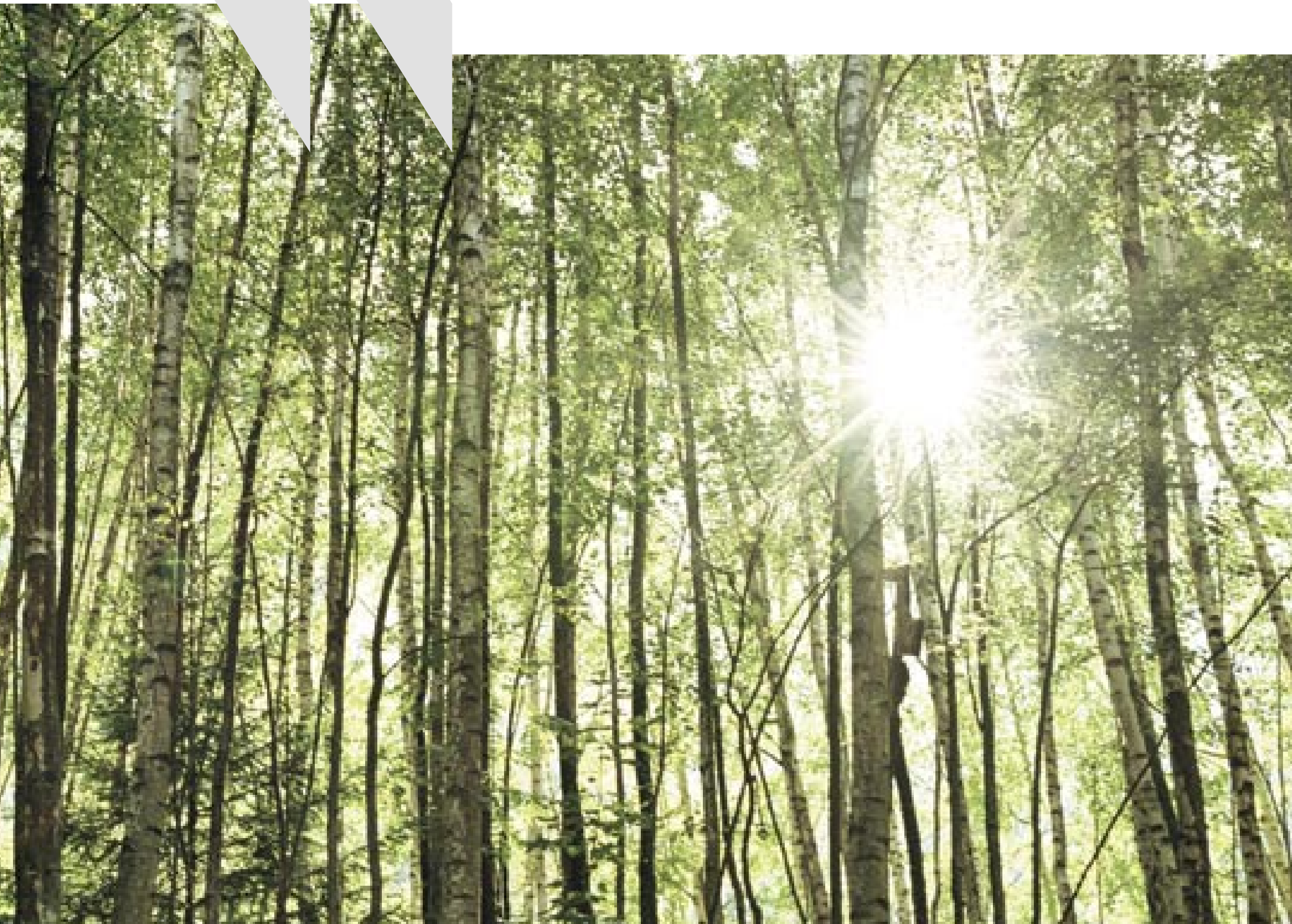
OECD Economic Surveys

Korea



OECD PUBLISHING

Volume 2005/21 – November 2005
Supplement No. 3

OECD
Economic Surveys

Korea

2005

OECD

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

This survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

Publié également en français

Table of contents

• • •

Boxes

Tables

Figures

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Korea were reviewed by the Committee on 7 September 2005. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 20 September 2005.

The Secretariat's draft report was prepared for the Committee by Randall Jones, Yongchun Baek and Tadashi Yokoyama, under the supervision of Willi Leibfritz.

The previous Survey of Korea was issued in June 2004.

BASIC STATISTICS OF KOREA

THE LAND

Area (thousand km^2)	100	Major cities, 2001 (million inhabitants):	
Agricultural area (thousand km^2)	14	Seoul	10.3
Forests (thousand km^2)	65	Busan	3.8
		Incheon	2.6
		Taegu	2.5

THE PEOPLE

Population, 2004 (million)	48.1	Civilian labour force, 2004 (million)	23.4
Per km^2, 2004	481	Civilian employment	22.6
Annual rate of change of population, 2004	0.5	Agriculture, forestry, fishing	1.8
		Industry	4.3
		Construction	1.8
		Services	14.6

PRODUCTION

GDP, 2004 (trillion won)	778.4	Origin of GDP, 2004 (per cent of total):	
GDP per head (US$)	14 137	Agriculture, forestry, fishing	3.7
Gross fixed investment, 2004		Industry	31.5
(trillion won)	229.7	Construction	9.3
Per cent of GDP	29.5	Services	55.5
Per head (US$)	4 171		

THE GOVERNMENT

Public consumption, 2004 (per cent of GDP)	13.5	Composition of the National Assembly:	Number of seats
Central government revenue, 2004,		April 2005	
consolidated basis (per cent of GDP)	23.0	The Uri Party	146
Central government budget balance, 2004,		The Grand National Party	125
consolidated basis (per cent of GDP)	0.7	Other	28
			299

FOREIGN TRADE

Commodity exports, 2004, f.o.b. (per cent of GDP)	37.3	Commodity imports, 2004, c.i.f. (per cent of GDP)	33.0
Main exports (per cent of total exports):		Main imports (per cent of total imports):	
Light industry products	11.7	Consumer goods	11.8
Heavy industry products	82.0	Industrial materials and fuels	50.7
Electronic products	34.6	Crude petroleum	13.3
Cars	9.7	Capital goods	37.4

THE CURRENCY

Monetary unit: Won		Currency unit per US$, average of daily figures:	
		2003	1 191
		2004	1 145
		August 2005	1 021

Executive summary

Korea's rapid economic development has lifted its per capita income from one-third to two-thirds of the OECD average during the past two decades. The economy is changing profoundly as a result of the structural reform programme launched after the 1997 crisis and increasing integration with the world economy. However, the delayed recovery of domestic demand from the 2003 recession has created concern about Korea's growth prospects over the medium term. Although there are signs of a rebound in domestic demand, sustaining high growth requires further progress in structural reform to boost productivity gains, as well as appropriate macroeconomic policies.

Macroeconomic policies should promote stability and balanced growth. The medium-term inflation target should remain the focus of monetary policy. Market-friendly policies should be used to deal with real estate price increases in some areas, while keeping the short-term policy rate low until there is a sustained recovery in aggregate demand. With foreign exchange reserves surpassing $200 billion, more than three times short-term foreign debt, the reduction in foreign exchange market intervention since the beginning of 2005 is appropriate to promote more balanced demand growth. The plans for fiscal stimulus, including public-private partnerships for infrastructure investment, should be pursued cautiously. The priority should be to limit increases in public spending and debt, given that population ageing is projected to be the most rapid in the OECD area. Reform of the public pension system is thus urgent to ensure its sustainability and limit the necessary rise in contribution rates.

Improving the relationship between levels of government is important to increase the efficiency of the public sector. *First*, there should be a clear division of responsibility and an upgrading of the capacity of local governments to enable them to exercise more power. The general local governments should have more influence on education, while providing more support, through stronger linkages with the local education authorities, with a final aim of merger. *Second*, the complicated local tax system should be simplified, while reducing the large role of property transaction taxes, and local tax revenue should be expanded, while increasing local governments' tax autonomy. *Third*, the shift from earmarked to block grants should continue, while simplifying the formula for the Local Share Tax. *Fourth*, increased autonomy at the local level should be accompanied by measures to ensure fiscal soundness. *Fifth*, the concerns about balanced regional development should be met through well-designed and transparent transfers, while addressing externalities due to concentration in the capital region through market-based instruments.

Upgrading the innovation framework is a key to faster productivity growth. A number of reforms are needed to make sure that Korea obtains full value for money from its relatively large investment in R&D and education.

- The *R&D system should be upgraded* by enhancing links between business, government, academic and foreign research institutes, with universities playing a greater role.

Flexibility in allocating R&D funds is important to avoid excessive emphasis on areas identified as future growth engines. Market-friendly policies should be used to encourage the risk capital market and the venture business sector.

- *Competition should be strengthened*, particularly in the service sector – where labour productivity is only about half of that in manufacturing – to encourage the development and diffusion of innovation.
- The *tertiary education sector should be restructured* based on increased competition between institutions, including those from abroad, to improve its quality. Funding for education needs to be rebalanced between levels to upgrade the quality of tertiary education, which has fallen during its period of rapid expansion.

Policies to improve the functioning of the labour market are essential, while encouraging greater labour force participation. The rising share of non-regular workers, who account for a third of employees, raises both equity and efficiency concerns. Relaxing employment protection for regular workers and improving the coverage of the social safety net, especially for non-regular workers, would enhance flexibility and reduce labour market dualism. Family-friendly measures to boost the relatively low participation rate of prime-age women are key to coping with rapid population ageing. It is also important to raise the effective age of retirement of employees from around 50, in part by reforming the seniority-based wage system and replacing the retirement allowance with a company pension system.

Further restructuring of the corporate and financial sectors is required to increase efficiency. While the large business groups (chaebol) have improved their soundness, it is important to increase competition, further implement the new corporate governance framework and improve financial supervision to strengthen market forces and prevent corporate misconduct. Moreover, it is essential to remain open to foreign investment. The deteriorating performance of small and medium-sized enterprises (SMEs) makes the restructuring of this sector a priority, while reducing government lending guarantees. Addressing the problems in the non-bank financial sector, which is heavily exposed to SMEs, is also essential. Another priority is to encourage the development of the capital market, which would enhance growth in an ageing society. The privatisation of government-owned banks should continue.

ISBN 92-64-01438-1
OECD Economic Surveys: Korea

Assessment and recommendations

While Korea stands out as one of the fastest-growing economies in the OECD area…

Korea has achieved an annual growth rate of 5½ per cent during the past five years, thanks in part to progress in restructuring its economy and strong external demand, particularly from China. The wide-ranging reform programme adopted following the 1997 crisis and the further opening to international competition is transforming the economy. Nearly half of the major business groups have disappeared, while foreign ownership of listed companies has increased from 15% to 42%. Rising foreign direct investment includes an important foreign presence in the banking sector. With rapid growth, the convergence process has continued, lifting Korea's per capita income to two-thirds of the OECD average.

… sustaining rapid growth over the longer-term requires meeting a number of challenges

However, the stagnation of domestic demand since the end of 2002 and slowing inputs of capital and labour have raised concerns about Korea's growth prospects. Sustaining the potential growth rate near its current level of 4½ to 5% requires meeting a number of challenges.

- Maintaining macroeconomic stability and sound public finances in the face of spending pressures stemming from exceptionally rapid population ageing, the development of a social safety net and the potential cost of future economic integration with North Korea.
- Effectively implementing the fiscal decentralisation programme to enhance efficiency in the context of the government's objective of promoting balanced regional development.
- Upgrading the innovation system to promote faster productivity gains by improving the R&D framework, strengthening product market competition and restructuring tertiary education.
- Enhancing labour market flexibility to cope with rapid structural change and reversing the trend toward increasing dualism, while promoting greater labour force participation.
- Resolving persistent remaining weaknesses in the corporate and financial sectors.

In sum, it is essential to complete the transformation of the economic framework that was launched in the wake of the 1997 crisis, while addressing emerging challenges, in order to sustain high growth.

With the rebound in domestic demand still hesitant…

Structural factors have contributed to the weakness of domestic demand since the 2003 recession. Households have reduced consumption following the run-up in debt during the credit card bubble of 2001 and 2002, while the corporate sector has been reluctant to

 OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

expand investment despite a high level of profits. The acceleration of real export growth to a historical high of 20% supported output growth of 4.6% in 2004. However, with exports slowing significantly in the first half of 2005, due in part to weaker demand from China, output growth will fall short of the government's goal of 5% for the year. Although there are some signs of a pick-up in domestic demand, output growth may slow to around 4% for the year, with faster growth in 2006 as domestic demand strengthens.

… the Bank of Korea should keep short-term interest rates low, while limiting intervention in the currency market …

The central bank should maintain low interest rates until aggregate demand is on a sustained recovery track in the context of the medium-term inflation targeting framework introduced in 2004. The Bank has supported demand by keeping the short-term policy rate at a record low of 3¼ per cent since November 2004. With the core consumer price index rising almost 3% year-on-year in the first half of 2005 – near the midpoint of the inflation target of 2½ to 3½ per cent – the real short-term rate is close to zero. The impact of low interest rates has been partially offset by the rising exchange rate, which gained 12% on a trade-weighted basis between the first quarters of 2004 and 2005. This appreciation occurred despite significant foreign exchange market intervention, which boosted reserves to $205 billion by early 2005, the fourth-highest in the world. With reserves now more than three times larger than Korea's short-term foreign debt, there is little rationale for further reserve accumulation. *The apparent scaling back of intervention since the beginning of 2005 should thus continue.* Moreover, a stronger won has the positive effect of re-balancing the composition of growth from exports to domestic demand. *It is important to carefully monitor the new schemes created to manage foreign exchange resources – such as the Korea Investment Corporation – so as to avoid losses.*

… despite increases in real estate prices in some areas

The Bank of Korea is under pressure to raise interest rates to stabilise the upward trend in real estate prices in some parts of the country. Prices of apartments in certain districts of Seoul rose 10% in the first half of the year, although on a nation-wide basis, prices are up less than 4%. However, interest rate hikes are a blunt instrument for influencing real estate prices and would be harmful to the nascent recovery in domestic demand. The economic impact of rising real estate prices in specific regions is likely to be limited, although it may raise equity issues about the distribution of wealth. *Such concerns should be addressed by targeted measures, such as ensuring that the capital gains tax is adequate to achieve the desired level of redistribution. Policies to deal with real estate prices should be market-friendly. In particular, the authorities should end the stop-and-go pattern of imposing regulatory measures aimed at stabilising prices*, and then periodically removing such measures to boost the construction sector.

Additional fiscal stimulus appears to be unnecessary…

The easing of monetary policy has been accompanied by a mildly expansionary fiscal policy stance in 2004 and 2005. The consolidated central government deficit – excluding the social security surplus and the cost of financial restructuring – is projected to rise in 2005 from ½ to 1% of GDP. This reflects a 1 percentage point cut in income tax rates and the elimination of special excise taxes on some luxury items. In addition, nearly 60% of expenditures were frontloaded in the first half of 2005, which may result in a decline in government outlays in the second half of the year in the absence of a supplementary budget. However, spending by state-owned enterprises and private-sector investment in infrastructure will increase in the latter half of the year. Given the recent upturn in domestic demand, *additional fiscal stimulus appears unnecessary. The priority should be to achieve the medium-term framework's objective of a balanced budget, excluding the social security surplus, by 2009.*

… and public-private partnerships should be pursued with care to limit contingent liabilities

To boost fixed investment, the government recently launched a public-private partnership plan, which aims at attracting private-sector participation in the provision of infrastructure under a "build-transfer-lease" approach. The government and private sector are expected to agree on total spending of 6 trillion won (0.8% of GDP) in 2005 and a cumulative 24 trillion won by 2007. The private sector is projected to spend 0.5 trillion won on these projects in 2005. Given that these projects will take up to four years to complete, *the programme should not be pursued as a countercyclical policy. Instead, joint public-private projects should be selected on the basis of their long-term economic benefits and the programme should be anchored in the medium-term framework. Moreover, contracts with firms need to be carefully crafted to control the government's expenses and contingent liabilities.* Limiting increases in public debt should be a top priority, given the spending pressures, particularly for population ageing. Indeed, Korea's elderly dependency ratio, the third-lowest in the OECD area in 2000, is projected to be the third-highest by 2050.

Systemic reform of the public pension system is an urgent task

Given the rapid ageing, fundamental reform of the public pension system is urgent. Under the current parameters – a contribution rate of 9% and a benefit replacement rate of 60% – the National Pension Scheme (NPS) would run deficits by 2036 and its Fund would be exhausted by 2047. Ensuring the sustainability of the NPS would require a contribution rate of around 20%, which would likely have a negative impact on the labour market. *Korea needs a more systemic reform of the pension system to ensure its sustainability, while providing adequate coverage.* In 2004, 12.4 million persons – a little more than half of the labour force – paid contributions to the NPS. In addition, there appears to be a considerable under-reporting of income by the self-employed. *The authorities should immediately adjust the parameters of the earnings-related public pension to sustainable levels, which implies lower benefit rates. Furthermore, the tax-financed means-tested social programme, which currently has limited coverage, should be gradually transformed into a universal basic pension, with a relatively low flat rate. The scope of such a two-tier system depends on the availability of fiscal resources and may require measures to reduce the basic pension benefit to the wealthy. Given the small number of persons currently receiving public pensions, it is essential that the means-tested programme be adequate to lower the relatively high incidence of poverty among the current elderly population as well as those entering retirement before the introduction of the basic pension.*

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Fiscal rules are needed to ensure sound financial management by local governments…

One aspect of maintaining a sound fiscal position is to ensure the accountability of local governments, which account for almost half of total government spending in Korea. With the abolition of the system requiring central government approval of each local government bond issue, *fiscal rules need to be adequate to ensure sound financial management. This should include increased transparency concerning contingent liabilities, particularly in regard to public corporations, while reducing the reliance of local governments on borrowing from the public sector.*

… accompanied by an overhaul of the local government tax system…

Fiscal responsibility of local governments should also be enhanced by increasing their taxing powers through a broad reform of the local tax system.

- *The current system, which includes 16 different taxes, should be simplified by eliminating those that generate minimal revenue but increase complexity and administrative costs.*
- *Local governments should be encouraged to exercise their existing power to change tax rates, which has been little used despite being allowed for 11 local taxes.*
- *The high level of taxes on property transactions, which account for 40% of local government tax revenue, should be reduced as they create lock-in effects, thus reducing the efficiency of land use, and are only loosely related to the demand for local government services.*
- *The government should accelerate its plan to boost the effective tax rate on property holdings from 0.1% at present to 1% by 2017 by bringing the tax base closer to market levels, as this would discourage speculative activity and encourage efficient land use.*

The net effect of reforms should be to increase local government tax revenues through higher property holding taxes *and, if necessary, other taxes that achieve the objective of enhancing local autonomy and accountability.*

… while using transfers to limit regional disparities…

However, increasing local government reliance on tax revenue is likely to aggravate regional imbalances, given that per capita tax payments in the capital region are about 60% higher than in the rest of the country. *Achieving the second objective of limiting regional imbalances requires that the devolution of taxing power be accompanied by sufficient transfers from the central to poorer local governments to ensure adequate public services throughout the country. The formula currently used to calculate such transfers should be made more transparent and simple, while reducing arbitrary adjustments. The central government should make clear that local government efforts to boost tax revenues will not be offset by decreased transfers.*

… and increasing spending autonomy

The government should transfer responsibilities to local governments to increase efficiency and enhance the capacity of the public sector to meet the needs of local citizens.

Effective decentralisation requires establishing a clear division of responsibilities between levels of government. *The capabilities of local governments, which have been limited to acting as agents of the central government, should be expanded to handle greater responsibilities*. Currently, there exist separate local governments responsible for primary and secondary education. *The general local governments should have more influence on education, while providing more support, through stronger linkages with the local education authorities, with a final aim of merger. Autonomy should also be expanded by changing earmarked transfers to block grants, where appropriate, and relaxing the conditions attached to earmarked transfers to allow greater flexibility for local authorities.*

Market-friendly polices should be used to achieve goals on regional balance and pollution control

Developing more dynamic and autonomous local governments may have a positive impact on the government's goal of achieving more balanced regional growth. Despite the measures to reduce concentration in the capital region by regulations limiting new construction, the region's share of population and economic activity has risen to nearly half. The easing of these regulations on small and medium-sized enterprises (SMEs), venture businesses, foreign-invested companies and advanced-technology firms is appropriate as it allows firms to follow through on investment plans. At the same time, *it is necessary to increase reliance on economic instruments aimed at offsetting externalities resulting from concentration in the capital region, notably congestion and pollution*. With air pollution in Seoul among the most severe in the OECD area, *the government should follow through on the introduction of a cap-and-trade system in 2007 to limit industrial emissions*. In addition, the government launched a "regional innovation plan" aimed at creating clusters of government research institutes, firms and universities in various locations outside of the capital region. *The location of such clusters should be chosen transparently on the basis of clear criteria. Given the importance of innovation in sustaining growth, policies to promote innovation should focus primarily on the objective of fostering national productivity growth rather than on regional development.*

The innovation framework should be upgraded by improving R&D efficiency…

Korea already makes a large investment in R&D, with such outlays amounting to nearly 3% of GDP. It is important to maximise the benefit from this investment by upgrading the R&D system.

- *Linkages between business, university and government research institutes should be strengthened. The performance-based evaluation system of public-sector R&D should be further developed, taking greater account of its relevance to the business sector.*
- *Incentives for R&D in the universities, which are currently underutilised, should be strengthened.*
- *The government should maintain flexibility in setting research priorities in order to limit the risks inherent in focusing on sectors identified as future growth engines.*
- *Policies should aim at increasing the international integration of Korea in R&D activities.*

… developing a risk capital market and a venture business sector…

The authorities have also been active since the 1997 crisis in developing a risk capital market and a venture business sector. *Government involvement in this area should be re-focused on leveraging private-sector participation by improving transparency and disclosure requirements. The government certification system for venture businesses should be phased out as planned*. The government also offers relatively generous tax incentives to encourage private-sector R&D. *The effectiveness of these incentives should be evaluated to ensure their efficiency and the results should be compared with the potential gains from supporting other activities. In addition, while intellectual property rights have been strengthened, better enforcement would encourage innovation activities.*

… strengthening product market competition, particularly in services…

In addition to promoting the creation of new knowledge, it is at least as important to use the existing stock of knowledge more effectively. This is particularly true in Korea, given that its average labour productivity per hour is only 40% of the US level, suggesting a large scope for further convergence based on existing technology. *It is necessary to strengthen competition in order to encourage the diffusion of knowledge, as well as its creation. Reducing entry barriers and administrative opacity and improving the exit mechanism are needed to support the creation of new enterprises*, a key to developing and adopting new technologies. Given that services' share of value added is steadily increasing, boosting productivity in this sector is essential to sustain growth. *The priority should be to remove entry barriers in the areas of retail, business services, healthcare and social services. The complicated system of land regulation should be simplified and made more transparent to avoid hindering the entry of new firms.*

… and restructuring the tertiary education system

Ensuring the availability of highly trained human resources is of key importance for innovation. While Korea's substantial investment in primary and secondary schools, together with extensive private tutoring, has produced good results, the large increase in the number of students at the tertiary level has been accompanied by a deterioration in quality. *Reversing the decline will require a rebalancing of expenditures away from primary and secondary schools*, where age cohorts have already begun to decline, in favour of tertiary education, where funding per student is exceptionally low compared to other OECD countries. *It is necessary to increase the availability of scholarships and loans to ensure that students from low-income families have access to tertiary education. Deregulation and stronger competition to drive the restructuring and consolidation of tertiary educational institutions would help reverse the decline in quality. Greater transparency about the performance of each university and increasing the scope for foreign institutions to operate in Korea would strengthen competition and efficiency in this area. At the same time, it is essential to increase opportunities for lifelong education* given rapid structural change and population ageing.

It is essential to boost labour force participation rates…

Population ageing also makes it crucial to boost the labour force participation rate. If participation were to remain at its current level, the labour force would decline by 15% by mid-century, thus increasing the burden of ageing. One key is to raise the participation rate of prime-age women, which is one of the lowest in the OECD area. *Increasing support to families for childcare and extending the length of publicly-financed maternity leave from one to three months would help to increase female participation.* It is also important to increase, or at least maintain, the labour force participation of persons over the age of 50, who will account for half of the working-age population by mid-century. *One priority is to extend significantly the age of retirement from companies beyond the current practice of around age 50.* Most workers leaving firms become self-employed workers, primarily in the service sector. Raising the effective retirement age from enterprises would limit the inflow of labour into this low-productivity sector. *The key is to transform the seniority-based wage system, which makes older workers relatively expensive, into a remuneration system more closely linked to productivity levels.* While wage systems in firms are decided by collective bargaining, *the government should voice support in the Tripartite Commission for productivity-linked wage systems and introduce them where appropriate in the public sector. In addition, the authorities should discourage the use of mandatory retirement ages in firms*, which would increase pressure to reform the seniority-based wage system.

… and implement a well-designed company pension system

Replacing the current retirement allowance system with a company pension system would reduce the incentive of firms to retire older workers, while increasing private savings for retirement. The recently introduced framework for company pensions allows employers and workers in each firm to adopt a defined benefit or defined contribution system. *In order to facilitate labour market mobility, company pension systems based on defined contributions should be encouraged, while at the same time phasing out the traditional retirement allowance system.*

To reverse the trend towards dualism, it is necessary to expand the coverage of the social safety net for non-regular workers…

The government has increased subsidies to encourage the employment of older workers, as well as other groups. However, given the large deadweight costs of this approach, *employment subsidies should be reduced. Instead, the priority should be to bring the effective coverage of the Employment Insurance System, currently at about half of employees, more closely into line with the law, which mandates coverage for 85%.* Currently, only one in four unemployed persons receives unemployment benefits. *In addition, it is important to expand the coverage of work-based social insurance programmes, including health and pensions, to non-regular workers.*

… and increase employment flexibility for regular workers

Better coverage of non-regular workers by the social safety net would reduce the cost advantage that encourages firms to shift from regular to non-regular workers, who now account for one-third of employees. Perhaps as important, non-regular workers provide greater employment flexibility for firms. *Stopping or even reversing the rising share of non-regular workers, while ensuring overall flexibility in the labour market, requires increased employment flexibility for regular workers*. The 1998 reform to allow collective dismissals of regular workers for managerial reasons has not created enough flexibility in practice. *The Supreme Court decision specifying acceptable criteria for dismissal – including to prepare against future crises – needs to be incorporated into the law to ensure enhanced flexibility*. The effort to obtain a consensus among the social partners on reform of labour laws and practices has been frustrated by a difficult industrial relations climate. *The government should develop a more harmonious environment by implementing the roadmap to resolve remaining industrial relation issues*. In sum, a comprehensive package is needed that includes less employment protection for regular workers, greater coverage of non-regular workers by the safety net and an improved industrial relations environment.

The trend toward better corporate governance should continue…

Rapid structural change in the corporate sector requires improved corporate governance as well as greater labour market flexibility. There has been marked progress among the remaining chaebol, which have reduced their debt-equity ratios below 100%. However, there appears to be a reluctance to invest despite abundant cash holdings. To some extent, this more cautious behaviour is the desirable outcome of better corporate governance practices and the desire to increase financial soundness. *It is important to make further progress in improving corporate governance, enhancing transparency and ensuring that the market for corporate control is open to both domestic and foreign participants. With further progress in this regard, the phasing out of the 25% shareholding ceiling imposed on more than 200 chaebol-affiliated firms would be appropriate, which may have a beneficial impact on business activity. Finally, it is essential to remain open to foreign investment.*

… while encouraging the restructuring of SMEs

In contrast to the large companies, the situation in SMEs has deteriorated. *It is important to streamline the diverse programmes to support SMEs*, which have made them dependent on the government. In addition, *the increase in government guarantees on bank loans to SMEs, which amount to 6% of GDP, should be reversed. The government's June 2005 plan to streamline programmes that support SMEs and to reduce government guarantees on bank loans to SMEs should be implemented. Banks should be encouraged to improve credit analysis in lending to SMEs*. It is encouraging that the delinquency rate of SME lending fell from 2.3% in June 2004 to 2.1% a year later. However, the exposure of non-bank lending institutions to SMEs has boosted their non-performing loans (NPLs) and weakened their balance sheets. *The Financial Supervisory Commission should remain vigilant in imposing prompt corrective action to limit potential problems in this sector*.

It is essential to resolve the delinquent borrower problem…

In contrast, the commercial banks have managed to increase their profitability and capital adequacy ratios, while reducing their NPL ratios. *It is important to press ahead with the privatisation of the state-owned banks*, which is boosting the foreign presence in the banking sector. While the banks appear to have overcome the aftermath of the credit card bubble, the large number of delinquent borrowers – 3.6 million or nearly one-tenth of the working-age population – continues to damp private consumption. *Government policies that provide support for debtors without resolving the problem should be phased out, while avoiding additional schemes to help delinquent debtors in order to prevent moral hazard problems*. Meanwhile, only a very small fraction of delinquents – around 30 000 – have used court-based personal bankruptcy procedures. *The government should encourage the legal process to function actively, which requires increased resources for the judicial system. Discrimination against delinquent borrowers should be discouraged. Meanwhile, a new unified insolvency law, which is to be implemented in 2006, should be used to improve the exit mechanism in the corporate sector.*

… while promoting the development of the capital market

Compared to the banking sector, developments in the capital markets have been less favourable in recent years despite the acceleration of financial-sector liberalisation and an opening to international capital flows. A vibrant and strong capital market is important for the development of venture business as well as to provide appropriate long-term saving instruments needed in the context of population ageing. Recent trends in the capital market are encouraging. *It is important to promote the further development of the capital market through the issuance of government bonds with long-term maturity, limiting vulnerability to shocks and upgrading the financial infrastructure, including credit rating agencies.*

ISBN 92-64-01438-1
OECD Economic Surveys: Korea

Chapter 1

Key challenges facing Korea

Rapid economic growth has boosted per capita income in Korea to two-thirds of the OECD average. Continuing the convergence to high-income countries requires addressing a number of structural weaknesses. This chapter looks at five key challenges: i) maintaining macroeconomic stability and a sound government financial position in the context of strong spending pressures due in part to population ageing; ii) improving the fiscal federalism framework to increase efficiency and provide greater autonomy to local governments; iii) upgrading the innovation framework by improving the R&D system, strengthening product market competition, particularly in the service sector, and restructuring the education system, especially at the tertiary level; iv) improving the functioning of the labour market, in part to reverse the trend toward dualism, and encouraging greater labour force participation, particularly among women; and v) restructuring the SME sector and further upgrading corporate governance practices, while addressing the weaknesses in the capital market.

The hesitant recovery from the recession in 2003 has raised concerns in Korea that the country is entering a period of slower growth well before it has attained the average income level in the OECD area. With households constrained by debt and the corporate sector reluctant to expand investment – despite strong profits – final domestic demand has been virtually stagnant during the past two years. Meanwhile, the external sector has accounted for three-quarters of economic growth since 2002, as export growth accelerated to a record high 20% in volume terms in 2004. However, export growth has moderated in the context of slowing demand from overseas. The stop-and-go growth pattern experienced since the 1997 crisis has led to worries that the underlying impetus for growth has weakened. This chapter first provides an overview of the post-crisis transition in Korea and then identifies the key challenges to sustaining rapid growth.

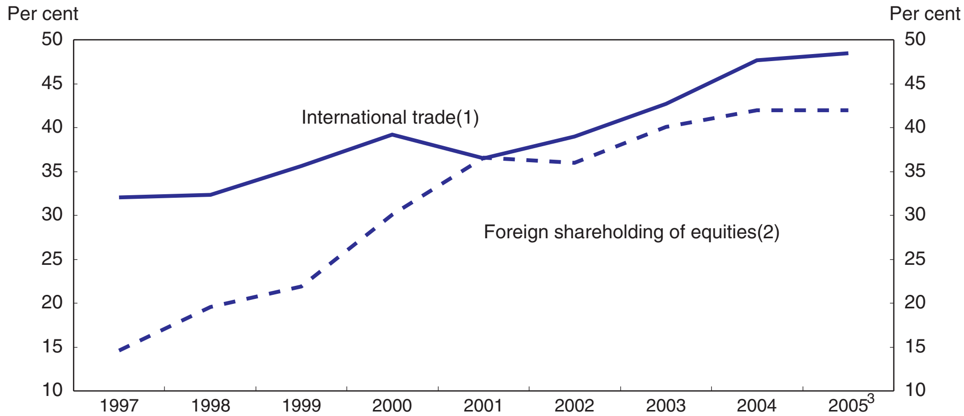
The shift to a more market-oriented and open economy

The 1997 crisis marked a major turning point for Korea as it launched a wide-ranging programme of economic reforms aimed at strengthening market mechanisms.[1] While changing the framework did not transform economic behaviour overnight, many of the reforms have taken root and produced positive results. In the financial sector, the newly privatised banking industry has become profitable and financially sound. In the corporate sector, the dominant role of the large business groups, the chaebol, has been reduced as nearly half of the top 30 groups have disappeared. The survivors have significantly improved their balance sheets in the context of an improved corporate governance framework. For the manufacturing sector as a whole, the average debt to equity ratio has fallen from almost 400% in 1997 to around 100% today (Table 6.1). As for social protection, the government has strengthened the social safety net, notably by expanding the coverage of employment insurance and the public pension system. However, economic reforms did not come cheaply: gross government debt has doubled from 12% of GDP in 1997 to 26%, largely reflecting the cost of restructuring the financial sector.

Korea has also become more closely integrated in the world economy during the past decade (Figure 1.1). *First*, international trade rose from 32% of GDP in 1997 to 48% in 2004, thanks in part to a sharp increase in trade with China that has made it Korea's largest trading partner. *Second*, with the removal of ceilings on equity ownership, the foreign share of the Korean stock market has risen from 15% in 1997 to 42%, with foreign investors holding more than 50% in a number of leading companies, such as Samsung Electronics. *Third*, inflows of foreign direct investment, although volatile, have been larger since the crisis, averaging 1.2% of GDP, compared to only 0.3% during the period 1990-97. The higher level reflects the liberalisation of controls on inflows and the surge in mergers and acquisitions during the restructuring of the corporate sector. Moreover, the privatisation of the commercial banks has led to foreign investors holding a majority share in eight of the 14 banks. However, these trends have raised some concerns among the public about foreign ownership in Korea.[2]

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Figure 1.1. **The internationalisation of the Korean economy**



1. Exports and imports of goods and services in volume terms on a national accounts basis, divided by two, as a share of GDP.
2. Foreign share of market capitalisation, including KOSDAQ.
3. First half of the year.

Source: Bank of Korea and Korea Exchange, *KRX Review*.

Korea has remained one of the fastest growing OECD economies during the past five years, with output growth at an annual average rate of 5½ per cent. The pattern, though, has been uneven with high growth rates fuelled by the ICT sector boom in 1999 and 2000 and the household credit bubble of 2001 and 2002 followed by periods of relatively weak activity.[3] Nevertheless, per capita income, adjusted for price differences, has risen to two-thirds of the OECD average (Figure 1.2).[4] However, taking account of the amount of labour inputs, labour productivity per hour worked in Korea is still only 40% of the US level (Figure 1.3), suggesting significant scope for continued convergence in Korea's income level.

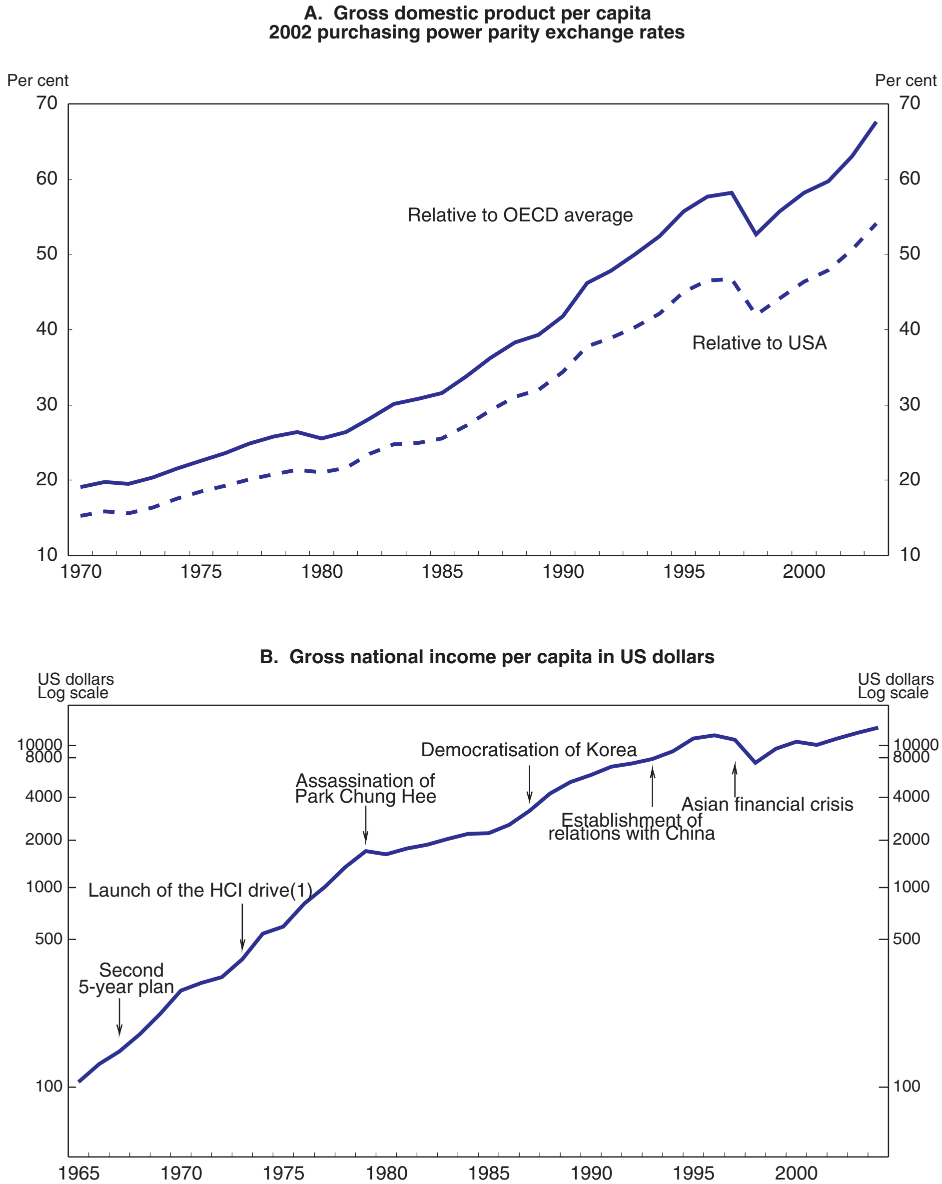
Key challenges to sustaining high growth

Korea faces a number of challenges to maintain its high growth potential. In particular, inputs of labour and capital, which have accounted for more than two-thirds of output growth over the period 1980 to 2000 (Table 1.1), will tend to grow more slowly in the future. Labour inputs will be affected by the deceleration in the growth of the working-age population and the scheduled decline in working hours, currently the longest in the OECD area, during the gradual introduction of the five-day workweek. As for capital inputs, the increased emphasis in the corporate sector on boosting profitability and limiting financial risks has reduced investment as a share of GDP. In sum, inputs of labour and physical capital are expected to contribute about 2½ percentage points of growth annually through 2012. Achieving potential growth of 5% would thus require an acceleration of total factor productivity growth (TFP), while maintaining the contribution of TFP near its current level would result in potential growth of around 4½ per cent. With TFP growth already one of the highest in the OECD area in absolute terms, boosting or even maintaining it becomes more difficult as Korea approaches the technology frontier in many areas.

The prospects for economic growth will be influenced by many factors, including a number of imbalances:

- The growing concentration in the capital region, which accounts for almost half of Korea's population and economic activity, leading to government policies to promote balanced regional development.

Figure 1.2. **Korea's per capita income is converging to the OECD average**



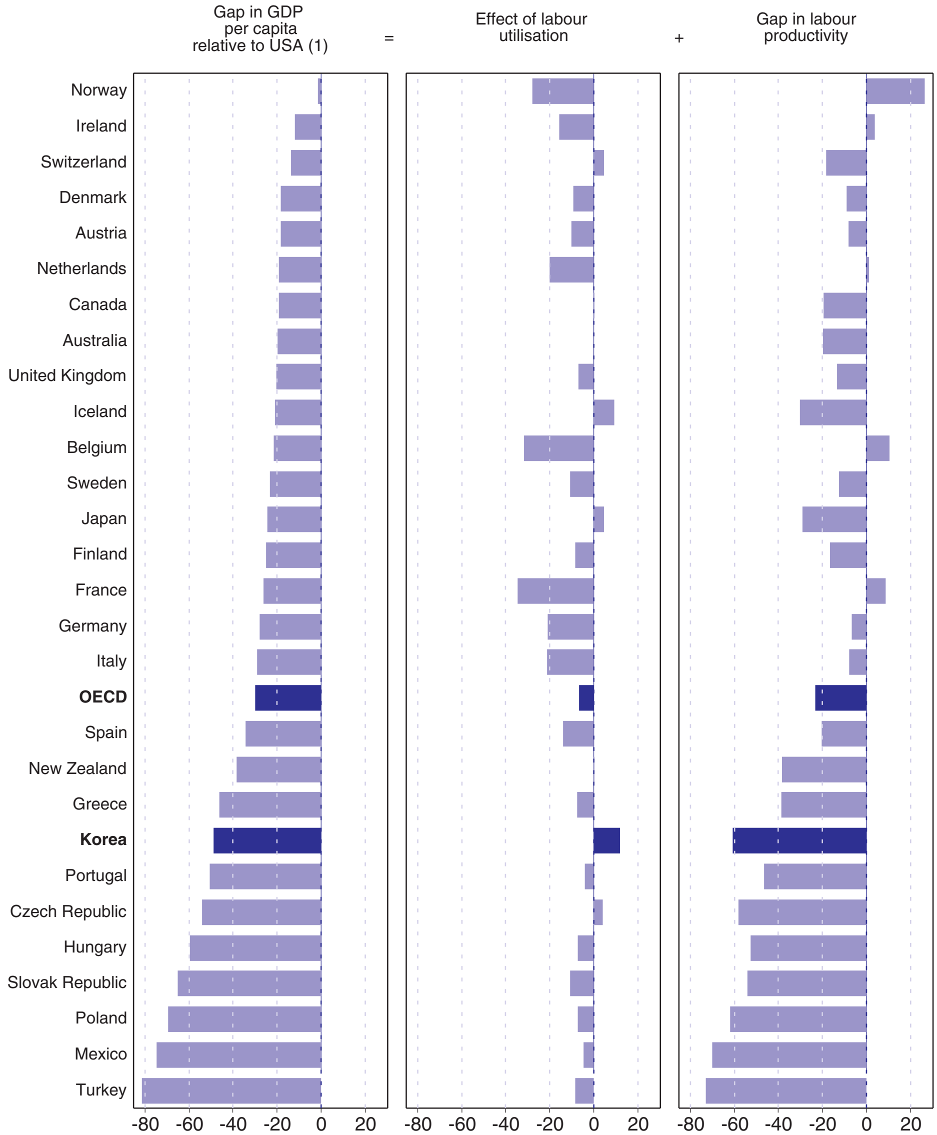
1. Heavy and chemical industry.

