS Ratio and Profitability of the Banking Sector**



Data source: Financial Supervisory Service (Republic of Korea).

**Figure 18: Foreign Reserves Relative to GDP or Short-Term Debt**



Data source: Bank of Korea (Republic of Korea), International Monetary Fund.

Third, the foreign reserve position also has improved since the currency crisis period. Although short-term foreign debts had increased rapidly since 2005 and triggered some disturbances in the foreign exchange market in the wake of the global financial panic, the amount of official foreign reserves has substantially increased compared to that in the currency crisis period in both absolute and relative terms (Figure 18).

Fourth, there has been qualitative progress, though it is not readily measured quantitatively. For example, financial market supervision has been strengthened in many respects, and accounting practices and public announcement systems have become more transparent.

Of course, there are some aspects that have deteriorated. The size of household debt, which was extremely low during the currency crisis period, has increased to a level that concerns investors in the Korean market. The size of government debt has also increased, though it is still in far better shape than that of many advanced countries. Nevertheless, there is no doubt that the overall structure of Korea's financial market has become far sounder than it was 10 years ago, which seems to have greatly helped maintain financial market stability and domestic demand.

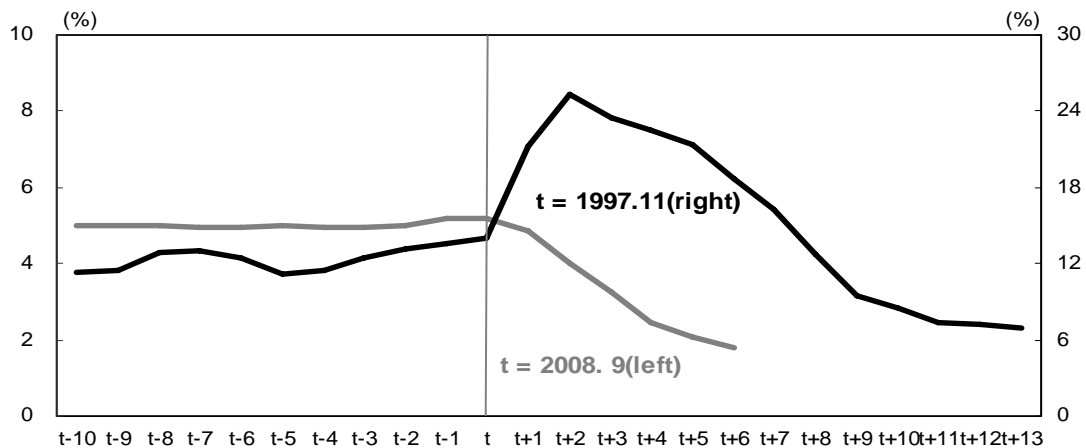
### 3.3 Macro-Policy Reactions

Policy reactions to cope with the current crisis also have been very different. Above all, the use of exchange rate policy has completely changed since 1997. In 1997, the Korean government continued futile attempts to defend the currency value through direct market interventions until its foreign reserves became nearly depleted. When the Korean government asked the IMF for a bailout package, its remaining foreign reserves were below US\$10 billion. This time, however, the government did not intervene, even when the exchange rate became extremely volatile right after the Lehman Brothers bankruptcy filing. Instead of clinging to the exchange rate, the Korean government tried to secure overall foreign currency liquidity in the market by negotiating currency swaps with the US,

Japan, and the PRC. This policy stance greatly contributed to saving official foreign reserves as well as helping (or forcing) the private sector to quickly adjust itself to a new currency value and generate a current account surplus. In other words, the Korean government honored the floating exchange rate regime, and facilitated the necessary macroeconomic adjustments.

By letting the exchange rate float, the Korean government could maintain a flexible monetary policy this time, which it actually exercised. In response to the financial market panic, the Bank of Korea swiftly lowered the policy interest rate target from 5% to 2% within the 4 months from October 2008 to January 2009. This monetary policy reaction starkly contrasted with that of the currency crisis period when the Korean government (and the IMF) abruptly raised the interest rate target to around 30%. This contrast in the monetary policy reactions was mainly due to the difference in foreign currency liquidity during the crises. In December 1997, faced with the near-depletion of foreign reserves, minimizing the nation's default probability became the foremost policy objective, and all policy measures were aligned accordingly. Monetary policy was also mobilized for this purpose and the interest rate rose drastically. While previous research showed that the high interest rate policy contributed to the early recovery of foreign reserves and exchange rate stabilization, it was clear that this policy significantly deepened the economic recession and worsened employment situations. This time, however, backed by more than US\$200 billion in foreign currency reserves, monetary policy was used for economic stabilization. This experience of sharply contrasting interest rate policy reactions in Korea clearly demonstrates the inseparable connection between monetary policy and exchange rate policy.

**Figure 19: Policy Interest Rate Targets and Overnight Interbank Call Rates**



Data source: Bank of Korea (Republic of Korea).

Fiscal policy reactions were not as contrasting as monetary policy reactions. In both periods, expansionary fiscal stances were assumed, *ex post*. The size of the budget deficit, approximately 3% of GDP, is also similar. However, the processes leading to these similar reactions were different. In the crisis of the late 1990s, the IMF initially recommended that the Korean government maintain a balanced budget, but as the economic situation worsened in 1998 it revised its recommendation toward a budget deficit: 0.8% of GDP in the 5<sup>th</sup> agreement on February 7, 1.75% of GDP in the 6<sup>th</sup> agreement on May 2, 4.0% of GDP in the 7<sup>th</sup> agreement on July 24, and finally 5.0% of

GDP in 8<sup>th</sup> agreement on October 27. In contrast, the Korean government announced a fiscal expansion as soon as the current global crisis began. After global financial panic was triggered, the Korean government announced a supplementary budget of W11.2 trillion (approximately 1.1% of GDP) in November 2008, which has already been implemented. In addition, the government submitted another supplementary budget plan of W28.9 trillion (approximately 2.8% of GDP) to the National Assembly in March 2009, which should be implemented soon. This difference in policy reaction flexibility may have a meaningful implication on the time lag problem that is typically associated with fiscal policy.

## **IV. Prospects for the Korean Economy**

### **4.1 Short-Term Prospects for Growth Rebalancing**

#### **Factors for the Collapse in the 4<sup>th</sup> Quarter of 2008, Revisited**

If export reliance was the cause of the collapse of Asia as well as Korea in the 4<sup>th</sup> quarter of 2008, there should not be any expectations for recovery in Korea, or more broadly in Asia, until the US and the Europe begin to recover. In contrast, if the additional factors discussed earlier prove to be important contributors to the collapse of the Korean economy, it is worthwhile to think about the possible impacts of those factors.

First, the severe capital withdrawal pressures are likely to be eased within a relatively short time period, though this easing will rely heavily on the capricious environment of the global financial market. Such a drastic capital withdrawal as seen in October 2008 does not seem to be sustainable: if Korea's short-term foreign debt continues to be withdrawn as much as US\$23 billion a month, it will almost disappear by the end of the first half of this year (the total short-term foreign debt was approximately US\$150 billion at the end of last year). In fact, the pressures have already eased from US\$23 billion in October 2008 to US\$12 billion in November and to US\$6 billion in December. As far as the abrupt capital outflow as an additional factor dragging down Korea's domestic demand, one may hope for a partial normalization process of domestic demand even before global trade begins to recover.

Second, if the current global crisis eventually leads to the unwinding of long-accumulated global imbalances, its corollary should be a relatively small correction of final demand in Asia compared to that in the US. Therefore, it seems natural to expect Asian domestic demand to recover earlier than that of the US. To the extent that Asian intra-regional trade does not entirely rely on the final demand of the US, or as far as Asia's trade is related to its own final demand at least partially, a small correction of Asia's demand is likely to result in a relatively small correction in Asia's trade, though Asia as a whole should reduce the size of its trade surplus.

The major premise of this scenario is the boosting of domestic demand in the PRC, a key component in the global rebalancing process, as well as a critical driver for the revitalization of Asia's intra-regional trade. In this sense, what happened during the 4<sup>th</sup> quarter of 2008 was a correction of global overheating including the PRC, and the global rebalancing scenario has not yet begun, at least not on the part of the PRC. However, as the PRC begins to rebalance its overheated economy, prospects appear more positive,

at least in relative terms, for Asia and Korea. Of course, a full-blown recovery of Korea will be in line with the global recovery in both financial and real sectors.

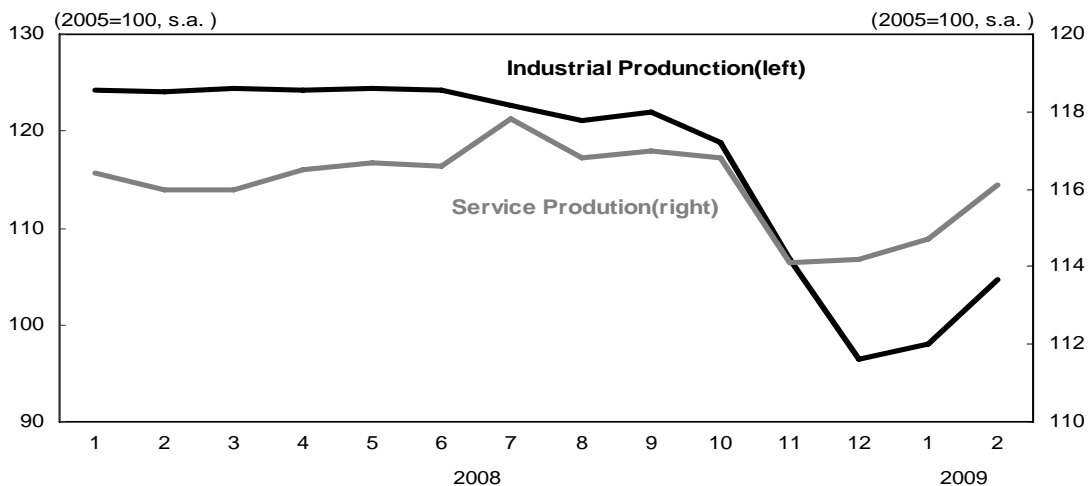
### Policy Reactions, Revisited

Unlike during the currency crisis period, macroeconomic policies immediately responded to the shock this time. The substantial depreciation of the won in the swirl of global financial crisis will help the profitability of Korean exporters and relieve the deflation pressures from abroad. The policy interest rate target has already been lowered to an unprecedented level of 2%, which will relieve the burdens of debt-ridden households and firms as well as the downward pressures in asset prices. Also, the government proposal for the supplementary budget, which should be approved in the near future, will help alleviate the declining trend of domestic demand. In short, all of the macroeconomic policy tools are consistently aligned for one single goal—boosting the economy.