Source: OECD and Bank of Korea.

- The widening productivity gap between the manufacturing and service sectors, which is already the largest in the OECD area.
- The increasing dualism in the labour market, which has the second-highest proportion of non-regular workers among OECD countries.
- The improving financial health of the banking sector, which contrasts with the underdevelopment of the capital market and problems in the non-bank financial sector.

Figure 1.3. **Breaking down the income gap**

Percentage point differences in GDP per person relative to the United States



1. The gap in GDP per capita is equal to the sum of the two components shown. The effect of labour utilisation is based on total hours worked per capita. Productivity is measured on a per-hour basis.

Source: OECD, Productivity Database (February 2005).

- Rising profitability for large companies, while the financial situation of the small and medium-sized enterprises (SMEs) deteriorates.

It is necessary to address these imbalances and other structural problems to sustain Korea's growth potential. After first considering the challenge of maintaining macroeconomic stability through appropriate fiscal, monetary and exchange rate policies, the chapter discusses the challenges of fiscal decentralisation, upgrading the innovation framework, improving the functioning of the labour market and addressing problems in the corporate and financial sectors.

Table 1.1. **Korea's potential growth rate**

	Annual average contribution in percentage points				
	Potential growth (per cent)	Labour	Physical capital	Total factor productivity	*of which:* Human capital
1981-1990	7.8	1.7	3.6	2.5	0.8
1991-2000	6.3	1.2	3.2	1.9	0.9
2003-2012					
Scenario A[1]	4.6	0.6	1.9	2.1	0.6
Scenario B[2]	5.2	0.6	2.0	2.6	0.6

1. Assumes that Korea's economic system and international openness remain at the current level.
2. Assumes that Korea's economic system is improved through structural reform and increased international openness.

Source: Han *et al.* (2002).

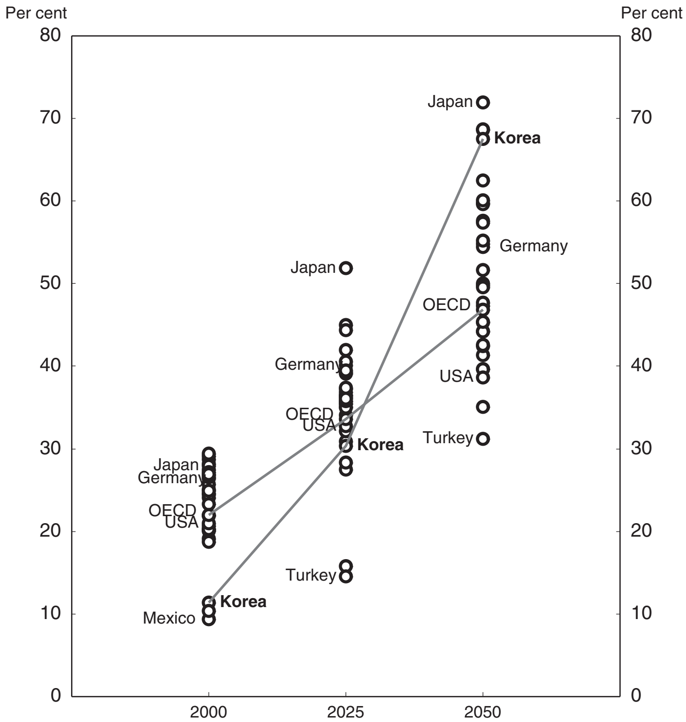
Maintaining macroeconomic stability and a sound government financial position

The Bank of Korea has been successful in keeping core inflation within the 2½ to 3½ per cent target zone introduced at the beginning of 2004. The Bank has left its short-term policy rate at a record low of 3¼ per cent since November 2004 in the context of weak domestic demand. Monetary policy decisions are also influenced by asset price trends. The significant price increases for real estate in some parts of the country have raised concerns about a possible bubble, leading to pressure on the central bank to raise interest rates. In addition, the rising exchange rate may pose risks to Korea's export-led recovery. Indeed, the won rose by 12% on a trade-weighted basis between the first quarters of 2004 and 2005, despite significant intervention in the foreign exchange market that has boosted Korea's foreign exchange reserves by a quarter to $205 billion, the fourth-highest in the world. There are risks associated with the rapid accumulation of foreign reserves, as well as the opportunity cost of holding them and the expense of sterilising their impact on the domestic money supply.

While Korea's fiscal position remains sound, the pressure for increased spending will be intense. At present, gross public debt and government expenditures as a share of GDP are among the lowest in the OECD area, reflecting the immaturity of the social welfare system and the relatively low level of public services. However, there are strong pressures for increased spending in the future. *First*, population ageing will be exceptionally rapid. Indeed, within 50 years, Korea's old-age dependency ratio will increase from the third-lowest among member countries to the third-highest (Figure 1.4), reflecting the sharp fall in fertility and rising life expectancy. The National Pension Scheme, created in 1988 as a partially-funded system, is not sustainable under its current framework. Moreover, there will be considerable upward pressure on healthcare expenditures, which are currently one of the lowest in the OECD area at 5.9% of GDP. *Second*, in addition to ageing-related expenditure, Korea will have to improve other aspects of the social safety net, such as employment insurance and social assistance. *Third*, rising income levels are boosting the demand for public services and infrastructure. Success in controlling government spending will depend partly on improving the efficiency of the public expenditure system and simplifying the complicated budget structure, which includes a large number of special accounts and public funds.

Figure 1.4. **Old-age dependency ratios, 2000-2050**

Ratio of the population aged 65 and over to the population aged 20-64



Source: OECD (2004a), *Ageing and Employment Policies: Korea*.

It is essential to maintain a sound public financial position in order to cope with the spending pressures mentioned above as well as the potentially large fiscal burden of any future economic integration with North Korea. In line with the Berlin Declaration of 2000, the South is providing important economic assistance to the North and this may increase. The chronic food shortages in the North and its economic deterioration during the past decade suggest that the cost of economic integration may be enormous. Indeed, the burden is likely to be heavier than in the case of Germany, given that the population of North Korea is one-half that of the South, while its per capita income is only about 6% of the South's.[5]

In sum, the key macroeconomic challenges, which are addressed in Chapter 2, are:

- Achieving the medium-term inflation target in the context of pressure on real estate prices and the exchange rate.
- Coping with the spending pressures stemming from rapid population ageing, the development of the social safety net and rising demand for public services and infrastructure.
- Enhancing the efficiency and transparency of the public expenditure system.
- Maintaining a sound public financial position to prepare for future spending pressures and for the potential costs of economic integration with North Korea.

Getting the most out of fiscal decentralisation

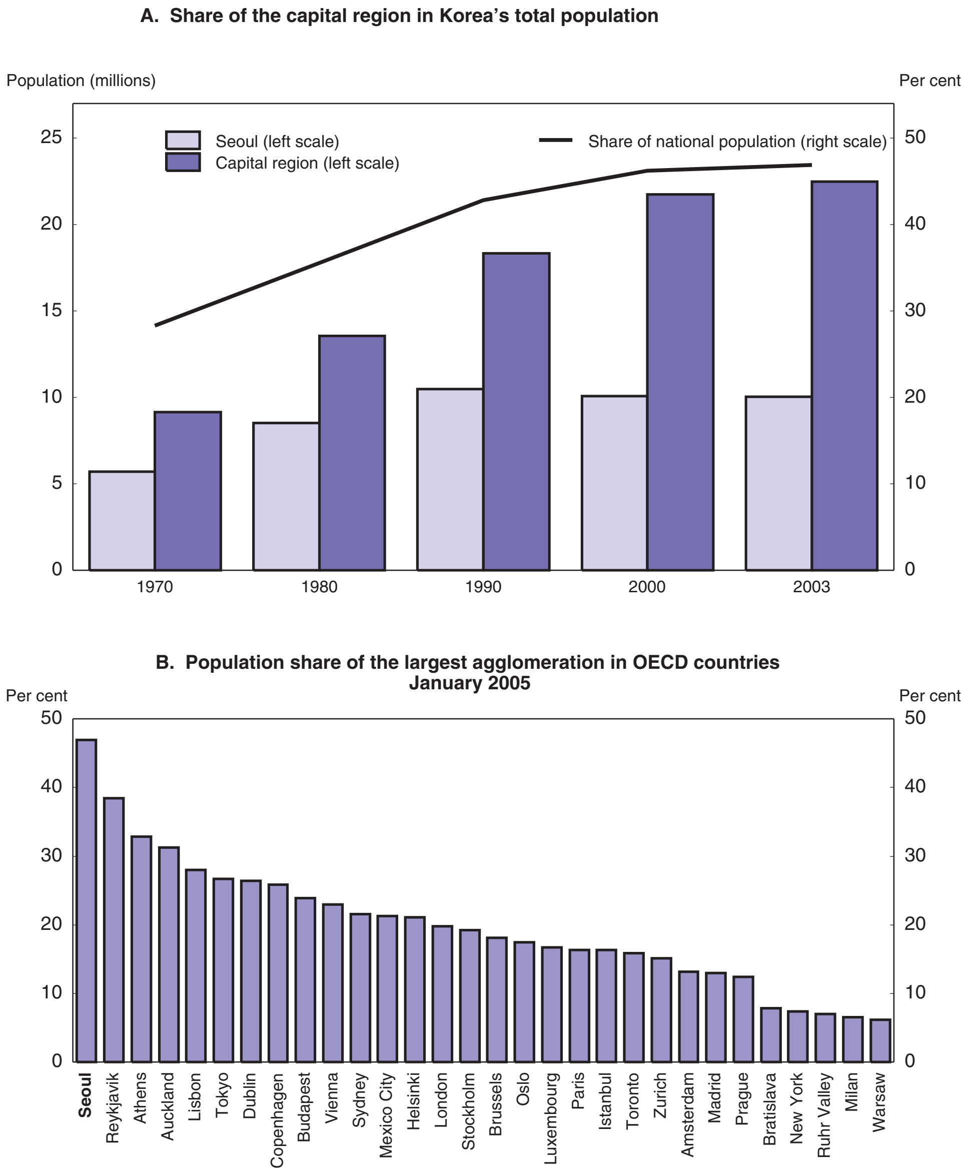
Ensuring a sound government fiscal position depends in part on local governments, which account for about half of total government expenditure. The role of local governments will increase with the implementation of the 2003 *Roadmap for Decentralisation*, which calls for: *i)* a "sweeping transfer of central authority" to local governments; *ii)* "strengthening the autonomy of local public finances" and governance; and *iii)* "augmenting local government financing capacities and correcting inter-regional imbalances". Accomplishing this plan will be difficult given the historical legacy of strong central control that has limited local governments to the role of agents for the central authorities in Seoul. Even the key area of education is effectively outside the responsibility of local authorities. Weak local autonomy stems in part from the absence of a clear division of responsibilities between the central and local governments. The scope for transferring authority to local authorities is hindered by a lack of capacity in lower-level governments to manage increased responsibility.

The autonomy of local jurisdictions is restricted by their lack of revenue. Indeed, for 84% of local governments, "own-source revenue" accounts for less than half of their total revenues. The large gap between own-revenues and outlays forces local governments to rely extensively on grants from the central government, some of which are earmarked transfers subject to regulations that limit the flexibility of local authorities. The scope for increasing revenue from the local tax system, which includes 16 separate levies, is limited. The heavy reliance on property taxes, which generate about half of local tax revenue, exacerbates regional differences, as the variation in land prices exceeds that of income. Moreover, property taxes are heavily weighted toward transactions, rather than holdings, thus tending to lock-in land use and failing to discourage land speculation. Local authorities show little initiative in using their existing authority to change tax rates by up to 50% for most local taxes. Only 14 of the 250 local governments had used such flexibility by the end of 2004, resulting in a near complete absence of tax competition. Borrowing by local governments is subject to strict central government control and most lending to local jurisdictions comes from public-sector institutions.

However, increasing the reliance on local tax revenue may widen the already large regional variation in income. Indeed, per capita local tax payments in the capital region (Seoul, Incheon and Gyeonggi Province) are about 60% higher than in the rest of the country. Consequently, the degree of financial independence already varies widely, from 95% in Seoul to an average of 17% in provincial cities. Further increasing the fiscal capacity of the richest regions may thus have adverse implications for the government's priority of balanced regional development. Despite a variety of policies to limit concentration, the capital region has become one of the largest urban agglomerations in the world. Indeed, its share of Korea's population has risen from 28% in 1970 to almost half (Figure 1.5), with 22.5 million people living within a 40-kilometre radius, while other regions have experienced depopulation. While agglomerations account for an important share of population in many OECD countries, the concentration in Korea's capital region is by far the highest (Panel B).

Seoul's population density is 16 000 persons per km^2, exceeding that of Tokyo, Los Angeles, Paris (Ile de France), New York, London and Mexico City. Such high density results in a number of negative externalities. *First*, Seoul has a relatively severe air pollution problem, imposing social costs estimated at 10.8 trillion won (Kang *et al.*, 2003), about 1½ per cent of national GDP (Box 1.1). *Second*, the cost of traffic congestion is estimated to have risen from 2.9 trillion won in 1993 to 12.4 trillion won (1.6% of national GDP) in 2002.

Figure 1.5. **Concentration in major cities**



Source: Korea National Statistical Office and Brinkhoff (2005).

In sum, the key challenges to fiscal decentralisation, which are discussed in Chapter 3, are:

- Overcoming the tradition of strong control by the central government, reflecting the lack of a clear assignment of responsibilities between local and central governments, and the weak capacity of local governments to exercise greater responsibility.
- Reducing the reliance on intergovernmental grants, which limit the flexibility of local governments.

Box 1.1. **Improving Korea's air quality**

Despite some improvement over the past decade, air pollution remains a serious problem in Korea, notably in Seoul. Indeed, the concentration of nitrogen dioxide (NO_2) and particulate matter (PM) in Seoul are 56% and 75%, respectively, above the average in major cities in the OECD area (Figure 1.6). As for sulphur dioxide (SO_2), Seoul is the sixth-highest. The air pollution problem is due to the population density in the Seoul area, increasing per capita energy consumption and the growing reliance on motor vehicles. Indeed the use of private cars has risen at the expense of public transport in recent years. Moreover, nearly 80% of the cars used for commuting have only one passenger. Windblown yellow sand from China has also been a factor for PM. In contrast to nitrogen dioxide, ozone and particulate matter, emissions of sulphur dioxide and carbon monoxide (CO) have fallen considerably since the 1990s.

New environmental policies have been introduced recently, notably the Special Act on Seoul Metropolitan Air Quality Improvement, which took effect in 2005. Its major points include: *i)* the introduction of a cap-and-trade system for the main industrial sources of emissions beginning in July 2007, which will reduce the cost of pollution abatement by using economic instruments (2003 *Economic Survey of Korea*): *ii)* the public procurement of a certain amount of low-emission vehicles, such as electric hybrid vehicles, is now mandatory; and *iii)* emission reduction devices are to be attached to diesel vehicles that exceed emission standards. The government aims to reduce NO_2 and PM_{10} concentrations in Seoul by about 40% between 2003 and 2012 through investment amounting to 6 trillion won (0.8% of 2004 GDP).

Efforts are also being taken to reduce on-road mobile emission sources. One important step is the replacement of diesel urban buses and garbage trucks by natural gas vehicles. Emission standards have been tightened in recent years for heavy-duty, light-duty and gasoline passenger vehicles, with further strengthening planned in 2006 and 2007. For diesel passenger vehicles, which were authorised for sale in 2005, the Euro-III standard is applied and is to be raised to the Euro-IV level in 2006. Vehicles already meeting this standard are granted a 50% cut in their special excise tax. As for gasoline vehicles, California's ULEV standard will be applied from 2006. The mandatory emission tests introduced in Seoul in 2002 were strengthened in 2004 for all vehicles, with those that fail required to install treatment devices or retrofit with cleaner engines.* As for fuel, the sulphur content standard for gasoline is to be lowered from 130 to 50 ppm, and that for diesel from 430 to 30 ppm in 2006. In addition, the reduction of tax advantages for diesel fuel has boosted its price from 47% to 75% of the gasoline price between 2000 and 2005, with a further hike to 85% planned by 2007.

The government is also implementing other initiatives. To reduce emissions in the industrial sector, about 2 000 tele-monitoring systems were installed by 2004, and the system will be extended to the entire country this year. With the enactment of the Indoor Air Quality Control Act in 2004, the use of construction materials emitting harmful substances is limited. Finally, the government aims to reduce Korea's energy intensity, measured as tonnes of oil equivalent per unit of GDP (in 1995 US$), from 0.30 to 0.28 between 2003 and 2008, in part by encouraging the use of public transport and railroad freight.

Despite the emphasis on improving environmental polices, the prospect for substantially reducing air pollution is unclear. Cleaner air in the capital region depends not only on environmental policies but also on measures related to housing, transport, energy and spatial planning. This suggests that a broader and more integrated approach to the environment may be needed to ensure sustainable development over the long run.

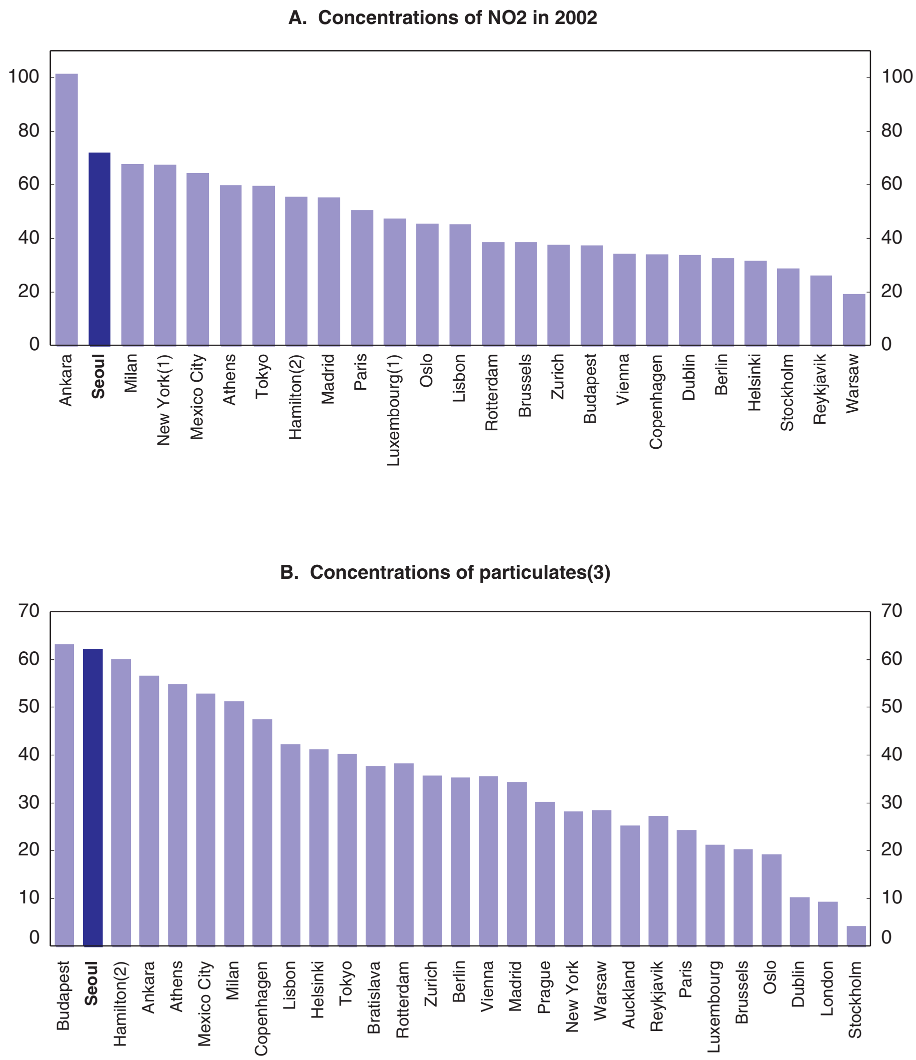
Box 1.1. **Improving Korea's air quality** *(cont.)*

At the same time, it is essential to ensure that the marginal benefits of new polices to reduce pollution are more than the costs and that policies are implemented in a cost-effective way, with greater emphasis on economic instruments.

* Buses older than two (previously three) years must be tested. For private cars, the rule was changed from 12 to 7 years. As for trucks and light-duty vehicles, those older than three years (previously four) must be tested.

Figure 1.6. **Air quality in major OECD cities**

Ng / M^3



1. 2000.
2. Canada.
3. Latest year between 1996 and 2000.

Source: *OECD Environmental Data Compendium* (2002) and *OECD Environmental Indicators* (2005).

- Simplifying the complex local tax system that is too heavily concentrated on property transaction taxes and produces revenue amounting to less than half of local government spending.
- Combining greater fiscal decentralisation with the government's concern about concentration in the capital region, which creates environmental and congestion costs while reducing population in other regions.

Sustaining high growth through innovation

Korea is characterised by a high level of investment in knowledge. Spending on education as a share of GDP is the highest in the OECD, while R&D expenditures are the sixth-highest. However, a number of indicators suggest that Korea is not getting the full benefit from this investment. Its output of codified knowledge in the form of patents and publications is relatively small and the effectiveness of R&D is limited by the lack of interaction between research institutes in business, academia and the government. In addition, universities – which employ nearly three-quarters of PhD research personnel – perform only 10% of R&D activities, suggesting that they are under-utilised for research. Korea is also relatively isolated internationally, with foreign sources financing only 0.4% of R&D activities, one of the lowest proportions in the OECD area. These weaknesses may hinder the transition from a catch-up model of transition to a more creative approach.

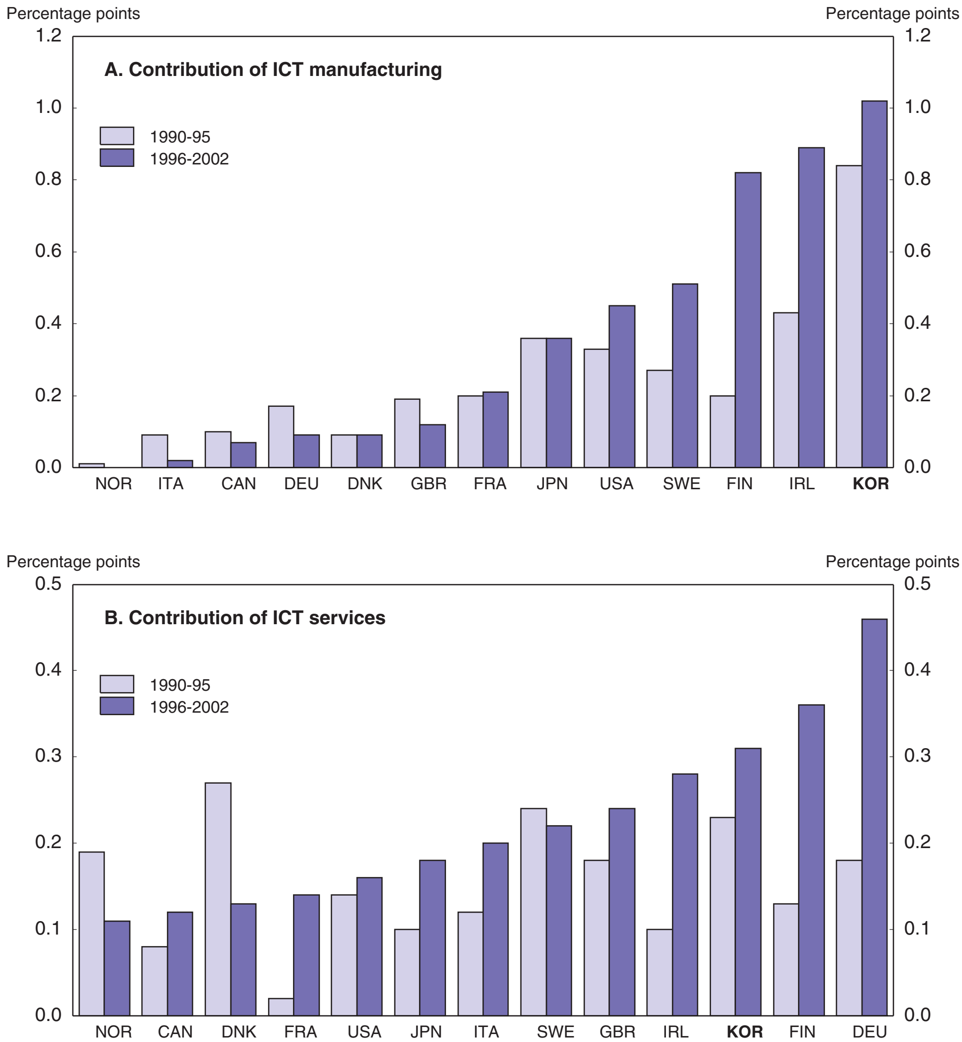
R&D is concentrated in a small number of firms and industries in the manufacturing sector, contributing to the dualistic nature of the economy. Indeed, the top five companies account for more than a third of business-financed R&D spending. Nearly one-half of business R&D is performed in the ICT sector, which has made a major contribution to economic growth. Indeed, ICT manufacturing contributed 1 percentage point per year to aggregate labour productivity growth in the second half of the 1990s, the highest in the OECD area (Figure 1.7). ICT services – primarily telecommunications – contributed another 0.3 percentage points (Panel B). However, the concentration in ICT has contributed to large terms of trade losses and may not provide a base broad enough to sustain growth in an economy as large as Korea's.

While R&D has promoted productivity in certain sectors, there remain many lagging areas, particularly in services. Indeed, labour productivity in Korea's service sector is only 56% of that in manufacturing, well below the 93% average in the OECD (Figure 1.8). The size of the gap, the largest in the OECD area, suggests weaknesses in the diffusion of technology. For example, although Korea is a world leader in the manufacture of ICT goods, the use of this technology in the business sector lags behind many other OECD countries (Figure 4.7). The proportion of "transferred technologies" that were developed by government research institutes and universities is very small, indicating that the R&D effort in the public sector is largely unused by the business sector. With productivity per hour of labour input less than half of the US level, there is considerable scope for convergence through catch-up efforts using the existing stock of knowledge.

Innovation and productivity growth are promoted by product market competition, including the creation of new firms and the exit of weak enterprises. Indicators of product market competition rank Korea in the middle of OECD countries. However, entry barriers and regulations are concentrated in services, contributing to the low level of productivity in this sector. A complex and non-transparent framework for land use is one regulatory

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Figure 1.7. **Contribution of ICT to aggregate labour productivity growth**[1]



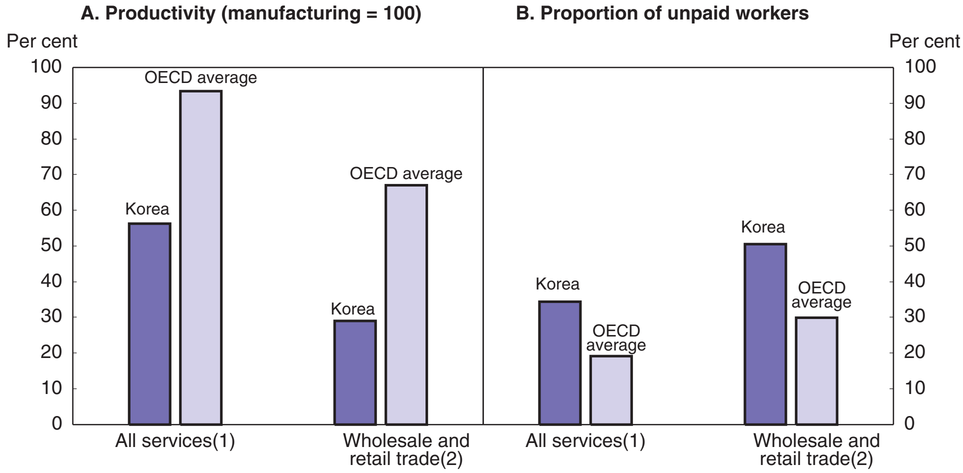
1. Contributions to value added per person employed, in percentage points. 1991-95 for Germany; 1992-95 for France and Italy; 1993-95 for Korea; 1996-98 for Sweden; 1996-99 for Korea and Spain; 1996-2000 for Ireland, Norway and Switzerland; 1996-2001 for France, Germany, Japan, the United Kingdom and the United States.

Source: OECD (2004b), *The Economic Impact of ICT – Measurement, Evidence and Implications*, Tables A5.1 and A5.2.

aspect that limits entry. In the retail sector, there still remain obstacles to the opening of large-scale outlets. Other sectors where regulations stifle competition include business services and social services, such as health and long-term nursing care.

The availability of qualified human capital is another fundamental aspect of innovation. Korea's focus on primary and secondary school education has contributed to the outstanding performance of its students on international tests.[6] However, the excellent results do not continue through to the tertiary level. For example, an opinion survey of business executives ranked the usefulness of Korea's university education at 59th out of 60 countries. The low ranking reflects a decline in quality in the context of an extraordinary rise in quantity as the advancement rate from secondary to tertiary

Figure 1.8. **Productivity and employment in the service sector**



1. ISIC codes 50-99.
2. Including hotels and restaurants (ISIC codes 50-52 and 55).

Source: OECD STAN Database for Industrial Analysis and the OECD Labour Force Database.

education increased from 33% of the age cohort in 1990 to 81% in 2004. As a result, the ratio of students to teaching staff has risen to a level well above the OECD average, while public spending per student at the tertiary level is only 15% of the OECD average. The reliance on private outlays and the limited supply of student loans and grants creates concerns about the access of low-income households to higher education. The lack of information about the performance of universities limits the scope for competition to drive the needed restructuring of the tertiary sector.

In sum, the key challenges to improving the innovation framework, which are analysed in Chapter 4, are:

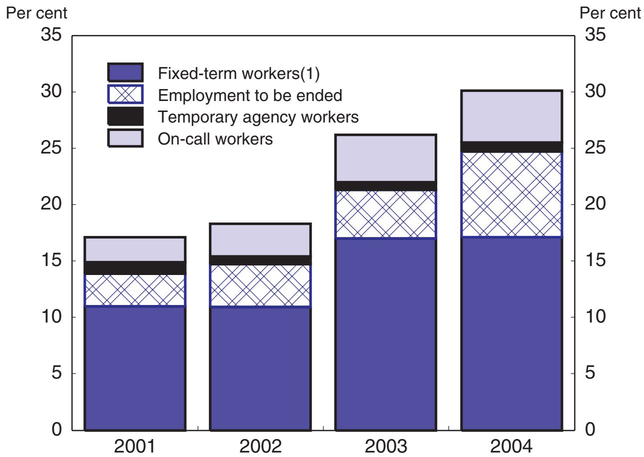
- Upgrading the R&D system by overcoming the weak interaction between businesses, universities and the government, the limited role of academia and the absence of international linkages.
- Increasing incentives to create and diffuse new technologies by strengthening product market competition.
- Improving the quality of tertiary education to ensure an adequate supply of high-skilled human capital.

Enhancing labour market flexibility and raising labour force participation

Non-regular workers account for nearly one-third of employees (Figure 1.9). Their growing role creates both equity and efficiency concerns, as they are paid significantly lower wages, after adjusting for their qualifications, than regular workers. Moreover, they are excluded from some aspects of the worksite-based social safety net. In addition to their lower cost, employers tend to prefer non-regular workers since they increase employment flexibility compared to regular workers, who are difficult to dismiss. Flexibility is also hindered by the strong opposition of workers to dismissals, which reflects to some extent the limited development of the social safety net. Despite legal changes mandating wider coverage of the Employment Insurance System, only 24% of the unemployed in 2004

Figure 1.9. **Non-regular workers in Korea**

Per cent of wage employees



1. At least 85% of fixed-term workers had contracts of one year or less for each year 2001 to 2004.

Source: Ministry of Labour.

received unemployment benefits. Finally, problematic industrial relations have weakened business confidence and discouraged investment, including foreign direct investment. Labour market rigidity is particularly harmful in Korea, given the rapid pace of structural change and population ageing.

Ageing will have a major impact on the labour market. By mid-century, workers over the age of 50 will account for about half of the labour force, which would be about 15% smaller than today, assuming that labour force participation rates for each age and gender group remain unchanged. The rate for prime-age women (25 to 49) is currently the third-lowest in the OECD area. In contrast, the rate for older workers is one of the highest, despite the fact that most employees leave firms at around age 50. Firms have an incentive to let workers go once they reach that age, as the importance of seniority in determining wages makes them relatively expensive. Most workers remain in the labour force after age 50, although three-quarters are self-employed. The influx of older workers into the service sector, particularly in retail outlets, contributes to the low productivity in this protected sector. Self-employed persons (including unpaid family workers) account for one-third of the labour force in Korea, one of the highest proportions in the OECD area (Figure 1.8).

In sum, the key labour market challenges, which are addressed in Chapter 6, are:

- Boosting the labour force participation rate over the medium term in order to cope with population ageing, in part by raising economic activity by prime-age women.
- Raising the effective age of retirement from firms.
- Reducing the degree of dualism resulting from the increased use of non-regular workers, in part by lowering employment protection for regular workers.
- Expanding the effective coverage of the social safety net, especially for non-regular workers.
- Establishing more co-operative and harmonious industrial relations.

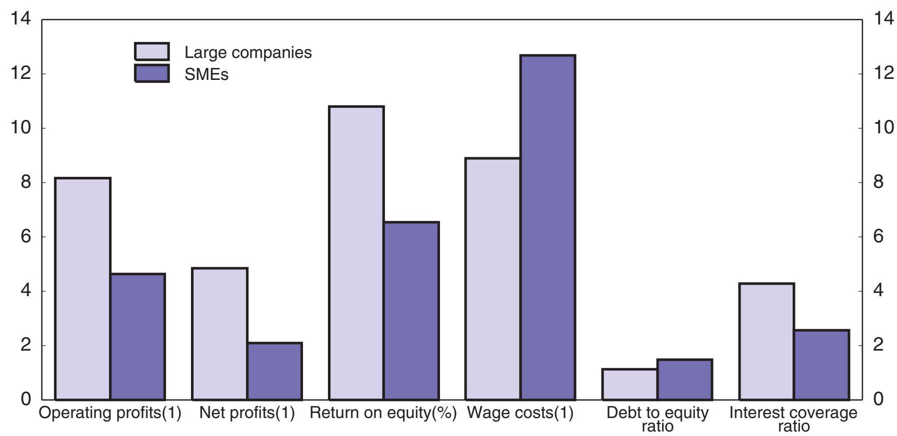
Addressing remaining weaknesses in the corporate and financial sectors

There remain concerns about corporate governance practices and transparency in chaebol-affiliated companies. Consequently, the Korea Fair Trade Commission maintains restrictions on shareholding and loan guarantees by companies affiliated with the chaebol. Despite these concerns, large companies have significantly improved their performance after a difficult period of restructuring in the wake of the crisis. In contrast, the small and medium-sized enterprises (SMEs), which largely avoided restructuring, have experienced a secular decline in their financial health and business profitability. In 2003, net profits were 5% of sales for large companies compared to 2% for SMEs (Figure 1.10). In addition, the smaller companies had a higher debt to equity ratio. The government has increased financial assistance, including loan guarantees, to SMEs, which have long been considered as a disadvantaged sector. However, such aid has gradually eroded the competitiveness and independence of SMEs and needs to be reduced. In addition to the polarisation between large and small companies, there has been a divergence within the SME sector, with a significant share of very weak firms. Nevertheless, banks appear to be willing to continue rolling over their loans as many are backed by real estate or guaranteed by the government.

The exposure of non-bank lending institutions, such as saving banks and credit unions, to SMEs has contributed to a deterioration in the performance of these institutions in recent years. In contrast, the banks have returned to profitability, while strengthening their capital base and reducing non-performing loans to a record low level. Their turnaround following the crisis was thanks in part to the government's 165 trillion won (29% of GDP in 2000) financial-sector restructuring programme, of which more than half went to the banking sector.[7] The restructuring facilitated the privatisation of government-owned banks, leaving only one financial holding company that is primarily government-owned at present.[8] While the banking sector is expanding, developments in the capital market have been less favourable in recent years (Figure 1.11). Indeed, the outstanding value of equities and corporate bonds has remained between 70 to 80% of GDP since 2001 – compared to 107% in

Figure 1.10. **Comparison of large companies and SMEs**

2003

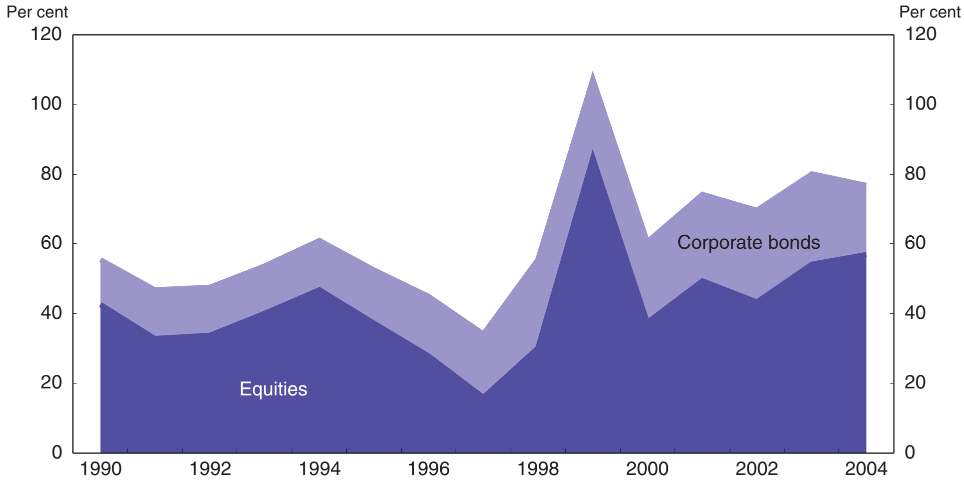


1. As per cent of sales.

Source: Kang (2005).

Figure 1.11. **The capital market in Korea**

As per cent of GDP



Source: Korea Exchange.

1999 at the peak of the ICT bubble – despite the further entry of foreign investors into the equity market. The capital market is thus small relative to the size of Korea's economy and its level of development. In addition, maturities tend to be short, with three years the norm for corporate bonds and 30% of government bond issues. The underdevelopment of the capital market and the lack of long-term instruments are problematic in the context of rapid population ageing. In part, it reflects the weakness of non-bank financial institutions, such as investment trust companies and insurance companies.

While financial institutions have made considerable progress in overcoming the collapse of the household credit bubble, the household sector is still feeling the negative aftermath. As of the end of 2004, 3.6 million individuals – about a tenth of the working-age population – were delinquent on their debt repayments. The government has taken measures, such as the establishment of a "bad bank" to purchase delinquent loans, the provision of income support to around 0.4 million low-income debtors and self-employed in the SME sector, and the revision of the framework for personal bankruptcy. This has contributed to increasing use of the bankruptcy framework, although in total only about 30 000 persons have passed through the legal process since 2002, reflecting the stigma attached to bankruptcy and the limited capacity of the judicial system. Discrimination against delinquent borrowers should be discouraged.

The key challenges in the financial and corporate sectors, which are discussed in Chapter 6, are:

- Overcoming continued weaknesses in corporate governance.
- Restructuring the SME sector, in part by reducing government loan guarantees.
- Completing the privatisation of government-owned banks.
- Developing the capital market and addressing the problems of non-bank financial institutions.
- Accelerating the resolution of the delinquent borrower problem without creating significant moral hazard problems.

Conclusion

Korea has been successful in maintaining rapid growth during the transition to a more market-oriented and internationally-open economy since the 1997 crisis. However, the pattern has been erratic, with rapid growth fuelled by the ICT boom and the household credit bubble followed by periods of sluggish activity. Establishing a solid foundation for growth is important to promote the continued convergence to the high-income countries. This requires addressing the structural weaknesses and the various imbalances noted above that have emerged as a result of past economic policies. Completing the ambitious reform agenda launched in the wake of the crisis is thus a key to sustaining output growth through productivity gains as inputs of labour and capital slow. The following chapters analyse the key challenges in the reform agenda.

Notes

1. The economic reform process was analysed in detail in the OECD *Economic Surveys of Korea* in 1998, 1999, 2000 and 2001. See Annex 1.A1 for details on progress since the 2004 *Survey*.
2. The Deputy Prime Minister recently called for a more balanced view of foreign capital (*MOFE e-Newsletter*, No. 10, April 11-17, 2005).
3. Indeed, the standard deviation of Korea's real GDP growth rate from 1999 to 2004 is more than double the OECD average and the highest after Turkey.
4. In terms of current exchange rates, per capita income rose from $10 000 in 2001 to more than $14 000 (Panel B). At this pace, the government's goal of doubling it to $20 000 will be achieved by 2008.
5. In comparison, East Germany's population was less than a third of West Germany's at the time of German re-unification, while the per capita income gap was smaller, with that in East Germany around half of the West. Moreover, Korea would face this challenge at a lower level of income than in the case of Germany.
6. In the OECD's PISA study, the scores of Korean fifteen-year-olds in mathematics, reading and science are among the highest, placing them second overall.
7. Of this amount, 70 trillion won has been recovered thus far, while 69 trillion won is classified as not retrievable.
8. The Woori Financial Holding Company includes three banks (Woori, Kwangju and Kyeongnam) as well as some securities companies.

Bibliography

Brinkhoff, Thomas (2005), *The Principal Agglomerations of the World*, *www.citypopulation.de*.

Han, Jin-Hee, Kyung-soo Choi, Dong-seok Kim and Kyung-mook Lim (2002), *The Potential Growth Rate of the Korean Economy, 2003-2012*, Korea Development Institute, Seoul (in Korean).

Kang, Dongsoo (2005), "Corporate Distress and Restructuring Policy of the Korean Small Medium-sized Enterprises", Korea Development Institute Working Paper 2005-01, Seoul.

Kang, Kwang Kyu, Man-Ok Kang and Mi-Suk Kim (2003), "Economic Analysis on Special Measures for Air Quality in the Capital Region", Korea Environment Institute, mimeo, Seoul (in Korean).

OECD (2003), *Economic Survey of Korea*, Paris.

OECD (2004a), *Ageing and Employment Policies: Korea*, Paris.

OECD (2004b), The *Economic Impact of ICT – Measurement, Evidence and Implications*, Paris.

OECD (2004c), *Economic Survey of Korea*, Paris.

 OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

ANNEX 1.A1

Taking stock of structural reforms

This annex reviews actions taken on structural policy recommendations in the 2004 *OECD Economic Survey of Korea*. Recommendations made in this *Survey* are shown in the boxes at the end of each chapter.

Recommendations in the 2004 *Survey*	Actions taken or proposed by the authorities
A. Public pensions	
The benefits and contributions of the National Pension Scheme (NPS) should be brought into balance.	The government submitted a reform bill to the legislature in 2003 but no action has been taken.
As a quarter of those required to contribute to the NPS do not participate, the effective coverage should be expanded.	The number of persons paying contributions fell from 12.6 million in 2003 to 12.4 million in 2004.
The financial imbalances in the public-sector occupational pension schemes, which are already in deficit, needs to be addressed, while introducing portability with the NPS.	Pension benefits to retired public-sector workers who are active in the labour market have been reduced. No action taken on portability.
The plan to transform the retirement allowance system into a company pension system should be implemented.	A law introducing a company pension system was enacted in 2005. However, it allows firms to maintain the current retirement allowance system in place of a pension plan.
B. The tax system	
Broaden the tax base for the corporate income tax and the VAT. The priority should be to reduce the generous allowances and tax credits in the personal income tax.	A committee has been created to design a tax reform programme and will present a report by the end of 2005.
Raise the effective tax rate on real estate from its current level of 0.1%.	The tax base for real estate was raised sharply to bring it closer to market value (see Table 3.2). A national comprehensive real estate tax was introduced in 2005.
C. The public expenditure system	
Given the indicative nature of the existing medium-term National Fiscal Management Plan, its linkage with the annual budget process needs to be strengthened further.	Ministerial spending ceilings in the 2005 budget were based on the 2004-08 Plan, which was also submitted to the National Assembly along with the budget. The initial five-year plan for 2004 to 2008 was transformed into a plan for 2005 to 2009.
Establish an effective institutional framework for evaluating performance, in particular, by increasing the capacity of the Board of Audit and Inspection (BAI).	The role of the BAI has been strengthened and the number of staff at the deputy director level was increased by 30% from 220 to 283.
Public funds and special accounts should be consolidated further based on stricter evaluation, and there is also a need for tighter controls on the creation of new funds and accounts.	The government is in the process of preparing legislation to reduce the number of special accounts and public funds. When legislated, the number of public funds will decline from 60 to 54, and number of special accounts from 19 to 12.
The ability of the responsible minister to boost the outlay of a public fund by up to 30% without the consent of the National Assembly should be further narrowed.	The government is reviewing measures to reduce the discretionary power of ministers to boost the spending of public funds.
Earmarked taxes and quasi-taxes should be reduced.	The share of earmarked taxes for transportation, education and rural development in national tax revenue declined between 2001 and 2004. The number of quasi-taxes remained at 102.

Taking stock of structural reforms *(cont.)*

Recommendations in the 2004 *Survey*	Actions taken or proposed by the authorities
To improve the governance of public corporations, general accountability mechanisms need to be upgraded further by adopting more output-oriented reporting through activity-based costing and strengthening monitoring mechanisms.	The Basic Law on the Management of Government-Affiliated Organisations was introduced in 2004, and is currently applied to 88 institutions. It mandates competitive open recruiting of CEOs, Evaluation of Actual Results of Operation and "Operation Publicity System".
D. Labour market	
Labour market flexibility	
Reduce employment protection for regular workers, in part by shortening the minimum consultation period necessary before dismissal, in part to reduce dualism in the labour market.	No action taken. The government is trying to initiate a discussion on this issue in the Tripartite Commission.
Limit any negative impact on employment from the minimum wage system.	In 2005, the minimum wage is to be raised 13.1% to 2 840 won per hour (about 39% of the average monthly wage). The number of workers earning the minimum wage is expected to rise to 1.2 million workers (from 7.6 to 8.8% of total workers).
Social safety net	
Continue to expand the coverage of the Employment Insurance System (EIS).	In 2004, the EIS was expanded to daily workers and newly hired workers over the age of 60, boosting its coverage from 66% to 85% of employees. The government plans to further expand the coverage to workers over the age of 65 and those working less than 15 hours per week, while allowing the self-employed to join on a voluntary basis.
Increase compliance with the EIS, in part through enhanced co-operation with other social security administrators and the tax administration.	With the expanded coverage in 2004, the proportion of eligible workers actually insured fell from 74% to 64%. However, the proportion of employees insured rose from 49% to 54%.
Increase the coverage of non-regular workers in social insurance systems based in workplaces, in part to reduce the incentives for firms to hire non-regular workers.	The coverage of the worksite-based National Pension Scheme has been expanded step by step between 2003 and 2006 and now includes part-time employees working at least 80 hours a month.
In developing the social safety net, avoid introducing disincentives in the tax and social benefit systems that would discourage employment.	There have not been significant changes to work incentives.
Active labour market policies	
Rigorously examine the costs and benefits of each policy to avoid wasteful spending.	An evaluation of vocational training institutions undertaken since 1999 will be implemented in 2005 and made public to increase incentives to improve service quality, differentiate the level of government assistance and close poorly performing institutions.
Ensure the availability of job-placement services, through both the Public Employment Service (PES) and private-sector providers, while avoiding duplication, in order to limit mismatch problems.	The PES has been strengthened through networking with universities and local governments, securing qualified personnel and the provision of tailor-made action plans for unemployed individuals.
Make certain that publicly-financed training programmes for the unemployed are effective in raising the employment prospects of the participants.	The employment rate for those who had completed training increased from 41.0% in 2003 to 46.5% in 2004.
Avoid wage subsidies, given their generally high deadweight costs.	In 2004, number of participants in employment subsidy programmes declined by 18%, while the amount of expenditure increased by 5%.
Industrial relations	
Resolve remaining labour rights issues such as union pluralism at the firm level, paying full-time union officials and the question of essential public services.	The government initiated discussions in the Tripartite Commission in 2004 on the roadmap for reform of industrial relations, which was introduced in 2003.
Allow both labour and management to fully exercise fundamental rights to create checks and balances that would limit the social costs of industrial disputes.	Although the number of strikes increased in 2004, they are being settled relatively quickly, reducing the number of work days lost by 8%.
The authorities should develop an environment more conductive to harmonious industrial relations and avoid getting involved in industrial disputes, thus requiring labour and management to settle their disputes autonomously.	The industrial relations environment appeared to improve in 2004, in part due to the implementation of the Social Pact, contributing to the decline in the number of work days lost due to strikes.
Enhance labour force participation	
Reduce the importance of seniority in setting wages in order to maintain the employment of older workers.	In 2004, the government expanded the employment subsidy for older workers and incentives for their training. Meanwhile, the government continued to publicly support the wage-peak system, in part by establishing the Wage and Job Research Centre at KLI to spread performance and job-based wage schemes.

Taking stock of structural reforms *(cont.)*

Recommendations in the 2004 *Survey*	Actions taken or proposed by the authorities
Reform aspects of the public pension system that will create incentives for older workers to leave the labour force.	In the draft bill submitted to the National Assembly in 2003, the benefits for "the early old-age pension", which can be paid to people aged 55 or over with an insured term of more than 10 years, was reduced.
Encourage greater labour force participation by women by introducing more family-friendly policies.	The labour force participation rate of women rose by 1.1 percentage point to 53.9% in 2004. The length of maternity leave paid by the EIS is to be increased from 30 to 90 days in 2006 for SMEs, leaving the total length at 90 days. The government has increased expenditures on childcare facilities.
E. Corporate sector	
Ensure that class-action suits become an effective tool for minority shareholders to prevent abuses by management and controlling shareholders. Expand the scope of suits gradually to include more firms and perhaps more types of abuse, such as related party transactions and inter-company transfers.	Class-action suits, which cover securities-related cases, were introduced in 2005 for large firms with assets of more than 2 trillion won. The scope for such suits will be expanded to all firms listed on the stock exchange in 2007.
Further strengthen corporate governance, the financial sector and prudential supervision in order to discipline chaebol behavior.	The Monopoly Regulation and Fair Trade Act was revised to include graduation criteria from the regulations on chaebol's shareholdings in other firms. The limit on chaebols' financial affiliates exercising their voting rights of shares in other companies is to be cut from 30% to 15% by 2008.
Ensure the full implementation of the most recent changes to the corporate governance and auditing frameworks to improve transparency and prevent fraud.	Evidence that firms with better corporate governance are rewarded with higher stock market valuation suggests progress in implementing the new corporate governance framework.
Improve the R&D framework by better utilising the universities and by enhancing the links between government research institutes, business R&D centres and the universities.	The government made the restructuring of the national innovation system a top priority in 2004 (see Chapter 4).
Avoid undue emphasis on the ten industries identified as future growth engines, which could lead to distortions and high opportunity costs.	No action taken.
Consolidate assistance to small and medium-sized enterprises (SMEs).	In 2004, the number of government programmes to assist SMEs was reduced from 79 to 77, and the amount of outlays declined by 8% to 5 trillion won. Public credit guarantees for SMEs remained at 6¼ per cent of GDP in 2004, with an average duration of five years.
F. Financial sector	
Continue the privatisation process of banks.	The government sold 15% of the Woori Financial Group, reducing its share to 78.9%, and its remaining 22% in Hana Bank and 51.5% in Korea First Bank.
Monitor the soundness of household loans and introduce steps to ensure that problems in the credit card sector do not spread to other sectors including banks.	The after-tax profits of the nation-wide banks reached a record high of 5.9 trillion won in 2005, while the ratio of substandard loans or below fell to 2% and the capital adequacy ratio rose to 11.3%.
Restore the financial health of the credit card companies by requiring them to obtain new capital and strengthen risk management.	Of the nine non-bank credit card companies, three were consolidated with parent banks. The remaining six have increased capitalisation by 10.6 trillion won since 2003, raising their adjusted capital adequacy ratio from negative 3.3% to 10.5% between 2003 and 2004. Their delinquency rate (including rescheduled loans) declined from 28% to 20% in 2004, and their net loss declined from 10.5 to 1.6 trillion won.
Improve the health of the investment trust companies (ITCs), in part through restructuring and privatising the largest two companies.	The privatisation of the three-largest ITCs was completed in 2004 (Hyundai ITC) and 2005 (Korea and Daehan).
The FSC should enforce the supervisory framework to promote the stability of the non-bank financial sector, especially non-bank lending institutions, and shift to a more pre-emptive and risk-based approach.	The substandard loans or below ratio for non-bank lending institutions (excluding credit card companies) rose slightly from 5.3% to 5.5% in 2004, while profits remained negative.
Strengthen market discipline and eliminate moral hazard problems, both for financial institutions and consumers.	In dealing with the household delinquency problem, the government has adhered to market-friendly mechanisms, while avoiding debt forgiveness.
G. Product market competition	
International competition	
Reduce tariff levels and harmonise standards with international norms to avoid negative effects on imports.	The simple average of MFN ad-valorem duties has fallen to 11.6% (42.1% for agricultural goods and 7.0% for non-agricultural goods), but remains higher than in most other OECD countries.

Taking stock of structural reforms *(cont.)*

Recommendations in the 2004 *Survey*	Actions taken or proposed by the authorities
Lower the high level of agricultural protection to contribute to the success of multilateral trade negotiations.	Special treatment of rice will be extended to 2014, while increasing the minimum market access of imports from 4% to 7.96% of domestic consumption. The free trade agreement with Chile that went into effect in 2004 requires the gradual elimination of tariffs on agricultural products over the coming decade.
Facilitate Korea's participation in regional free trade agreements that would enable it to benefit from the economic dynamism of Asia.	The first FTA with Chile came into effect in 2004. Korea has concluded negotiations with Singapore on an EFTA and is making efforts with other potential FTA partners, such as Japan, ASEAN and Canada.
Establish conditions that will encourage inflows of foreign direct investment, in particular by bringing the economic framework into line with global standards and improving labour market conditions.	The annual inflow of FDI rose to $8.6 billion on an arrival basis ($12.8 billion on a notification basis) in 2004, the largest since 2001. The government selected 151 issues related to the FDI environment (including 16 labour market issues), of which 55 were deregulated or reformed by March 2005.
Extend the special incentives in the Free Economic Zones to the rest of the country.	No action taken.
Competition law	
Grant the Korea Fair Trade Commission (KFTC) compulsory investigative powers to make its administrative enforcement more effective.	No action taken.
Make the threat of individual sanctions more credible to ensure that it is an effective deterrent.	A trial court recently sentenced several defendants to up to a year in prison, and the case is on appeal to the Supreme Court.
Concentrate chaebol-regulating functions that are related to finance and corporate governance in regulators responsible for financial and securities matters. Transactions that have an exclusionary or distorting effect on product market competition in particular cases should remain subject to competition-law control.	No action taken.
Eliminate remaining unnecessary special-interest exemptions, such as the small-business cartels for government procurement.	The law allowing small-business cartels for government procurement has been abolished, effective from 2007.
Reduce entry barriers and regulations that limit competition.	The KFTC abolished or reformed 56 anti-competitive regulations in 2004, and an additional 94 regulations are to be reviewed in 2005 by the KFTC and the Regulatory Reform Committee, which has launched a two-year programme to scrutinize and streamline the existing 8 000 regulations.
Retail distribution and professional services	
Deregulate zoning laws to facilitate the development of large retail outlets. Simplify the application process for opening large-size retail stores and make it more transparent. The arbitrary imposition of additional costs should be prevented.	Deregulation, including raising the limit on lot size (from 10 000 m^2 to 30 000 m^2 in the "natural green area") and consolidating administrative procedures, is underway.
Eliminate unnecessary constraints on entry and the form of practice in key professional sectors, particularly law and accounting.	By easing regulations on admission, the number of annual entrants into both legal and accounting services has risen to between 900 and 1 000, around double that in 1997. The National Judicial Law Reform Committee was established in 2005.
Abolish restrictions on competition, including fees, between members of the same profession, while encouraging competition between professional associations.	The KFTC continues to monitor and abolish restrictions on competition such as entry barriers, fee setting and cartels.
Minimise the delegation of powers from the government to professional associations. They should not be granted exclusive jurisdiction to make decisions about entrance requirements and other issues.	The government has been directly implementing important decisions related with competition in the professional service market, such as entrance.
Electricity	
Strengthen the government's commitment to a realistic reform programme that includes more detailed time schedules, while specifying the degree and method of privatisation of the generating and distributing subsidiaries, as well as the final market structure.	In accordance with the proposal by the Tripartite Joint Study Group, the original reform plan was revised in June 2004. An independent business unit in the power distribution sector of KEPCO will be created in 2006, rather than privatising this sector.
Implement the plan to create independent generation and distribution companies to ensure that they do not have links to KEPCO, which will run the transmission system, nor significant common ownership.	In the power generation sector, the privatisation of the five thermal power generating companies, which are subsidiaries of KEPCO, is underway.
Ensure cost-reflective pricing, such as a price-cap system, and eliminate cross subsidisation between sectors to provide incentives for the efficient use of electricity.	Electricity prices have been adjusted gradually to better reflect costs, although there still remains cross subsidisation among sectors (industry, household, agriculture, commercial, etc).

Taking stock of structural reforms *(cont.)*

Recommendations in the 2004 *Survey*	Actions taken or proposed by the authorities
Establish an independent regulator. Given MOCIE's policy and industry promotion responsibilities in this sector, and its role as "owner" in voting the government's shares in KEPCO, it will be important that MOCIE play no direct regulatory role.	No action taken.
Strengthen competition law enforcement in the energy sector, particularly with respect to market access and anti-competitive conduct, by enhancing co-operation between the sector regulator and KFTC.	No action taken.
Natural gas	
Establish a firm timetable for reform in order to prevent further uncertainty and delay, while balancing the goal of introducing competition with concerns about the security of energy and KOGAS's existing contracts with LNG producers.	No action taken, although the issue has been under discussion in the Tripartite Commission since 2004.
Provide incentives for efficient use of gas by ensuring cost-reflective pricing such as a price-cap system.	No action taken.
Establish an independent regulator and separate it from the policy functions to be retained by MOCIE.	No action taken.
Strengthen competition law enforcement in the energy sector by increasing co-operation with the KFTC.	No action taken.
Telecommunications	
Use auctions to allocate spectrum for all wireless licenses.	Auctions have not been implemented yet. However, the government introduced in 2004 a higher fee scheme on spectrum for SK Telecom, which uses a better quality low frequency, than on PCS providers.
Impose a price cap system in markets where KT remains dominant, while refraining from interfering in all other markets.	No action taken.
Take more comprehensive measures to promote competition in the local loop.	The reform of local loop unbundling (LLU), by reducing fees and minimising access refusals, led to an increase in the number of loops in use for LLU from 600 to 1 000.
Transform the KCC into an independent communication sector regulator, clearly differentiating MIC's policy responsibilities from regulatory responsibilities.	No action taken.
Reduce barriers to entry in telecommunications by introducing a general approval system.	No action taken.
Implement number portability extensively to minimize the transaction costs of changing service provider.	For local calls, number portability was extended to 21 large cities in 2004, while for mobile services, it was fully introduced from January 2005.

ISBN 92-64-01438-1
OECD Economic Surveys: Korea
© OECD 2005

Chapter 2

Economic prospects and macroeconomic policies

This chapter considers what macroeconomic policies are appropriate for Korea in light of the economic outlook and spending pressures over the medium term. The Bank of Korea should keep interest rates at low levels until domestic demand gains momentum, and avoid using monetary policy as a tool to stabilise real estate prices in some areas of the country. A policy of exchange rate flexibility and limited intervention in foreign exchange markets should be continued. As for fiscal policy, the focus should be on controlling expenditure, given rising spending pressures due to population ageing and the potential cost of economic integration with North Korea. There is an urgent need for reform of the National Pension Scheme, which is not sustainable. The use of public-private partnerships to promote private investment in infrastructure should be implemented cautiously so as to ensure efficiency gains and limit the budgetary costs and contingent liabilities of the government.

Korea has experienced a hesitant and unbalanced recovery from the 2003 recession. Although economic growth picked up to 4.6% in 2004, domestic demand remained weak. While private consumption has since gained some strength, exports have decelerated significantly, resulting in disappointing growth figures in the first half of 2005. Macroeconomic policy makers in Korea face a number of challenges:

- How to promote a sustained rebound in domestic demand after two years of stagnation.
- How to cope with upward pressure on the exchange rate, which threatens exports, the main engine of growth since 2003.
- How to deal with significant increases in real estate prices in some parts of the country and prevent a nation-wide price bubble.
- Whether to use fiscal stimulus to help spark a stronger recovery in domestic demand.
- How to reform the pension system to ensure its sustainability without raising the contribution rate to a level that would have a significantly negative impact on the labour market.
- How to involve the private sector in supplying needed investment in infrastructure.
- How to improve the efficiency of the public expenditure system.

After a brief overview of the economic outlook, this chapter discusses how monetary and fiscal policy can help meet these challenges and then concludes with the key policy recommendations shown in Box 2.2.

Economic prospects

Korea is in the midst of a transition from an export-led recovery to an expansion in which domestic demand makes a more significant contribution. Growth was relatively sluggish at less than 3% (seasonally-adjusted annual rate) in the first half of 2005, in part due to special factors,[1] as the pick-up in domestic demand was offset by the deceleration of exports due to slower overseas demand.

The rebound in domestic demand is led by private consumption, which grew around 3% in the first half of 2005, the fastest since 2002. Consumption had contracted in 2003 and 2004 as households focused on improving their balance sheets after a sharp run-up in debt. In addition, the collapse of the 2001-02 household credit bubble sharply reduced the growth of credit (Table 2.1). Rising oil prices also had a negative impact on income given Korea's high dependence on oil imports, which amounted to 4% of GDP in 2003. Although the 38% rise in the import price of oil in 2004 was partially offset by the appreciation of the won, the growth of gross national income at 3.8% was well below output growth due to the terms of trade loss. An additional 25% rise in Korea's oil import price during the first half of 2005 is another negative factor for domestic demand. Moreover, it has an adverse impact on Korea's major trading partners, thus slowing exports.

After two years of adjustment, households' net financial assets have rebounded from their 2002 trough, while gross debt has stabilised at around 130% of household income

Table 2.1. **Household credit trends**

A. In trillion won

	1998	2000	2001	2002	2003	2004
Banks	52.9	107.2	156.7	222.0	253.8	276.3
Credit card companies	16.1	47.2	67.2	84.1	51.8	41.8
Savings institutions[1]	45.3	44.0	46.1	52.7	66.9	78.0
Insurance	21.5	27.1	32.6	38.7	42.9	45.3
Others[2]	47.9	41.4	39.0	41.6	32.2	33.3
Total	183.6	266.9	341.7	439.1	447.6	474.7
Annual growth rate (%)	. .	24.7	28.0	28.5	1.9	6.1

B. In per cent

	1998	2000	2001	2002	2003	2004
Banks	28.8	40.2	45.9	50.6	56.7	58.2
Credit card companies	8.8	17.7	19.7	19.1	11.6	8.8
Savings institutions[1]	24.7	16.5	13.5	12.0	14.9	16.4
Insurance	11.7	10.2	9.5	8.8	9.6	9.5
Others[2]	26.1	15.5	11.4	9.5	7.2	7.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

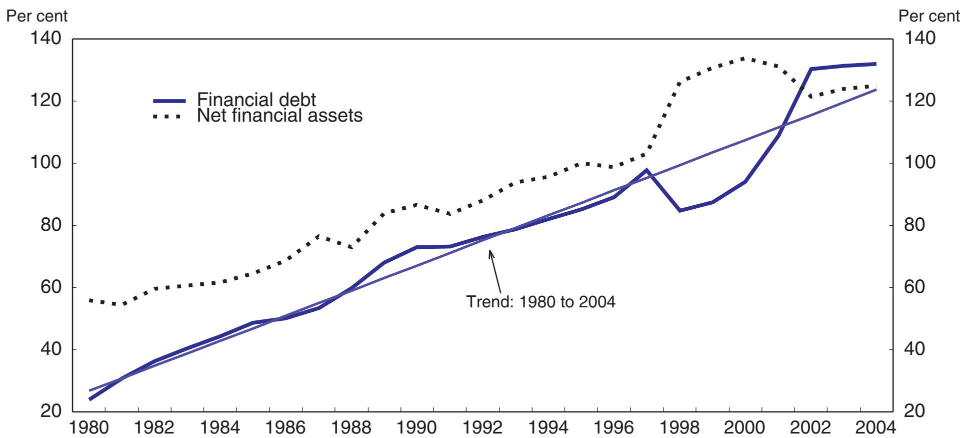
1. Includes savings banks, credit unions, community credit cooperatives and mutual credits.
2. Includes finance companies, bank trust accounts, postal savings, sales credits and National Housing Fund.

Source: Bank of Korea.

(Figure 2.1). Meanwhile, the growth of credit to households has picked up following restructuring in the financial sector (see Chapter 6). Thus, two of the major impediments to private consumption growth appear to be significantly reduced. Moreover, private consumption should be supported by stronger labour market conditions, given the 2.2% year-on-year rise in employment during the first half of 2005.

Figure 2.1. **Household financial assets and liabilities**[1]

Per cent of household disposable income[2]



1. For the "Individual Sector" in the Bank of Korea's flow of funds data.
2. OECD estimate of household income in 2004.

Source: Bank of Korea.

Table 2.2. **Economic outlook**[1]

Percentage change in constant 1995 prices

	Share of GDP in 2001[3]	2001	2002	2003	2004	2005	2006
Demand and output							
Private consumption	55.2	4.9	7.9	–1.2	–0.5	2.9	4.3
Government consumption	12.9	4.9	6.0	3.8	3.0	4.7	3.7
Gross fixed capital formation	29.5	–0.2	6.6	4.0	1.9	3.7	4.9
Final domestic demand	97.7	3.3	7.3	1.0	0.7	3.4	4.4
Stockbuilding[2]	–0.2	0.0	–0.2	–0.5	0.8	–0.6	0.5
Total domestic demand	97.4	3.3	7.0	0.5	1.6	2.8	5.0
Exports of goods and services	37.8	–2.7	13.3	15.6	19.7	7.2	12.2
Imports of goods and services	35.5	–4.2	15.2	10.1	13.8	5.9	13.8
Foreign balance[2]	2.3	0.5	–0.2	2.5	3.4	1.2	0.4
GDP	100.0	3.8	7.0	3.1	4.6	3.7	4.9
Prices							
GDP deflator		3.5	2.8	2.7	2.7	1.0	1.0
Private consumption deflator		4.8	2.8	3.4	3.5	3.3	3.1
Consumer price index		4.1	2.7	3.6	3.6	3.2	3.0
Core consumer price index		3.6	3.0	3.1	2.9	3.0	2.8
Labour market							
Employment growth		2.0	2.8	–0.1	1.9	1.3	1.4
Participation rate[4]		66.1	67.1	66.8	67.8	68.2	68.4
Unemployment rate		3.8	3.1	3.4	3.5	3.4	3.3
Balance of payments							
Current account (US$ billions)		8.0	5.4	11.9	27.6	16.8	10.1
As a percentage of GDP		1.7	1.0	2.0	4.1	2.1	1.2

1. For demand and output, this table incorporates the preliminary results for the first and second quarters of 2005 into the projections published in *Economic Outlook* No. 77 in May 2005, which was completed before the results for the first and second quarters of 2005 were available. While final domestic demand increased at a 3.8% annual rate in the first half of 2005 (at a seasonally-adjusted annual rate) – in line with the 4% projected in *Economic Outlook* No. 77 – export growth was significantly weaker than expected. The projections for prices and the labour market are those published in *Economic Outlook* No. 77.
2. Contribution to GDP growth.
3. The components shown below do not sum to 100 per cent due to a statistical discrepancy equivalent to 0.3% of GDP.
4. Labour force as a share of population age 15 to 64.

Source: OECD, Economic Outlook database.

The other factor explaining the relatively weak recovery in domestic demand is fixed investment. Business capital spending remained surprisingly subdued in 2004 despite the 20% volume rise in exports and the jump in ordinary profits to nearly 8% of sales (Table 6.1). Moreover, machinery orders have been falling in 2005. Some of the decline in fixed investment may be structural as its share of GDP has fallen from a peak of 39% in 1996 to 29% in 2004. However, construction investment rebounded in the second quarter of 2005 after five consecutive quarterly declines, spurred on by higher real estate prices.

Given the sluggish first half, economic growth in 2005 will not reach the government's original 5% objective. Instead, it may fall to around 4%, as the deceleration in exports to a single-digit level more than offsets the pick-up in private consumption and construction (Table 2.2). The pace of growth may be somewhat stronger in 2006 as both domestic demand and exports accelerate. However, there are a number of risks:

- Both household and business confidence weakened in the second quarter of 2005, although they remain far above the level of the fourth quarter of 2004.[2] Weaker confidence could damp equipment investment and private consumption. Although the household saving rate has recovered from its low of 1.5% in 2002 to around 5%, it is still well below its average of 20% in the 1990s. While the saving rate is unlikely to return to such a high level, the current rate may be less than its medium-term equilibrium level.
- The government's determination to stabilise real estate prices, which are rising rapidly in some parts of the country, may lead to policies that weaken the nascent rebound in construction.

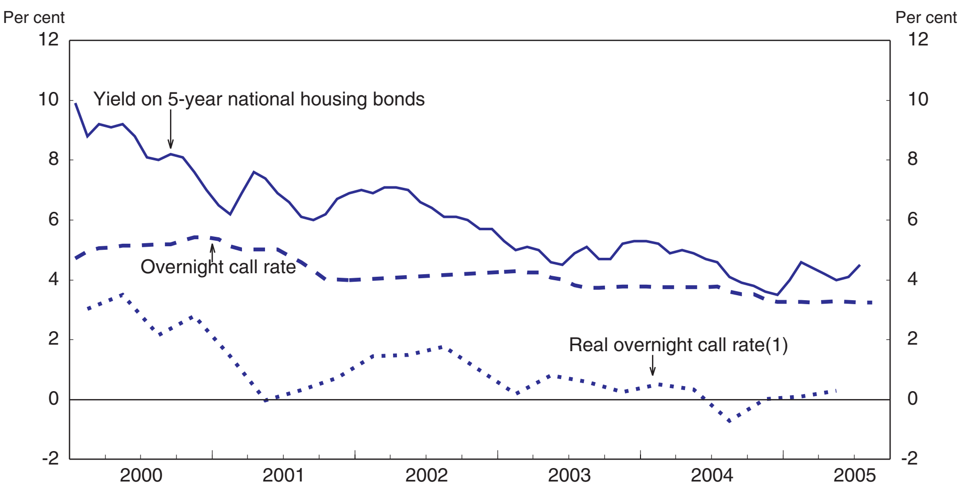
On the positive side, the export slowdown might be less than expected as a result of an upturn in the ICT sector, which accounts for one-third of Korea's exports, while the pent-up demand of firms for machinery and equipment might lead to a larger than expected rise in fixed investment.

Monetary and exchange rate policy considerations

The 2004 revision of the Bank of Korea Act strengthened the independence of the central bank and established a medium-term inflation target of 2½ to 3½ per cent for the core consumer price index (see the 2004 *Survey*). Given weak inflationary pressures and sluggish demand, the Bank cut the overnight rate twice in the second half of 2004 to a record low of 3¼ per cent (Figure 2.2). In real terms, the short-term policy rate has been close to zero since mid-2004. The impact of falling interest rates on monetary conditions was partially offset by the appreciation of the won. However, financial conditions have continued to ease, according to the index used by the Bank of Korea (Figure 2.3).

The central bank has been successful in keeping core inflation within the medium-term target zone (Figure 2.4). However, the rate of increase in the core CPI fell below the lower limit of the target zone in mid-2005 in the context of relatively weak output growth.

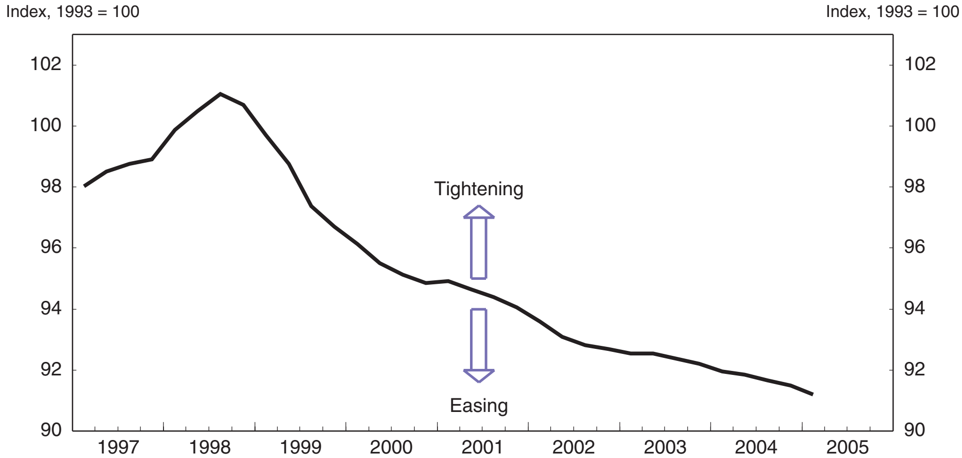
Figure 2.2. **Interest rates**



1. Deflated by the year-on-year change in the consumer price index.

Source: Bank of Korea.

Figure 2.3. **Financial conditions index**[1]

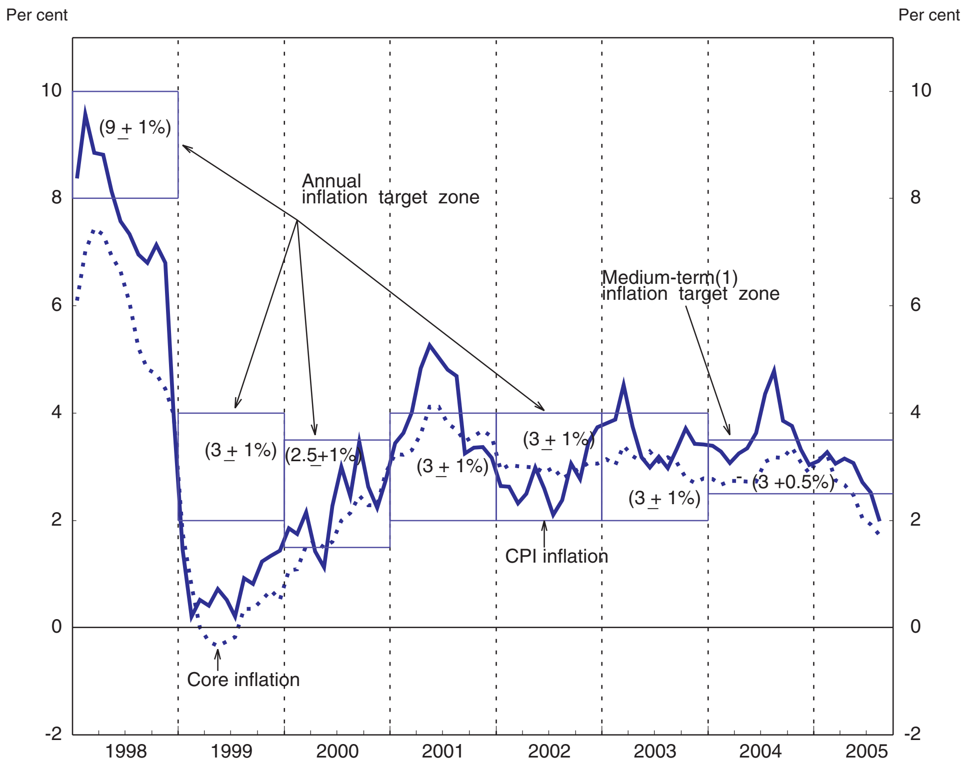


1. The index is a weighted average of the short-term interest rate, the corporate bond yield, stock prices and the exchange rate.

Source: Bank of Korea.

Figure 2.4. **Inflation targets and outcomes**

Year-on-year percentage changes



1. In 2004, the Bank of Korea changed the target to a medium-term objective.

Source: Bank of Korea.

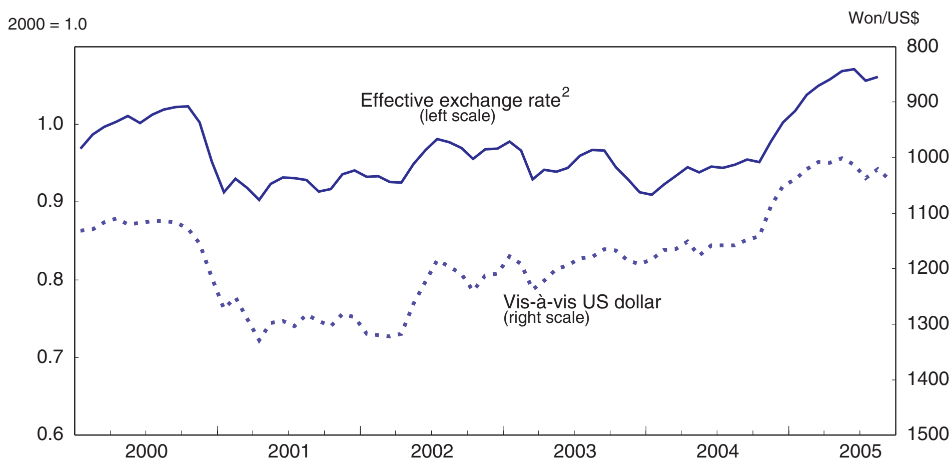
One factor putting downward pressure on prices has been the rise of the won in spite of significant foreign exchange market intervention during 2004. Despite slowing core inflation and concerns about the strength of domestic demand, the scope for maintaining an easy monetary stance until aggregate demand is on a sustained recovery trace may be influenced by concern over rising real estate prices in some parts of Korea.[3] The following paragraphs consider exchange rate policy and real estate market trends.

Is there a need for foreign exchange market intervention?

The won appreciated by 14.5% relative to the dollar between the first quarter of 2004 and the first quarter of 2005 (Figure 2.5), the largest rise of any Asian currency. In effective terms (relative to Korea's 41 major trading partners), the won increased 12% over the same period. The appreciation occurred despite large-scale intervention in the foreign exchange market aimed at smoothing the currency's upward trend. As a result, Korea's foreign exchange reserves increased 28% to $205 billion in March 2005 (Figure 2.6), the second-highest in the OECD area. Indeed, reserves are now three times higher than short-term foreign debt and, at 30% of GDP, represent a significant stock of national wealth. Since the first quarter of 2005, the won has depreciated slightly against the dollar, while foreign exchange reserves remained steady, suggesting that intervention has largely ceased.

Allowing the won to appreciate, in line with the flexible exchange rate policy adopted in 1997, has been beneficial for the economy. In particular, it is helping to re-balance growth from external to domestic demand by providing income gains for households and firms by offsetting the large terms of trade losses resulting from rising oil prices and falling semiconductor prices. In addition, the appreciation of the won reduces the burden of the private sector's foreign debt, which amounted to $75 billion (10% of GDP) at the end of 2004. The scaling back of intervention since the first quarter of 2005 is also appropriate, given the risks and costs associated with intervention. Sterilised intervention requires the issuance of Foreign Exchange Equalisation Bonds and Monetary Stabilisation Bonds (MSBs), which may carry higher interest rates than the instruments in major reserve currencies. The

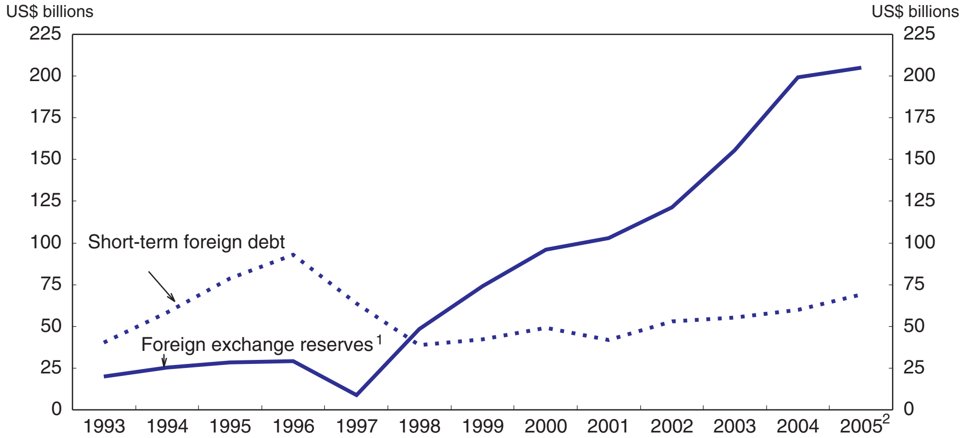
Figure 2.5. **The exchange rate**[1]



1. A rise indicates an appreciation of the won.
2. Calculated *vis-à-vis* forty-one trading partners.

Source: OECD.

Figure 2.6. **Foreign exchange reserves and short-term foreign debt**



1. Useable reserves only; *i.e.* excludes illiquid deposits at offshore Korean banks.
2. June 2005.

Source: Bank of Korea.