### Recent Economic Indicators

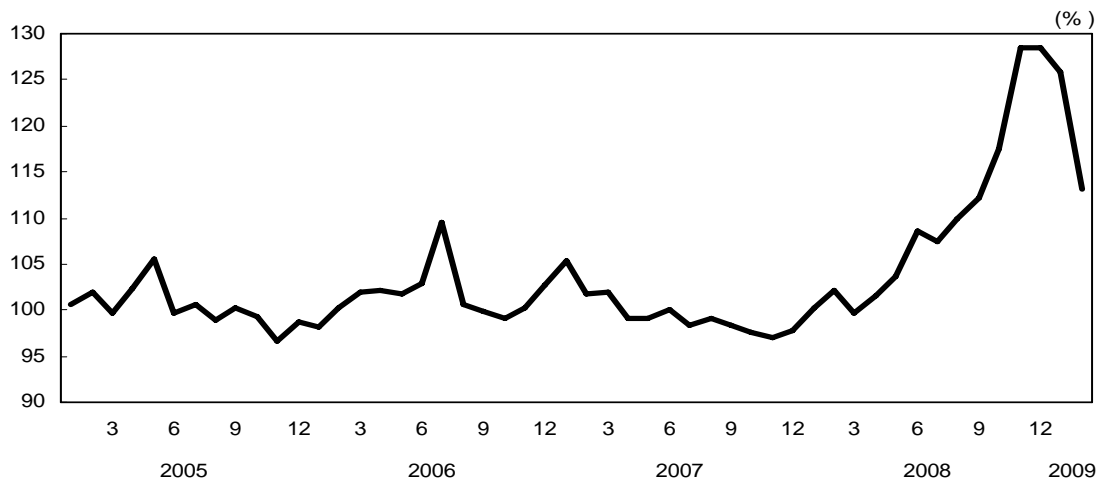
Very recently, there has been some signal that investor sentiment has improved. For example, stock prices are rising and the currency value is appreciating. Both business and consumer sentiment indexes have turned around since February 2009. More solid signals can be confirmed from the monthly indicators of production. Service production, which takes up approximately 55% of GDP and has close ties to domestic demand, began to increase month-to-month in December 2008, as the drastic capital outflow pressures were gradually eased (Figure 20). Industrial production, which takes up approximately 30% of GDP and closely relates to export demand, also began to increase month-to-month in January 2009, as the collapsing trend of the PRC's imports stabilized. As for industrial sectors, it is also encouraging that inventory has been declining very rapidly despite the collapse in export demand (Figure 21). This implies that industrial production has adjusted promptly to the abrupt contraction in demand, and can rebound early if demand conditions do not deteriorate further in the future.

**Figure 20: Service and Industrial Production (Seasonally Adjusted)**



Data source: National Statistical Office (Republic of Korea).

**Figure 21: Inventory to Shipment Ratio (Seasonally Adjusted)**



Data source: National Statistical Office (Republic of Korea).

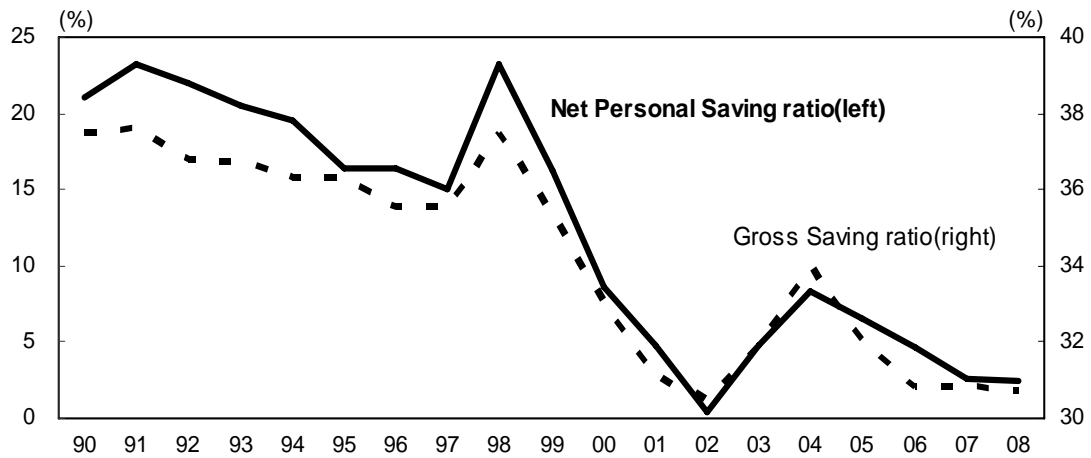
#### **4.2 Domestic Demand vs. Exports, or Services vs. Manufacturing**

It is often said that Asia should increase its domestic demand because its growth is too dependent on exports. This assertion may make sense for countries like the PRC that maintain a huge current account surplus. Faced with the presumably permanent decrease in demand from the US, it is necessary for Asia to seek other demand sources to make up for this gap. In this sense, the recovery of domestic demand in the PRC will play a pivotal role for the recovery of the whole Asia.

However, the same argument does not seem to be warranted for Korea, in which the current account fluctuates around a balanced level. Any permanent and sizable increase in domestic demand, unless accompanied by a parallel increase in exports, would imply a current account deficit that would likely disturb the foreign exchange market as it recently did. The aggregate savings rate of Korea has also been in a declining trend since the currency crisis, as bank credits became readily accessible to consumers (Figure 22). In particular, the net savings rate of Korean households has declined very rapidly from around 20% before the currency crisis to around 3% in 2007. In fact, the current savings rate of the Korean household is so low that many economists are worried about its negative implications on the financial market stability and future consumption potential.

**Figure 22: Savings Rate, Aggregate and Household**





Note: Net personal saving ratio is household personal savings divided by household disposable income.  
 Data source: Bank of Korea (Republic of Korea).

A similar argument from a supply-side perspective, however, seems legitimate—Korea needs to boost service sectors rather than manufacturing sectors. Though this statement appears to be similar to the earlier demand-side arguments because most services are spent domestically, its implications are totally different. First, it does not produce any implication on current account sustainability, while clearly recognizing the fact that the Korean economy relies heavily on manufacturing sectors in relation with exports (Figure 6). Second, typical measures for boosting domestic demand are expansionary macroeconomic policies (in particular, a fiscal expansion), but policy measures for boosting service sectors include microeconomic policies to enhance their productivities. According to the Organization for Economic Cooperation and Development (OECD) (2004), Korea’s productivity growth in the service sector relative to the manufacturing sector was the second lowest (next to Poland) among the OECD countries, which was largely attributed to many regulations that hampered service sector productivity, such as entry and exit barriers, mandatory licensing, and policy discriminations in favor of manufacturing. How to reform these regulations into efficient systems will be a key policy agenda for the government of Korea.