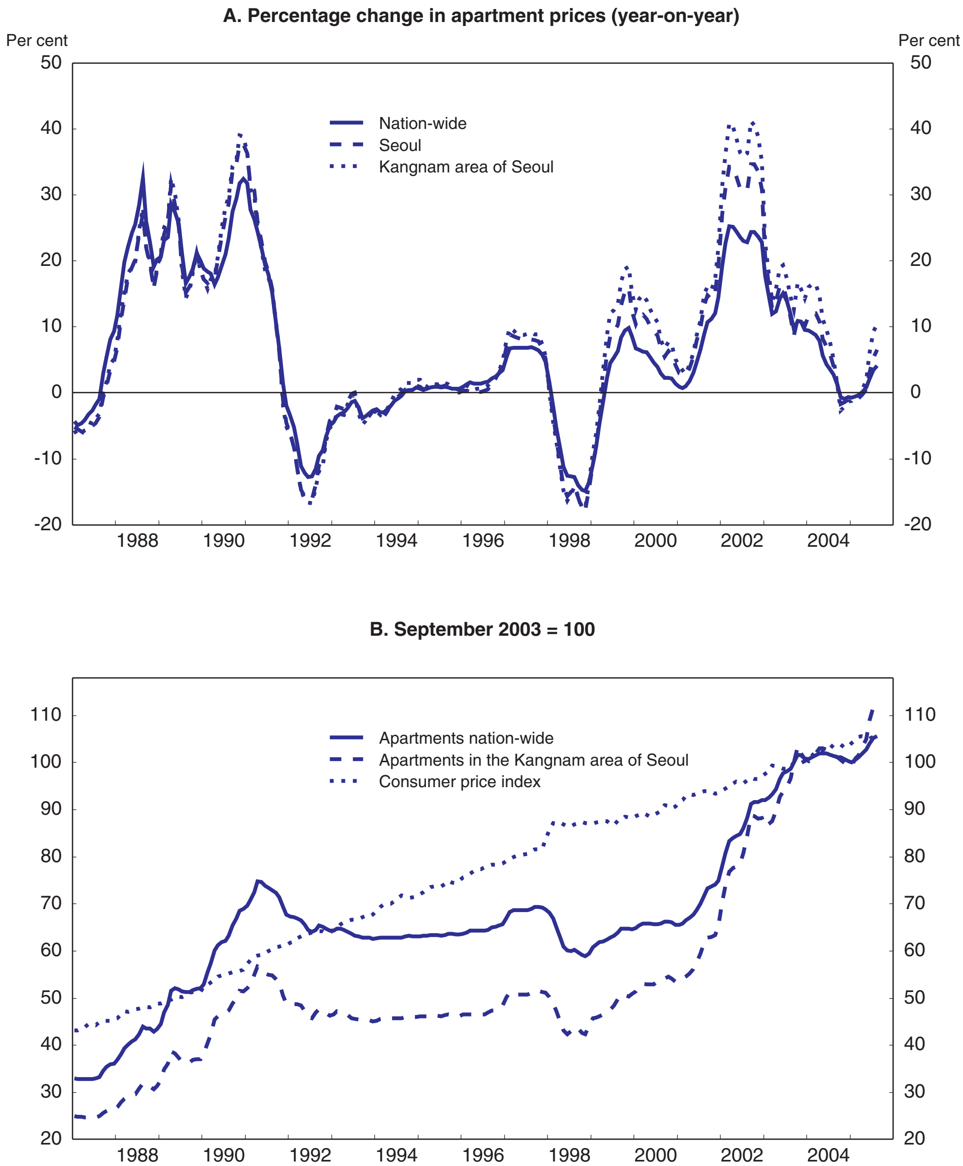
stock of MSBs has nearly doubled from 84 trillion won in 2002 to 162 trillion won (21% of GDP) in March 2005, and now exceeds the stock of Treasury bonds. Moreover, there is little rationale from a precautionary perspective for accumulating additional reserves, given that they substantially exceed short-term foreign debt. The policy approach of limiting intervention and maintaining a flexible exchange rate policy should thus continue.

The management of foreign exchange reserves, which is the responsibility of the Bank of Korea, will be affected by two new schemes introduced in 2005. *First*, the Korea Investment Corporation (KIC), a state-run organisation, will begin managing $20 billion of foreign exchange reserves in October in an attempt to earn a higher rate of return and promote the development of Korea as a financial hub. A small part of these funds will be directly managed by the KIC, with the remainder contracted out to asset management companies. *Second*, the Bank of Korea began making currency swap transactions with banks in July to support equipment investment by lowering the interest rate on foreign exchange loans. The scheme, which has an initial limit of $5 billion, involves swaps between the central bank's dollar assets and commercial banks' won assets. The Bank will ensure that each swap is linked to an underlying foreign transaction with the same maturity. These new schemes will need to be carefully managed to protect the value of Korea's foreign exchange reserves.

Concern over real estate prices

Korea has experienced two episodes of rapid increases in real estate prices during the past two decades (Figure 2.7). The 2002-03 episode was in part a correction from the decline that occurred in the wake of the 1997 crisis. Indeed, the 16.4% increase in the nation-wide housing price index in 2002 brought it back into line with long-run trends. Overall, housing price increases appear to have been rather moderate. The nation-wide index tripled between 1987 and 2005 while the consumer price index rose by 2.5 times (Panel B). The government is sensitive to increases in real estate prices, reflecting concern about possible spillovers to inflation, risks to financial institutions and a deterioration in income and

Figure 2.7. **Housing price trends**



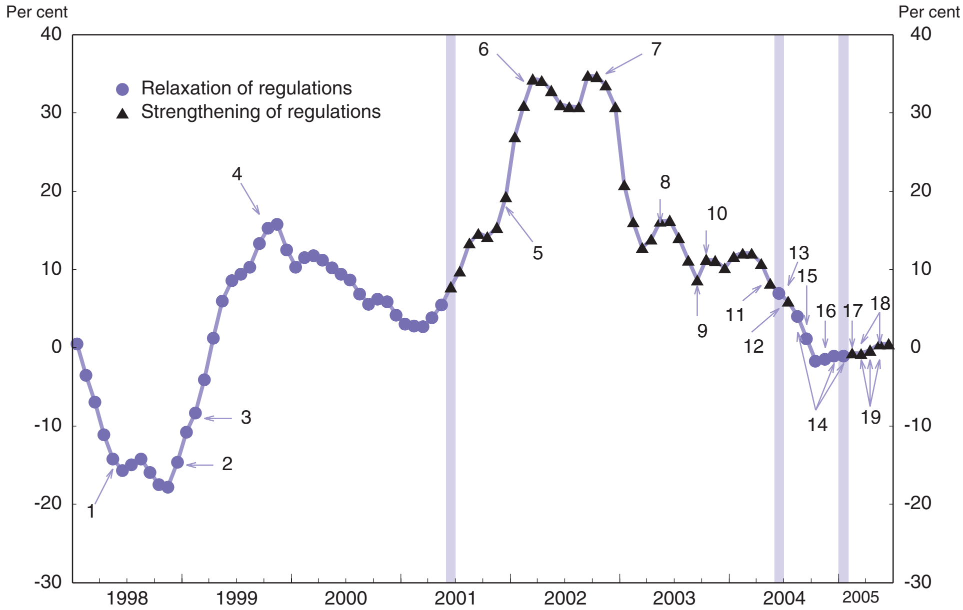
Source: Kookmin Bank.

wealth distribution. According to the 2000 census, nearly a quarter of households lived in dwellings that did not meet the minimum housing standard (Chung, 2005).

Korea has followed a stop-and-go pattern of polices, alternating between strengthening the extensive array of regulations on the housing market to limit price increases and easing regulations to stimulate the construction sector (Figure 2.8). For example, the "comprehensive package to stabilise the housing market" in October 2003, when the nation-wide housing price index was increasing at a double-digit rate, was followed by an initiative to support the construction industry in July 2004, when the rate had slowed to less than 6%.[4] During the period of relaxed regulation in 1999 following the crisis, the restriction on the right to re-sell apartments during the construction stage was abolished in an

Figure 2.8. **Real estate market policies**

Year-on-year percentage change in apartment prices in Seoul



Relaxation measures

1. Abolished regulation on including small apartments in new developments.
2. Relaxed conditions under which no capital gains tax is applied on real estate transactions.
3. Abolished regulation restricting the right to sell apartments during the construction stage.
4. Relaxation of restrictions on opening special savings accounts needed to qualify for housing.

Strengthening measures

5. Re-introduction of regulation on including small apartments in new developments.
6. Re-introduction of regulation restricting the right to sell apartments during the construction stage.
7. Strengthening of the conditions under which no capital gains tax is applied on real estate transactions. Strengthening of restrictions on opening special savings accounts needed to qualify for housing.
8. Strengthening of regulation restricting the right to sell apartments during the construction stage.
9. Strengthening of the regulation on including small apartments in the renovation of existing apartments.
10. Announcement of the comprehensive package of policies to stabilise the housing market.
11. Designation of additional 'housing speculation overheating zones'.
12. Policy against speculation in the area designated as the new administrative city.

Relaxation measures

13. Policy to achieve a soft landing of the construction sector.
14. Reduction in the number of 'housing speculation overheating zones'.
15. Flexibility on the designation of 'housing speculation overheating zones' in regional cities.
16. Reduction in the number of zones where reporting of housing transactions to government is required.

Strengthening measures

17. Policies for market stabilisation in the capital region.
18. Designation of additional 'housing speculation overheating zones'.
19. Designation of additional zones where reporting of housing transactions to government is required.

Source: Joon-Kyung Kim (2005).

effort to boost housing demand, but then re-introduced in 2002 for apartments in areas with intense speculation. It was further strengthened in 2003. However, the fine-tuning approach to the real estate market has several negative results. *First*, the frequent changes in the regulatory environment make it difficult for market participants to plan effectively for the long term. *Second*, some of the measures have a perverse impact. For example, the re-introduction in 2001 of the regulation requiring that small apartments account for 60% of units in new housing developments, intended to make homes affordable for low-income households, limited the supply of larger apartments. Given the growing demand for larger dwellings, this accelerated the already high rate of price increase. Indeed, the replacement of existing apartments in the Kangnam area of Seoul, the area with the fastest real estate price increases (Figure 2.7), has been tightly restricted, thus effectively freezing supply.

After falling on a year-on-year basis since late 2004, housing prices, both in the Kangnam area of Seoul and on a nation-wide basis, were approaching stability by mid-2005 (Figure 2.7). In addition, rents were stable in the first half of 2005. However, in Kangnam-ku – one section of the Kangnam area[5] – prices increased at a 14% annual rate during the first half of 2005, attracting considerable attention. The Financial Supervisory Service has asked banks to refrain from lending excessively to home buyers and took measures in June aimed at curbing speculation in property. Meanwhile, state prosecutors are launching a crackdown on property speculators and the tax authorities decided to launch investigations of individuals and companies owning more than three properties. The government has also announced plans to build more housing in the capital region as part of a new real estate policy that was announced at the end of August.[6] However, the amount of mortgage loans in June increased at the fastest rate in three years, perhaps prompted by the reforms to be introduced in August. There is growing pressure on the Bank of Korea to raise interest rates to curb the rise in property prices.

However, as a general rule, central banks should not use monetary policy in an attempt to contain a specific asset price. There is even less justification for a monetary policy response when housing price increases are concentrated in specific regions of the country, while the nation-wide index is stable. Instead, the authorities should focus on improving the policy framework for real estate. *First*, the stop-and-go pattern should be replaced by an appropriate long-term framework that is consistent and does not change periodically with economic conditions. Frequent reversals may make policies less effective as well. For example, the number of zones designated as areas where "housing speculation is overheated" was increased until May 2004, reduced between July and January 2005 and then increased in April and May 2005.[7] *Second*, policies should be market-friendly and focus on increasing supply rather than reducing demand through attempts to stop speculators. In particular, some policies to limit housing prices tend to limit supply, thus resulting in even greater price increases. According to one study, government policies for the housing market, to the extent that they are effective, are pro-cyclical (Tcha, 2005). *Third*, the best policy tool to influence the real estate market and to meet equity concerns is taxation, rather than regulation. The government is moving in the right direction with its goal of raising the property holding tax, which is very low with an effective rate of only 0.1%, to 1% by 2017 (see Chapter 3). In addition, the capital gains tax should be applied consistently at market values by reducing the range of deductions and exemptions (Hur, 2005). *Fourth*, the development of the capital market will help provide alternative investment possibilities besides real estate (see Chapter 6). The government is considering introducing new tax incentives to boost investment in the stock market. However, such an approach may create additional distortions.

Coping with fiscal policy challenges

This section considers the stance of fiscal policy and the impact on public debt. While public debt is relatively low and Korea is one of only five OECD countries in which the government is a net creditor, there are a number of pressures that will tend to boost public spending: *i)* the public-private partnerships for investment in infrastructure; *ii)* population ageing, which will boost expenditures on public pensions; and *iii)* economic co-operation with North Korea. This section ends by discussing reforms in the public expenditure framework.

Fiscal policy developments in 2004 and 2005

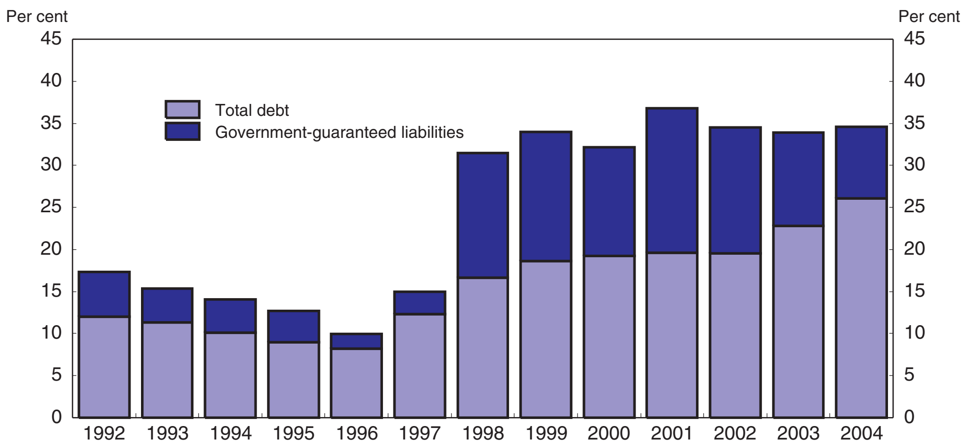
The consolidated government budget, excluding the social security surplus and the cost of financial-sector restructuring, was in balance in 2003 before recording a deficit of 0.5% of GDP in 2004 (Table 2.3).[8] To stimulate the economy, the government frontloaded expenditures in the first half of 2004 and then adopted a supplementary budget of 0.5% of GDP in the second half. With economic growth roughly in line with its potential rate, this suggests that the stance of fiscal policy was mildly expansionary in 2004, in contrast with the contractionary stance in 2003. The decision to replace maturing government-guaranteed bonds that were used to fund financial-sector restructuring with Treasury bonds increased government debt from 19.5% of GDP in 2002 to 26.1% in 2004 (Figure 2.9). However, the combined total of government debt and government-guaranteed liabilities remained stable at around 35% of GDP.

The initial budget for 2005 projects an increase in the consolidated budget deficit to around 1% of GDP (Table 2.3). Given the assumption of 5% real and 8.2% nominal GDP growth, this suggests that the fiscal stance is intended to remain slightly expansionary in 2005. Total spending is scheduled to rise by 9%, led by a 14.5% increase in social welfare outlays, notably for pension expenditures, government support for health insurance, social welfare for poor households and unemployment insurance payments. In contrast, investment in infrastructure is slated to rise by only 2% in 2005. Meanwhile, government revenue is projected to increase by 7.8%, reflecting a 1 percentage point cut in income tax rates and the elimination of special excise taxes on some luxury items.

With the frontloading of expenditures in the first half of the year and continued uncertainty about the strength of the recovery, the government has been under some pressure to introduce a supplementary budget. Indeed, the use of supplementary budgets has become the norm, providing additional public outlays of around 5 trillion won (0.7% of GDP) per year between 2001 and 2004. However, with the signs of recovery in domestic demand, additional fiscal stimulus appears unnecessary. Moreover, given the length of time needed to design and implement a supplementary budget, its impact would be felt so

Figure 2.9. **Government gross debt and guaranteed liabilities**

Per cent of GDP[1]



1. Intra-government debt is netted out beginning in 1997.

Source: Ministry of Finance and Economy.

Table 2.3. **Consolidated government budget**

Trillion won[1]

	1998	1999	2000	2001	2002	2003		2004		2005
	Outcomes					Initial budget[2]	Outcome[3]	Initial budget[2]	Outcome[3]	Initial budget[2]
A. Total										
Revenue	96.7	107.9	135.8	144.0	158.7	172.0	171.9	185.3	178.8	199.7
Growth (per cent)	–2.6	11.6	25.8	6.1	10.2	11.4	8.3	7.7	4.0	7.8
Per cent of GDP	20.0	20.4	23.5	23.1	23.2	23.7	23.7	23.8	23.0	23.8
Expenditures	115.4	121.0	129.3	136.8	136.0	165.3	164.3	178.2	173.2	193.8
Growth (per cent)	15.1	4.8	6.9	5.8	–0.5	11.4	20.8	7.8	5.4	8.8
Per cent of GDP	23.8	22.8	22.3	22.0	19.9	22.8	22.7	22.9	22.2	23.1
Balance	–18.8	–13.1	6.5	7.3	22.7	6.6	7.6	7.1	5.6	6.0
Per cent of GDP	**–3.9**	**–2.5**	**1.1**	1.2	**3.3**	**0.9**	**1.1**	**0.9**	**0.7**	**0.7**
Of which:										
Social security balance	6.1	7.4	12.5	15.4	17.6	19.4	19.6	22.5	21.2	25.9
Per cent of GDP	1.3	1.4	2.2	2.5	2.6	2.7	2.7	2.9	2.7	3.1
Privatisation revenues	0.3	3.3	0.0	3.7	6.7	1.6	1.3	0.0	0.5	0.0
Per cent of GDP	0.1	0.6	0.0	0.6	1.0	0.2	0.2	0.0	0.1	0.0
Financial-sector restructuring costs	0.0	0.0	0.0	0.0	0.0	13.0	13.0	12.0	12.0	12.0
Per cent of GDP	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.5	1.5	1.4
B. Alternative measures of the balance							0.0			
Excluding social security	–24.9	–20.4	–6.0	–8.2	5.1	–12.8	–12.0	–15.5	–15.6	–19.9
Per cent of GDP	–5.1	–3.9	–1.0	–1.3	0.7	–1.8	–1.7	–2.0	–2.0	–2.4
Excluding social security and financial-sector restructuring costs	–24.9	–20.4	–6.0	–8.2	5.1	0.2	1.0	–3.5	–3.6	–7.9
Per cent of GDP	**–5.1**	**–3.9**	**–1.0**	**–1.3**	**0.7**	**0.0**	**0.1**	**2.4**	**–0.5**	**–0.9**
Excluding social security, privatisation and financial sector restructuring costs	–25.2	–23.7	–6.0	–11.9	–1.7	–1.4	–0.3	–3.5	–4.1	–7.9
Per cent of GDP	–5.2	–4.5	–1.0	–1.9	–0.2	–0.2	0.0	–0.5	–0.5	–0.9
Memorandum item										
Adjusted expenditures[4]	115.7	124.3	129.3	140.5	142.7	153.9	152.6	166.2	161.7	181.8
Growth (per cent)	15.9	7.4	4.0	8.7	1.6	0.1	6.9	8.0	6.0	9.4

1. On a GFS basis. Includes public enterprises, but excludes local government.
2. Growth rate relative to previous year's initial budget.
3. Growth rate relative to previous year's outcome.
4. Excludes financial sector restructuring costs and privatisation revenues, which are treated as negative net lending under the Government Financial Statistics (GFS) methodology.

Source: Ministry of Planning and Budget.

late that it would risk being pro-cyclical. The priority should be to limit the growth of outlays and debt and achieve the National Fiscal Management Plan's target of a balanced budget (excluding the social security surplus) by 2009. At present, the government has no plans to introduce a secondary budget. Instead, it will encourage state-owned enterprises to boost their investment in the second half of the year and ease restrictions on construction of industrial facilities in the capital region. In addition, the authorities hope to induce private-sector spending on infrastructure projects as part of the public-private partnerships (PPP) plan.

Ensuring the efficiency of public-private partnerships to promote investment in public infrastructure

In 2005, the government announced a new plan to encourage the private-sector supply of infrastructure assets and services that have traditionally been provided by the government. Korea has had such a programme since 1994 based on the "Build-Transfer-Operate" approach, which led to a number of joint projects, primarily in the area of transport.[9] Under the new framework, the projects will be constructed under a "Build-Transfer-Lease" (BTL) approach in which the government leases the facilities constructed by private-sector entities for between 10 and 30 years. The objectives of this plan include:

- Supplying necessary public infrastructure as early as possible, given that the amount of public investment is too limited to provide adequate infrastructure in a timely manner.
- Increasing efficiency in public infrastructure investment and management by introducing the private sector's creativity and efficiency.
- Providing long-term investment opportunities guaranteeing a stable rate of return to pension funds and insurance companies.
- Playing a countercyclical role by stimulating the construction industry.

The implementation of BTL projects consists of three stages (Ministry of Planning and Budget, 2005). *First*, the responsible ministry conducts preliminary studies on the economic and policy feasibility of each proposed BTL project, including the expected benefit and the urgency. *Second*, those projects passing the feasibility test are subject to "Value for Money" testing to determine whether the PPP approach would lead to a better outcome, in terms of cost and the level of service quality, than funding through the budget. *Third*, projects deemed suitable for PPPs are analysed to determine the appropriate level of lease payments to compensate the private-sector entities for the construction costs. In May 2005, 17 project clusters, including schools, retirement homes, medical clinics, museums, libraries and military housing, were opened for public bidding (Table 2.4). The government and the private sector are expected to agree on total spending of 6 trillion won (0.7% of GDP) in 2005 for 128 projects averaging 48 billion won each. The first projects entered the construction stage in August, with private-sector expenditures projected to reach 0.5 trillion won by the end of 2005. The cumulative total spending for PPP projects agreed to by 2007 is expected to be 24 trillion won (3.1% of GDP).

The government provides a number of incentives to encourage private-sector firms to participate in PPPs. *First*, they are allowed to use public land in designated areas. *Second*, a Minimum Revenue Guarantee – up to 90% in some cases – provides additional revenue over the term of the lease contract. *Third,* tax incentives, covering acquisition and registration taxes and the VAT, are provided. *Fourth*, the government mitigates foreign exchange risks, in some cases through direct subsidies. There are also incentives to encourage financial

Table 2.4. **Public-private partnerships to promote investment in infrastructure**

Trillion won

Type of investment	2005	2006	2007	Total
Educational facilities	3.1	5.8	4.7	13.6
Water works and sewage	1.0	2.3	2.3	5.6
Military housing	0.7	0.6	0.6	1.8
Cultural and welfare facilities	0.8	0.6	0.6	2.0
Railroad facilities	0.4	0.7	0.0	1.2
Total	**6.0**	**10.0**	**8.4**	**24.1**

Source: Ministry of Planning and Budget.

institutions to invest in BTL projects. In addition, the scheme includes measures to promote the participation of small and medium-sized construction companies by providing preferential treatment and loan guarantees.

To guarantee fiscal soundness and transparency, the government will encourage active competition in the bidding process, which should lead to an appropriate rate of return on BTL projects. The total scale of projects will be set so that the long-term lease costs do not exceed the current budget outlays on infrastructure investment. In addition, information on the yearly investment amounts, as well as budgetary costs, will be included in the medium-term National Fiscal Management Plan and reported to the National Assembly.

There are advantages to drawing on the efficiency and creativity of the private sector in building and operating public infrastructure. In addition, PPPs can be designed so as to shift the risk away from taxpayers and to equity owners. It is encouraging that the programme draws on the expertise of the Public and Private Investment Management Center (PIMAC) to ensure the objectivity of the feasibility studies conducted by the relevant ministry at the first stage. PIMAC was created by the merger of the Private Investment Center of Korea and the Public Investment Management Center (PIMA) in the Korea Development Institute. PIMA was originally established as an independent organisation in 1999 to conduct *ex ante* evaluation of large-scale public investment projects (see the 2004 *Survey*). Of the 113 projects selected for screening by mid-2004, 92 were rejected (Table 2.5), resulting in budget savings of around 60 trillion won (8% of GDP). Given the success of this approach in eliminating wasteful investment projects, the role of PIMAC in reviewing BTL projects is appropriate as they create explicit and contingent liabilities for the government.

However, there are a number of potential weaknesses in the new scheme in Korea. *First*, PPP projects may receive less review in the National Assembly than publicly-funded projects as they are only reported to the legislature but not included in the budget subject to legislative approval. *Second*, PPPs should not be used for macroeconomic stabilistion. Despite the 128 different projects announced in the first half of the year, only 0.5 trillion won (0.1% of GDP) will be spent by the private sector in 2005. Instead, the focus should be on long-term efficiency gains. *Third*, the various incentives included in the programme, such as those to induce the participation of SMEs and investment by financial institutions, reduce transparency and risk reducing efficiency. *Fourth*, while PPPs are anchored in the medium-term fiscal plan, leases of up to 30 years extend far beyond the five-year horizon of the plan. In addition to these concerns, the experience of other OECD countries that have used the PPP approach point to a number of additional risks (see Box 2.1).

Table 2.5. **Preliminary feasibility studies on public investment projects**

Trillion won

	Total public investment projects		Selected for screening by PIMA[1]		Investment projects rejected	
	Number of cases	Estimated expenses	Number of cases	Estimated expenses	Number of cases	Estimated expenses
1999	19	26.7	12	6.9	7	19.8
2000	30	13.9	15	6.0	15	7.9
2001	41	19.8	14	6.4	27	13.3
2002	30	16.6	13	6.2	17	10.4
2003	52	32.0	35	24.7	17	7.3
2004[2]	33	5.8	24	4.9	9	0.9
Total	**205**	**114.8**	**113**	**55.1**	**92**	**59.6**

1. The Public Investment Management Centre, which is located in the Korea Development Institute. It was recently merged with the Private Investment Center of Korea to create the Public and Private Investment Management Center (PIMAC).
2. January to June.

Source: Ministry of Planning and Budget.

Reforming the National Pension Scheme

The rapid pace of population ageing (Figure 1.4) will lead to pressure to increase public pension outlays. The National Pension Scheme (NPS), established in 1988, is clearly unsustainable despite the reforms introduced in 1998. The Scheme aims at providing pension benefits with a replacement rate of 60% for workers earning average wages with 40 years of contributions. For those that also receive the mandatory Retirement Allowance (see Chapter 5), pension payments are rather generous, with a total replacement rate of 80% after 35 years.[10] However, at the current contribution rate of 9%, the NPS would fall into deficit in 2036 (Figure 2.10), exhausting the National Pension Fund, which is currently 32 times larger than pension payments, by 2047. Ensuring financial sustainability – defined as a reserve fund large enough to pay two years of benefits – through 2070 requires boosting the contribution rate to 19.85% by 2030.[11] In addition, health insurance contributions would rise to 8.2% of wages by that point.

The government is legally required to review the sustainability of the NPS every five years. In 2003, the government proposed a reduction in the replacement rate from 60% to 50% in 2008, accompanied by a 1.38 percentage point rise in the contribution rate every five years beginning in 2010, boosting it to 15.9 per cent by 2030.[12] Such a contribution rate would be adequate to ensure the financial stability of the NPS through 2070 under fairly optimistic economic assumptions. In particular, real wage growth is projected to remain relatively high at 2% during the decades 2030 to 2050, while the real rate of return on investment is assumed to be 2.5%.[13] Under somewhat less favourable economic assumptions,[14] the contribution rate would have to rise to 17.2%. While this is below the 20% rate necessary under the current parameters, it would still have negative consequences on labour market performance. However, the 2003 reform proposal remains blocked in the National Assembly.

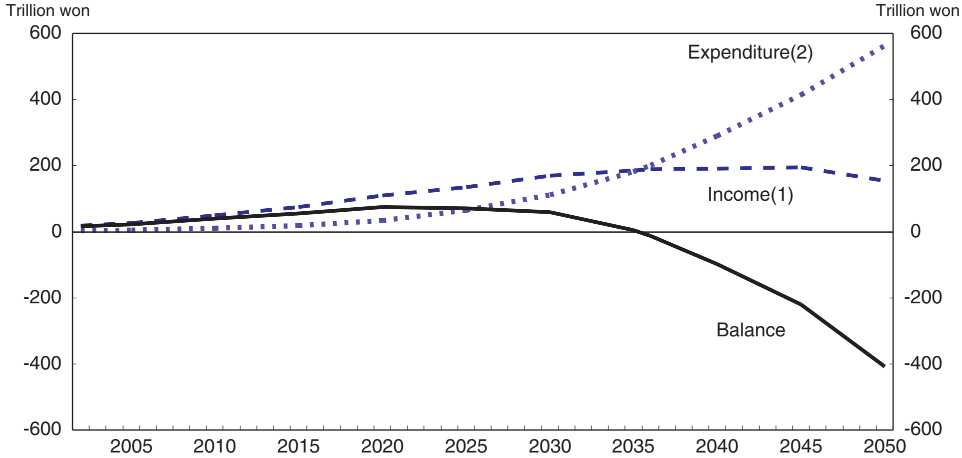
In addition to the question of sustainability, the relatively limited coverage of the NPS remains a concern. Expansion of the legal coverage and enhanced compliance has boosted the number of persons paying contributions nearly three-fold from 4.4 million in 1988 to 12.4 million in 2004.[15] Nevertheless, the total number of contributors was equivalent to only 55% of the labour force. In addition, there was a large gap in the level of contributions

Box 2.1. **Problems with the use of public-private partnerships to build social infrastructure**

- Financing costs are generally higher in the private sector. It is essential, therefore, to ensure that the efficiency advantage of the private-sector firms is large enough to offset their higher borrowing costs.
- While the private-sector entity winning the PPP bid is likely to be the most efficient in constructing the infrastructure project, there is no guarantee that it will have a comparative advantage in operating the facility. In Korea, the builder signs a 10 to 30-year contract to operate and manage the facility. However, the skills required to build a retirement home, for example, presumably differ from those needed to manage it efficiently. In the case of Hungary and Mexico, granting both construction and operating rights for road projects was considered to be a failure (Joumard *et al.*, 2004).
- The potential for cost-efficiency over the long term depends on the degree of competition (Joumard *et al.*, 2004). It is thus essential that the process of contracting and tendering be organised in such a way that it reduces government dependence on the concession holder. In particular, conditions on the level of service quality should be specified in the contract, although that can be difficult in some cases. Even if the service quality can be included in the contract, the threat that the government could find another private partner in case of under-performance may not always be credible given the specificity of assets. In sum, the government and its private partners may become mutually dependent in a way that stifles competition.
- The costs of writing well-designed contracts and carrying out tenders for PPPs are often high. After constructing public infrastructure, the private entities in Korea will be reimbursed through long-term leases, with the rate of return based on the yield on five-year government bonds, plus an adjustment factor that depends on the long-term premium and the risks involved in facility construction and operation.
- The payment of the lease should be included in the government's budget. However, in the case of Korea, there has not been any decisions on fiscal rules governing the accounting treatment of PPPs (Ministry of Planning and Budget, 2005). The BTO projects created in the past have been treated separately from publicly-financed projects. In some countries, PPPs have been used to bypass spending controls and move public investment off budget, while the government continues to bear most of the risk (IMF, 2004).
- In addition to dealing with the explicit costs, PPPs can entail large contingent liabilities for the government. For example, design problems, cost overruns and project delays pose risks that can lead to increased public debt. It is thus important to transfer risk to the private sector, including the equity owners, although this increases the cost and difficulty of writing contracts. Transferring risks also depends on the regulatory and oversight mechanisms in place (Joumard *et al.*, 2004). In Korea, the government bears exchange rate risks, as noted above. In addition, it is difficult to estimate the size of contingent liabilities as they depend on the Minimum Revenue Guarantees given to operators.

between those ensured through their workplace (1.8 million won in 2003) and individually-insured persons (1.05 million won), who tend to be self-employed. The relatively low coverage and small payments by those who are self-employed raises the risk that the NPS will not be adequate to prevent poverty among older persons. The rate of relative poverty

Figure 2.10. **Long-term projections for the National Pension Scheme**



1. Including investment earnings.
2. Including administrative costs.

Source: National Pension Research Institute.

is already significantly higher for households headed by someone over the age of 60 (Table 2.6), reflecting the breakdown of traditional means of income support before the social safety net is sufficiently well developed.

A systemic reform of the pension system is needed to address the problem of inadequate pension coverage, while ensuring the sustainability of the NPS. The parameters of the earnings-related pension should be immediately adjusted to sustainable levels by lowering benefit rates. Furthermore, the tax-financed social welfare programme, which is means-tested and currently has limited coverage, should be gradually transformed into a universal basic pension, with a relatively low flat rate. The scope of such a two-part national pension, as proposed in the 2001 *Economic Survey of Korea*, should depend on the availability of fiscal resources and may require measures to reduce the basic pension

Table 2.6. **Poverty rates by age of household head**

Based in survey of urban households[1]

Age	Poverty rate[2] (%)	Poverty experience rate[3] (%)	Long-term poverty rate[4] (%)
29 or under	28.8	63.5	25.4
30-39	17.1	36.7	12.3
40-49	13.8	30.4	9.0
50-59	9.7	25.5	4.9
Over 60	22.5	42.0	17.4
Total	15.6	34.1	10.8

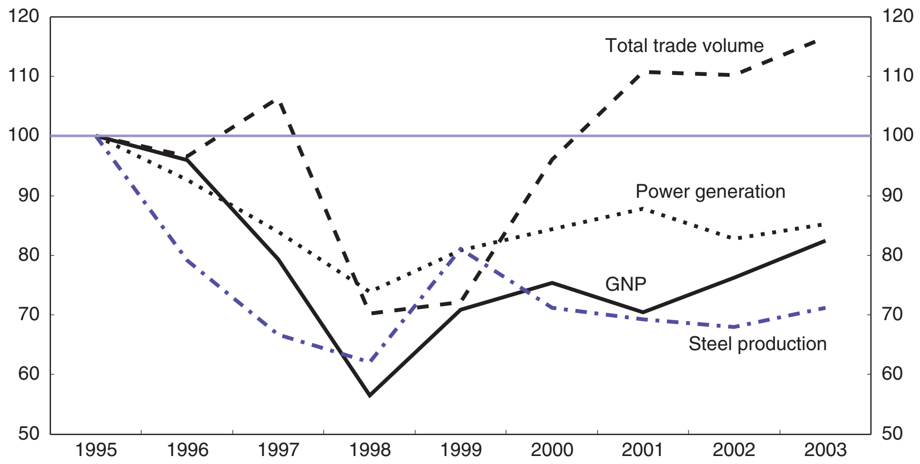
1. This is based on the National Statistical Office's survey of urban households during 1998-2000. Consumption was used as the survey included self-employed persons. Poverty is defined as households whose consumption expenditure is in the bottom 10% of total consumption expenditure.
2. In poverty in a specific quarter.
3. In poverty one or more quarters during the three-year period.
4. In poverty for 8 or more quarters over 12 quarters.

Source: Chang (2004).

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Figure 2.11. **North Korean economic trends**

1995 = 100



Source: Ministry of Unification, Republic of Korea.

benefit to the wealthy. The public pension should be supplemented by the development of a company pension system (see Chapter 5) and individual savings.

Such a reform of the NPS would sharply limit the accumulation of assets in the National Pension Fund and thus reduce the risks associated with a large concentration of assets in a single institution. The Fund already amounted to 15.5% of GDP by 2003 and may double to around 35% by 2015. The Fund's investment objective is to generate a high return, while taking account of "stability and socioeconomic utility". The proportion of the Fund deposited in the account of the National Treasury for developing infrastructure has fallen from more than half in 1999 to only 6% in 2004, reflecting the decision taken in 2001 to stop making loans to the government. By 2003, the composition of the Fund had changed significantly. The largest proportion is now invested in bonds (85%), with government bonds accounting for about one-third of this category. Equities account for most of the remainder at 7%. To improve the rate of return, the National Pension Corporation began to outsource some of the management of the Fund to asset management companies in 2001, although the share accounts for less than 1% of the total. Increasing the extent of contracting out may help boost returns. However, it is necessary to ensure a governance framework that prevents political influence on the companies in which the Fund invests.

Greater economic co-operation with North Korea

After a precipitous decline in the 1990s, the North Korean economy has stabilised in recent years, with GNP growth estimated at between 1% and 2% in 2002 and 2003 (Ministry of Unification, 2005). Nevertheless, a number of indicators, such as GNP, power generation and steel production, remain significantly below their 1995 levels (Figure 2.11). As a result, North Korea's economy was only 3% the size of the South's in 2003, while per capita income was only 6% as large (Table 2.7). The North has experienced a chronic grain shortage of about 2 million tonnes a year, as annual output of about 4 million tonnes falls well short of its needs. The shortage, which is expected to continue in 2005, has made North Korea dependent on food aid from South Korea and other nations.

Table 2.7. **Comparison of North and South Korea**

2003 unless otherwise noted

	(A) North Korea	(B) South Korea	(A/B) Comparison (%)
Population (millions)	22.5	47.9	47.0
GDP (billion US$)	18.4	608.6	3.0
GDP/GNP per capita (US$)	818	12.720	6.4
Total trade (billion US$)	2.4	372.6	0.6
Exports	0.8	193.8	0.4
Imports	1.6	178.8	0.9
Inter-Korean exports (millions US$ in 2004)	258	439	58.8
Commercial exports[1]	258	90	286.7
Non-commercial exports[2]	0	349	–
Industrial statistics			
Power generation (100 million kWh)	196.0	3.224.0	6.1
Steel production (million tonnes)	1.1	46.3	2.4
Cement (million tonnes)	5.5	59.2	9.4
Agricultural statistics			
Grains (million tonnes)	4.3	5.0	85.0
Fertiliser (million tonnes)	0.4	3.3	12.6

1. Processing-on-commission trade accounts for about half of commercial trade.
2. Includes humanitarian aid, Mt Geumgang Tours and the construction of the Gaesong Industrial complex.

Source: Ministry of Unification, Republic of Korea.

Inter-Korean trade is limited by restrictions on travel and communications between the two halves of the peninsula. According to a government survey of inter-Korean trading companies in 2003, 60% engaged in indirect trade through third countries, while 17% traded only directly (with the remainder involved in both types of trade). Despite these obstacles, inter-Korean trade increased from around $300 million per year in the second half of the 1990s to around $700 million in 2003 and 2004 (Table 2.7), which would make South Korea the second-largest trading partner of the North after China. Inter-Korean trade consists of three parts: *i)* regular business transactions (a quarter of the total); *ii)* processing-on-commission,[16] primarily in textiles (a quarter); and *iii)* non-commercial trade, notably humanitarian aid, the Mt. Geumgang tours and construction of the Gaesong Industrial Complex (one-half). Inter-Korean trade fell slightly in 2004, primarily due to a 15% decline in commercial trade (business transactions and processing-on-commission), reflecting South Korean quotas on agricultural and fishery products.

Although ministerial level talks between the North and South came to a temporary halt in July 2004, there was continued progress on joint economic projects, particularly the industrial park for South Korean firms in Gaesong. The first phase of the project – a 3.3 million m^2 complex for labour-intensive SMEs – is already under construction. Fifteen South Korean firms have been selected for the pilot phase and five are already in operation. North Korean workers are to be paid a minimum of $50 per month, less than one-tenth of the minimum wage in South Korea. Infrastructure for the complex – notably rail and road links, electricity and communications – is being provided by the South Korean government. The objective is to create a 66 million m^2 heavy industrial complex. The location of Gaesong near the border may help make it more successful than earlier attempts to establish special

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

economic zones in remote areas of the North. The two governments agreed to open road and rail links between the North and South in October 2005.

In June 2005, South Korea proposed supplying 2 million kilowatts of electricity annually to the North beginning in 2008 after the construction of power lines from the South to the North. However, this project is conditional on North Korea abandoning its nuclear programmes and will depend on the ability of the North's grid to receive and distribute such a large flow of electricity. Government spending on co-operation with North Korea was 0.5 trillion won (0.1% of GDP) in 2004 and will increase significantly in the future.

Improving the public expenditure system

The rising pressure for greater spending, in particular due to population ageing and possible increased economic co-operation with North Korea, makes it essential to improve the efficiency of public spending (see the 2003 *Survey*). The public expenditure system has been criticised for a lack of strategic prioritisation in allocating resources and performance evaluation of projects. The administration is tackling these problems through the National Fiscal Management Plan, the introduction of a top-down budgeting approach and the expansion of the performance management system. The National Fiscal Management Plan was first introduced for the period 2004 to 2008 (see the 2004 *Survey*) and contains targets on the level of government spending, sectoral spending priorities and expenditures for key budgetary programmes. The initial plan for 2004 to 2008 was reflected in the budget proposal for 2005, and it will soon be updated to 2005 to 2009 to be used in the formulation of the 2006 budget. The objective is to improve the efficiency and predictability of public spending and ensure that it is consistent with national visions and policy priorities. However, it is not clear to what extent the targets for the five-year period are binding on the annual budgeting process, which is the key to an effective medium-term plan.

The implementation of the Plan will be aided by the adoption of a top-down budgeting approach. Budgeting has relied excessively on a bottom-up approach in which the sectoral allocation and the total size of the budget were determined at the last stage by aggregating the expenditures on individual programmes. As a result, little attention was paid to outcomes, and the linkage between the budget and overall policy management was inadequate. A top-down system, which was introduced as a pilot project in four government agencies in 2004 and fully implemented in 48 line ministries for the 2005 budget, is expected to promote more efficient spending. Sectoral expenditure ceilings are set according to priorities in the National Fiscal Management Plan, and the line ministries are allowed to formulate their budgets autonomously within the respective ceilings. Increased autonomy has reduced the incentive for each ministry to demand excessive funding, resulting in a deceleration in the growth rate of the total requested budgets from 30% in the 2004 budget to 12% in the 2005 budget. Furthermore, budgets for continuous projects were reduced by 3.1 billion won, while those for new projects were doubled in the 2005 budget.

There has been less progress on reducing the number of special accounts and funds, which accounted for 16% and 29%, respectively, of consolidated expenditure in 2004 (see the 2004 *Survey*). The number of special accounts was 23 in 2005 while there were 60 funds. The highly complex and compartmentalised budget structure reduces transparency and makes it difficult for the authorities to allocate resources efficiently (Koh, 2005). It is thus important that the government follow through on its plan to reduce the number of public funds and special accounts to 54 and 12, respectively.

Conclusion

Although the long-awaited rebound in domestic demand appears to be underway, the monetary policy stance should remain supportive, in the context of the medium-term inflation target framework, until the recovery is firmly on track. However, additional fiscal stimulus appears unnecessary, as private consumption growth is likely to be strong by the time the impact of fiscal measures would be felt. Instead, the priority should be to limit government outlays and debt, given the rising pressures for increased public spending. Detailed recommendations are shown in Box 2.2.

Box 2.2. **Summary of recommendations for macroeconomic policy**

Monetary and exchange rate policies

- Continue the medium-term inflation targeting framework introduced in 2004.
- Pursue a flexible exchange rate policy, while limiting intervention in foreign exchange markets and avoiding the further accumulation of foreign exchange reserves.
- Carefully monitor the new schemes created to manage foreign exchange resources, such as the Korea Investment Corporation, so as to avoid losses.
- Maintain a low short-term policy interest rate until aggregate demand is on a sustained recovery track.
- Avoid using monetary policy as a tool to stabilise real estate prices.
- Use market-friendly policies to deal with real estate market trends and end the stop-and-go pattern of regulation that alternates between the goals of limiting price increases and promoting construction activity.

Fiscal policy

- Avoid additional fiscal stimulus, including a supplementary budget in 2005, as domestic demand appears to be on a recovery track and the impact of stimulus would come so late as to risk having a pro-cyclical impact.
- Focus the public-private partnerships to promote private investment in infrastructure on long-term efficiency considerations rather than on countercyclical objectives and limit their budgetary costs and contingent liabilities for the government.
- Reform the National Pension Scheme to ensure its sustainability while containing the necessary hike in contribution rates to limit the negative impact on the labour market.
- Expand the use of contracting out in managing the National Pension Fund, while ensuring that the governance framework prevents political influence on the companies in which the Fund invests.
- Ensure that the social safety net is adequate to limit the risk of poverty among the elderly during the transition period while the National Pension Scheme matures and broadens its coverage.
- Enhance the efficiency of the public expenditure system, in part through effective top-down budgeting and ensuring that the medium-term National Fiscal Management Plan is binding on annual budgets.
- Further cut the number of special accounts and funds to increase budgetary transparency and efficiency.

Notes

1. The hike in tobacco taxes at the end of 2004 had prompted a surge in cigarette sales in the final quarter of 2004. The Bank of Korea calculates that this reduced the growth rate in the first quarter from around 3.1% on a year-on-year basis to 2.7%, the slowest in two years.
2. The Bank of Korea's index of consumer sentiment fell from 108 in the first quarter of 2005 to 102 in the second, still well above the 87 in the final quarter of 2004. Meanwhile, the business sentiment index recorded even a sharper fall – from 108 to 91 – but also remains much higher than the 61 in the fourth quarter of 2004.
3. See, for example, the Monetary Policy Decision released after the 7 July 2005 meeting.
4. Real estate prices and investment in residential construction are positively correlated. Since 1987, the correlation coefficient using quarterly data is 0.4.
5. This area is attractive in part because of the educational opportunities, including private tutoring institutes (*hakwon* – see Chapter 4).
6. The policy is explained in a Ministry of Finance and Economy press release of 31 August 2005, available at *www.mofe.go.kr*.
7. Real estate transactions in these zones have to be reported to the government. The main difference is that capital gains taxes are imposed on market values rather than on the valuation used for property taxes, which is about 35% of the market price (see Chapter 3).
8. The government's preferred fiscal measure excludes the social security surplus as this is intended to cover the future liability of public pensions. In addition, the decision to replace government-guaranteed borrowing used to finance restructuring of the financial sector (see Chapter 6) with public bonds has boosted the reported deficits. Between 2003 and 2006, 49 trillion won (about 6% of GDP) of such debt is being brought into the budget. It should also be noted that Korea uses the GFS measure of the government budget. General government on a SNA93 basis is available through 2002, when it reported a surplus of 5.5%, compared to a 3.3% surplus using GFS. The difference reflects the fact that GFS does not include local government, but does include net lending items, some of which are financial in nature.
9. During the past decade, 157 BTO projects have been launched (47 at the national level and 110 at the municipal government level), totalling 40 trillion won (6% of GDP). Of the total, 44 are already in operation, while the remainder are under construction or negotiation.
10. However, with the increased number of non-regular workers, only half of workplace-insured persons receive the Retirement Allowance. Moreover, it is estimated that the average period of coverage will be 22 years in 2050.
11. This projection, made by the National Pension Research Institute, assumes the fertility rate is constant at 1.4, somewhat above the current rate of 1.2. Fully funding the NPS would require a contribution rate of 25%.
12. The ruling party has introduced legislation that would cut the replacement rate to 50% but leave the contribution rate unchanged.
13. In comparison, the average rate of increase in real compensation in the business sector during the 1990s in the OECD area averaged around 1%.
14. Real wage growth slows to 1.5% during the period 2030 to 2050, while the real rate of return is 2%.
15. Another 4.6 million were classified as insured but exempt from paying contributions.
16. Processing-on-commission trade involves the shipment of raw materials and semi-processed good to the North for processing, followed by sale in the South. About 80% of this trade is in textiles, with the remainder largely in electronics. In 2004, 118 Korean companies were active in this type of trade.

Bibliography

Chang, Jiyeun (2004), "Grants to Promote Employment of the Elderly in Korea – Introduction and Evaluation", Korea Labor Institute Issue Paper No. 35, Seoul.

Chung, Eui-Chul (2005), "Housing Policies for Low Income Households", *KDI Annual Report*, Korea Development Institute, Seoul.

Hur, Suk-Kyun (2005), "The Current Situation and Theoretical Analysis of Housing-Related Taxes in Korea", *KDI Annual Report*, Korea Development Institute, Seoul.

International Monetary Fund (2004), "Public-Private Partnerships", Prepared by the Fiscal Affairs Department, Washington.

Joumard, Isabelle, Per Mathis Kongsrud, Young-Sook Nam and Robert Price (2004), "Enhancing the Effectiveness of Public Spending: Experience in OECD Countries", OECD Economics Department Working Paper No. 380, Paris.

Kim, Joon-Kyung (2005), "Real estate and housing policies", mimeo, Korea Development Institute, Seoul (in Korean).

Koh, Young-Sun (2005), "Reforming the fiscal management system in Korea" mimeo, Korea Development Institute, Seoul.

Ministry of Planning and Budget (2005), "Public-Private Partnership in Public Investment in Korea", mimeo, Seoul.

Ministry of Unification (2005, *Facts and Figures: Statistics of North Korea Administrative District*, Seoul, *www.uniKorea.go.kr*.

OECD (2004), *Economic Survey of Korea*, Paris.

Tcha, MoonJoong (2005), "Determinants of Housing Prices and Policy Issues", *KDI Annual Report*, Korea Development Institute, Seoul.

ISBN 92-64-01438-1
OECD Economic Surveys: Korea

Chapter 3

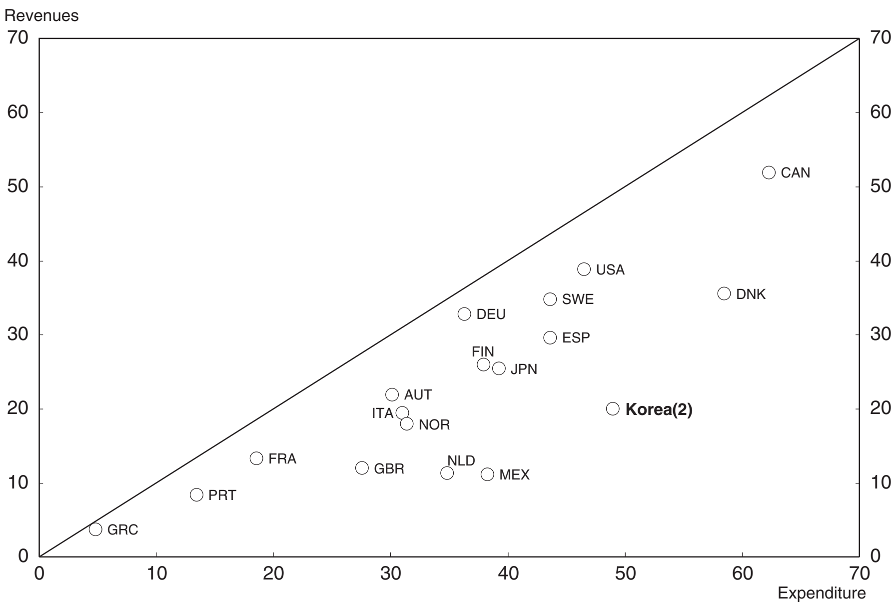
Getting the most out of public-sector decentralisation

This chapter discusses policies to improve fiscal relations between levels of government to better meet the needs of citizens, an objective of the government's "Roadmap for Decentralisation". Although local government accounts for around half of total government spending, they have little autonomy and fiscal resources vary sharply between regions. The priority should be to enhance the independence of local authorities by establishing a clear division of responsibilities and transferring additional assignments to the local level. The general local governments should also have more influence on education, while providing more support, through stronger linkages with the local education authorities, with a final aim of merger. The allocation of intergovernmental grants should be more transparent and the regulations attached to them should be relaxed to expand flexibility, while increasing reliance on block grants. Improving the fiscal federalism framework also requires more revenue raising power for local governments while simplifying the structure of local taxes. Greater accountability and rules are needed to ensure sound fiscal management by local governments.

Korea is a unitary country with a short history of local autonomy. Policies to increase the role of local government, which have been linked to the objective of promoting regionally balanced development, began in the late 1980s. This has contributed to a rise in local governments' share of general government outlays to around one-half, a relatively high proportion compared to other OECD countries (Figure 3.1).[1] However, the benefits of decentralisation have not been fully realised. *First*, the historical legacy of centralised control has left excessive authority at the central level. In particular, the education budget is largely outside the control of local authorities. Moreover, weak self-governance and a lack of capability at the local level have limited the effective use of the power that they do have. *Second*, the severe imbalance in the financial resources of central and local governments requires local authorities to rely on large transfers from the central government, including earmarked grants. *Third*, there is a large variance in the fiscal independence of local governments, with local own-source revenue accounting for 95% of

Figure 3.1. **Sub-national government share in general government revenues and expenditure**

Per cent in 2003*



Note: Revenues include direct and indirect taxes as well as non-tax revenues received by regional and local governments and are expressed as a share of revenues received by the general government. Expenditure corresponds to total expenditure by regional and local governments expressed as a share of general government expenditure. Transfers between governments are netted out. The country ranking in this figure does not necessarily correspond to the comparative fiscal autonomy of sub-national governments.

1. Or latest year available: 2000 for Japan, 2002 for Denmark, Korea and Mexico.
2. Including local education governments.

Source: OECD, National Accounts database; Statistics Norway; Statistics Canada; US Bureau of Economic Analysis.

spending in Seoul compared to only 17% in lower-level cities. In sum, the current framework weakens the management of fiscal resources and makes it difficult for local governments to meet the demands of their constituents. In the longer run, reforming the relationship between central and local governments is an important aspect of controlling spending pressures while limiting the regional variation in fiscal capacities.

This chapter identifies policy options to improve fiscal relations across levels of government. After an overview of the current situation, the following sections present the key issues related to spending, revenue and fiscal discipline. The fifth section considers the link between fiscal federalism and policies to promote balanced regional development. The chapter concludes with an agenda for further reform.

The trend toward fiscal decentralisation

Korea was governed by a highly centralised administrative system until the late 1980s, with local governments acting as little more than branches of the central government. However, the reform of the Local Autonomy Act and the Local Finance Act in 1988 launched the shift of responsibilities to sub-national governments. This was followed by the introduction of a directly elected local council system in 1991, followed by the popular election of governors and mayors in 1995 (see Box 3.1). These reforms, which were in line with the world-wide trend toward decentralisation, were aimed at satisfying the pressure for greater democracy and meeting the increasing demands of local citizens. In addition, greater local autonomy was expected to promote more balanced regional development. Fiscal decentralisation appears to have enhanced the quality of public services by increasing flexibility, allowing them to reflect local needs and demands more closely (Kwon, 2003).

The government's reform plan

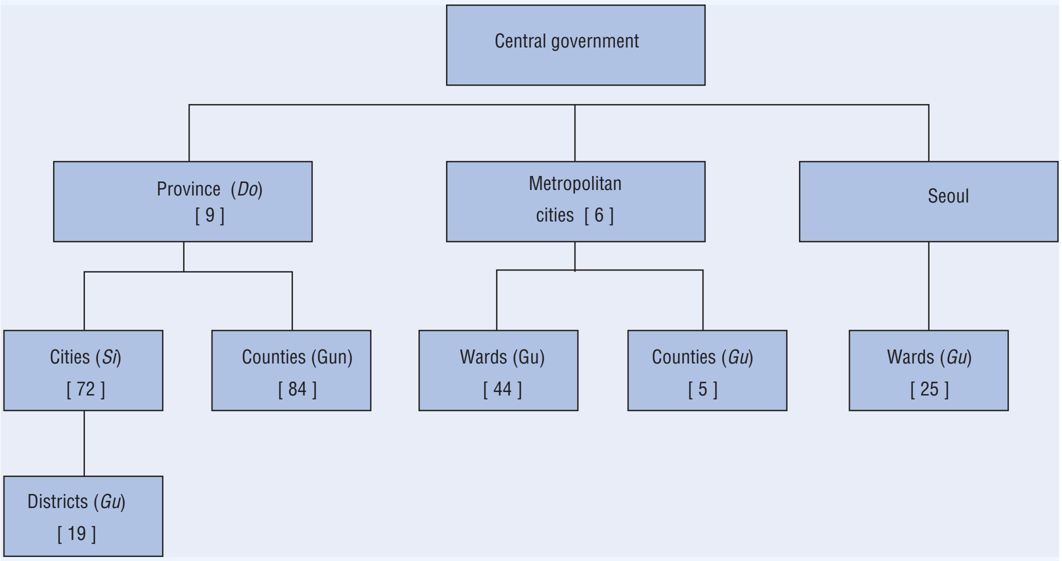
The government considers decentralisation to be necessary for competing in a globalised world, creating a knowledge-based economy and promoting the development of civil society. The current administration has thus adopted decentralisation and balanced regional development as major items on its policy agenda. In 2003, it created the Presidential Committee for Government Innovation and Decentralisation (PCGID),[2] which identified a number of problems in this area.

- *Excessive central government authority and intervention in local government affairs*. The role of local government has been limited to implementing centrally-determined policies and programmes as directed and guided by central government ministries and agencies.
- *A large imbalance in fiscal resources between the central and local governments*. Consequently, local jurisdictions are largely dependent on the central government, which tends to treat them as administrative units rather than as independent legal entities. Funding relies to a large extent on earmarked grants, giving the central government effective control over a wide area of local policies.
- *Weak capabilities at the local government level and little participation by local residents*. Rather than bringing government closer to people as hoped, the participation rate in local elections has been declining (Kim, 2004). In addition, there has been a marked increase in corruption charges against elected local officials from 23 between 1995 and 1998 to 49 between 1998 and 2002.

Box 3.1. **The structure of local government in Korea**

There are basically two levels of local government in Korea. The upper-level government consists of nine provinces, six metropolitan cities and Seoul special city (Figure 3.2). Urban areas are separated out from their surrounding provinces and designated as metropolitan cities once their population approaches one million. These cities have the same status as provinces. Lower-level governments are subdivided into the administrative units of cities, counties and wards, and include legislative assemblies. Authority for education is located in the Offices of Education in the provincial and metropolitan governments (see below). The major spending areas of local general government in 2002 were; general administration (16.3%), health and living environment (15.7%), development and preservation of resources (14.8%), social assistance (10.8%), education and culture, excluding the local education government's outlays in this area (10.8%) and housing and regional/social development (10.5%).

Figure 3.2. **Korean local government system**



Note: Korean terms are in italics. The number of units is in brackets.
Source: Ministry of Government Administration and Home Affairs.

The constitution grants local governments the right to manage their property and affairs and to enact their own regulations within national laws. More specific responsibilities are defined in the Local Autonomy Act, which designates the following "autonomous affairs" to be handled by the local authorities: *i)* the organisation and management of local governments; *ii)* the promotion of citizens' welfare, including social facilities and assistance for disadvantaged persons; *iii)* industry promotion; *iv)* local development and management of facilities such as roads and water supply; *v)* promotion of education, athletics, culture and the establishment of childcare centres; and *vi)* local civil defence and fire fighting. The central government is to maintain only a passive role in these autonomous affairs.

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

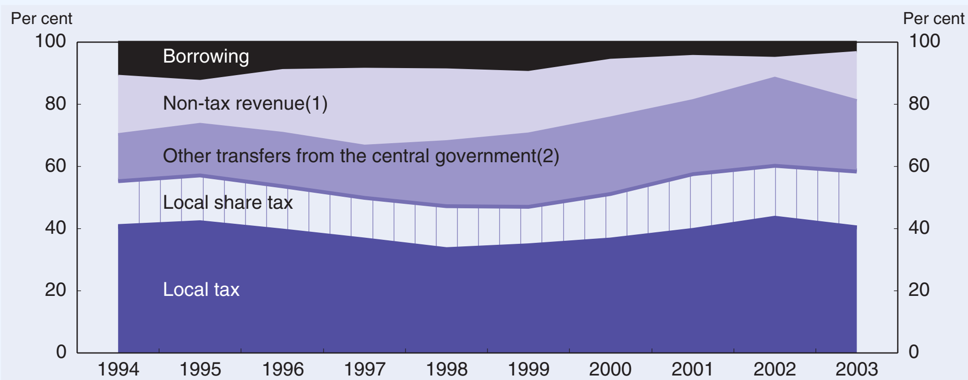
Box 3.1. **The structure of local government in Korea** *(cont.)*

There are also "delegated functions", which are entrusted either to local governments or to local chief executives. Responsibilities delegated to local governments, such as vaccinations and the maintenance of national roads and public health centres, are subject to specific laws. In principle, expenditures are jointly borne by the central and local governments, and the local governments also receive earmarked grants. Responsibilities delegated to local chief executives include the registration of residents, administration of referendums, policing and promotion of commerce and industry. Such expenditures are financed by earmarked grants, with the national authorities playing an active role in their implementation.

On the revenue side, local taxes and transfers from the central government each fund about 40% of local expenditures (Figure 3.3). Transfers are divided between the Local Share Tax, which is set at a fixed share of national tax revenue, and National Subsidies and the Local Transfer Fund, which are primarily earmarked grants. Non-tax revenue – income from local public enterprises, public land development and various user charges – is also significant. Local funding sources, including tax and non-tax revenues, account for slightly more than half of local outlays. Finally, borrowing by local governments has funded a shrinking share of local spending in recent years.

Figure 3.3. **Funding of local government expenditures**

As per cent of total



1. Calculated as a residual, setting local government revenue equal to expenditure. The large amount of carryover included in non-tax revenue made reported local government revenue about 40% higher than spending over the decade 1994 to 2003.
2. National Subsidies and the Local Transfer Fund.

Source: Ministry of Government Administration and Home Affairs.

The Committee's "Roadmap" for reform (see Box 3.2) includes many measures that are to be implemented by 2006. The guiding principles are to demonstrate confidence in local governments and transfer greater resources and responsibilities to them. Although some major changes have been introduced, such as the elimination of the Local Transfer Fund and the creation of the Special Account for Balanced National Development in 2005, implementation is still at an early stage. Moreover, there are a number of issues that need to be further addressed to realise the full benefits of decentralisation.

Box 3.2. **The Roadmap for Decentralisation in Korea**

1. Reallocate authority between central and local governments

- Overhaul laws concerning decentralisation to establish clear criteria for allocating responsibilities between central and local governments.
- Implement an extensive transfer of central government authority to local levels.
- Enhance local autonomy in education through increased linkages between local general government and educational authorities and participation by residents.
- Introduce a local police force system.
- Consolidate the special local administrative offices, which hamper local government autonomy.

2. Implement sweeping fiscal decentralisation

- Expand local financing capacity, in part by transferring national taxes to the local level, and correct inter-regional imbalances.
- Overhaul local tax administration and promote more active use of the scope for tax-rate flexibility.
- Strengthen autonomy in local public finances by reforming the grant system and eliminating the requirement for case-by-case approval of local bond issues.
- Ensure the transparency and soundness of local fiscal management.

3. Enhance local government's capacity for autonomy

- Strengthen the legal framework for local government autonomy, including urban planning.
- Increase the quality of the local civil service through education, training and personnel exchanges.

4. Revitalise local legislatures and overhaul the local election process to reverse declining turnout

5. Strengthen accountability in local governments

- Balance increased autonomy with greater accountability through democratic oversight and an improved evaluation system.

6. Revitalise civic society and expand their participation in local civic affairs

7. Secure co-operative intergovernmental relations

- Strengthen collaboration between central and local governments and between local governments and improve mediation to resolve intergovernmental conflicts.

Source: Presidential Committee for Government Innovation and Decentralisation (2003).

Issues in the allocation of spending responsibilities

De facto control by the central government

The ambiguous division of responsibilities between levels of government allows the central authorities to effectively control spending by local governments. Although the Local Autonomy Act defines central and local expenditure responsibilities in general terms, the nearly 4 000 ordinances, regulations and laws governing public services determine the roles of local and national authorities in practice. As these tend to differ from the Local Autonomy Act, the distinction between central and local functions is unclear. In addition, central and local government functions overlap in areas such as labour affairs (including vocational training and counselling), the environment, construction and maintenance of roads and providing support for SMEs (OECD, 2003).[3] The overlap in responsibilities is accepted by local authorities, who are accustomed to centralised control (Kim, 2004). The importance of "delegated functions" adds further ambiguity to the assignment of tasks.

Local governments are required to follow the annual budget guidelines set by the central government, which set unit costs for very detailed expenditure categories.[4] The guidelines were changed to "budget criteria" from 2005, allowing local governments to set unit costs for some spending categories. However, the wages of local officials are still controlled by the central government. Central control is also exercised through the conditions attached to National Subsidies, which are provided for a wide range of local public services, concentrating in the areas of health, welfare, construction, transport and agriculture. In addition to being earmarked for specific areas, the grants are conditional on local governments complying with detailed operational standards, thus restricting flexibility. Local authorities are not allowed to carry over funds to following years or to transfer funds between grants, even though they are often for small amounts and for similar purposes, thus reducing their ability to respond to local conditions and leading to sub-optimal spending patterns over time.

The scope for allowing local authorities more flexibility in spending decisions, for example by shifting from earmarked to block grants (see below), appears to be limited by a lack of capacity at the local level to take on additional responsibilities (OECD, 2005b). Moreover, there is little incentive to do so as local public officials receive no additional salary corresponding to these extra tasks. Changing the historical legacy of centralised control requires not only institutional reforms, but also a transformation of the administrative culture of local officials and an improvement in their quality, in part through personnel exchanges with other governments units, both local and central, and the private sector. The recent introduction of an open competitive hiring system for certain positions should be used to bring in private-sector experts.

Exploiting scale economies by redesigning the geographical coverage of local public services

Local governments typically face difficulties in efficiently providing public services that are characterised by scale economies, are redistributive by nature and may affect residents from other jurisdictions. Korea has only 250 lower local government jurisdictions (Si, Gun and Gu) following the merger of some cities and counties in the mid-1990s.[5] Consequently, their average size – at nearly 200 000 inhabitants – is relatively large in area and population compared to other OECD member countries (OECD, 2005b). For example, the average population of Japan's 3 000 municipalities is less than 50 000.

Nevertheless, some lower-level governments in Korea may be too small to exploit economies of scale and scope in providing some public services. Almost half of Korea's cities and counties have less than 125 000 persons.[6] Voluntary associations of local governments to provide public services offer a flexible approach to exploit scale economies. However, such associations are relatively rare in Korea, with about 60 at present. Voluntary associations must be reported to the Ministry of Government Administration and Home Affairs (MOGAHA), which sets minimum requirements for their establishment. Their effectiveness has been limited by a lack of prior approval by local councils, which in some cases have overturned the projects of voluntary associations. In addition, there has been a problem with weak management and a lack of follow-up and inconsistency with policies in participating jurisdictions. Finally, some aspects of the Local Autonomy Act and the intergovernmental transfer system appear to create disincentives for such associations (OECD, 2001).

Independent local education governments

Responsibility for primary and secondary education is vested in Education Boards and Offices of Education, which are located at the provincial and metropolitan city level but remain separate from local general governments. The authority to make decisions related to education belongs to the Boards, while the Offices of Education play an executive role. The head of each Office is elected, primarily by teachers, although parents and civil society have a limited role.[7] Compared to local general governments, the local education governments are more dependent on transfers from the central government, which account for 71% of their budget.[8] In contrast, the share of own resources, such as admission fees, tuition and local bonds, is less than 10%. The remaining 19% of the education budget is provided by local general government through the Local Education Tax (see below) and a fixed share of local tax revenue.[9] Despite this support, the head of the local education governments are granted autonomy in formulating their budgets. The discrepancy between the spending responsibilities and funding capacity has limited the development of autonomy in education and discouraged financing efforts by the local general governments. In most OECD countries, in contrast, local governments are primarily responsible for implementing education policies.

Issues in local government funding

With tax and non-tax revenues covering a little more than half of their outlays, local governments rely on large transfers from the central government (Figure 3.3). There is a wide variation in the financial autonomy of local jurisdictions. While Seoul is virtually self-financing, 62% of local governments cannot even fund the salaries of local officials from their own revenues. This implies a need to increase transfers from the central government to limit inequality, although such an approach does not increase local government autonomy. On the other hand, enhancing revenue autonomy of local governments would have a negative impact on regional equity by widening the gap in fiscal capacity between regions. Therefore, the main challenge on the funding side is to provide local governments with sufficient revenue-raising autonomy to make them accountable to local citizens and encourage fiscal discipline, while ensuring that all have sufficient revenue capacity to provide at least a minimum level of core public services.

A complex local tax system that limits the autonomy of local authorities

The local tax system, which has accounted for about 20% of total tax revenue in Korea during the past decade,[10] is relatively complicated with 16 local taxes (see Box 3.3). This contrasts with a much leaner local tax system in Nordic countries – at most four local taxes in Finland, Iceland, Norway and Sweden – which, like Korea, are unitary countries with a high share of local government in total public spending. A basic principle of Korea's tax system is the separation of tax bases between central and local governments to avoid excessive taxation on particular items.

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

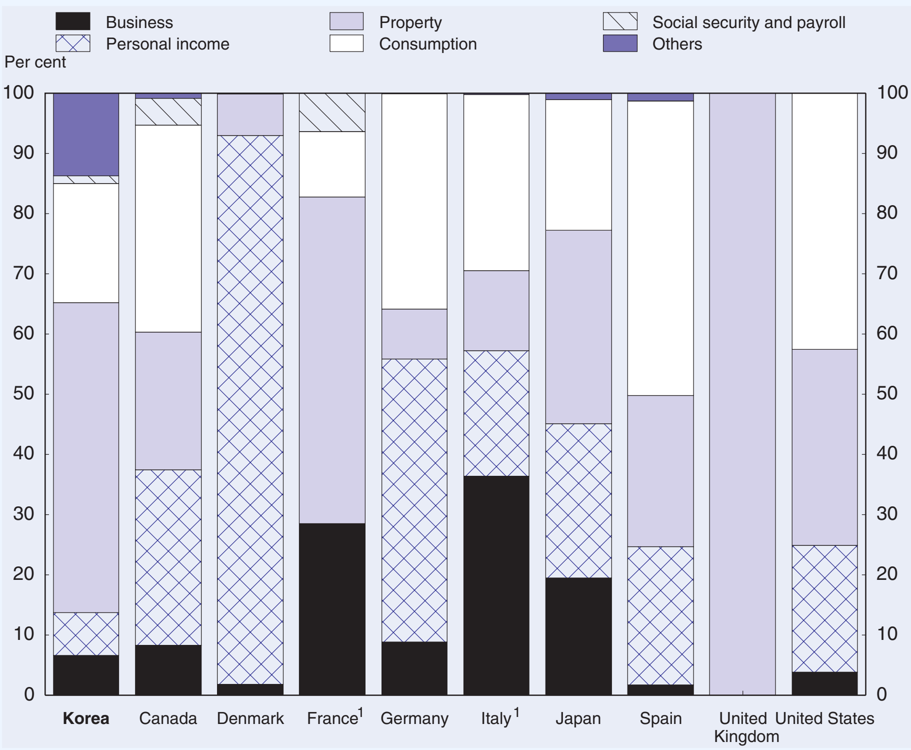
Box 3.3. **The local tax system**

Local taxes generated 32 trillion won (4½ per cent of GDP) in 2003. In the metropolitan cities and Seoul, 13 of the 16 taxes are imposed at the upper level of local government, while three are administered by lower-level units.* In the provinces, the situation is reversed: seven of the taxes are imposed at the upper level, with the remainder at the lower level (Table 3.1). Thus, some taxes imposed at the upper level in the metropolitan cities, such as the automobile tax, are imposed at the lower level in the provinces. Nine key taxes generated 88% of local tax revenue. The large number of minor taxes, each generating less than 3% of local tax revenue, reflects the reliance on earmarked taxes. However, one of the earmarked taxes, the Local Education Tax, is a major revenue source. It was introduced in 2001 as a surcharge on five local taxes, but is transferred directly to local education governments and thus does not enhance the autonomy of local general governments (Kim, 2003 and 2004).

Property taxes account for about half of local tax revenue (Figure 3.4). However, taxes on consumption, business and personal income and social security and payroll taxes were relatively insignificant compared to other OECD countries.

Figure 3.4. **Composition of sub-national government tax revenues**

2003



1. Including other taxes paid solely by business (Taxe professionnelle in France and IRAP in Italy).

Source: *OECD Revenue Statistics*, 1965-2003.

* Prior to 2005, there were 17 local taxes. However, the Comprehensive Land Tax was merged into the Property Holding Tax in 2005.

Table 3.1. **The local tax system in Korea**

Tax	Revenue in 2003	Share of total	Permitted range of tax rates	Actual range of tax rates	Tax imposed by			
	Billion won	Per cent			Provinces		Metropolitan cities[1]	
					Upper level	Lower level	Upper level	Lower level
Property registration	7 550	23.5	1-3%	2%	x		x	
Property acquisition	5 503	17.1	1-3%	2%	x		x	
Inhabitants,[2] *of which*:	4 558	14.2	5-15%	10%	x		x	
Individual	2 356	7.3	5-15%	10%	x		x	
Corporate	2 202	6.8	5-15%	10%	x		x	
Local education[3]	4 009	12.5	5-90%	10-60%	x			x
Tobacco consumption	2 384	7.4	–	641 per pack	x			x
Automobile	1 778	5.5	40-330 won/cc	80-220 won/cc	x			x
Comprehensive land[4]	1 603	5.0	0.2-5.0%	0.2-5.0%		x		x
Motor fuel[5]	1 266	3.9	–	21.5%	x			x
Urban planning	999	3.1	Below 0.23%	0.15%	x			x
Property holding	903	2.8	0.035-6%	0.07-4.0%		x		x
Leisure	896	2.8	–	10%	x		x	
Common facilities	411	1.3	0.025-0.26%	0.05-0.13%	x		x	
Business office	104	0.3	Below 0.5%	0.5%		x		x
Regional development	103	0.3	5-15 won/10 m^3	10 won/10 m^3	x		x	
Licence	65	0.2	–	3 000-45 000 won		x	x	
Butchery	44	0.1	0-10%	10%	x			x
Agricultural income	4	0.0	–	3-40%	x			x
Total	32 180	100.0			13	4	7	10

1. Including Seoul.
2. The standard rate is 10% of the national personal income tax and corporate income tax.
3. A surtax on five local taxes: Registration, Leisure, Automobile, Tobacco, and Inhabitants.
4. The Comprehensive Land Tax was merged into the Property Holding Tax in 2005, leaving 16 local taxes. Of these, three are levied at the lower level of provincial governments and nine at the lower level of metropolitan cities.
5. A surtax on the national Transportation Tax.

Source: OECD, Network on Fiscal Relations across Levels of Government.

Strong reliance on property taxation

The large share of property taxes in local tax revenue is primarily due to the Acquisition Tax and the Registration Tax, which generated 13.1 trillion won (1.8% of GDP) in 2003 – 40% of total local tax revenue.[11] In contrast to transaction taxes, taxes on holding property (the Comprehensive Land Tax and Property Holding Tax) contributed only 2.5 trillion won. The relatively small amount reflects a tax base set at around 30% of market value, resulting in an effective tax rate of 0.12% (Table 3.2). Altogether, recurrent taxes on property generate revenue amounting to less than 0.5% of GDP, well below the 1.9% average in the OECD (Figure 3.5).

Property taxation is theoretically more advantageous than other taxes as it is levied on immobile assets, thus limiting the scope for tax evasion. Moreover, to the extent that it is based on asset values, it conforms to the benefit principle. However, there are a number of problems with property taxation in Korea.

- It acts as a barrier to liquid property markets and efficient land use as it is largely imposed on transactions rather than on ownership of property.[12]
- Economic growth in a local jurisdiction creates little additional local tax revenue because tax revenue from property transactions is only loosely related to income increases.[13]

Table 3.2. **Changes in property holding taxes**

	2003	2004	2005 and after
Housing	A local tax, levied on individual buildings	No change	Two taxes: Local tax[1] National tax[2]
Tax base	Standard construction cost (170 thousand won/m^2) Adjusted by the size	Standard construction cost (180 thousand won/m^2) Adjusted by market value[3]	50% of the combined value of building and land[3]
Tax rate	6 rates (between 0.35% and 6%) depending on the size of the tax base	No change	3 rates (between 0.15% and 0.5%) depending on the size of the tax base
Land	A local tax (Comprehensive Land Tax), with help from the central government)	No change	Two taxes: Local tax, levied on individual land holdings National tax[2]
Tax base	36.1% of the standard market value[4]	39.2% of the standard market value[4]	50% of the standard market value[4]
Tax rate	9 rates between (0.2% and 5%) depending on the size of the tax base	No change	3 rates (between 0.2% and 0.5%) depending on the size of the tax base

1. Beginning in 2005, the land used for a building is no longer taxed under the Comprehensive Land Tax, but is instead taxed as part of the Property Holding Tax.
2. The "Comprehensive Property Tax", which is imposed on an individual's total property holdings, at a progressive rate between 1% and 4%.
3. Based on a survey by the National Tax Service. The target is set at 80% of the market value.
4. Based on a survey by the Ministry of Construction and Transportation. The standard market value is thought to be 80% to 90% of the market value.

Sources: Ministry of Government Administration and Home Affairs and the Ministry of Finance and Economy.

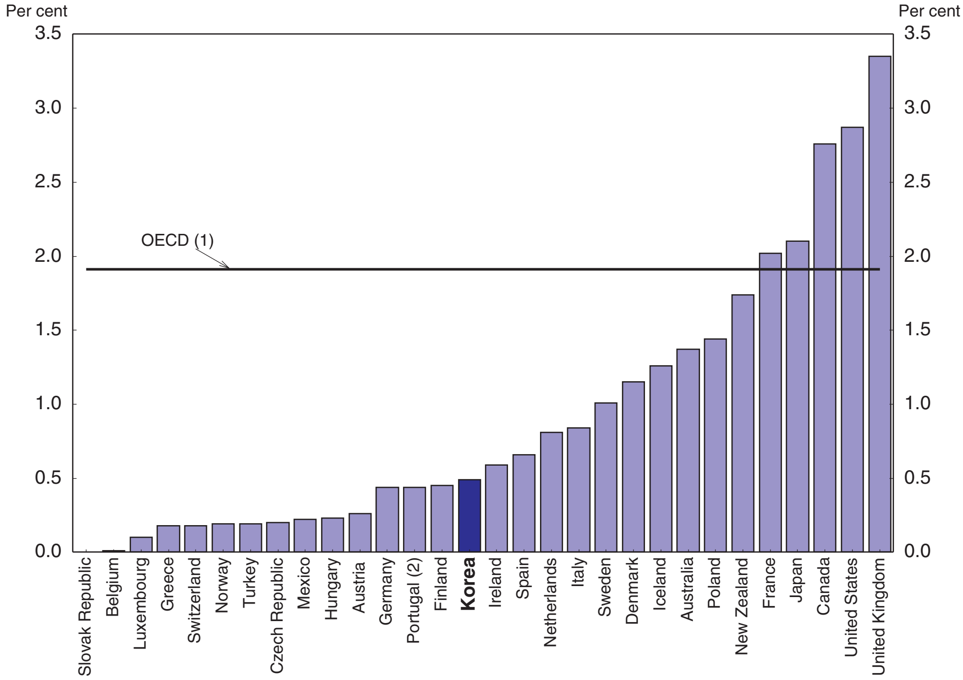
Instead, the revenue depends on real estate market conditions, thus undermining the stability and predictability of local tax revenues.

- Tax rates and valuation methods have been largely determined by the central government, which set an "application ratio" that averaged 36% of the "standard market value". While the application ratio was not legally binding, most local authorities accepted it because lowering it would significantly decrease revenue while raising it would cause taxpayer resistance.
- Since the regional disparity in the property tax bases is larger than that of income taxes, the strong reliance on property taxation aggravates regional disparities.
- The low rate on property ownership encourages landholding for speculative purposes and does not encourage efficient use of land.
- Holding taxes tended to be regressive as they were adjusted for building size rather than market value.

Acknowledging that the structure of property taxation tends to undermine efficient land usage, encourage landholding for speculative purposes and impair equity, the government plans to boost the effective tax rate on property holdings to 0.24% in 2008, 0.5% in 2013 and 1.0% in 2017 by raising the valuation closer to the market value. In 2005, the application ratio was raised to 50% of the standard market value, while lowering the permitted range for the tax rate in order to prevent a sudden rise in tax liabilities (Table 3.2).[14] However, some local governments in the capital region have lowered tax rates in order to reduce the property tax burden. To restrict speculation on real estate and increase progressiveness, the government introduced in 2005 the "Comprehensive Property Tax" on individuals' nation-wide holdings, at a rate of between 1% and 4% depending on the cumulative value.[15] All of the revenue from this tax is to be returned to those local

Figure 3.5. **Recurrent taxes on immovable property in OECD countries**

Revenues as a per cent of GDP in 2002



1. Weighted average using 2000 GDP and purchasing power parities.
2. 2001.

Source: OECD Revenue Statistics, 1965-2003.

governments whose tax revenues decline due to this change or whose financial status is weak. The combined effect of these reforms is expected to increase revenues from taxes on holdings of land and buildings by 2.6 times between 2003 and 2008. The increase in property holding taxes was accompanied by a reduction in the tax rate on property transactions from 5.8% to 4.6% (4% on transactions between individuals). However, the effective rate on transactions was actually increased because the tax base was raised to the standard market value.[16]

Local governments do not use the existing scope for flexibility

The Local Tax Act defines the tax bases and standard rates for 16 local taxes. Local governments are allowed to adjust rates, by as much as 50% above or below the standard rate, for 11 of 16 local taxes. However, this power has been rarely used. At the provincial/metropolitan city level, only four of 16 jurisdictions had changed a tax rate from its standard rate as of 2004, and only ten of the 250 lower-level local governments. As noted above, though, a number of local governments reduced the rate on the property holding tax in 2005 as assessments were brought closer to market levels. In contrast to the limited use of tax flexibility, local governments grant tax reductions and exemptions as part of regional development policy (Hong, 2003).[17] The share of tax expenditure in total local revenue was 10.3% in 2000, thus reducing transparency.

The limited use of tax-rate flexibility in Korea conflicts with the principles of fiscal federalism and the situation in some other OECD countries. In particular, more variation in taxes on enterprises would be expected, as companies are more mobile than property. Several factors may explain the absence of tax competition. *First*, it is widely believed that lowering tax rates would lead to reductions in grants, although there is no direct link between tax rates and the amount of grants provided by the central government (see below). *Second*, local governments tend to demand increases in intergovernmental grants – rather than raise tax rates – when they want to boost expenditures (OECD, 2005b). *Third*, local governments hesitate to diverge from norms set by the national authorities, given the central government's control over local taxes and outlays. *Fourth*, local authorities fear taxpayer resistance to higher tax rates.

Increasing local governments' revenue powers

Increasing local government revenue-raising powers would allow them to better respond to local citizen preferences and help ensure fiscal discipline by making the cost of local public services more visible for local taxpayers. One priority, as noted above, should be to substantially increase revenue from property holding taxes, although this should be partially offset by a reduction in property transaction taxes. The government is considering the creation of a tax on facilities such as nuclear power plants and waste disposal sites. However, this approach would further complicate the already complex local tax system, without providing much revenue for most jurisdictions, and would likely widen regional disparities. Another option is to establish a local share of the VAT as was done in Japan in 1997. However, such an approach did not enhance local autonomy as local authorities are not allowed to adjust the rate of the VAT, which is collected by national authorities. Instead, greater reliance on taxes for which local authorities can set the tax rate would increase their revenue powers while enhancing autonomy.

Large intergovernmental transfers

Transfers from the central government fund another 40% of local government expenditure (Figure 3.3). They thus play an extensive role in closing the gap between local government spending responsibilities and revenue capacity, as well as narrowing the large variation in fiscal capacity between local governments. Indeed, per capita fiscal expenditure is higher in low-income regions (Moon, 2003). Among these transfers, the largest is the *Local Share Tax* (LST), a national equalisation scheme aimed at equalising vertical and horizontal imbalances, which covered 18% of local government spending in 2003. Revenues transferred through this grant have been fixed at 15% of national tax revenues (excluding earmarked taxes and customs duties). *National Subsidies*, earmarked grants which provide funds for a wide range of local public services, covered about 17% of local spending in 2003. The *Local Transfer Fund* (LTF), a block grant fund introduced in 1991 to promote balanced regional development and to supplement local investment, financed 5% of local outlays.

In 2005, there was a major reform of intergovernmental transfers:

- The government re-organised National Subsidies, resulting in the transfer of 163 programmes to local governments, with total spending of 1.1 trillion won, about a quarter of the total.[18]
- The Local Transfer Fund (LTF) was abolished.[19]

- The share of domestic taxes reserved for LST, a block grant, was increased from 15% to 19.1%, boosting funding by 4 trillion won (0.6% of GDP) and offsetting the loss of funds from the LTF.
- The Special Account for Balanced National Development (SABND) was created.

The Local Share Tax

The LST is the main equalisation scheme. The allocation of the "ordinary" portion of the LST is based on criteria that measure the difference between fiscal needs and capacities, as in many other OECD countries, to calculate the fiscal shortage (Box 3.4). Calculation of the *Ordinary LST* has been criticised on a several grounds: *i)* the complicated and non-transparent method of calculation, including 31 criteria and the arbitrary setting of adjustment coefficients (Kook, 2004a and 2004b); and *ii)* the inclusion of variables, such as the number of local government officials and administrative districts, which are under the control of local governments.[20] The complicated formula leads many local officials to believe that the amount of LST that they receive will be reduced if they raise local tax rates. It also leads to erratic fluctuations in the standard fiscal needs calculation, which make it difficult for local government planning.[21] In addition, the calculation of the *Special LST* is criticised as being discretionary and non-objective. Recognising that the LST is too complicated, the government reduced the number of criteria slightly to 26 in 2005. In addition, the calculation of the standard fiscal needs formula has been revised in order not to penalise local governments that make savings, such as cuts in the number of public officials and current expenditures, although it still includes some variables decided by local governments.