## V. Concluding Remarks

There has been a debate whether Korea, or more broadly Asia, can be “decoupled” with the business cycles of the US. This paper argues that Korea, as well as Asia in general, is not immune to global crises. At the same time, however, a more than proportional response of GDP to global crises in Korea and Asia does not seem to be the general case either. In this line of reasoning, the extremely hysteric response of Korea during the 4<sup>th</sup> quarter of 2008 was attributed not only to the crisis in the US, but also to additional idiosyncratic components such as the extraordinary collapse of the PRC’s imports and the drastic capital outflow from Korea.

The paper also identifies similarities and differences of the current recession in comparison with the currency crisis period. The current recession appears to be similar to the currency crisis period in that the growth rate and currency value collapsed simultaneously. However, the paper argues that there are more differences than similarities. First, the currency crisis was mainly attributed to the internal fragility of Korea’s financial market, but the current recession was mostly caused by external shocks. This difference in the causes of the two recessions was clearly reflected in the different responses of private consumption and exports, and hence employment. In the dimension of macroeconomic policy reactions, monetary policy was far more flexible this time than during the currency crisis period.

From this analysis, two implications can be drawn. First, as far as the economic response of the 4<sup>th</sup> quarter of 2008 being more hysteric than necessary for the rebalancing of macroeconomic fundamentals in Korea, it is expected that those economic losses can be recovered relatively soon. The most recent economic indicators appear to be encouraging in this context. Yet, for a more visible recovery of the Korean economy, the recovery of the PRC’s domestic demand seems necessary, which is also crucial for the global macroeconomic stability. Ultimately, a full-blown recovery of Korea will be in line with the global recovery.

A second implication is that structural aspects are critical for maintaining economic stability as well as employing flexible macroeconomic policies. While the Korean economy plunged into a historic crisis in 1997, triggered by the relatively small external shock of the Thai baht crisis, the economy is expected to remain relatively robust this time even in the midst of the most serious global crisis since the Great Depression. Behind this positive expectation stand the sound institutional fundamentals and flexible macroeconomic policy reactions of the Korean economy.

## References

Kato, T. 2009. Implications for Asia from the Global Financial Crisis and Policy Perspectives. Presented at the Harvard Asia Business Conference, Harvard University, Cambridge, 14–15 February.

International Monetary Fund (IMF). 2001. International Linkages: Three Perspectives. In *World Economic Outlook: The Information Technology Revolution*. Washington, DC: IMF.

Korea Development Institute (KDI). 2008. Effects of the Global Recession on the Korean Economy. Internal Manuscript. KDI.

Organization for Economic Cooperation and Development (OECD). 2004. *OECD Economic Surveys: Korea*. Vol. 2004/10. Paris: OECD.

Shin, S., and H. Kim. 2008. An Analysis on the Recent Slowdown of Employment. In *KDI Economic Outlook*. Seoul: KDI.

Sommer, M. 2009. Why Has Japan Been So Hard by the Global Recession? IMF Staff Position Note SPN/09/05. Washington, DC: IMF.

## Data Sources

	Country	Source
Banco de Espana	Spain	<a href="http://www.bde.es/infoest/htmls/capit25e.htm">http://www.bde.es/infoest/htmls/capit25e.htm</a>
Bank of Korea	Republic of Korea	<a href="http://ecos.bok.or.kr/">http://ecos.bok.or.kr/</a>
Bloomberg	World	<a href="http://www.bloomberg.com">http://www.bloomberg.com</a>
Bureau of Economic Analysis	US	<a href="http://www.bea.gov/national/nipaweb/SelectTable.asp">http://www.bea.gov/national/nipaweb/SelectTable.asp</a>
Cabinet Office	Japan	<a href="http://www.esri.cao.go.jp/index-e.html">http://www.esri.cao.go.jp/index-e.html</a>
Census and Statistics Department	Hong Kong, China	<a href="http://www.censtatd.gov.hk/home/index.jsp">http://www.censtatd.gov.hk/home/index.jsp</a>
Financial Supervisory Service	Republic of Korea	<a href="http://fisis.fss.or.kr/">http://fisis.fss.or.kr/</a>
Foreign Trade Statistics	US	<a href="http://www.census.gov/foreign-trade/www/index.html">http://www.census.gov/foreign-trade/www/index.html</a>
Global Insight	World	<a href="http://www.globalinsight.com/">http://www.globalinsight.com/</a>
International Monetary Fund	World	<a href="http://www.imf.org/external/data.htm">http://www.imf.org/external/data.htm</a>
Joint External Debt Hub (BIS, IMF, OECD, World Bank)	World	<a href="http://www.jedh.org/">http://www.jedh.org/</a>
Kookmin Bank	Republic of Korea	<a href="http://www.kbstar.com/">http://www.kbstar.com/</a>
Korea Customs Service	Republic of Korea	<a href="http://english.customs.go.kr/">http://english.customs.go.kr/</a>
National Bureau of Statistics of China	PRC	<a href="http://www.stats.gov.cn/english/">http://www.stats.gov.cn/english/</a>
National Institute for Statistics and Economic Studies	France	<a href="http://www.insee.fr/en/">http://www.insee.fr/en/</a>
National Statistical Office	Republic of Korea	<a href="http://www.kosis.kr/">http://www.kosis.kr/</a>
Nationwide	UK	<a href="http://www.nationwide.co.uk/default.htm">http://www.nationwide.co.uk/default.htm</a>
OECD	World	<a href="http://puck.sourceoecd.org/">http://puck.sourceoecd.org/</a>
Standard and Poor's, S&P/Shiller Case	US	<a href="http://www2.standardandpoors.com">http://www2.standardandpoors.com</a>
Singapore Department of Statistics	Singapore	<a href="http://www.singstat.gov.sg/">http://www.singstat.gov.sg/</a>