The creation of the Special Account for Balanced National Development (SABND)

Regional development objectives will be pursued by the SABND, which consists of 153 programmes aimed at ensuring minimum national standards for public services and promoting regional innovation. The account tries to improve efficiency of intergovernmental transfers through an integrated, comprehensive and local-demand based approach compared to the more fragmented, programme-oriented and central government-based strategy of the past. SABND, with total spending of 5.5 trillion won (0.7% of GDP), has three main components: *i)* formula-based projects (2.6 trillion won), which are allocated autonomously based on factors such as the population, size and fiscal capacity index of local governments; *ii)* projects for poor regions (1.0 trillion won); and *iii)* regional innovation projects (1.9 trillion won), which are allocated by the central government in response to requests from local governments. The grants, which range in size from 0.5 billion to 534 billion won, are financed by the Liquor Tax, congestion charges, transfers from the general account and a couple of special accounts. Matching grants are the main form of financing. The matching rate ranges from 30% to 100%, with 50% the most common.

Despite some similarities with National Subsidies, which are also matching grants, there are certain unique elements in the SABND (Kim, 2004 and Lim, 2004). *First*, the discretionary power of the line ministries in deciding the allocation of funds is reduced as nearly half of the SABND grants will be formula-based. Moreover, to allow local governments to spend these funds in line with their specific priorities, they are given flexibility to shift them to other purposes and are permitted to carry over up to 20% of the total budget during a specified time period. *Second*, the projects supported by the SABND have to compete with each other, given that local governments have some scope to choose their preferred set of projects. The line ministries are thus forced to make their

Box 3.4. **The Local Share Tax**

The Local Share Tax for each jurisdiction is determined by its *fiscal shortage*, calculated as the difference between its standard fiscal need (SFN) and its standard fiscal revenue (SFR). The SFN is calculated using a complicated formula that takes into account demographic, geographic, social and economic characteristics in 12 categories and 31 sub-categories. Population and size of the jurisdiction are the most important characteristics in the formula. These needs are combined with the unit cost of each sub-category, after adjustment for special factors.

SFN = Basic fiscal demand + Supplementary demand + Demand incentive

Basic fiscal demand is estimated as:

$BD = \Sigma(m,p,c)$ where m is the measurement unit, p is the unit cost and c is an adjustment coefficient

Supplementary demand adjusts for the amount of a local government's contribution to the education special account. The demand incentive is used to induce local governments to cut spending by reducing the number of officials and other measures.

The calculation of the SFR is as follows:

SFR = Basic revenue + Supplementary revenue + Incentive revenue

Basic revenue is set at 80% of estimated tax revenue to encourage local government to raise revenue. Supplementary revenue includes factors such as: *i)* 80% of earmarked tax revenue and user charges; *ii)* 100% of general grants from upper-level governments; *iii)* 50% of the difference between forecast and actual local tax revenue two years ago; and *iv)* 50% of the difference between the forecast amount of general grants two years ago and the actual amount. The incentive revenue is used to compensate for the impact on basic revenue when a local government changes a tax rate from the standard rate. However, the process of calculating the incentive revenue is not legally binding. This ambiguity leads local governments to believe that efforts to boost their tax revenue reduce the amount of the Local Share Tax that they receive (Kim, 2003).

The sum of fiscal shortages across jurisdictions is usually more than the amount of funds available for the LST, which as noted above, is a fixed share of national tax revenue. Consequently, an adjustment factor is applied to the shortage of each local government to determine their allocation.

In addition to the Ordinary LST, a portion of LST funds is set aside for the Special LST. This fund is distributed to local governments for priority projects such as housing, disaster relief and to meet the special needs of regions. While the Special LST is allocated to all local governments, ten did not qualify for the Ordinary LST in 2002. The share of the Special LST was reduced from 9.1% to 3.65% in 2004 by converting part of it to Ordinary LST.

programmes attractive to local governments. *Third*, most of the SABND programmes are executed in connection with the five-year National Balanced Development Plan and the National Fiscal Management Plan to ensure overall consistency. *Fourth*, local governments must develop their planning skills as they are not given unconditional rights to spend the full amount of SABND funds allocated to them. If they do not provide reasonable plans to use these resources, only part of the fund can be carried over to the following year, and unspent funds will eventually be reclaimed by the central government.

Despite these positive elements, there are a number of weaknesses in the SABND grants (Lim, 2004):

- Around a quarter of the projects were transferred from the National Subsidies programme in which many of the details were specified by the central government. Consequently, line ministries will maintain considerable influence.
- The characteristics of projects are not fundamentally different from those in the National Subsidies programme.
- Local governments will have to deal with a larger number of ministries than in the case of National Subsidy grants.
- Local governments appear slow to make creative plans that match their citizens' needs due to a lack of planning ability and weak incentives to accept additional responsibility as noted above.
- The SABND aims to address simultaneously the policy goals of balanced regional development (equity) – where it overlaps with the LST – and regional development (efficiency).

Securing fiscal discipline in a decentralised setting

Local government debt amounted to 2.3% of GDP in 2004, well below the 25% figure for the central government. Local debt has been tightly controlled and stable,[22] even in the aftermath of the financial crisis, which contributed to a substantial run-up in central government debt from less than 9% of GDP in 1996 (see Chapter 2). The stability reflects strict central government control of local government borrowing.[23] Nevertheless, local governments are allowed to incur debt in certain cases, subject to approval by the Ministry of Government Administration and Home Affairs (MOGAHA) on a case-by-case basis (Box 3.5).

Local debt consists of loans (86%) and bonds (14%). The central government and public funds provide almost all loans, making the role of private financial institutions relatively unimportant (Table 3.3). The central government makes many types of special accounts and public funds available for local government borrowing. The most important is the *Public Capital Management Fund,* which is funded by the surpluses on government pension schemes, postal savings, and other funds. Another important central government fund for local borrowing is the National Housing Fund, which issues national housing bonds. A part of this Fund is then loaned to local governments to build low-cost public housing.

Table 3.3. **Local government debt**

In 2001 trillion won[1]

		A. Borrowing from:		
Government	Public funds	Financial institutions	Foreign borrowing	Subtotal
10.4	4.2	0.5	0.4	15.3
(58.6%)	(22.6%)	(2.6%)	(2.2%)	(86.1%)
		B. Bonds by type:		
Compulsory bonds	Regular bonds	Foreign bonds	Bonds in lieu of payment[2]	Subtotal
1.3	0.8	0.4	0.0	2.5
(7.1%)	(4.6%)	(2.1%)	(0.1%)	(13.9%)

1. Numbers in parenthesis show share of the local government debt of 17.8 trillion won.
2. This is basically a way of postponing payment to contractors for public works.

Source: Ministry of Government Administration and Home Affairs.

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

As for bonds, the most important category is compulsory bonds (Table 3.3), which must be purchased as part of certain transactions such as the purchase of cars, the registration of construction machinery and urban land development. The revenue thus raised is earmarked for subway construction and urban development. In contrast, regular bonds purchased in the market account for less than one-third of total local government bonds. The fact that the central government places strict restrictions and controls on local government borrowing, while at the same time subsidising it, has limited the development of a local debt market. Given the rising demand for investment in urban infrastructure, it will be increasingly important to link local borrowing with the long-term capital market. The plan to replace the approval system for individual local bonds in 2006 with a total ceiling on bond issues is likely to encourage a greater role for market-based borrowing. However, this raises concern about whether there would be adequate fiscal rules, which are currently rather lenient (see Box 3.5), to ensure sound financial management.

The soundness of the fiscal position is clouded by the uncertain financial links between the government and public enterprises. There is a risk that local government debt could be significantly boosted by the liabilities of public enterprises. In particular, the debt of subway companies in the major metropolitan cities amounted to around two-thirds of local government debt in 2001, despite central government transfers that partly mitigated the burden of subway construction. In sum, strengthening market forces requires disclosing adequate information on local government's repayment capacity.

Box 3.5. **Rules on debt financing by local governments**

Local governments are allowed to incur debt, subject to approval by MOGAHA, in the following cases: *i)* construction of public facilities; *ii)* projects generating profits large enough to repay the debt; *iii)* disaster recovery and prevention projects; *iv)* debt repayment; and *v)* other projects that permanently improve the welfare of residents. On the other hand, MOGAHA explicitly forbids debt financing for current expenditure, facilities whose service life is very short and small projects. Debt issuance by local governments should also be consistent with MOGAHA's Medium-term Local Finance Plan. The criteria for determining what projects are appropriate are strict in principle but can be arbitrary in practice.[1]

In addition, local governments must meet the following criteria to receive permission from MOGAHA for debt financing. *First*, they have not delayed the repayment of debt. *Second*, debt repayment as a share of general revenue over the preceding four years averaged less than 20%.[2] *Third*, the ratio of the budget deficit to general revenue is not more than 10%. *Fourth*, projected local tax revenue is not less than 90% of the total in the previous year. *Fifth*, issuance of debt has been consistent with the original application sent to MOGAHA. The local government then submits the plan to the local council, which determines the final amount of debt to be issued. Local councils can approve an amount less than that approved by MOGAHA but they seldom do so, reflecting the fact that local debt is viewed not so much as a future tax burden but as a form of central government assistance.

1. MOGAHA sends guidelines to local governments every year to provide guidance as to which projects justify increased debt.
2. Debt repayment includes interest payments, while general revenue is defined as local tax and non-tax revenue and general grants (Local Share Tax).

The link between fiscal decentralisation and policies for balanced regional development

As noted above, fiscal decentralisation has been aimed in part at mitigating the concentration of population and economic activities in the capital region and to achieve balanced regional development. With about 22 million people – 48% of the country's total – the concentration in the capital region (Seoul, Incheon and Gyeonggi province) is one of the highest in the world (Figure 1.5), resulting in congestion and pollution costs (see Chapter 1). Its dominance is even more pronounced in terms of fiscal resources, accounting for 71% of personal income tax receipts and 85% of corporate income tax receipts in 2003.[24] Average per capita local tax revenue in the capital region is more than 60% above the national average, resulting in wide regional variations in the share of own-source revenue in local government revenue (the fiscal independence index). While Seoul is almost independent, with own revenue accounting for 95% of total revenue, the average for the metropolitan cities is 66% (Table 3.4). Moreover, the averages for provinces, cities and towns are less than 50%. Indeed, own-source revenue accounted for less than half of total revenue in 84% of local governments (Panel B).

The government's decentralisation policy did not succeed in stopping concentration

The authorities have implemented numerous measures since the 1970s to reduce concentration in the capital region (see Box 3.6). However, as in the case of other OECD countries, including Japan, these policies have not been successful (OECD, 2005c). Indeed, the share of the population has risen from 28% in the early 1970s to nearly half at present, in part due to the shift from manufacturing to service industries. In addition, measures of regional inequality appeared to have increased since 1990 (Moon, 2003).

These efforts to limit concentration – to the extent that they have been effective – have been costly. The continued growth of the capital region indicates that the high costs of locating there are outweighed by the benefits, such as economies of agglomeration resulting from proximity to the nexus of business activities. There is evidence that some sectors

Table 3.4. **Fiscal independence of local government**

A. The share of own-source revenue in total revenue by type of local government (per cent)

	Seoul	Metropolitan cities	Provinces	Cities	Towns	Special districts
Average	94.5	68.8	41.3	38.8	16.6	42.6
Highest	94.5	72.7	78.0	70.4	48.6	92.7
Lowest	–	54.6	14.2	12.3	7.1	19.4

B. The distribution of the share of own-resource revenue of local governments

Per cent of total revenue	Prefectures	Cities	Towns	Special districts	Total	Per cent of total
Less than 10%	0	0	10	0	10	4
10-30%	7	32	72	15	126	50
30-50%	1	30	6	46	83	33
50-70%	3	14	0	3	20	8
70-90%	4	1	0	2	7	3
Higher than 90%	1	0	0	3	4	2
Total	16	77	88	69	250	100

Source: Ministry of Government Administration and Home Affairs.

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

Box 3.6. **Policies to limit concentration in the capital region**

The government has implemented a wide range of policies to foster balanced regional development:

- Development activities have been regulated by the Capital Region Rearrangement Act. Large-scale construction projects, such as new towns and industrial complexes and tourist facilities, which may increase the concentration of population in the capital region, requires prior approval of the committee on Capital Region Rearrangement.
- The construction of large facilities in the capital region is restricted by imposing quotas on manufacturing industries and universities and by levying congestion charges on large business buildings in Seoul.
- The "Relocation Promotion Measures" announced in 1999 provide large financial incentives, such as tax reductions and/or exemptions and loans, to firms that move out of the capital region.
- Economic activity in underdeveloped areas is promoted through the creation of regional industrial parks.

The authorities have also tried to mitigate overcrowding in the capital region by relocating central government functions. In the mid-1990s, ten agencies were moved to Daejeon, the largest city in the middle of Korea. This was followed by legislation in 2004 to create a new administrative "capital" in Chung Cheong Province (OECD, 2005b). However, the Constitutional Court declared that the legislation was unconstitutional. The government then proposed the Special Act on Construction of the Administrative City, which was enacted in 2005. In contrast to the 2004 plan, Seoul will remain as the capital and home to the legislative and judicial branches, as well as the president. According to the revised plan, 49 government agencies, including 12 ministries, will be relocated by 2014. The population of the new city is targeted at 500 thousand by 2030. In addition to the new administrative city, the government plans to move 176 public organisations outside of the capital region by 2012. The locations are to be decided by September 2005 with construction to start by 2007. This plan would reduce the proportion of public organisations located in the capital region from 85% at present to 35%.

benefit from the spatial concentration of people, firms and information. Indeed, more than two-thirds of venture companies are located in the capital region, which offers high-quality human capital, excellent universities, and an attractive living environment. However, the limits on construction in the capital region make it difficult for these businesses to expand beyond the incubation stage (Kim and Son, 2004). Regulations restricting investment and new businesses in the capital region limit the economic benefits of agglomeration and conflict with the objective of maintaining rapid economic growth.

Given the continued trend toward concentration and the cost and ineffectiveness of current policies, the administration adopted balanced regional development as a major policy objective along with fiscal decentralisation. Major initiatives to promote balanced regional development include:

- The launching of the Roadmap for Decentralisation (see Box 3.2) and the Presidential Committee on National Balanced Development in 2003.

- The creation of the Special Account for Balanced National Development in 2005 (see above).
- The proposed construction of a new administrative city to host a large number of major government offices (see Box 3.6).

At the same time, the regulations on construction in the capital region have been relaxed for SMEs, venture businesses, foreign-invested companies and advanced-technology firms. Moreover, the restrictions on building factories, schools and tourist facilities in the capital region are to be relaxed beginning in 2006.

Implications for fiscal decentralisation

Fiscal decentralisation, which aims at the efficient provision of local public services, does not necessarily match with the objective of balanced regional development. Nevertheless, policies aimed at these two objectives have been closely tied together in Korea. Mixing these two policy goals could lead to significant efficiency problems. For example, some of the policy directions aimed at providing more autonomy may exacerbate regional differences. In particular, greater reliance on local tax revenues will further widen the gap in fiscal capacity between regions, as noted above. However, this could be offset by the greater use of a well-designed block grant system to limit the regional variation in income levels, as well as a shift in responsibility to local authorities. In particular, the funding of local public services, notably education, through grants provided by the national government, transfers significant fiscal resources to rich regions (Kim, 2004). For example, the city of Seoul, which does not receive Ordinary Local Share Tax because of its high income level, is receiving educational grants from the central government. If Seoul were to transfer more revenue to the Seoul Education Office, then a higher proportion of education grants from the central government would be available for less wealthy regions. Therefore, stronger linkages between the local education authorities and the local general governments, with a final aim of merger, are needed to induce the local general governments to invest more resources in education. This, in turn, will increase local autonomy and efficiency.

Conclusion

Despite the progress in decentralisation since the late 1980s, overcoming the historical legacy of strong control by the central government and the limited role of local governments requires further reform. The comprehensive programme launched in 2003 is a step in the right direction. However, achieving the full benefits of liberalisation requires other initiatives as discussed above and summarised in Box 3.7.

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

Box 3.7. **Summary of recommendations for fiscal decentralisation**

Increase the capacity of local governments to handle greater responsibility for taxes and spending

- Facilitate personnel exchanges between levels of government and with the private sector.
- Provide incentives for local civil servants to accept more responsibility.

Enhance the autonomy of local governments and increase efficiency in spending programmes

- Establish a clear division of responsibilities between levels of government and minimise "delegated functions" to allow local governments independence in carrying out their tasks.
- Facilitate the creation of voluntary associations of local governments, in part through changes in the regulatory framework and the grant system, to provide public services more efficiently.
- Transform earmarked grants, including National Subsidies and those provided by the SABND, to block grants, except in cases where spillovers make earmarked subsidies the better approach.
- Relax the conditions attached to earmarked grants to allow more flexibility to local authorities.
- Allow local authorities to carry over grants to the future and permit some scope for shifting funds between projects to enhance their discretion and independence from line ministries.
- Make the definition of standard fiscal needs and standard fiscal revenues in the formula for the Local Shared Tax more simple, transparent and based on objective criteria, while limiting discretionary elements.
- Strengthen linkages between the local education governments and local general governments, with a final aim of merger, to increase local autonomy for education.

Increase local governments' revenue powers

- Simplify the complicated local tax system by eliminating some of the 16 existing taxes and avoid the creation of new local taxes.
- Encourage the use of existing flexibility to set tax rates and make clear that changing tax rates does not influence the level of transfers from the central government.
- Reduce reliance on taxes on property transactions, which account for about 40% of local tax revenue, in order to reduce lock-in effects and encourage the efficient use of land.
- Accelerate the plan to raise the effective tax rate on property holding from 0.1% at present to 1% by 2017 by bringing the tax base in line with market values.
- Use property holding taxes as the primary source of additional local tax revenue, along with other taxes that enhance local autonomy.
- Ensure adequate public services throughout the country by making sure that the transfers from the central government to poor local governments are sufficient as tax powers are transferred to local jurisdictions.

Box 3.7. **Summary of recommendations for fiscal decentralisation** *(cont.)*

Ensure fiscal discipline of local governments

- Design appropriate fiscal rules for local governments as the central government approval system for individual local government bond issues is abolished in 2006.
- Reduce local governments' reliance on loans from the central government and public corporations, while increasing the role of market financing.
- Phase out the use of compulsory bonds.
- Strengthen accountability of local governments and increase transparency about their financial position, including contingent liabilities related to local public corporations.

Separate regional development policies from fiscal decentralisation policies

- Increase the tax autonomy of local authorities, while using well-designed intergovernmental transfers to limit regional income disparities.
- Finance local public services through block grants that take account of the fiscal capacity of local governments.
- Shift away from regulation to limit concentration in the capital region in favour of market-based measures that address the externalities of pollution and congestion.

Notes

1. On a consolidated basis, local general governments accounted for 33% of total government spending in 2004, with the local educational governments, which are independent of local general government (see Box 3.1), accounting for another 12%. Subtracting intergovernmental transfers from central government spending boosts the local government share to around 50%.
2. In addition to the main Committee, which has 20 members, the PCGID includes six executive committees, task force teams, an advisory board, an office of planning and management, and various subcommittees.
3. There have been efforts to redefine expenditure responsibilities more clearly in recent years. In 1999, the Presidential Commission on Devolution Promotion to Local Authorities was established and it decided to transfer 1 090 central government functions to local jurisdictions by the end of 2001. However, less than half of the functions had been transferred by 2004. Nevertheless, a 2005 survey by the Commission found that the devolution has reduced the number of required documents and the cost of issuing licenses.
4. For example, the category of public employee compensation has ten expenditure items such as basic salary, bonus, family allowance, meal allowance, transportation allowance, etc.
5. In 1995, 41 cities and 39 counties were merged into 40 cities and the areas of three metropolitan cities were revised. Since then, there have been only minor changes in the number of municipalities.
6. In the case of Japan, for example, the unit cost of local public services was found to be lowest for municipalities of around 125 thousand persons (Yoshida, 2003).
7. Only teachers with more than five years of experience are allowed to be candidates. There are also 180 lower-level Offices of Education whose heads are nominated by the provincial and metropolitan city-level Offices. The lower-level Offices are also independent of lower-level general governments.
8. Transfers from the central government consisted of three components until the end of 2004. The most important (79% of the total) was the *Local Education Share Tax*, which is a block grant financed by a fixed share (13%) of national tax revenue (excluding earmarked taxes and duties). The *Local Education Transfer Fund*, which was financed by an earmarked national tax, provided an additional 20%. The remainder, about 1%, was from National Subsidies. In December 2004, the Transfer Fund was abolished and offset by an increase in the Local Education Share Tax to 19.4% of national tax revenue.

9. Prior to 2005, the transfer was set at 3.6% of provincial and municipal tax revenue. In addition, local governments provided "teachers' salary transfers", which covered 100% of salaries in Seoul, 50% in Busan and 10% in other metropolitan cities and Gyeonggi Province. In 2005, the share of local tax revenue transferred to the educational authorities was raised to 10% in Seoul, 5% in other metropolitan cities and Gyeonggi Province and left unchanged at 3.6% for other local governments, while the teachers' salary transfers were abolished.
10. This is slightly above the 18% average of other unitary countries in the OECD, though well below the 35% average of the federal countries.
11. The total tax rate for real estate transactions was 5.8% (2% for the Acquisition Tax, to which 0.2% is added for the Special Tax for Rural Development, and 3% for the Registration Tax, to which 0.6% is added for the Local Education Tax).
12. In addition, a national tax on capital gains is levied in order to discourage speculative transactions.
13. Kook (2004a and 2004b) argues that the relationship between local tax revenues and local income is very weak due to high dependency on property transaction taxation.
14. The regressive nature of the tax on buildings was also ended by making the tax base depend on market value rather than on size.
15. The amount paid for the local property tax will be deducted from the amount of the national tax. The government expects 60 thousand persons to pay this tax in 2005, generating revenues of 0.7 trillion won.
16. Previously, the tax was officially based on the transaction price, but in practice was similar to that used for the property holding tax, *i.e.*, about 30% of the market value.
17. Tax reductions and exemptions must be announced in municipal ordinances and approved by MOGAHA.
18. This is funded by a transfer of 0.83% of national tax revenue to local governments through the LST. In general, the shift from earmarked National Subsidies to the LST block grants is appropriate, except when spillovers between jurisdictions are significant.
19. The LTF was a mixture of block grants and a tax-sharing system between the central and local governments that was funded by fixed rates of domestic tax revenues (100% of the Liquor Tax and 14.2% of the National Transportation Tax). Although the LTF helped to expand local infrastructure, it was criticised for its rigid management. In particular, the rationale for investing a fixed share of the Liquor Tax was unclear as its link to local infrastructure was weak. In addition, the artificial division of the fund into many categories based on a fixed formula was criticised as an example of rigid management of earmarked revenue (Kim, 2004).
20. In contrast, in several other OECD countries, such as Norway, only those criteria that cannot be directly manipulated by local governments are included in the formula.
21. For example, the standard fiscal need of counties jumped 41.5% in 2001 followed by a 9.7% rise in 2002. Another element of uncertainty is the fact that total LST outlays are set at a fixed share of national tax revenue, which may fluctuate considerably.
22. Nevertheless, some local governments have a significant level of debt. For example, Busan's debt was 117% of its annual tax and non-tax revenue in 2001, and it would have exceeded 250% if the debt of the Busan Transport Authority were included. In the case of Seoul, the subway debt was more than double the city government's debt in 2001 (Kim, 2003).
23. The fact that the share of local government bonds in total local expenditure decreased after 1996, the year following the introduction of popular elections of governors and mayors, suggests that the central government succeeded in controlling the debt of local governments.
24. According to Moon (2003), regional inequality in terms of per capita regional GDP in Korea is similar to that in other OECD countries such as France and Germany. However, it should be noted that the regional GDP data in Korea do not appear to fully represent income differences between regions (OECD, 2001).

Bibliography

Hong, Ki-Yong (2003), "Regional Economic Policy Transition in Local Government of Korea", ERSA conference papers, European Regional Science Association.

Hur, Suk-Kyun (2003), "Intergovernmental Allocation of Tax Bases in Korea", *Developing and Strengthening the System of Intergovernmental Fiscal Relations and Fiscal Decentralisation*, World Bank and Korea Development Institute Conference Proceedings, Korea Development Institute, Seoul.

Joumard, Isabelle and Per Mathis Kongsrud (2003), "Fiscal Relations across Government Levels", OECD Economics Department Working Paper, No. 375, Paris.

Kim, Junghun (2003), "Republic of Korea", in *Local Government Finance and Bond Markets*, edited by Y. Kim, Asian Development Bank, Manila.

Kim, Junghun (2004), "Fiscal Decentralisation in Korea", Korea Institute of Public Finance, Seoul.

Kim, Kyung-Hwan and Jae-young Son (2004), "Spatial Policies Towards the Seoul Capital Region", a draft for presentation at the International Seminar on Metropolitan Growth Management.

Kook, Joong-Ho and Jung-Wook Shim (2003), "Local Public Finance and Intergovernmental Transfers in the ROK", *ERINA Report* Vol. 51, Economic Research Institute for Northeast Asia (in Japanese).

Kook, Joong-Ho (2004a), *Local Tax in Korea*, Soseisha, Tokyo (in Japanese).

Kook, Joong-Ho (2004b), "On Intergovernmental Fiscal Relations in the Republic of Korea", ERINA Discussion Paper No. 0401, Economic Research Institute for Northeast Asia (in Japanese).

Kwon, Osung (2003), "The Effects of Fiscal Decentralisation on Public Spending: The Korean Case", *Public Budgeting & Finance*, Volume 23, Issue 4.

Lee, Yongmo (2005), "Adequacy of Korea's Tax Assignment: A Fiscal Federalism Approach", *International Review of Public Administration*, Vol. 9, No. 2.

Lim, Sung-Il (2004), "Recent Changes in the Intergovernmental Grants System and Their Impacts on Local Finance in Korea: With a Focus on the Newly Established Special Account for National Balanced Development", a paper presented at the Korea-Japan International Seminar "Regional Innovation, Fiscal Decentralisation and the Reform of Local Public Finance", Asian Institute for Regional Innovation.

Moon, Hyungpyo (2003), "Regional Inequality and Fiscal Decentralisation in Korea: Evaluation and Policy Implications", *Developing and Strengthening the System of Intergovernmental Fiscal Relations and Fiscal Decentralisation*, World Bank and Korea Development Institute Conference Proceedings, Korea Development Institute, Seoul.

OECD (2001), *OECD Territorial Reviews: Korea*, Paris.

OECD (2003), *Economic Survey of Korea*, Paris.

OECD (2004), *Economic Survey of Korea*, Paris.

OECD (2005a), *Economic Survey of Japan*, Paris.

OECD (2005b), *OECD Territorial Reviews: Busan, Korea*, Paris.

OECD (2005c), *OECD Territorial Reviews: Seoul, Korea*, Paris.

Presidential Committee for Government Innovation and Decentralisation (2003), *The Participatory Government's Roadmap to Decentralisation,* Seoul.

Yoo, Il-ho (2003), "Promoting Transparency and Accountability of Local Public Finance in Korea", *Developing and Strengthening the System of Intergovernmental Fiscal Relations and Fiscal Decentralisation*, World Bank and Korea Development Institute Conference Proceedings, Korea Development Institute, Seoul.

Yoshida, Hiromitsu (2003), "Reassessing the economic effect of amalgamation of municipalities", *JCER Review*, Vol. 46, Japan Center for Economic Research, Tokyo (in Japanese).

 OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

ISBN 92-64-01438-1
OECD Economic Surveys: Korea

Chapter 4

Sustaining high growth through innovation: reforming the R&D and education systems

With inputs of labour and capital slowing, sustaining high growth rates in Korea will increasingly depend on total factor productivity gains, which are in turn driven to a large extent by innovation. While a number of Korean firms are at the world technology frontier in areas such as ICT, the diffusion of technology to lagging sectors is a priority to sustain growth. This chapter recommends policies to improve the science and technology system by upgrading the R&D framework, in part through closer linkages between firms, universities and the government, and enhanced intellectual property right protection. Strengthened competition, particularly in the service sector, is needed to promote the diffusion of new technologies. Innovation also requires policies to ensure the supply of high-quality human capital through reforms of tertiary education. This requires a restructuring of the university system through increased competition and deregulation, as well as additional financial resources to improve quality.

Korea's rapid growth has been based primarily on inputs of capital and labour (Table 1.1), driven by the highest rate of business investment in the OECD area, a growing working-age population and rising participation in the labour force. Total factor productivity (TFP) gains – including human capital accumulation – have played a secondary role. Nevertheless, a high level of investment in education and R&D has supported TFP gains, in part by facilitating a "catch-up" model of innovation. Rapid growth has helped to promote the convergence of per capita income to two-thirds of the OECD average (Figure 1.2) and make Korea a leader in certain manufacturing industries, such as ICT. Despite this impressive performance, Korea remains in the bottom quarter of OECD countries in terms of per capita income.

Sustaining high growth will increasingly depend on TFP gains through innovation as the growth of inputs of labour and capital are expected to decelerate over the medium term. Innovation – the successful development and application of new knowledge – spans a wide range of activities ranging from invention of new technologies to their diffusion and related organisational changes. It also includes the development of new products and processes based on the existing stock of knowledge. Indeed, it is as important to expand the capacity to utilise existing knowledge, as it is to create new technology. The scope for benefiting from existing knowledge is large in Korea, given that labour productivity per hour worked is 40% of the US level (Figure 1.3). In particular, productivity in Korea's service sector is only about half of that in manufacturing, which implies that increasing productivity in services is a priority to raise overall economic performance.[1] To spur economic growth, an upgrading of the national innovation system was announced in a 2004 programme that includes ambitious targets to raise total R&D spending and basic research outlays by the government, with the aim of developing key technologies as future growth engines.

However, Korea faces a number of obstacles in using innovation to enhance its growth potential:

- R&D spending is concentrated in a small number of firms and industries, while linkages between business, university and government research institutes are weak. Universities play a minor role in R&D and interaction with foreign researchers is limited.
- Entry barriers and regulations restrict competition, particularly in the service sector, thus weakening incentives for the diffusion of technology. Despite government support, the development of the venture business sector has been weak.
- The sharp expansion in the number of students going to university has been accompanied by a decline in the quality of tertiary education, which is relatively poor by international standards.

This chapter highlights a number of policy issues affecting innovation – including the generation of new knowledge and the effective use of existing knowledge – and recommends policies to help sustain Korea's growth potential. It begins by presenting an overview of the major challenges facing the R&D framework and recent government initiatives in this area, including policies to encourage private-sector innovation. The

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

following sections examine important aspects of the product, capital and labour markets that impact on innovation and the challenge of securing adequate human capital, which requires the reform of the education system. The chapter concludes with a set of policy recommendations shown in Box 4.5.

Upgrading the R&D system in Korea[2]

The OECD *Growth Study* found a positive link between private-sector R&D intensity and the level of per capita GDP. At 2.6% of GDP, total R&D spending matches that in the United States and Germany despite Korea's lower level of development (Figure 4.1). The high R&D intensity in Korea is due primarily to the business sector, which accounts for three-quarters of R&D spending (Table 4.1). The number of researchers, at 0.7% of the workforce ranks close to the OECD average. However, according to an OECD study, Korea's overall innovation performance was ranked below the average of member countries (Freudenberg, 2003).[3] The key challenges facing Korea's R&D system include:

- The transition from a catch-up model of technological progress to a more creative approach.
- Reducing the concentration of R&D activities in a relatively small number of firms and industries in the manufacturing sector, while boosting the share of the service sector.
- Increasing interaction between business, government and academic R&D activities.
- Expanding international R&D linkages, which are relatively limited at present.
- Increasing the output of codified knowledge in the form of patents and publications.
- Strengthening the diffusion of knowledge throughout the economy.

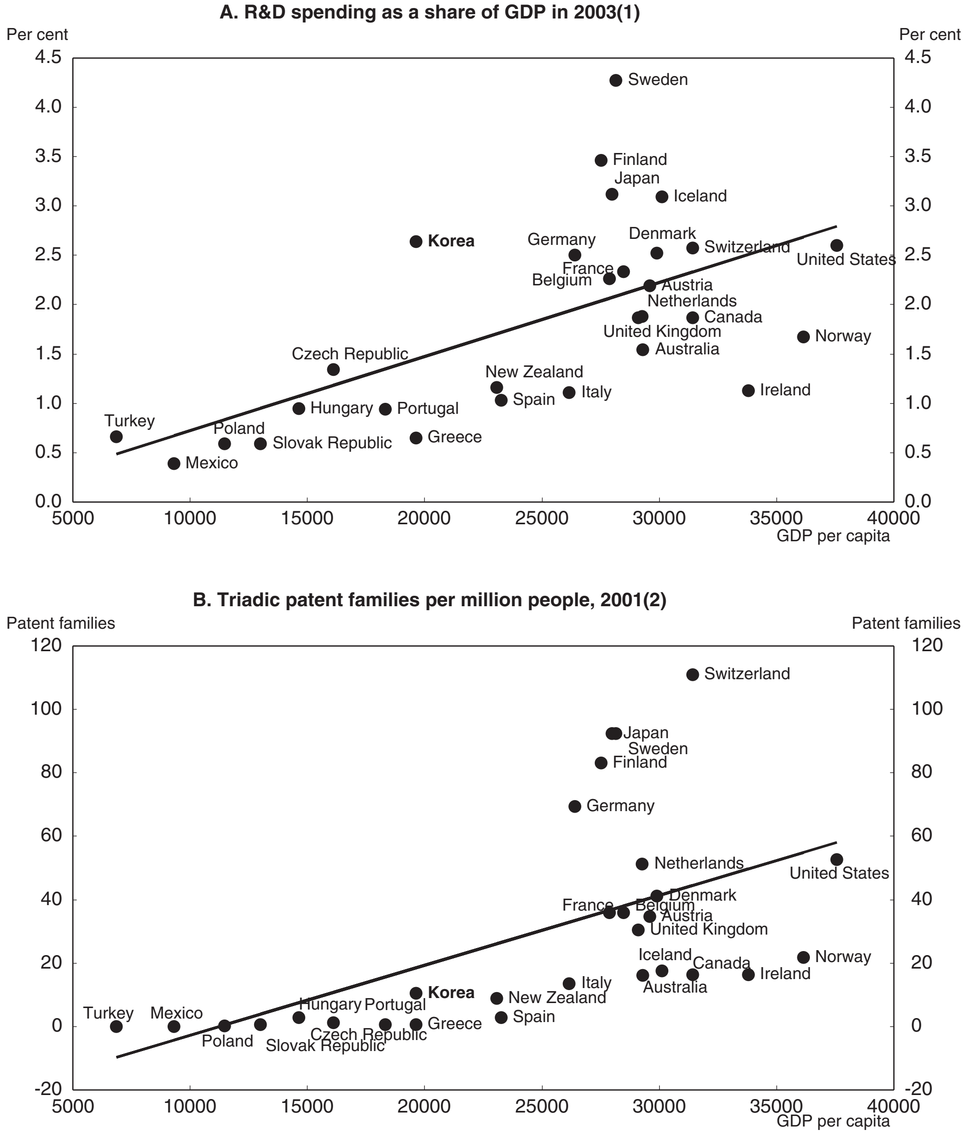
An overview of the major challenges facing the R&D system

The transition from a catch-up model of innovation

Korea's relatively low performance in the generation of new knowledge reflects the fact that its innovation system has remained largely based on a "catch-up" model, which favours the acquisition of advanced technologies from abroad in selected sectors rather than a broader strengthening of its knowledge base (see Box 4.1). A recent study found that the contribution to TFP from foreign technologies has been a little larger than that from independent R&D activities (Ha, 2004).

In some sectors, Korea is now reaching the limits of the catch-up model as it approaches the technology frontier. According to a recent survey of 6 000 manufacturing firms, the overall technology level is estimated to be 80% of the world technology frontier, while 13% of firms replied that they have already reached the frontier (Kang, Du-Yong *et al.*, 2004). Thus, foreign sources can no longer provide the needed expertise in a growing number of fields. Moreover, there is a perception that foreign firms have become more reluctant to release their technology, reducing the scope for such imports. Korean firms are thus under increasing pressure to develop their own technological capabilities. According to the survey cited above, 89% of firms engaged in R&D possess in-house research facilities, and 59% of them implemented R&D without outside assistance. As for firms undertaking joint R&D activities, 46% co-operated with other firms and 43% with universities or GRIs, but only 11% with foreign institutions.

Figure 4.1. **R&D spending and patents**



1. US$ PPP exchange rates.
2. Patents filed in the patent offices in Europe, Japan and the United States to protect the same invention.

Source: OECD, *Main Science and Technology Indicators* (2004).

The concentration of R&D in large enterprises and in the manufacturing sector

Korea's R&D resources and outputs tend to be concentrated in a small number of industries. Overall, about three-quarters of business-sector R&D is in high and medium-high technology manufacturing industries (Figure 4.2). In 2003, 80% of this R&D was concentrated in two sectors: ICT and automobiles (MOST, 2004).[4] The heavy concentration in two sectors contributes to the dualism in the Korean economy and may not provide a broad enough base to promote the convergence to income levels in the most advanced OECD countries. In addition, a small number of firms play an important role: the top five companies[5] accounted for 37% of business R&D expenditures and 28%

Table 4.1. **Performance of science and technology activities**

	Indicators of scientific and technological activities[1]							
	GDP per capita (using PPP, OECD = 100 In 2003)	R&D[2] intensity (% of GDP in 2003)	Business financed R&D (% of R&D[2] in 2003)	BERD[3] intensity (% of value added in 2003)	Basic research expenditure (% of R&D[2] in 2002)	Researchers (per 1 000 employed in 2003)	Triadic[4] patent families (per million pop in 2001)	Science and engineering articles (per million pop in 2001)
Australia	110	1.54	46.3	1.06	26.0	7.2	16.2	758
Austria	114	2.19	42.6	1.62	15.2	4.7	34.7	564
Belgium	109	2.33	64.3	2.59	–	8.4	35.9	582
Canada	119	1.87	44.3	1.35	–	7.1	16.3	727
Czech Republic	64	1.34	51.4	1.09	37.7	3.2	1.3	256
Denmark	115	2.52	61.5	2.82	18.3	9.3	41.1	931
Finland	105	3.46	69.5	3.57	–	16.4	83.1	983
France	107	2.26	52.1	2.02	23.3	7.5	36.0	514
Germany	101	2.50	65.4	2.48	18.7	6.9	69.4	530
Greece	75	0.65	33.1	0.29	–	3.7	0.5	304
Hungary	56	0.95	30.7	0.55	24.5	3.8	2.8	243
Iceland	115	3.09	46.2	2.85	15.9	–	17.5	610
Ireland	128	1.13	67.2	1.04	12.2	5.1	16.3	432
Italy	100	1.11	43.0	0.77	22.0	2.8	13.6	385
Japan	108	3.12	73.9	3.10	12.5	9.9	92.3	451
Korea	**78**	**2.64**	**74.0**	**2.77**	**13.7**	**6.8**	**10.6**	**233**
Luxembourg	196	1.71	90.7	2.15	–	6.2	45.2	–
Mexico	36	0.39	29.8	0.18	30.8	0.6	0.1	32
Netherlands	112	1.88	51.8	1.54	9.5	5.5	51.2	786
New Zealand	88	1.16	37.1	0.56	44.9	7.0	8.9	742
Norway	139	1.67	51.6	1.41	15.0	8.7	21.9	721
Poland	44	0.59	31.0	0.18	32.2	3.9	0.2	147
Portugal	71	0.94	31.5	0.52	22.4	3.5	0.6	208
Slovak Republic	50	0.59	45.1	0.44	25.9	4.7	0.7	177
Spain	89	1.03	48.9	0.79	15.5	5.1	2.8	387
Sweden	108	4.27	71.9	5.18	18.4	10.6	92.3	1 159
Switzerland	117	2.57	69.1	3.11	28.0	6.3	110.9	1 117
Turkey	26	0.66	41.3	0.23	–	1.1	0.1	60
United Kingdom	112	1.87	46.7	1.84	–	5.5	30.5	807
United States	145	2.60	63.1	2.47	19.1	8.6	52.6	705
EU-25	–	1.86	55.5	1.72	–	5.8	–	–
OECD	100	2.26	62.2	2.14	–	6.5	37.5	468

1. As of the year indicated or latest available year.
2. Gross domestic expenditure on R&D.
3. Business enterprise expenditure on R&D.
4. Patents filed at the patent offices in Europe, Japan and the United States to protect the same invention.

Source: *OECD in Figures* (2004), OECD *Science, Technology and Industry Outlook* (2004) and OECD *Main Science and Technology Indicators* (2004).