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	99-01	Se-II Park	Labor Market Policy and The Social Safety Net in Korea: After 1997 Crisis
Working Paper	99-02	Sang-Woo Nam	Korea's Economic Crisis and Corporate Governance
Working Paper	99-03	Sangmoon Hahm	Monetary Bands and Monetary Neutrality
Working Paper	99-04	Jong-II You Ju-Ho Lee	Economic and Social Consequences of globalization: The Case of South Korea
Working Paper	99-05	Sang-Woo Nam	Reform of the Financial Sector in East Asia
Working Paper	99-06	Hun-Joo Park	Dirigiste Modernization, Coalition Politics, and Financial Policy Towards Small Business: Korea, Japan, and Taiwan Compared
Working Paper	99-07	Kong-Kyun Ro	Mother's Education and Child's Health: Economic Anlalysis of Korean Data
Working Paper	99-08	Euysung Kim	Trade Liberalization and Productivity Growth in Korean Manufacturing Industries: Price Protection, Market Power, and Scale Efficiency
Working Paper	99-09	Gill-Chin Lim	Global Political-Economic System and Financial Crisis: Korea, Brazil and the IMF
Working Paper	99-10 (C99-01)	Seung-Joo Lee	LG Household & Health Care: Building a High-Performing Organization
Working Paper	00-01	Sangmoon Hahm Kyung-Soo Kim Ho-Mou Wu	Gains from Currency Convertibility: A Case of Incomplete Markets
Working Paper	00-02	Jong-II You	The Bretton Woods Institutions: Evolution, Reform and Change
Working Paper	00-03	Dukgeun Ahn	Linkages between International Financial and Trade Institutions: IMF, World Bank and WTO
Working Paper	00-04	Woochan Kim	Does Capital Account Liberalization Discipline Budget Deficit?
Working Paper	00-05	Sunwoong Kim Shale Horowitz	Public Interest "blackballing" in South Korea's Elections: One-Trick Pony, or Wave of the Future?
Working Paper	00-06	Woochan Kim	Do Foreign Investors Perform Better than Locals? Information Asymmetry versus Investor Sophistication
Working Paper	00-07	Gill-Chin Lim Joon Han	North-South Cooperation for Food Supply: Demographic Analysis and Policy Directions
Working Paper	00-08 (C00-01)	Seung-Joo Lee	Strategic Newspaper Management: Case Study of Mael Business
Working Paper	01-01	Seung-Joo Lee	Nokia: Strategic Transformation and Growth
Working Paper	01-02	Woochan Kim Shang-Jin Wei	Offshore Investment Funds: Monsters in Emerging Markets?
Working Paper	01-03	Dukgeun Ahn	Comparative Analysis of the SPS and the TBT Agreements
Working Paper	01-04	Sunwoong Kim Ju-Ho Lee	Demand for Education and Developmental State: Private Tutoring in South Korea
Working Paper	01-05	Ju-Ho Lee Young-Kyu Moh	Do Unions Inhibit Labor Flexibility? Lessons from Korea
Working Paper	01-06	Woochan Kim Yangho Byeon	Restructuring Korean Bank's Short-Term Debts in 1998 - Detailed Accounts and Their Implications -
Working Paper	01-07	Yoon-Ha YOO	Private Tutoring as Rent Seeking Activity Under Tuition Control

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	01-08	Kong-Kyun Ro	경제활동인구 변동의 요인분석: 선진국과의 비교분석
Working Paper	02-01	Sangmoon Hahm	Restructuring of the Public Enterprise after the Crisis : The Case of Deposit Insurance Fund
Working Paper	02-02	Kyong-Dong KIM	The Culture of Industrial Relations in Korea : An alternative Sociological Approach
Working Paper	02-03	Dukgeun Ahn	Korean Experience of the Dispute Settlement in the world Trading System
Working Paper	02-04	BERNARD S. BLACK Hasung Jang Woochan Kim	Does Corporate Governance Matter? (Evidence from the Korean Market)
Working Paper	02-05	Sunwoong Kim Ju-Ho Lee	Secondary School Equalization Policies in South Korea
Working Paper	02-06	Yoon-Ha YOO	Penalty for Mismatch Between Ability and Quality, and School Choice
Working Paper	02-07	Dukgeun Ahn Han-Young Lie	Legal Issues of Privatization in Government Procurement Agreements: Experience of Korea from Bilateral and WTO Agreements
Working Paper	02-08	David J. Behling Kyong Shik Eom	U.S. Mortgage Markets and Institutions and Their Relevance for Korea
Working Paper	03-01	Sang-Moon Hahm	Transmission of Stock Returns and Volatility: the Case of Korea
Working Paper	03-02	Yoon Ha Yoo	Does Evidentiary Uncertainty Induce Excessive Injurer Care?
Working Paper	03-03	Yoon Ha Yoo	Competition to Enter a Better School and Private Tutoring
Working Paper	03-04	Sunwoong Kim Ju-Ho Lee	Hierarchy and Market Competition in South Korea's Higher Education Sector
Working Paper	03-05	Chul Chung	Factor Content of Trade: Nonhomothetic Preferences and "Missing Trade"
Working Paper	03-06	Hun Joo Park	RECASTING KOREAN <i>DIRIGISME</i>
Working Paper	03-07	Taejong Kim Ju-Ho Lee	Mixing <i>versus</i> Sorting in Schooling: Evidence from the Equalization Policy in South Korea
Working Paper	03-08	Naohito Abe	Managerial Incentive Mechanisms and Turnover of Company Presidents and Directors in Japan
Working Paper	03-09	Naohito Abe Noel Gaston Katsuyuki Kubo	EXECUTIVE PAY IN JAPAN: THE ROLE OF BANK-APPOINTED MONITORS AND THE MAIN BANK RELATIONSHIP
Working Paper	03-10	Chai-On Lee	Foreign Exchange Rates Determination in the light of Marx's Labor-Value Theory
Working Paper	03-11	Taejong Kim	Political Economy and Population Growth in Early Modern Japan
Working Paper	03-12	Il-Horn Hann Kai-Lung Hui Tom S. Lee I.P.L. Png	Direct Marketing: Privacy and Competition
Working Paper	03-13	Marcus Noland	RELIGION, CULTURE, AND ECONOMIC PERFORMANCE
Working Paper	04-01	Takao Kato Woochan Kim Ju Ho Lee	EXECUTIVE COMPENSATION AND FIRM PERFORMANCE IN KOREA
Working Paper	04-02	Kyoung-Dong Kim	Korean Modernization Revisited: An Alternative View from the Other Side of History

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	04-03	Lee Seok Hwang	Ultimate Ownership, Income Management, and Legal and Extra-Legal Institutions
Working Paper	04-04	Dongsoo Kang	Key Success Factors in the Revitalization of Distressed Firms : A Case of the Korean Corporate Workouts
Working Paper	04-05	Il Chong Nam Woochan Kim	Corporate Governance of Newly Privatized Firms: The Remaining Issues in Korea
Working Paper	04-06	Hee Soo Chung Jeong Ho Kim Hyuk Il Kwon	Housing Speculation and Housing Price Bubble in Korea
Working Paper	04-07	Yoon-Ha Yoo	Uncertainty and Negligence Rules
Working Paper	04-08	Young Ki Lee	Pension and Retirement Fund Management
Working Paper	04-09	Wooheon Rhee Tack Yun	Implications of Quasi-Geometric Discounting on the Observable Sharp e Ratio
Working Paper	04-10	Seung-Joo Lee	Growth Strategy: A Conceptual Framework
Working Paper	04-11	Boon-Young Lee Seung-Joo Lee	Case Study of Samsung's Mobile Phone Business
Working Paper	04-12	Sung Yeung Kwack Young Sun Lee	What Determines Saving Rate in Korea?: the Role of Demography
Working Paper	04-13	Ki-Eun Rhee	Collusion in Repeated Auctions with Externalities
Working Paper	04-14	Jaeun Shin Sangho Moon	IMPACT OF DUAL ELIGIBILITY ON HEALTHCARE USE BY MEDICARE BENEFICIARIES
Working Paper	04-15	Hun Joo Park Yeun-Sook Park	Riding into the Sunset: The Political Economy of Bicycles as a Declining Industry in Korea
Working Paper	04-16	Woochan Kim Hasung Jang Bernard S. Black	Predicting Firm's Corporate Governance Choices: Evidence from Korea
Working Paper	04-17	Tae Hee Choi	Characteristics of Firms that Persistently Meet or Beat Analysts' Forecasts
Working Paper	04-18	Taejong Kim Yoichi Okita	Is There a Premium for Elite College Education: Evidence from a Natural Experiment in Japan
Working Paper	04-19	Leonard K. Cheng Jae Nahm	Product Boundary, Vertical Competition, and the Double Mark-up Problem
Working Paper	04-20	Woochan Kim Young-Jae Lim Taeyoon Sung	What Determines the Ownership Structure of Business Conglomerates? : On the Cash Flow Rights of Korea's Chaebol
Working Paper	04-21	Taejong Kim	Shadow Education: School Quality and Demand for Private Tutoring in Korea
Working Paper	04-22	Ki-Eun Rhee Raphael Thomadsen	Costly Collusion in Differentiated Industries
Working Paper	04-23	Jaeun Shin Sangho Moon	HMO plans, Self-selection, and Utilization of Health Care Services
Working Paper	04-24	Yoon-Ha Yoo	Risk Aversion and Incentive to Abide By Legal Rules
Working Paper	04-25	Ji Hong Kim	Speculative Attack and Korean Exchange Rate Regime
Working Paper	05-01	Woochan Kim Taeyoon Sung	What Makes Firms Manage FX Risk? : Evidence from an Emerging Market
Working Paper	05-02	Janghyuk Lee Laoucine Kerbache	Internet Media Planning: An Optimization Model

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	05-03	Kun-Ho Lee	Risk in the Credit Card Industry When Consumer Types are Not Observable
Working Paper	05-04	Kyong-Dong KIM	Why Korea Is So Prone To Conflict: An Alternative Sociological Analysis
Working Paper	05-05	Dukgeun AHN	Why Should Non-actionable Subsidy Be Non-actionable?
Working Paper	05-06	Seung-Joo LEE	Case Study of L'Oréal: Innovation and Growth Strategy
Working Paper	05-07	Seung-Joo LEE	Case Study of BMW: The Ultimate Driving Machine
Working Paper	05-08	Taejong KIM	Do School Ties Matter? Evidence from the Promotion of Public Prosecutors in Korea
Working Paper	05-09	Hun Joo PARK	Paradigms and Fallacies: Rethinking Northeast Asian Security
Working Paper	05-10	WOOCHAN KIM TAEYOON SUNG	What Makes Group-Affiliated Firms Go Public?
Working Paper	05-11	BERNARD S. BLACK WOOCHAN KIM HASUNG JANG KYUNG-SUH	Does Corporate Governance Predict Firms' Market Values? Time Series Evidence from Korea
Working Paper	05-12	Kun-Ho Lee	Estimating Probability of Default For the Foundation IRB Approach In Countries That Had Experienced Extreme Credit Crises
Working Paper	05-13	Ji-Hong KIM	Optimal Policy Response To Speculative Attack
Working Paper	05-14	Kwon Jung Boon Young Lee	Coupon Redemption Behaviors among Korean Consumers: Effects of Distribution Method, Face Value, and Benefits on Coupon Redemption Rates in Service Sector
Working Paper	06-01	Kee-Hong Bae Seung-Bo Kim Woochan Kim	Family Control and Expropriation of Not-for-Profit Organizations: Evidence from Korean Private Universities
Working Paper	06-02	Jaеun Shin	How Good is Korean Health Care? An International Comparison of Health Care Systems
Working Paper	06-03	Tae Hee Choi	Timeliness of Asset Write-offs
Working Paper	06-04	Jin PARK	Conflict Resolution Case Study: The National Education Information System (NEIS)
Working Paper	06-05	YuSang CHANG	DYNAMIC COMPETITIVE PARADIGM OF MANAGING MOVING TARGETS;
Working Paper	06-06	Jin PARK	A Tale of Two Government Reforms in Korea
Working Paper	06-07	Ilho YOO	Fiscal Balance Forecast of Cambodia 2007-2011
Working Paper	06-08	Ilho YOO	PAYG pension in a small open economy
Working Paper	06-09	Kwon JUNG Clement LIM	IMPULSE BUYING BEHAVIORS ON THE INTERNET
Working Paper	06-10	Joong H. HAN	Liquidation Value and Debt Availability: An Empirical Investigation
Working Paper	06-11	Brandon Julio, Woojin Kim Michael S. Weisbach	Uses of Funds and the Sources of Financing: Corporate Investment and Debt Contract Design

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.