Box 4.1. **The catch-up model of innovation**

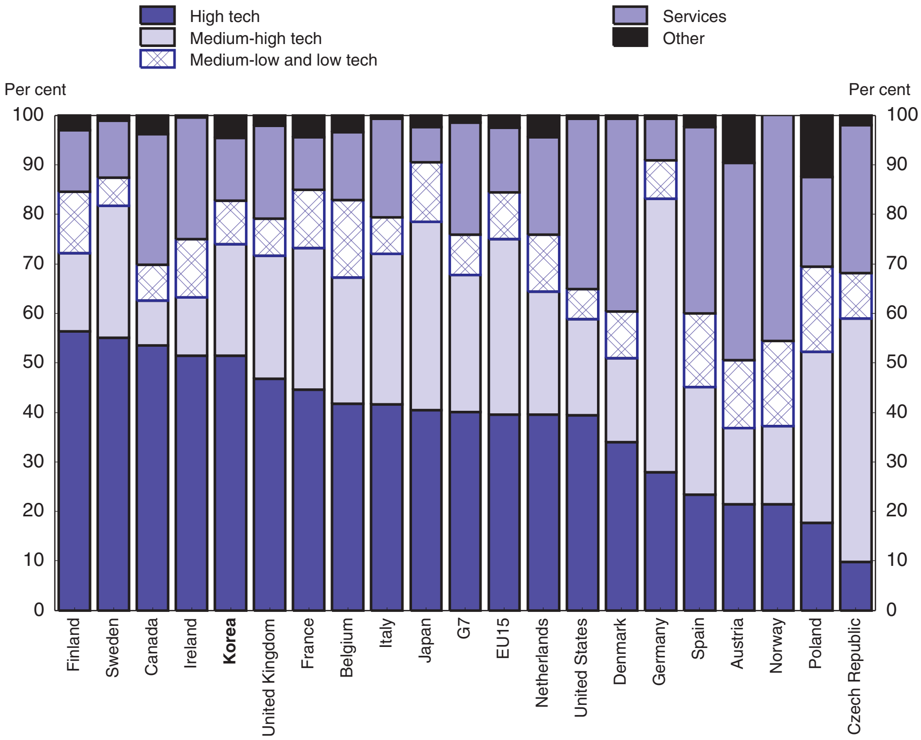
As a late industrialising country, Korea has relied heavily on foreign technology. Technological development was achieved through the interplay of imports of technology from abroad and indigenous R&D efforts. At the initial stage, Korea relied heavily on packaged technology, such as turnkey plants that largely produced "Original Equipment Manufactures" for sale under foreign brand names. As late as 1978, business-sector R&D expenditures were only 0.25% of GDP, while payments for technology imports amounted to 0.15%. The strategy began to evolve as Korea's cost advantage in terms of cheap labour began to wane at the end of the 1970s. This prompted the creation, in 1982, of the National R&D Programme, which aimed at localising technology by helping local firms adapt foreign technology through their own R&D efforts. In general, the assimilated technologies and the resulting products were in mature and standardised industries (Suh, 2000). It should be noted that, as in other East Asian countries, catch-up through reverse engineering and duplicative imitation was facilitated by relatively weak intellectual property rights (see Box 4.3). The shift to locally-developed technology is reflected in the eight-fold increase in business R&D spending to 2% of GDP between 1978 and the early 1990s, while payments for technology imports only doubled to around 0.4% of GDP over the same period.

The reliance on foreign technology, combined with past export-oriented policies focusing on products with economies of scale, has resulted in heavy dependence on foreign sources of materials, parts and components. This limits the beneficial "linkage effects" and amplifies vulnerability to external shocks. For example, the dependency ratio on foreign materials and components is about 70% for DVD players, 50% for mobile phones and 91% for liquid crystal displays. Using the 2000 input-output table, Korea's "import inducement coefficient" (the amount of imports generated by one unit of exports) was estimated to be 0.29 (0.46 in the ICT sector), much higher than Japan's 0.10 (BOK, 2004).

of researchers employed in industry, while the top twenty companies accounted for 52% and 48%, respectively. The concentration of innovation activities is also reflected in patents. The top five ICT companies hold 57% of all Korean patents in the United States, led by Samsung Electronics (35%).

Although innovation activities are concentrated in certain large companies, the share of small and medium-sized enterprises (SMEs) in business R&D has risen from less than 10% before the 1997 crisis to 24% in 2003, with venture businesses accounting for about half (MOST, 2004). Consequently, the proportion of business R&D conducted in large enterprises, at 76% in Korea, is somewhat less than the more than 80% share in the United States, Japan and Germany (OECD, 2004m). The proportion of enterprises engaged in innovation activity during 2000-01 in Korea was 40% for small enterprises, 57% for medium-sized, and 82% for large enterprises.[6] This is similar to Europe: the proportions were 40%, 63% and 80%, respectively, between 1998 and 2000.[7] In domestic patenting, the share of applications from SMEs and individuals in Korea doubled from 23% of applications between 1990-93 to 46% between 1998-2001 (KIPO and KIPRIS, 2005). Innovation networking between chaebol-affiliated companies and SMEs has been increasing, notably in the form of spin-offs or strategic alliances that has accompanied the restructuring of chaebol companies (Suh, 2005). Despite their rising share of R&D

Figure 4.2. **Business R&D expenditure by technology level**



Source: OECD in Figures (2004).

and patents, improvements in both labour productivity and TFP in SMEs have been relatively slow, resulting in a widening gap with large companies since the 1990s (KDI, 2003).

Korea's service sector, which is dominated by small establishments, accounted for 13% of business R&D in 2001, well below the OECD average of 21% (OECD, 2004m). In some "knowledge-intensive services", innovation activities are vigorous, supported by Korea's advanced ICT infrastructure (Lee *et al.*, 2003). Nevertheless, Korea has a large trade deficit in knowledge-intensive services, such as computer software system services**.** Excluding some ICT-related services, such as software consultancy, computer services and telecommunications, R&D expenditures in the service sector are almost negligible at 3% of total business R&D. In 2001 and 2002, the proportion of service-sector enterprises engaged in innovation activity was 25% (Um *et al.*, 2004), well below the EU average of 40% (Eurostat, 2004). The weak R&D performance in the service sector is reflected in a relatively low level of productivity (see below).

Weak interaction among R&D activities in business, government and the universities

A high rate of complementarity between public and private-sector R&D improves innovation performance. Ensuring such linkages requires the government to be responsive to the rapid evolution of the innovation process and to business needs and strategies (OECD, 2001b and Park, 2003). While collaboration among R&D players has gained in significance across OECD countries (OECD, 2002a), the industry-academia-government interface in Korea has remained weak because of inherent structural problems.[8] The innovation system is characterised by only limited reliance of industry on scientific research and low responsiveness of the non-business sector – government research institutes (GRIs) and universities – to demand from the business sector. In general, GRIs and universities point to an absence of technological and absorptive capability in the business sector and its lack of interest in technology diffusion, while firms complain about the inability of the GRIs and universities to solve business' technical problems. In 2003, 97% of business-financed R&D was performed by the business sector itself, while GRIs and universities performed only 1% and 2%, respectively (Table 4.2). About half of government-financed R&D spending was channelled to GRIs, with smaller amounts granted to universities and the business sector. In sum, the limited interaction between the suppliers and users of technology hinders the effectiveness of Korea's R&D spending.

Because the transfer of knowledge and technology takes place to a large extent through people, it is important to ensure that the regulatory framework and labour market foster the mobility of researchers between sectors. Such mobility has been limited in Korea. Another concern is that GRIs and firms have experienced a significant "brain drain" to the universities. In a survey about the desired job destination of researchers, employment at universities ranked first at 63%, followed by foreign institutions at 15%, while starting a business was preferred by 14%. Private firms and public institutions were the first choice of only 4% and 3% of researchers, respectively (Ko *et al.*, 2001). Despite relatively low wages, universities attract researchers because of the high level of social respect accorded to professors and job security, in contrast to significant job precariousness in the business labs, particularly since the financial crisis (Cho *et al.*, 2003). As a result, universities employed 72% of researchers with a PhD degree in 2003, and 30% of all researchers. Meanwhile, business-sector demand for highly qualified researchers has been limited by the reliance on a catch-up strategy, which focuses on assimilation and improvement of existing technology rather than on radical innovation.

There have been significant changes in the financing of university R&D. In 1997, government financed half of university R&D expenditure, with about one-third self-financed. In 2003, 73% was from the government, with 13% self-financed (Table 4.2, Panel B). This change is largely due to government projects such as "Brain Korea 21" (BK 21), which aims at upgrading university research and establishing centres of excellence. However, universities' share of total R&D performed in Korea remained at 10% in 2003, about half of the OECD average, indicating that their human resources are under-utilised in the area of research (Jung and Ko, 2004). Moreover, the universities perform only a quarter of basic research, in contrast to most other OECD countries where they are the major players. Another problem, in addition to the low level of R&D activity and spending, is weak co-operation with industry, in part due to the government-led nature of research projects.

The lack of international linkages in R&D

In addition to the lack of co-operation between domestic actors in R&D, international collaboration is weak. Foreign sources financed only 0.4% of R&D activities in Korea in 2003, the lowest share along with Japan (Figure 4.3). In terms of the cross-border

Table 4.2. **Flows of R&D funds in 2003**

A. R&D Funding

	Share of total R&D spending	Allocation between R&D actors[2] Government	Universities	Business enterprises	Total
Government[1]	24.2	52.2	30.5	16.9	100.0
Universities	1.3	0.3	98.1	1.6	100.0
Business enterprises	74.0	1.4	1.9	96.7	100.0
Foreign sources	0.4	1.7	10.3	88.0	100.0

B. Sector performing R&D

	Share of total R&D performed	Funding source for R&D performed Government	Universities	Business enterprises	Foreign sources	Total
Government[1]	13.8	92.4	0.0	7.5	0.1	100.0
Universities	10.1	73.0	13.0	13.6	0.4	100.0
Business enterprises	76.1	5.4	0.0	94.1	0.5	100.0

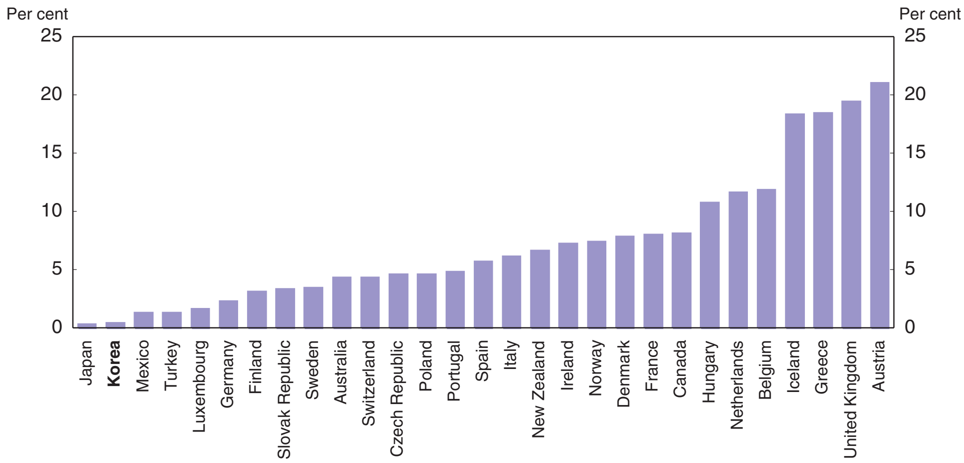
1. Includes private non-profit institutes.
2. By which sector performs the R&D.

Source: *OECD R&D Statistics* (2004).

ownership of inventions, *i.e.*, the share of foreign ownership of domestic inventions or the inverse, Korea also ranks as one of the lowest in the OECD area (OECD, 2003f). The low level of inflows of FDI, which were restricted in the past, is one reason for the lack of foreign links. International isolation may limit the scope for technological progress, as foreign sources of knowledge are increasingly important for innovation, leading to growing co-operation across national borders (OECD, 2005b). One positive sign is that the number of foreign R&D centres located in Korea has doubled to 122 since the financial crisis.

Figure 4.3. **Foreign funding of R&D expenditures**

Per cent of total R&D spending in 2003[1]



1. 2003 or latest year available.

Source: OECD, *Main Science and Technology Indicators* (2004).

Limited output of codified knowledge

Despite its relatively high level of R&D intensity, Korea's output of codified knowledge, in the form of patents and publications, is relatively weak as measured by the number of "triadic patent families" – patents filed in the United States, Japan and Europe. Korea is well below the expected level given both its income level and its amount of R&D spending (Figure 4.1, Panel B).[9] To some extent, this may be a legacy of focusing on catch-up rather than on the creation of new knowledge. In addition, there is some evidence that Korean firms prefer alternative protection methods, such as secrecy and lead-time, to patents (Um, 2004), which may be less favourable for the diffusion of knowledge than patents.

Inadequate diffusion of knowledge throughout the economy

Technology transfer and commercialisation have not been active in Korea, resulting in an under-utilisation of the fruits of innovation. As of 2004, 61% of patent rights had not been used (KIPO, 2004). In particular, a large share of the technologies invented in the public sector has been ignored by the private sector. By 2004, the proportion of transferred technologies that had been developed by the GRIs and universities was 18% according to a survey by the Ministry of Commerce, Energy and Industry. This may reflect the difficulty in evaluating specific technologies of GRIs and universities, as well as the fact that research in the public sector is often undertaken with little consideration of its potential commercial application. Compared to other countries, the income received by GRIs and universities from technology transfers is relatively small considering their patent stock (OECD, 2003h).

Recent government initiatives to restructure the national innovation system

In sum, Korea does not appear to be getting the full benefits possible from its high level of R&D spending. In 2003, the government placed science and technology (S&T) at the top of its policy agenda to spur economic growth. To this end, the administrative system for S&T was fundamentally restructured:

- The role of the Ministry of Science and Technology (MOST) was strengthened by making it the central agency for planning, co-ordinating, and evaluating S&T policies, in co-operation with other ministries, particularly Commerce, Industry and Energy and Information and Communication, while abolishing its R&D programmes that compete with other ministries. The minister of MOST was named as a third deputy prime minister.
- The National Science and Technology Council (NSTC), which includes the president and the minister of MOST as chairman and vice chairman, was granted full authority to allocate the government's R&D budget, which is targeted to double between 2003 and 2007.

In 2004, the government announced a plan, which is summarised in Box 4.2, to restructure the national innovation system. The plan emphasises shifting from a catch-up model to a more creative approach, increasing networking among players and shifting towards performance and demand-oriented paradigms.

However, many of the key objectives in the programme have been under consideration during the last decade, which may imply that the weaknesses in the innovation system are not easy to tackle. There are a number of key concerns for Korea to benefit more fully from

 OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Box 4.2. **The government's programme to restructure the national innovation system**

1. Measures to upgrade the innovation capacity of industry, universities and government research institutes

- Boost R&D spending to 3% of GDP by 2007 by providing effective tax incentives to the business sector.
- Foster 10 000 innovation-driven SMEs through technical and financial assistance, subsidies for employing R&D personnel, and an easing of regulations (*e.g.*, on land use, environment) on start-up companies.
- Increase basic research from 20% of the government R&D budget in 2004 to 25% by 2007, and raise the share of R&D that is performed in universities from 10% to 15% of total R&D over the same period.
- Enhance organisational flexibility and labour mobility in the GRIs, and expand their autonomy.
- Implement deregulation of such measures as the ceiling on chaebol shareholding and building controls in the capital region to promote business innovation activities in high-technology areas.

2. Measures to raise the efficiency of R&D investment and to secure highly qualified workers

- Raise the allocative efficiency of R&D investment by concentrating national R&D programmes on basic/generic research areas and by minimising the overlap between public and private spending.
- Nurture S&T manpower and minimise mismatches in the job market for skilled workers by strengthening the monitoring of demand and supply.
- Make engineering and vocational education more responsive to technology and business demand.
- Secure talented science and engineering students by expanding incentives at the tertiary level and reforming science education in the primary and secondary levels.

3. Measures to develop technology and to upgrade the diffusion mechanism

- Develop certain technologies to act as growth engines for the Korean economy.*
- Help the material and component-related industries improve their competitiveness.
- Develop technology in key areas such as future core technologies (*e.g.*, biotechnology and nanotechnology), mega-science (*e.g.*, space and marine technologies), energy, and public welfare (*e.g.*, health, transportation).
- Strengthen the diffusion mechanism by creating intermediaries between technology invention and diffusion, improving technology evaluation schemes, and strengthening the intellectual property rights system (*e.g.*, providing patent information and streamlining patenting procedures).
- Foster Daedeok Science Town as a R&D Special Region and develop regional innovation clusters.

4. Measures to upgrade the performance of the innovation system

- Strengthen linkages among business, government and universities.
- Fortify international collaboration, and establish an East Asia regional R&D hub in Korea.

Box 4.2. **The government's programme to restructure the national innovation system** *(cont.)*

- Construct a national information system for S&T by 2008.
- Establish a performance-oriented evaluation and management system.
- Strengthen the roles of the NSTC and MOST in co-ordinating S&T policies and allocating their budgets.

5. Measures to upgrade innovation infrastructure

- Create job opportunities through a virtuous circle of innovation, diffusion and employment.
- Improve the social compensation of highly qualified workers by reducing the burden of the alternative military service obligation, raising the share of science and engineer career tracks in the government, and expanding the reward system for scientists and engineers.
- Promote a S&T-friendly culture and social environment by national agenda-setting and diverse activities.
- Guarantee the social and ethical responsibility of S&T.

* Ten strategic industries were identified in August 2003 as future growth engines: bio-medical products, next-generation computer displays, next-generation semiconductors, next-generation batteries, future automobiles, intelligent robots, digital TV and broadcasting, next-generation mobile communications, intelligent home networks and digital content and software solutions.

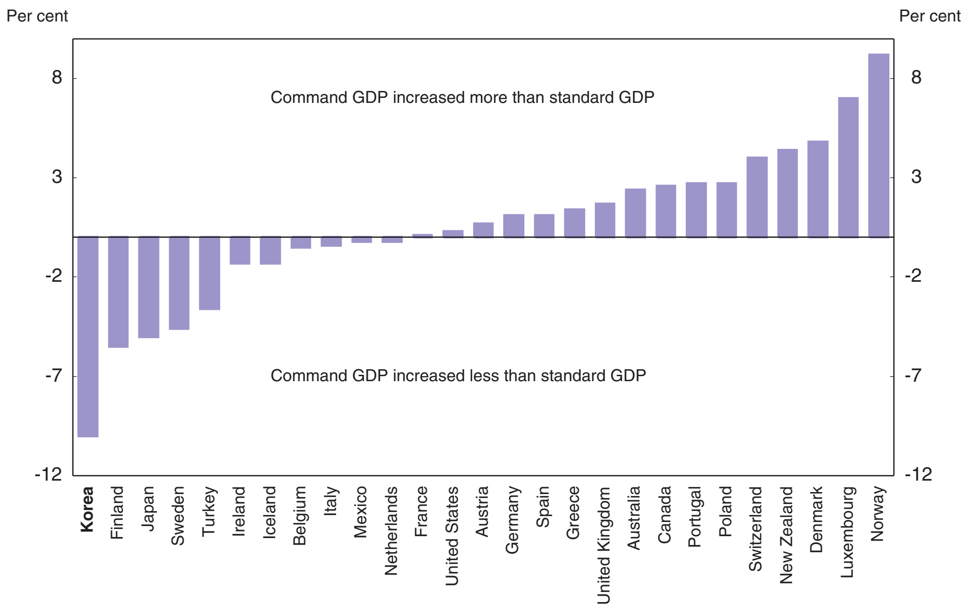
reform of its innovation system. *First*, innovation policy should be more fully integrated into the overall strategy of economic development. Given that the ultimate objective of innovation is to raise living standards, government programmes should be more focused on boosting productivity, rather than on upgrading technology itself. This requires greater linkages among policies for S&T, education, the product market and other areas, in part through increased co-operation among ministries. For example, securing highly qualified human capital for S&T requires greater co-ordination between the NSTC and the Human Resources Development Council (HRDC) in the Ministry of Education and Human Resource Development. The current public funding system for university R&D, which is fragmented among diverse ministries, also needs co-ordination between those two councils to improve allocative efficiency (Woo and Lee, 2004). Co-ordination between the two councils is to be enhanced by the recently created S&T Joint Committee for S&T Workforce Issues. Another priority should be to harmonise and minimise potential conflicts between the national innovation system and the recently launched Regional Innovation System (RIS), which emphasises balanced territorial development. Regional industrial policies driven by diverse ministries focusing on S&T, business and universities have suffered from weak co-operation. It is thus necessary to strengthen regional planning, co-ordination and evaluation capabilities and to build effective firm-supporting systems (Yun and Lee, 2004).

Second, although most countries have identified a limited number of priority sectors for public R&D expenditures (OECD, 2004m), picking winners and giving them undue emphasis could lead to a government failure or distortions. To avoid such problems in Korea, flexibility in implementing R&D programmes is required. This is especially important for the "next generation growth engine" programmes, in which the government is planning to invest 3.1 trillion won between 2004 and 2008 (0.4 trillion won in 2004, 6% of government R&D outlays). Perhaps more important is the signal provided to the private sector. For example, the shareholding ceiling imposed on chaebol-affiliated companies is waived for the ten strategic industries. The government's role in R&D should strengthen its focus on developing generic technologies and human capital in order to avoid crowding out private investment and to abide by international norms regulating government subsidies.

Another risk of focusing on key high-technology products, such as semiconductors and mobile telecommunications, is a further deterioration in the terms of trade as firms in other countries also increase production in these areas. Indeed, Korea has experienced significant terms of trade losses in recent years. An accurate measure of living standards should take into account the impact from this income loss. One approach is to adjust GDP by the terms of trade effect, a measure known as the "command GDP" (Figure 4.4). The output increase since 1990 according to this measure is a full 10% below the conventional GDP, the largest such gap in the OECD area. Not surprisingly, other countries where ICT is important – Finland, Japan, Sweden and Ireland – also show a large gap. In sum, while the contribution of ICT to manufacturing productivity in Korea is the largest in the OECD area at 1 percentage point a year (Figure 1.7), it contributes importantly to the terms of trade loss, which reduces income by about 0.7 percentage points on average per year. This perspective suggests that there are gains to a diversified approach to R&D.

Figure 4.4. **Impact of the terms of trade on income**

Cumulative gap between command GDP and standard GDP between 1990 and 2004[1]



1. Command GDP adjusts standard GDP for the terms of trade effect by deflating exports by the import price deflator:

$$\text{Command GDP} = TDDV + XGSV * (PXGS/PMGS) - MGSV$$

where TDDV is real domestic demand, XGSV and MGSV are exports and imports in volume terms, and PXGS and PMGS are the export and import deflators.

Source: OECD, Economic Outlook database.

Third, the evaluation system for public R&D investment needs to be upgraded to improve budget allocation and its responsiveness to a diverse set of stakeholders. The current system is more centred on programme management rather than systemic performance evaluation (Suh, 2003). The evaluation of R&D programmes is entrusted to 12 management agencies, which also play a vital role in allocating R&D budgets. Recent initiatives to enact a law for performance-based evaluation are a step in the right direction.

Fourth, a key challenge is to make the innovation system more efficient and interactive by strengthening linkages among the institutions active in R&D, including foreign players. Although the government has already implemented programmes to raise the responsiveness of GRIs,[10] new approaches such as public/private partnerships may be beneficial (OECD, 2004m). To overcome the under-utilisation of human resources, the compensation scheme, including the ownership of intellectual property rights, needs to be reformed to reward research achievements. However, a more effective way may be to promote joint research and manpower exchanges across sectors (Ko *et al.*, 2001), including technological co-operation between domestic and foreign firms. In the past, Korean firms have relied on "arm's length" methods to acquire foreign technologies. New modes of technology acquisition, such as foreign direct investment, joint research, cross-licensing and strategic alliances, need to be utilised more.

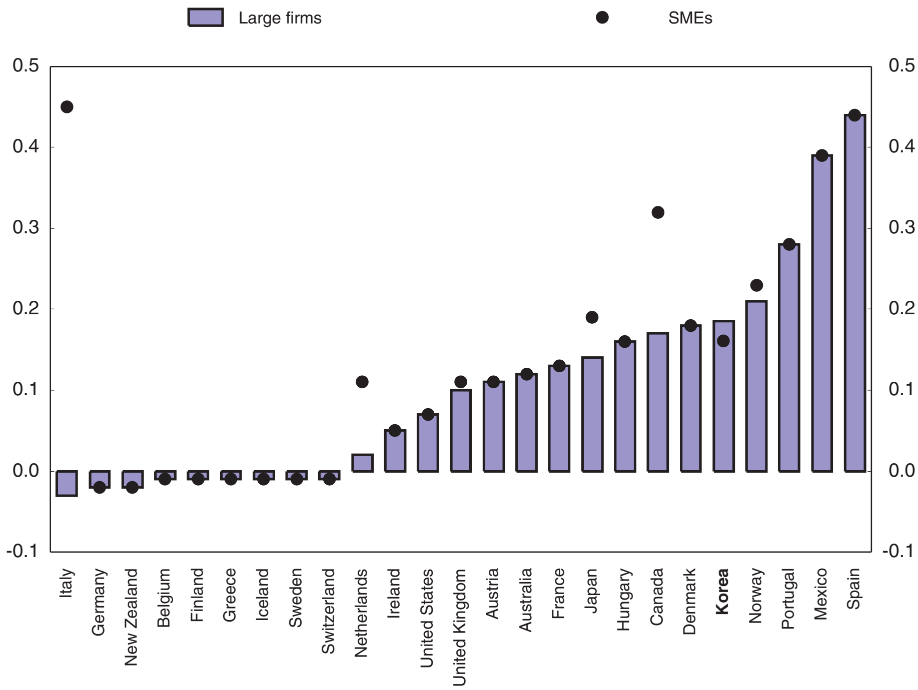
Fifth, it is at least as important to ask whether optimal use is being made of the existing stock of knowledge as it is to ask how that stock can be expanded. Effective use of existing technology depends on its diffusion. Increasing the R&D linkages between business, GRIs and universities is one strategy that is likely to encourage diffusion. In addition, the government recently introduced programmes to bring patent holders together with potential licensees and a public-private partnership was established to support SMEs in intellectual property matters (OECD, 2004g). At the same time, it is important to consider the role of intellectual property rights, regulatory features of product, capital and labour markets, and the availability of skilled human capital in diffusing technology. While policies in these areas usually aim at objectives other than innovation, they affect an economy's capacity to diffuse, as well as to create, new technologies. In the absence of an appropriate framework, policies to stimulate innovative activities in the private sector, which are discussed in the next section, are unlikely to be effective. The following sections look at the regulatory features of product, capital and labour markets and the development of skilled human capital.

Policies to encourage private-sector innovation

To encourage private-sector innovative activity, OECD countries use a variety of policies, including direct public funding and tax incentives for business R&D and support for entrepreneurship, notably SMEs and venture capital. Such intervention can be justified as necessary to offset market failures that reduce innovation expenditure below the socially desirable level. While fiscal incentives can be effective, their overall impact appears to be relatively small. Moreover, such policies can have high economic costs and entail substantial deadweight losses (Pain and Jaumotte, 2005). Compared to other OECD countries, tax incentives for R&D in Korea are generous (Figure 4.5) and cover every stage, *i.e.*, reserves, facility investment, R&D outlays and technology transfers. The strengthening of incentives helped to increase tax expenditures on R&D from 0.4 trillion won to

Figure 4.5. **Tax treatment of R&D in OECD countries**

Rate of tax subsidy for one unit of R&D in 2004[1]



1. For example, $1 of R&D spending in the United States resulted in 7 cents of tax relief.

Source: OECD, *Science, Technology and Industry Outlook* (2004) and Warda (2004).

1.3 trillion won (0.2% of GDP) between 1999 and 2004. As noted in the programme to upgrade the national innovation system, the government intends to increase tax incentives for R&D.

Protecting intellectual property rights (IPRs) strengthens incentives for innovation. However, empirical research shows that the relationship between the IPR system, patenting and innovative activity is complex. The challenge is to design an IPR system that encourages the creation of knowledge by raising the returns to innovators on the one hand and at the same time promotes the diffusion of innovation. While the social cost of allowing exclusive use under patents can be high, in the absence of such protection inventors may prefer secrecy, which can be even more restrictive of the diffusion of knowledge. In Korea, empirical studies find a positive relationship between patent protection and technological innovation, product market competition and value added (Chung *et al.*, 2004). Another study found that a 1% increase in intellectual property, as measured by the number of patent applications, raised output by 0.11% (Youn *et al.*, 2003). For an enterprise, a 1% increase in patent registrations raises its own TFP by 0.03%, while a 1% increase in the sum of patent registrations by competing firms in the same industry is estimated to raise the average TFP by 0.12%. This implies that the social rate of return on patents is higher than the private rate in the absence of adequate IPR, reducing investment in patenting below the socially optimal level.

Box 4.3. **The evolution of intellectual property right protection in Korea**

The level of IPR protection in Korea has risen in line with the country's economic development. Such a strategy facilitated Korea's catch-up approach to innovation by allowing it to benefit from reverse engineering and duplicative imitation at early stages of its development. As the country advanced toward the technology frontier, strengthening IPR protection was in the best interests of Korean firms. In addition, countries with stronger IPR protection tend to receive larger transfers of technology from multinational companies (Branstetter *et al.*, 2004).

The first patent legislation was adopted in 1961 and amended to conform to the Paris Convention in 1981. However, the legislation did not cover food products, chemical substances and pharmaceuticals. Korea enacted the Computer Program Protection Act in 1986 in part to improve IPR protection for software. The patent, trademark and utility model laws were revised in 2001 to increase both fines and prison terms for violators of IPRs. This was followed by legislation in 2003 to strengthen enforcement, in part by giving police powers to the Standing Inspection Team of the Ministry of Information and Communication. In sum, the United States Trade Representative concluded in 2005 that "Korean patent law is fairly comprehensive, offering protection to most products and technologies" and that "Korea has taken significant steps to strengthen its intellectual property regime over the years." Remaining concerns focus on the effective enforcement of IPR for copyrighted materials.

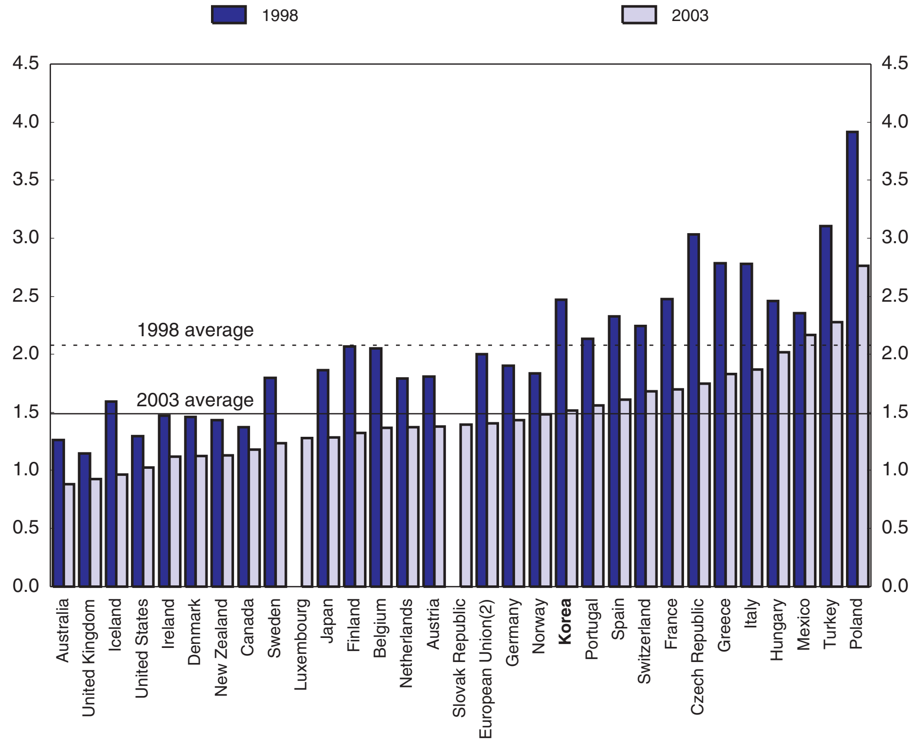
Empirical research shows that stronger IPR protection has a substantial positive effect on patenting (Pain and Jaumotte, 2005). The general tendency of IPR policy in most countries is to increase protection for intellectual property (Martinez and Guellec, 2004). Korea has also strengthened the legal framework for IPR protection, which should encourage patenting and thus boost growth. Its framework has been brought in line with global standards such as the WTO agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), although enforcement needs to be improved further to encourage companies to invest in R&D and to file patents (see Box 4.3). Based on opinion surveys of business executives, the Institute for Management Development (IMD) ranked Korea's patent and copyright protection at 37th out of 60 economies (IMD, 2004), and the World Economic Forum (WEF) ranked IPR protection at 23rd out of 104 countries (WEF, 2004).

The impact of the regulatory framework on innovation

Product market competition

Product market competition strengthens incentives to innovate, thereby promoting productivity growth. Empirical evidence suggests that product market regulation that inhibits competition reduces R&D spending, and is negatively correlated with TFP growth (Bassanini and Ernst, 2002). In addition, productivity is driven by "creative destruction" through new entry and exit as well as by productivity growth in existing firms and changes in market share. New firms make an important contribution to innovation because they can begin production with the most productive combinations of inputs. The entry of new firms is highest in business environments with high-quality regulation, low start-up costs and a low level of corruption (Scarpetta *et al.*, 2002). Although measuring the quality of

Figure 4.6. **Product market regulation**[1]



1. The scale of the indicator is from least to most restrictive of competition.
2. A simple average of the 15 countries then in the European Union.

Source: OECD, *Economic Policy Reforms* (2005).

regulation is not straightforward, the OECD product market regulation indicator ranked Korea among the middle of OECD countries in 2003, an improvement compared to 1998 (Figure 4.6). However, the detailed indicators show that barriers to entrepreneurship, trade and investment are relatively high, reflecting regulatory and administrative burdens and legal barriers (Conway *et al.*, 2005).

Entry and exit barriers

Despite Korea's regulatory reform effort following the 1997 financial crisis (OECD, 2000), barriers to entry remain an important concern. A 2002 study found that 36% of all industries were subject to legal entry barriers, with the proportion higher in non-manufacturing (Jaehong Kim, 2002).[11] While the start-up time for a new business is not high compared to other OECD countries, the number of procedures, the total cost and minimum capital requirement (50 million won or 3.3 times annual per capita income), are relatively onerous (Table 4.3). Multiple contact points and administrative procedures should be replaced by one-stop shops. However, the most significant entry barrier is the extensive regulatory framework governing land use, which includes 112 different laws, administered by a number of different ministries. Moreover, there is a lack of transparency given that there is no comprehensive database on these regulations (see the 2004 *Survey*).

Table 4.3. **Time and cost in starting or closing a business**

2004

	Korea	OECD[1]
Starting a business		
Number of procedures	12	6
Time (days)	22	25
Cost (% of annual income per capita)	17.7	8.0
Minimum capital (% of annual income per capita)	332.0	44.1
Closing a business		
Time (years)	1.5	1.6
Cost (% of estate)	4.0	6.8
Recovery rate (cents on the dollar)	81.1	72.2

1. Includes 22 high-income OECD countries.

Source: World Bank (2005).

Regulatory reform is thus a key aspect of reducing entry barriers. Korea launched a major regulatory reform effort in 1998 that reduced the total number of regulations by nearly half (see the 2000 *OECD Economic Survey of Korea*). The Prime Minister's Office, along with the Regulatory Reform Committee, recently launched several initiatives to review existing regulations (see Annex 4.A1). Regulations that were justified by the existence of market failures or aimed at non-economic objectives should be reviewed. There are some restrictions that no longer have any economic justification other than the protection of incumbent firms, or result from the influence of special interest groups.

The exit mechanism in Korea appears to have improved, in part as the failure of so many large chaebol since 1997 suggests that no firm is "too big to fail". Moreover, the time and cost of closing a business are not high compared to other OECD countries (Table 4.3). However, the insolvency framework, which includes the Bankruptcy Act, the Company Reorganisation Act, the Composition Act and the 2001 Corporate Restructuring Promotion Act, is complex and fragmented. Moreover, the widespread use of workout programmes outside of the court system weakens the exit mechanism. A recent study comparing restructuring methods suggests that the performance of workout programmes falls short of that of legal procedures (Dongsoo Kang *et al.*, 2004). An effective exit mechanism should allocate risk among market participants in a predictable and transparent manner, while maintaining economic value. A new unified insolvency law, which is to be implemented in 2006, consolidates the bankruptcy and company re-organisation laws and abolishes the composition procedure. Improving the exit mechanism is a priority as the large number of firms with an interest coverage ratio below one for at least three consecutive years indicates that there is a significant amount of restructuring still to come (Table 6.1, Panel B).

Improving framework conditions in the service sector

Services have accounted for a growing share of the Korean economy, rising from 47% to 56% between 1980 and 2004 in terms of value added. This reflects demand-side factors, such as a high income elasticity of demand for some services and population ageing. The share of employment in services is increasing even faster due to significantly lower productivity growth in services than in manufacturing. Indeed, the share of service-sector employment increased from 37% to 64% between 1980 and 2004, reflecting rapid structural

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Table 4.4. **Employment and productivity by sector**[1]

	Korea	OECD
A. Employment and value added[2]		
Share of total employment, 2001 (%)		
Manufacturing (15-37)	19.7	16.0
Services (50-99)	62.3	71.1
Share of total value added, 2001 (%)		
Manufacturing (15-37)	30.3	17.3
Services (50-99)	53.9	72.0
B. Labour productivity in services[2]		
Value added per worker in 2001, manufacturing = 100		
Services (50-99)	56.2	93.4
Wholesale and retail trade, hotels and restaurants (50-52, 55)	29.0	67.0
C. Unpaid workers as a share of employment, 2003 (%)[3]		
Total economy (01-99)	34.9	16.5
Services (50-99)	34.3	19.2
Wholesale and retail trade, hotels and restaurants (50-52, 55)	50.5	29.8

1. The numbers in parentheses show the ISIC (Rev.3) codes.
2. The OECD total is for 24 countries in which both employment and value added data are available. Value added is converted at PPP exchange rates to obtain the OECD total.
3. The OECD total is based on 26 countries, using data for the latest year available.

Source: OECD STAN Database for Industrial Analysis (2005/01) and OECD Labour Force Database (2004).

change in Korea. However, the service sector remains relatively small in Korea compared to the OECD averages of more than 70% in terms of both value added and employment (Table 4.4). Consequently, the share of the service sector is expected to continue rising toward the OECD average. Persistent low productivity in the service sector in Korea would therefore impose a considerable drag on Korea's economic performance, in part by penalising the manufacturing sector, which incorporates a wide range of services in its production activities.

Labour productivity in Korea's service sector is only 56% of that in manufacturing, considerably below the 93% level in the OECD area as a whole (Panel B).[12] In particular, health and social services in Korea have one of the poorest performances in terms of the growth of value added and labour productivity (Wölfl, 2005). Korea's health expenditures are less than 6% of GDP, the second lowest in the OECD, and the number of physicians and nurses per 1 000 population is also relatively low (OECD, 2004i). Employment in social services, including childcare, medical treatment and educational services, accounts for 14% of total employment, about half of the OECD average (Hwang and Jeong, 2005). Adjusted for Korea's income level, the share of the service sector in value added is 12 percentage points below its expected level (Kongsrud and Wanner, 2005).

Low productivity in the service sector is explained by a number of factors. *First*, industrial policies favouring exports and the manufacturing sector have had an adverse impact on services. *Second*, entry barriers are generally higher in the service sector, as noted above, weakening competition. *Third*, the market size of services is small and there is a lack of experience (KDI, 2003). *Fourth*, there is a large inflow of older workers, given the early age of retirement of employees from firms, generally at around age 50. Lacking other alternatives, three-quarters become self-employed, primarily in the service sector (see Chapter 5). Consequently, one-third of workers in services are either self-employed or family workers compared to an average of 19% in the OECD area (Panel C).[13] *Fifth*, small establishments are prevalent in services. In particular, mom-and-pop type stores dominate the distribution sector, given the large supply of low-skilled and displaced workers, low capital requirements and barriers to the entry of larger stores. The small size of retail outlets limits the scope for economies of scale, making it difficult to benefit fully from Korea's advanced ICT infrastructure. Indeed, diffusion of ICT, which has been a major contributor to growth in the OECD area, is closely linked with establishment size (OECD, 2004k). Despite its specialisation in manufacturing ICT products, Korea has considerable scope to reap the productivity gains from increased use of ICT equipment in other sectors, particularly services, and its spill-over effects (Box 4.4).

Korea's service sector needs restructuring to boost its productivity and to mitigate the polarisation in sectoral performance and the resulting widening in income inequality. A priority should be to promote a pro-competitive regulatory environment by lowering entry barriers.[14] Three areas stand out in this regard. *First*, although regulations on retail trade at the central government level have been almost phased out (except those related to zoning and environmental considerations), there remain obstacles at the local level to opening large-scale stores (OECD, 2004b). The elimination of such obstacles would promote the consolidation of small stores.[15] Empirical evidence points clearly to large productivity gains from the liberalisation of entry in retail trade over the past two to three decades (Nicoletti and Scarpetta, 2003), in part due to the expansion of large-format outlets using new technology (Kongsrud and Wanner, 2005). *Second*, in professional

Box 4.4. **The ICT sector in Korea**

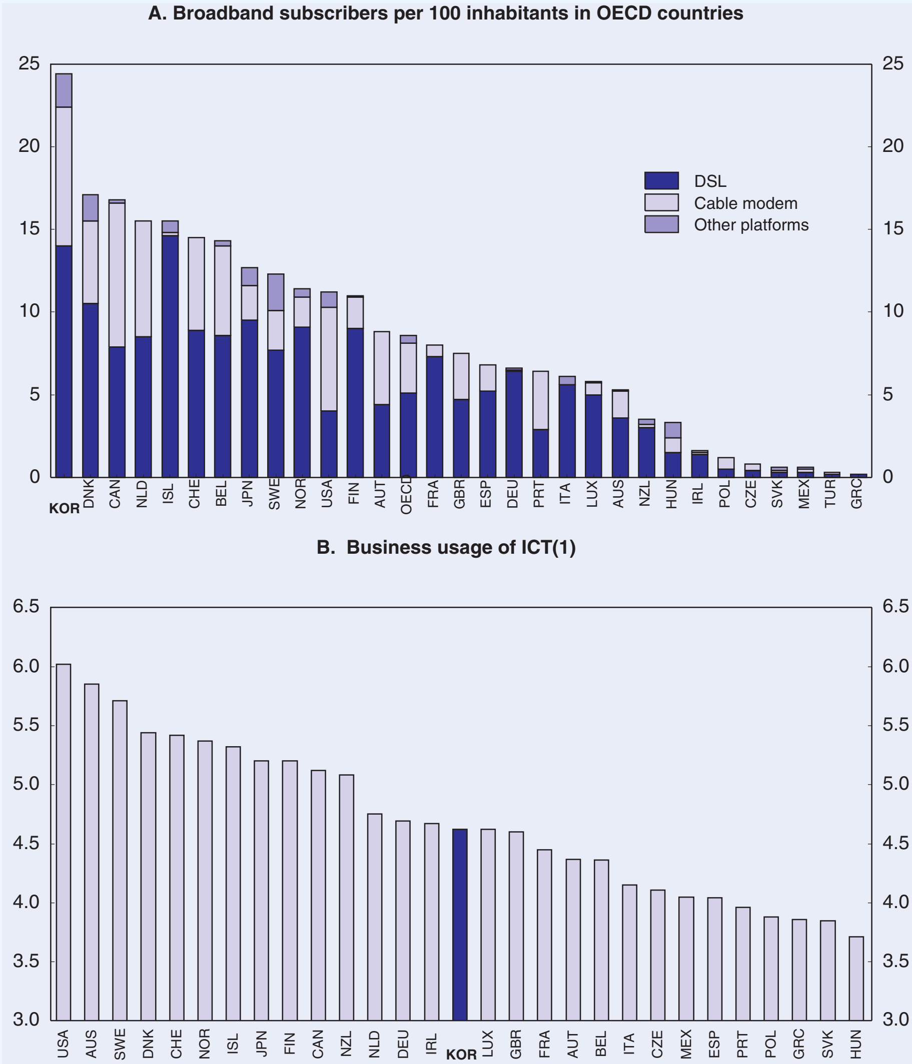
ICT intensity, defined as the ratio of ICT production to GDP, was 7.9% in Korea in 2003, the third-highest in the OECD. Korea's strength in ICT is most prominent in manufacturing, where it ranks first according to the OECD's "revealed comparative advantage" measure. In 2004, Korean ICT exports reached $74 billion (30% of total exports) with a $34 billion trade surplus in this sector. The leading ICT products are semiconductors, mobile phones, LCD, and digital TV. Three Korean companies – Samsung Electronics, LG Electronics and Korea Telecom – were included among the world's top 50 ICT firms based on 2003 revenues. Close to 1 percentage point of Korea's aggregate labour productivity growth in the second half of the 1990s came from ICT manufacturing (Figure 1.7), the highest contribution in the OECD area (Pilat, 2003).