## Working Paper Series

Category	Serial #	Author	Title
Working Paper	06-12	Hun Joo Park	Toward People-centered Development: A Reflection on the Korean Experience
Working Paper	06-13	Hun Joo Park	The Perspective of Small Business in South Korea
Working Paper	06-14	Younguck KANG	Collective Experience and Civil Society in Governance
Working Paper	06-15	Dong-Young KIM	The Roles of Government Officials as Policy Entrepreneurs in Consensus Building Process
Working Paper	06-16	Ji Hong KIM	Military Service : draft or recruit
Working Paper	06-17	Ji Hong KIM	Korea-US FTA
Working Paper	06-18	Ki-Eun RHEE	Reevaluating Merger Guidelines for the New Economy
Working Paper	06-19	Taejong KIM Ji-Hong KIM Insook LEE	Economic Assimilation of North Korean Refugees in South Korea: Survey Evidence
Working Paper	06-20	Seong Ho CHO	ON THE STOCK RETURN METHOD TO DETERMINING INDUSTRY SUBSTRUCTURE: AIRLINE, BANKING, AND OIL INDUSTRIES
Working Paper	06-21	Seong Ho CHO	DETECTING INDUSTRY SUBSTRUCTURE: - Case of Banking, Steel and Pharmaceutical Industries-
Working Paper	06-22	Tae Hee Choi	Ethical Commitment, Corporate Financial Factors: A Survey Study of Korean Companies
Working Paper	06-23	Tae Hee Choi	Aggregation, Uncertainty, and Discriminant Analysis
Working Paper	07-01	Jin PARK Seung-Ho JUNG	Ten Years of Economic Knowledge Cooperation with North Korea: Trends and Strategies
Working Paper	07-02	BERNARD S. BLACK WOOCHAN KIM	The Effect of Board Structure on Firm Value in an Emerging Market: IV, DiD, and Time Series Evidence from Korea
Working Paper	07-03	Jong Bum KIM	FTA Trade in Goods Agreements: 'Entrenching' the benefits of reciprocal tariff concessions
Working Paper	07-04	Ki-Eun Rhee	Price Effects of Entries
Working Paper	07-05	Tae H. Choi	Economic Crises and the Evolution of Business Ethics in Japan and Korea
Working Paper	07-06	Kwon JUNG Leslie TEY	Extending the Fit Hypothesis in Brand Extensions: Effects of Situational Involvement, Consumer Innovativeness and Extension Incongruity on Evaluation of Brand Extensions
Working Paper	07-07	Younguck KANG	Identifying the Potential Influences on Income Inequality Changes in Korea – Income Factor Source Analysis
Working Paper	07-08	WOOCHAN KIM TAEYOON SUNG SHANG-JIN WEI	Home-country Ownership Structure of Foreign Institutional Investors and Control-Ownership Disparity in Emerging Markets
Working Paper	07-09	Ilho YOO	The Marginal Effective Tax Rates in Korea for 45 Years : 1960-2004
Working Paper	07-10	Jin PARK	Crisis Management for Emergency in North Korea
Working Paper	07-11	Ji Hong KIM	Three Cases of Foreign Investment in Korean Banks
Working Paper	07-12	Jong Bum Kim	Territoriality Principle under Preferential Rules of Origin

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	07-13	Seong Ho CHO	THE EFFECT OF TARGET OWNERSHIP STRUCTURE ON THE TAKEOVER PREMIUM IN OWNER-MANAGER DOMINANT ACQUISITIONS: EVIDENCE FROM KOREAN CASES
Working Paper	07-14	Seong Ho CHO Bill McKelvey	Determining Industry Substructure: A Stock Return Approach
Working Paper	07-15	Dong-Young KIM	Enhancing BATNA Analysis in Korean Public Disputes
Working Paper	07-16	Dong-Young KIM	The Use of Integrated Assessment to Support Multi-Stakeholder negotiations for Complex Environmental Decision-Making
Working Paper	07-17	Yuri Mansury	Measuring the Impact of a Catastrophic Event: Integrating Geographic Information System with Social Accounting Matrix
Working Paper	07-18	Yuri Mansury	Promoting Inter-Regional Cooperation between Israel and Palestine: A Structural Path Analysis Approach
Working Paper	07-19	Ilho YOO	Public Finance in Korea since Economic Crisis
Working Paper	07-20	Li GAN Jaeun SHIN Qi LI	Initial Wage, Human Capital and Post Wage Differentials
Working Paper	07-21	Jin PARK	Public Entity Reform during the Roh Administration: Analysis through Best Practices
Working Paper	07-22	Tae Hee Choi	The Equity Premium Puzzle: An Empirical Investigation of Korean Stock Market
Working Paper	07-23	Joong H. HAN	The Dynamic Structure of CEO Compensation: An Empirical Study
Working Paper	07-24	Ki-Eun RHEE	Endogenous Switching Costs in the Face of Poaching
Working Paper	08-01	Sun LEE Kwon JUNG	Effects of Price Comparison Site on Price and Value Perceptions in Online Purchase
Working Paper	08-02	Ilho YOO	Is Korea Moving Toward the Welfare State?: An IECI Approach
Working Paper	08-03	Ilho YOO Inhyouk KOO	DO CHILDREN SUPPORT THEIR PARENTS' APPLICATION FOR THE REVERSE MORTGAGE?: A KOREAN CASE
Working Paper	08-04	Seong-Ho CHO	Raising Seoul's Global Competitiveness: Developing Key Performance Indicators
Working Paper	08-05	Jin PARK	A Critical Review for Best Practices of Public Entities in Korea
Working Paper	08-06	Seong-Ho CHO	How to Value a Private Company? -Case of Miele Korea-
Working Paper	08-07	Yoon Ha Yoo	The East Asian Miracle: Export-led or Investment-led?
Working Paper	08-08	Man Cho	Subprime Mortgage Market: Rise, Fall, and Lessons for Korea
Working Paper	08-09	Woochang KIM Woojin KIM Kap-sok KWON	Value of shareholder activism: evidence from the switchers
Working Paper	08-10	Kun-Ho Lee	Risk Management in Korean Financial Institutions: Ten Years after the Financial Crisis
Working Paper	08-11	Jong Bum KIM	Korea's Institutional Framework for FTA Negotiations and Administration: Tariffs and Rules of Origin
Working Paper	08-12	Yu Sang CHANG	Strategy, Structure, and Channel of Industrial Service Leaders: A Flow Chart Analysis of the Expanded Value Chain
Working Paper	08-13	Younguck KANG	Sensitivity Analysis of Equivalency Scale in Income Inequality Studies

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	08-14	Younguck KANG	Case Study: Adaptive Implementation of the Five-Year Economic Development Plans
Working Paper	08-15	Joong H. HAN	Is Lending by Banks and Non-banks Different? Evidence from Small Business Financing
Working Paper	08-16	Joong H. HAN	Checking Accounts and Bank Lending
Working Paper	08-17	Seongwuk MOON	How Does the Management of Research Impact the Disclosure of Knowledge? Evidence from Scientific Publications and Patenting Behavior
Working Paper	08-18	Jungho YOO	How Korea's Rapid Export Expansion Began in the 1960s: The Role of Foreign Exchange Rate
Working Paper	08-19	BERNARD S. BLACK WOOCHAN KIM HASUNG JANG KYUNG SUH	How Corporate Governance Affects Firm Value: Evidence on Channels from Korea
Working Paper	08-20	Tae Hee CHOI	Meeting or Beating Analysts' Forecasts: Empirical Evidence of Firms' Characteristics, Persistence Patterns and Post-scandal Changes
Working Paper	08-21	Jaemun SHIN	Understanding the Role of Private Health Insurance in the Universal Coverage System: Macro and Micro Evidence
Working Paper	08-22	Jin PARK	Indonesian Bureaucracy Reform: Lessons from Korea
Working Paper	08-23	Joon-Kyung KIM	Recent Changes in Korean Households' Indebtedness and Debt Service Capacity
Working Paper	08-24	Yuri Mansury	What Do We Know about the Geographic Pattern of Growth across Cities and Regions in South Korea?
Working Paper	08-25	Yuri Mansury & Jae Kyun Shin	Why Do Megacities Coexist with Small Towns? Historical Dependence in the Evolution of Urban Systems
Working Paper	08-26	Jinsoo LEE	When Business Groups Employ Analysts: Are They Biased?
Working Paper	08-27	Cheol S. EUN Jinsoo LEE	Mean-Variance Convergence Around the World
Working Paper	08-28	Seongwuk MOON	How Does Job Design Affect Productivity and Earnings? Implications of the Organization of Production
Working Paper	08-29	Jaemun SHIN	Smoking, Time Preference and Educational Outcomes
Working Paper	08-30	Dong Young KIM	Reap the Benefits of the Latecomer: From the story of a political, cultural, and social movement of ADR in US
Working Paper	08-31	Ji Hong KIM	Economic Crisis Management in Korea: 1998 & 2008
Working Paper	08-32	Dong-Young KIM	Civility or Creativity?: Application of Dispute Systems Design (DSD) to Korean Public Controversies on Waste Incinerators
Working Paper	08-33	Ki-Eun RHEE	Welfare Effects of Behavior-Based Price Discrimination
Working Paper	08-34	Ji Hong KIM	State Owned Enterprise Reform
Working Paper	09-01	Yu Sang CHANG	Making Strategic Short-term Cost Estimation by Annualized Experience Curve
Working Paper	09-02	Dong Young KIM	When Conflict Management is Institutionalized: A Review of the Executive Order 19886 and government practice
Working Paper	09-03	Man Cho	Managing Mortgage Credit Risk: What went wrong with the subprime and Alt-A markets?

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

## Working Paper Series

Category	Serial #	Author	Title
Working Paper	09-04	Tae H. Choi	Business Ethics, Cost of Capital, and Valuation
Working Paper	09-05	Woochan KIM Woojin KIM Hyung-Seok KIM	What makes firms issue death spirals? A control enhancing story
Working Paper	09-06	Yu Sang CHANG Seung Jin BAEK	Limit to Improvement: Myth or Reality? Empirical Analysis of Historical Improvement on Three Technologies Influential in the Evolution of Civilization
Working Paper	09-07	Ji Hong KIM	G20: Global Imbalance and Financial Crisis
Working Paper	09-08	Ji Hong KIM	National Competitiveness in the Globalized Era
Working Paper	09-09	Hao Jiang , Woochan Kim , Ramesh K. S. Rao	Contract Heterogeneity, Operating Shortfalls, and Corporate Cash Holdings
Working Paper	09-10	Man Cho	Home Price Cycles: A Tale of Two Countries
Working Paper	09-11	Dongcul CHO	The Republic of Korea's Economy in the Swirl of Global Crisis

\* The above papers are available at KDI School Website <<http://www.kdischool.ac.kr/new/eng/faculty/working.jsp>>. You may get additional copy of the documents by downloading it using the Acrobat Reader.