The economic impact of ICT is closely linked to the extent to which it is diffused throughout the economy, reflecting the fact that ICT is a network technology: the more people and firms that use the network, the more benefits it generates (OECD, 2004n). In 2004, Korea's broadband penetration rate was the highest in the OECD (Figure 4.7) while the price of Internet access was low. However, experience in OECD countries shows that the availability of ICT does not readily translate into its effective use in enterprises. In Korea, business-sector use of ICT ranks in the middle of OECD countries, despite the high availability of the Internet and the country's prowess in ICT manufacturing (Panel B). Business diffusion appears uneven despite rapid progress in some areas. Korean firms are not strong in integrating business processes, or in implementing intra-firm organisational changes and inter-firm collaboration along value chains. This is partly due to the large share of small establishments, which are not fully exploiting ICT because of a lack of awareness, personnel and specialist services.

Box 4.4. **The ICT sector in Korea** *(cont.)*

Figure 4.7. **Internet and its business use**

June 2004



1. Chart indicates the score on the business usage sub-index of the World Economic Forum Networked Readiness index for 2003-04. Business usage is determined by factors such as the level of B2B and B2C e-commerce, the use of ICT for activities like marketing, and levels of on-line transactions.

Source: OECD, *Communications Outlook* (2005).

services, such as law and accounting, regulations on entry and business activity should be lowered further (OECD, 2004b). *Third*, in social services, several studies have documented positive effects from expanding user choice and competition on performance in healthcare, childcare and long-term care (Lundsgaard, 2002).[16] Finally, remaining policies that discriminate in favour of manufacturing should be abolished. For example, electricity tariffs for manufacturing firms should not be kept below other sectors. The fact that the government's list of future growth engines is concentrated in technologies associated with manufacturing may suggest a continuing focus on that sector.

The market for risk capital and venture business[17]

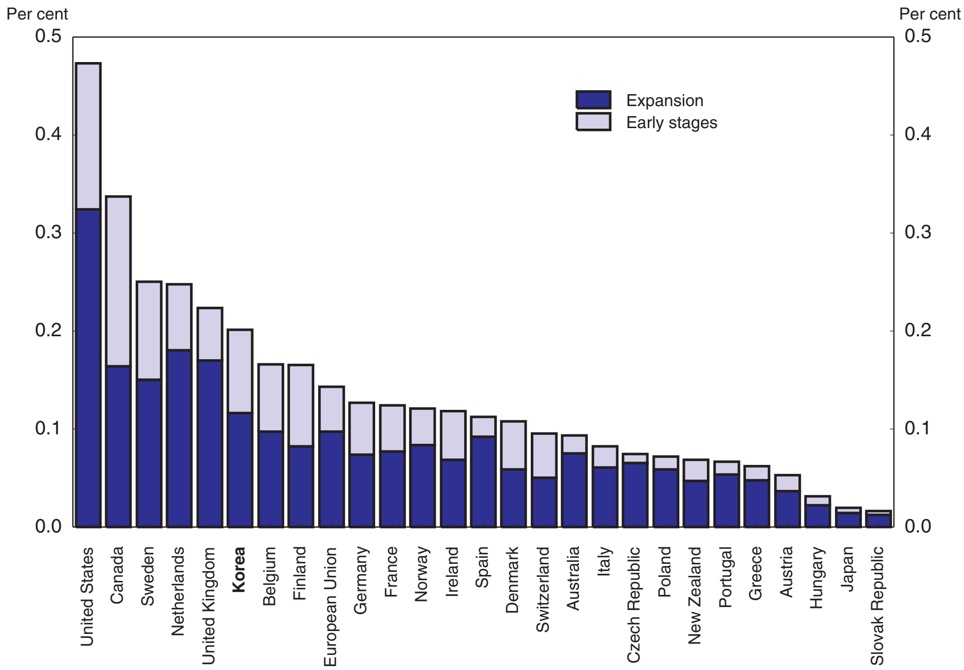
The financing environment for SMEs has improved dramatically since the 1997 crisis. With chaebol-affiliated companies focused on de-leveraging and banks more aware of the risks of lending to this sector, there has been a large expansion of loans to smaller companies. However, bank lending to SMEs relies heavily on real estate collateral or credit guarantees provided by the public sector (see Chapter 6). Investment in innovation is, by its nature, particularly risky, as a large proportion of the assets – such as human capital and new ideas – are intangible, which also limits their use as collateral. Moreover, bank lending is a less appropriate method of financing for venture business than equity. The inherent risks, combined with the information asymmetry between innovating firms and providers of external finance, discourage conventional financing of start-ups based on innovation. Venture capitalists fill the financing void, in addition to typically providing management services for these companies. Hence, well functioning markets for risk and venture capital are indispensable for innovation-based start-ups, including the opportunity to list on the stock exchange. Listing not only provides a source of funding, but also an exit opportunity for venture capitalists, which encourages their entry.

Korea jump-started its venture capital market in 1998 through a direct infusion of equity capital from the public sector, generous tax incentives and equity guarantees. This was accompanied by the introduction of a certification system in 1997 that designated certain SMEs as "venture businesses". The government's role in developing the venture business sector is part of its strategy to accelerate business restructuring and shift the weight of the economy from chaebol to start-ups in knowledge-based industries. With venture capital investment amounting to 0.2% of GDP, Korea ranks sixth among OECD countries (Figure 4.8). Korea shows a relatively good performance in early-stage financing compared to other OECD countries. In Korea, 40% of this investment has been in ICT. The major sources of venture capital have been the government (31% in 2004), in contrast to other OECD countries where the public-sector role has been gradually phased out. Corporations, banks and insurance companies are other important sources of funds. However, the roles of pension funds, individuals (business angels) and cross-border transactions have been relatively minor. Government policies to launch a venture capital market contributed to a bubble in the second-tier stock market (see below), which was followed by a crash, and the market remained sluggish through 2004. Consequently, the total amount of venture capital investment declined by two-thirds, from 2.0 trillion won in 2000 to 0.6 trillion won during each year between 2002 and 2004.

Venture capital investment has been centred on firms certified by the government as venture businesses. Firms that qualify receive a number of benefits (beyond those available to all SMEs), such as a reduced minimum capital requirement, tax exemptions, loans for start-ups, credit guarantees, and relaxed listing requirements for the second-tier stock exchange, the Korean Securities Dealers Automated Quotation (KOSDAQ). Although the support system may have helped encourage entrepreneurship and innovation activities in some SMEs, a number of unqualified firms have attempted, and in some cases, succeeded in being certified, thus reducing the credibility of this sector as a whole. In 2002, the government tightened the certification criteria by introducing a technology and innovation assessment by independent institutions and abolishing some qualitative

Figure 4.8. **Venture capital investment by stages**

Per cent of GDP, 1999-2002[1]



1. 1998-2001 for Australia, Japan, Korea and New Zealand. The definition of private equity/venture capital tends to vary by country.

Source: Baygan (2003).

criteria. Consequently, the number of certified venture businesses declined by 30% to 8 000 in 2004. Currently, a SME can be certified as a venture business by the Small and Medium Business Administration if it meets one of three criteria: *i)* it received equity investment from venture capitalists amounting to more than 10% of its capital; *ii)* the amount (over 50 million won) and intensity of its R&D spending is high; and *iii)* it uses new technologies, such as those protected by patents. As of 2004, only 5% and 18% of venture businesses qualified under the first two criteria, while 77% were approved under the third.

The KOSDAQ market was established in 1996 to promote the access of SMEs to equity funding through easier entry requirements and less stringent operating obligations than the Korea Stock Exchange (KSE). In addition, a special listing standard for venture business was introduced within the KOSDAQ. Standard requirements for paid-in capital, level of assets, business performance and debt to equity ratios are not applied to venture businesses. The KOSDAQ market experienced a boom, followed by the technology market crash that led to a 90% fall in the stock price index, a much bigger drop than the declines in the KSE and in other second-tier markets such as NASDAQ and the Swedish O-List. Although continued IPOs boosted the number of listed companies from 453 to 890 between 1999 and 2004, market capitalisation has fallen to 31 trillion won (4% of GDP), one-third of its 2000 peak of 99 trillion won.

The government introduced a number of programmes for venture businesses in 2004 to boost entrepreneurship and to overcome the weaknesses in the risk capital market:

- The Korea Technology Credit Guarantee Fund (KOTEC) has shifted the target of its credit guarantees towards start-ups and technology companies.
- Corporate credit bureaus have been established and the disclosure system for venture businesses was tightened.
- A private equity fund (PEF) law was introduced in December 2004. As of April 2005, five funds (with a total of 0.8 trillion won) had been established.
- Venture capital firms were allowed to acquire more than 51% of shares in their invested firms, allowing them to fully realise the upside potential.
- Reforms in the KOSDAQ and the "over-the-counter" market were introduced to induce viable start-ups and to restore trust among investors.

In contrast to the policies in the late 1990s that contributed to the bubble in the venture business area, this package should help improve the framework for this sector. Some of these measures, such as the establishment of credit bureaus, will strengthen market orientation. However, there is a risk of mismatches in the demand and supply for venture capital if the entrepreneurial sector provides insufficient investment opportunities, resulting in an excess of venture funds chasing too few start-ups. Private equity would then be concentrated on later-stage investments and traditional industrial sectors, with far less impact on potential growth. Thus, a key priority is to create an environment that encourages the supply of investment-ready SMEs. In addition, it is important to boost the private sector's role in venture funding. Government programmes should focus on leveraging and diversifying private sources of venture capital and moving small firms away from dependence on public debt guarantees and public funding.

However, overcoming weak funding from private sources may require additional reforms. *First*, more liberal policies for institutional investors, combined with improved standards for transparency and disclosure, are desirable. The introduction of a retirement pension system in the corporate sector in 2005 may have a positive impact on the development of the venture capital market, although there is considerable distrust in Korea of pension funds that pursue "high risk, high return" strategies. However, their investment portfolios should be closely supervised to protect the interests of beneficiaries. *Second*, rebuilding the confidence of stock market investors, who were hurt by the technology market crash, should be given priority. Strengthened screening procedures, disclosure requirements and delisting conditions would be beneficial. Class action suits, which will be allowed in 2007 for small listed firms with less than 2 trillion won in assets, should also enhance transparency. *Third*, the venture business certification system should be allowed to expire in 2005 as scheduled to create a more market-oriented business environment.

Labour market institutions

Labour market institutions and regulations can have a significant impact on the structure of innovation and the adoption of new technologies, which require adjustments in firms' workforces to change skill compositions or work practices in order to be fully effective. Empirical evidence in the OECD area suggests a negative correlation between the strictness of employment protection legislation and the share of investment spending devoted to ICT (Pain and Jaumotte, 2005). Although protection for regular workers is relatively high, Korea's overall protection level is in the middle of OECD countries, reflecting the easing of controls on the use of non-regular workers (OECD, 2004h). The increase in the share of non-regular workers to 30% in 2004, one of the highest levels in the OECD, facilitates labour-market adjustment and thereby the use of new technology. However, it creates equity concerns (see Chapter 5) and may limit incentives for in-house training of employees by boosting turnover and shortening tenure.

In general, though, there is little evidence that employment rigidity in Korea has seriously hindered innovation activities thus far. This may be due to the fact that Korean firms are engaged primarily in "cumulative innovation", which relies more on firm-specific work competencies. However, a study found that it is difficult to combine "numerical" and "functional" flexibility in Korea (Dongbae Kim *et al.*, 2004). Workplaces that achieve numerical flexibility by decreasing the number of regular workers have low functional flexibility, which promotes skill accumulation and flexible organisation, thus limiting the scope for job rotation. Indeed, the resulting lack of development of an "internal" labour market may hinder firms from fully exploiting their knowledge base (see the discussion below on vocational training).

Securing the supply of highly qualified human capital

The supply of well qualified labour is a key ingredient in the generation and diffusion of innovation.[18] Increased human capital not only raises labour productivity, but also serves as a driver of technological progress through a significantly positive effect on business-sector R&D. The OECD *Growth Study* estimated that the long-run effect on GDP per capita of one additional year of education ranges from 4% to 7% (OECD, 2003g). Korea has a remarkable record in expanding student enrolments at all levels of schooling. By 2002, the proportion of the population between 25 and 34 years old with an upper secondary school education was the highest in the OECD area, and the third-highest for tertiary education (Figure 4.9). Moreover, rising educational enrolment has been accompanied by exceptionally good student achievement on international standardised tests. In the OECD's PISA study, Korean fifteen-year-olds have some of the highest scores in mathematics, reading, science and problem solving, placing them second overall (OECD, 2004e).

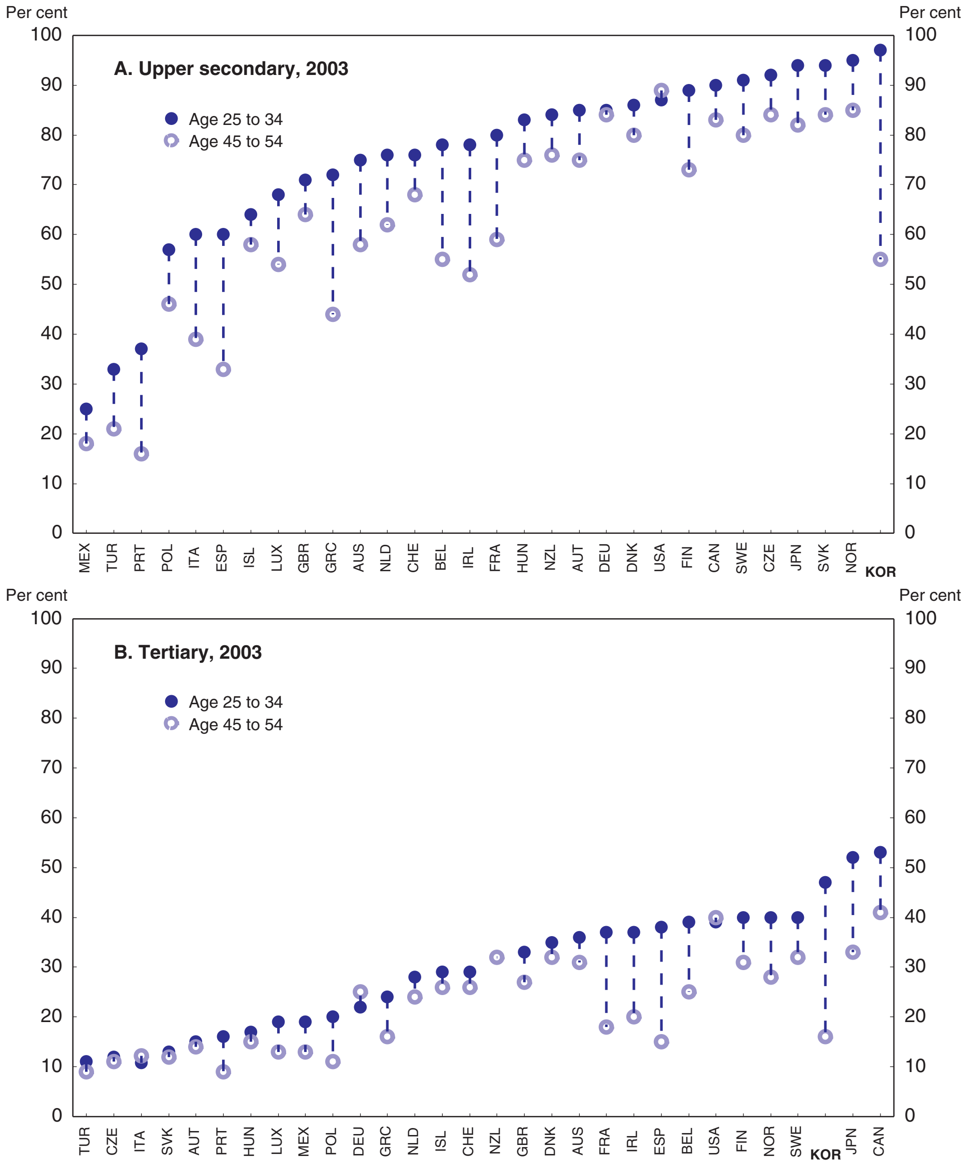
However, there is widespread public discontent in Korea regarding the education system. The same PISA study shows a low level of satisfaction towards schools and a high level of "out-of-school" activities.[19] Moreover, companies complain about the low quality of education. Based on an opinion survey of executives, the IMD ranked the usefulness of Korea's university education at 59th out of 60 economies, and the difficulty of finding qualified engineers in the domestic market at 52nd. The overall competitiveness of Korea's education system was placed 44th (IMD, 2004). The WEF ranked the quality of Korea's education system 60th out of 104 countries (WEF, 2004). Although the national zeal for education enhances Korea's growth potential, there is concern that the education system may be incapable of enhancing the country's competitiveness in a global economy driven by knowledge. This section discusses the high level of private education expenditure, problems in tertiary education, declining interest in science and engineering and the limited opportunities for lifelong learning and vocational training.

The high level of private expenditure on education

Korea spent 7.1% of GDP for educational institutions at all levels in 2002, the third-highest among OECD countries (Figure 4.10). While public-sector expenditures, at 4.2% of

Figure 4.9. **Educational attainments of the population**

Percentage of age group

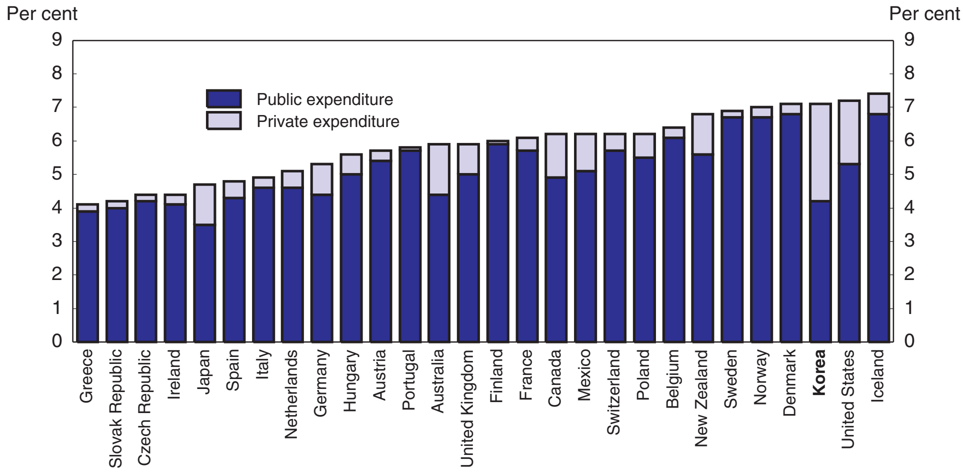


Source: OECD, *Education at a Glance* (2005).

GDP, was below the OECD average of 4.9%, private outlays were the highest in the OECD area at 2.9%. This does not include spending for students' out-of-school activities, especially private tutoring provided at institutes (*hakwon*). A Korean Educational Development Institute (KEDI) survey of parents reported that 73% of primary and secondary students received private tutoring after school hours, with total expenditure estimated at 13.6 trillion won, 2.3% of GDP (Choi *et al.*, 2003). Meanwhile, according to the government's Social Indicators Survey, which is based on household expenditures, spending on private tutoring exceeds private expenditure on educational institutions by 30%, implying a larger

Figure 4.10. **Expenditure on educational institutions**

Per cent of GDP in 2002



Source: OECD, *Education at a Glance* (2005).

amount than that of the KEDI survey (NSO, 2004). In any case, private tutoring expenditures appear to have risen significantly over the past few decades.[20]

The high and rising reliance on private tutoring in the primary and secondary levels has been regarded by Koreans as a social disease that imposes a number of costs (KEDI, 2003).[21] *First*, it competes and overlaps with public education, thus raising total expenditures on education unnecessarily. *Second*, the high burden of private tutoring hinders equal access to educational opportunities, raising equity issues. *Third*, it makes it difficult for the public education system to cope with students of widely differing educational levels. *Fourth*, the highly competitive nature of the education system risks hampering the full development of children (United Nations, 2003). Combined with the already high "in-school" learning time at 37 hours per week (the OECD average is 26 hours), additional "out-of-school" learning boosts total learning time to 50 hours, well above the OECD average of 35 hours (OECD, 2004e). The government has repeatedly tried to reduce private tutoring by abolishing entrance exams for secondary education,[22] expanding investment on public education, and even banning private tutoring. However, those actions have not been successful, as the share of students who receive tutoring and its total cost continue to increase.

The fundamental cause of the high reliance on private tutoring is that the current public education system does not satisfy the expectations of students and their parents. A recent study found a significantly positive relationship with schooling dissatisfaction,[23] as well as some effect from income, area of residence and mother's education level. However, the secondary school "equalisation policy" and the quantitative nature of the selection process for university entrance had no significant effect on the level of tutoring (Hyunjin Kim, 2004). Another study found a strong link with school quality: private tutoring expenses are higher for students attending lower quality schools, ranked in terms of both teachers and students (Taejong Kim, 2004). Since the restrictions on private tutoring were ruled unconstitutional by the Constitutional Court in 2000, the government has launched a total of 33 action plans aimed at reducing the amount of private tutoring by half, from

14 trillion won to 7 trillion won. Many of the plans focus on increasing the quality of public education. In the 2004 five-year fiscal plan, spending on elementary and secondary education is to increase by 36% (MPB, 2004). The plan assumes that nominal GDP rises about 8% a year – or 36% by 2008 – keeping such outlays at around the 3¼ per cent of GDP recorded in 2002. Other aspects include providing more diverse after-school activities and changing the heavy cultural emphasis on educational credentials.

However, achieving the objective of reducing private tutoring outlays will be difficult given the high priority attached to education, especially at elite universities, by the public. Indeed, the rigid hierarchy of universities has a powerful influence in determining career success and social status. According to a survey, 61% answered that "academic cliques" are the most important factor determining success in life for individuals of similar ability, followed by the level of educational achievement and regional background at 16% and 9%, respectively (Jung and Lee, 2003). The importance attached to gaining admission to elite universities dictates not only the secondary school curricula and the university admission system, but also increases the burden of private tutoring on families seeking additional learning opportunities.

The value of education at an elite university puts pressure on students to get high scores on the university entrance exam, the Academic Ability Test. Such an approach encourages homogeneity rather than preparing students for a world in which creativity to develop new ideas is essential. Reform of the university entrance system is thus a key to improving education. The system was changed in 1998 to allow universities to develop their own criteria and select students based on broader criteria than just test scores. However, a recent survey shows that the implementation of the new system has been slow and limited due to a lack of consensus on how to evaluate student performance and a lack of resources to guide students (Yang, 2004). Under an October 2004 plan, admission will be based more on overall performance in secondary school and less on the entrance exam. Successfully implementing this reform, which is planned for 2008, would help shift the educational system away from learning by rote and toward more creativity.

In addition, structural reforms in secondary education are needed. Decentralisation to bring decision-making power and accountability closer to those who teach and manage schools would enhance quality and responsiveness (see Chapter 3). In fact, there has been some progress in this regard. Between 1998 and 2003, the share of decisions taken at the school level rose from 25% to 48%, while that of the central government declined from 37% to 9% (OECD, 2004c), Many decisions – budgets, student assessments, textbooks and courses – are now under the responsibility of each school (OECD, 2004e), although teacher-related issues are not. However, behavioural factors and the vertical relationship between schools and supervisors hinder the extent of autonomous decision-making at the school level (Sung-Yeol Kim, 2002). In addition, the scope to create independent private schools[24] and curricula should be expanded to increase flexibility in education and enlarge the choices of students and schools.

Tertiary education should be reformed

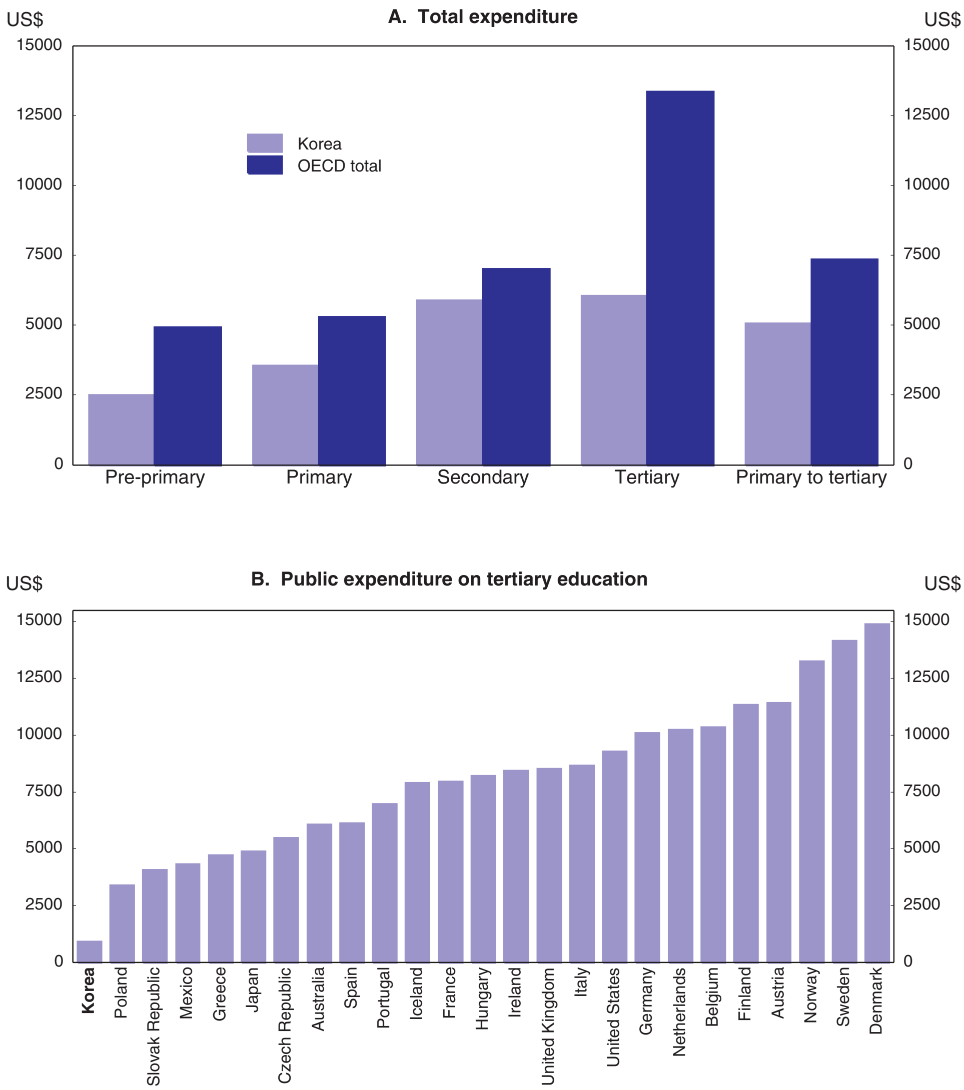
The labour market has shown a "skill mismatch" in which workers at both low and high skill levels are in short supply, while the middle level is oversupplied.[25] Consequently, SMEs in labour-intensive industries face chronic problems in finding an adequate number of employees, a factor contributing to their shift to lower-wage countries. On the other hand, companies complain about the low quality of domestic tertiary education and the skill level of graduates, which leads some to prefer hiring more experienced workers. According to a 2004 survey by the Federation of Korean Industries, 78% of companies replied that tertiary education has serious problems in supplying skilled workers, and it takes between 23 and 30 months to train new employees.[26] The degree of mismatch and concerns about the quality of education is reflected in the high unemployment rate of 9.6% for youth in the 15 to 24 age group in 2003. It was thus 2.7 times higher than the overall unemployment rate, compared to an OECD average of 1.9 times. In addition, half of workers are employed in a different field than the one they studied in school. The problems in matching the supply and demand for workers, especially for the highly qualified, will be exacerbated by structural changes, notably the growing role of high-technology sectors. The government hopes that increased co-operation between education and business will better match education with labour market needs. However, a more fundamental structural reform that emphasises market demand and competition is required, combined with the reforms at the secondary level discussed above.

International flows of students also illustrate the quality deficiencies of Korean tertiary education. Korea accounts for almost 5% of foreign student flows to the OECD area, making it the second-largest source after China. However, its role as a destination is among the lowest in the OECD (OECD, 2004d): only 0.1% of all tertiary level students in Korea are from abroad, with about half from China. The limited number of foreign students is partly due to the fact that most university programmes are not offered in English or other foreign languages. Moreover, some foreign universities are stingy in accrediting diplomas and qualifications acquired in Korea, and even the country's best universities have difficulty in gaining wide recognition in the international educational community.[27]

The *first* priority that should guide reform at the tertiary level is to upgrade quality by expanding financial resources. Although total expenditure on education in Korea is high (Figure 4.10), spending per student at the tertiary level was less than half of the OECD average in 2002 (Figure 4.11). This reflects the low level of public funding; government expenditures on tertiary education amounted to less than $ 1 000 (at PPP exchange rates), compared to an OECD average of around $8 000 (Panel B), reflecting the longstanding emphasis on primary and secondary education. Moreover, the important role of private universities, which account for more than 80% of tertiary educational institutions and students, keeps public spending low. The rapid expansion of tertiary education, reflected in the rise in the advancement rate from secondary to tertiary education from 33% of the age cohort in 1990 to 81% in 2004, was accompanied by a decline in quality. In particular, the ratio of students to teaching staff has risen significantly to a level well above the OECD average.[28] Korea thus needs a better balance between quantitative expansion and quality promotion in tertiary education. However, reform requires consideration of a number of complex issues: *i)* the already high level of overall educational spending, including private tutoring; *ii)* the balance between public and private financing; *iii)* the allocation of funds between different levels of education; *iv)* efficiency in the allocation and use of funds; and *v)* linking public funding to performance and restructuring (Woo *et al.*, 2002 and Lee and Ban, 2004).

Achieving the best financing mix between public and private sources is complicated by the dominant role of private universities. User charges, at 84% of total tertiary education costs, are the highest in the OECD. The heavy reliance on user charges creates equity concerns about the access of low-income households to higher education (OECD, 2003b). Moreover, the level of public subsidies, *i.e.*, scholarships, grants, student loans, transfers and payments, to support tuition payments is significantly lower in Korea than in other

Figure 4.11. **Expenditure on educational institutions per student in 2002**
US dollars using PPP's, based on full-time equivalents



Source: OECD, *Education at a Glance*, 2005.

OECD countries, while the access of low-income households to the financial market is limited. This problem could be addressed through increasing scholarships and loans that are subsidised or income-contingent policies, an approach widely used in other OECD countries (Blöndal *et al.*, 2002). The creation in 2005 of the Credit Guarantee Trust on Student Loans, in which the government will guarantee student loans, will benefit a wide range of students, particularly those from low-income families.

Another challenge is to balance public expenditures between different levels of education. Public spending on the tertiary level was 0.3% of GDP in 2002, much lower than the 3.3% spent on primary and secondary schools. In contrast, outlays in the OECD area are divided more evenly at 1.0% and 3.5%, respectively (OECD, 2005a). Public expenditure on the tertiary level in Korea is to increase by 39% in nominal terms between 2004 and 2008, compared to 36% for primary and secondary schools (MPB, 2004). Flexibility in allocating expenditures is limited by a law requiring the government to spend 19.4% of revenue from national taxes (excluding earmarked taxes and duties), plus all of the revenue from the education tax, for primary and secondary education. While this scheme has helped expand basic education, it limits the scope for funding tertiary education. One source of potential saving is capital expenditure, which amounted to 21% of education spending in 2001, more than double the OECD mean. Its share is likely to decrease in Korea, given the declining number of students.

Second, restructuring and consolidation of universities is required. The expected decline in the youth population provides a good opportunity to achieve cost savings that can be used to boost the quality of tertiary education. Due to the declining fertility rate, over-capacity in tertiary education is already apparent among provincial universities, and the gap will widen over the next decade. It is estimated that by 2012, the population of the age groups between 5-14 and 20-29 will be 78% and 81%, respectively, of their 2002 levels (OECD, 2004c). The government announced a plan in 2004 to encourage the restructuring of the tertiary education sector through M&As, mergers and the exit of non-viable universities with the goal of enhancing the competitiveness of this sector. By mid-2005, eight of the 50 national universities had reached agreements on terms of consolidation, in addition to the merger of two national universities in 2004.

Third, greater deregulation is needed to help the universities respond better to signals from their stakeholders and to stimulate competition among them. While the abolition of remaining regulations on public university tuition in 2003 was an important step, more changes are needed. The major task is to re-design the role of the central government, notably the Ministry of Education and Human Resource Development. Its new role should consist of making macro-level strategic decisions, securing resources, ensuring overall co-ordination and evaluation, setting standards and providing support services. At the regional level, the co-ordinating role of the local governments among industry and universities needs to be encouraged. This has been neglected due in part to the separation of local government between general and educational functions. Recently, there have been some improvements, such as the role of general local governments in selecting proposals under the "New University for Regional Innovation" (NURI) project.

Fourth, the lack of competition should be overcome. The rigid hierarchy of universities in Seoul and the information asymmetry between education service providers and consumers discourages competition between universities, which is needed to improve their performance as well as to guide the restructuring process. At the same time, the lack of a fair evaluation system for professors hinders healthy competition among the teaching staff, while competition among students at the tertiary level is weak in contrast to the primary and secondary schools. In both colleges and universities, there are very few challenging programmes for gifted students, and widespread "paternalism" hinders universities from using strong incentives, such as flunking out students, to encourage good performance. It is important to provide more information about universities' performance to promote competition. The decision to disclose the success of the graduates of each university in finding jobs – a reform that faced strong resistance from low-ranked universities – is significant and should be expanded to cover more information. It is also important to develop a transparent mechanism to assess the quality of teaching. An independent national body with clearly defined criteria and standards should be established to undertake these tasks.

Opening the tertiary education market to accredited foreign providers would be an effective way to stimulate competition and upgrade the competitiveness of Korean universities.[29] At present, no foreign tertiary-level institutions with a majority share of investment are operating in Korea. Some conditions to ensure the quality of education and to protect consumers, such as standards for setting up campuses (buildings and property), act as entry barriers. In addition, the non-profit juridical person requirement for schools discourages the entry of foreign educational institutions by prohibiting them from remitting profits. Recently, the government enacted a bill that relaxed the establishment standards on foreign institutions in the three "Free Economic Zones" (Incheon, Busan and Gwangyang) and Jeju "Free International City". An increased foreign presence is desirable. Consideration should also be given as to how to ensure the quality of foreign providers and the impact of foreign suppliers on the post-secondary system as a whole (OECD, 2004d).

Fifth, more diversification is needed. Except for some institutions such as KAIST and POSTECH, Korean universities operate in a "department store" style, offering a broad range of disciplines rather than concentrating in areas in which they have a competitive advantage. Provincial universities tend to follow the trends set by the top-ranked institutions, which are concentrated around Seoul, regardless of their ability to afford them. This results in homogeneity among universities, thereby reducing their relevance and flexibility to respond to local development needs. Instead, each institution should develop its own programmes in light of its institutional strengths and local needs. This would result in a system in which universities specialised in certain areas, while maintaining a few institutions that cover all disciplines. Diversification has already started with the government's "Brain Korea 21" (BK 21) and "New University for Regional Innovation" (NURI) projects, which use public investment to establish a few centres of excellence in tertiary education.[30] However, a lack of institutional capacity in many universities and the absence of competition among them make diversifying the educational system difficult. Rather than having the government designate centres of excellence, universities should compete for research funding in order to develop their own competencies.

Sixth, industry-university relationships should be further strengthened. A law promoting industry-university partnership for the commercialisation of research results was revised in 2003, and special entities for this purpose were established within the universities in 2004.[31] Greater priority should be given to developing more extensive and varied forms of industry-university co-operation. For example, input from the business sector should be used to improve forecasts of labour demand and to revise the curricula to include subjects and technologies important to firms. In addition, labour mobility between industry and universities for faculty and compulsory traineeships for students in firms should be encouraged. However, the most important challenge is to overcome the inertia of universities, which tend to remain aloof from the business world, focusing on academic content rather than on its application.

In sum, global experience and research on education reform demonstrate that consensus building, clear goals, strong leadership, the ability to make adjustments during the process, measurable indicators and the availability of a support infrastructure are critical to success. The required changes need the support and participation of all stakeholders, including the government, parents, teachers, unions and the business sector. This is especially important in Korea, given the importance attached to education and the widespread distrust of reform initiatives, reflecting the unsatisfactory outcomes of past efforts.

Concerns about labour shortages in science and technology

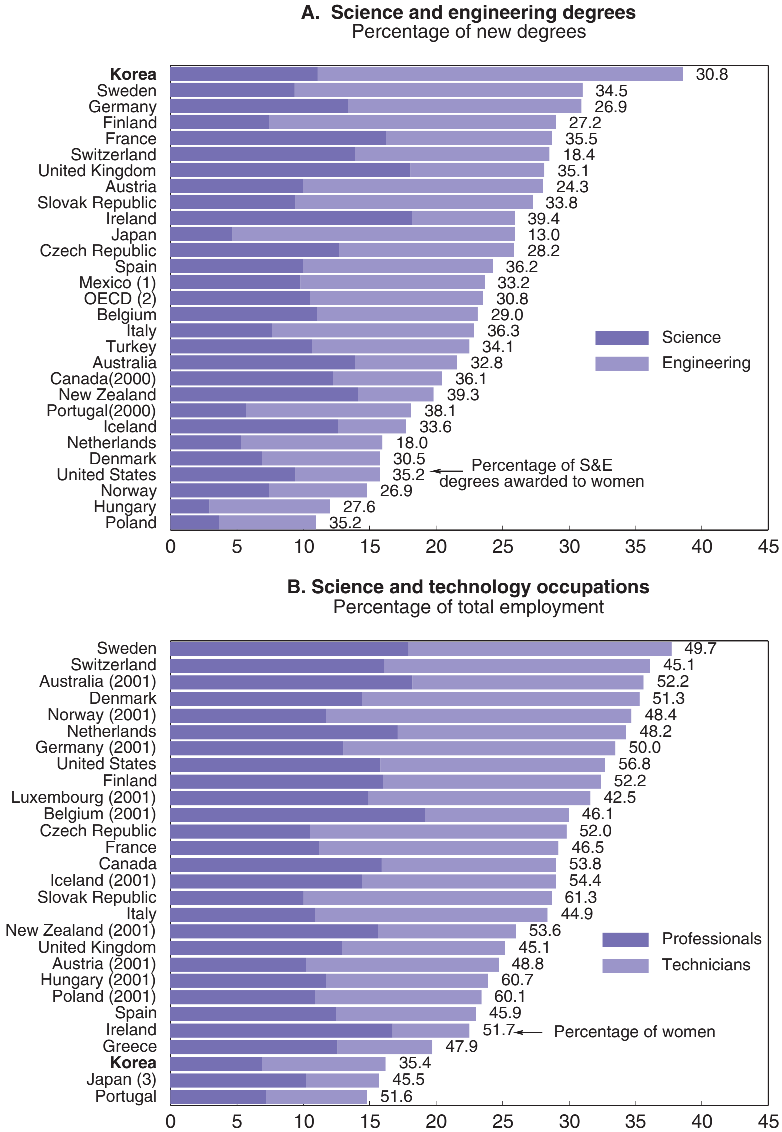
Korea worries that the future supply of science and engineering graduates will be inadequate (OECD, 2003d), despite the fact that it has a remarkably high share of students in these areas. Indeed, these subjects account for 40% of new university degrees, the highest proportion in the OECD (Figure 4.12, Panel A). The concerns are less focused on a potential quantitative shortage than on qualitative issues. *First*, the quality of students in science and engineering, as shown in their scores on the Academic Ability Test, has been declining. This may reflect labour market signals favouring such majors as social science, business, law, education and medicine (Jang, 2002). Although the cause of the wage differential is not entirely clear, an international comparison shows that regulations on some professional services are relatively restrictive in Korea, in contrast to strong competition in engineering (Nguyen-Hong, 2000). *Second*, there are complaints from the business sector about the quality of science and engineering graduates and their low employability in science and technology (HRST) occupations (Panel B). The government recently initiated measures to induce gifted students to study science and engineering by offering incentives such as expanded scholarships and an increased quota of science and engineering career tracks in the civil service. However, a more effective approach would be to strengthen competition in professional services through deregulation and a lowering of entry barriers. In addition, faced with international competition in securing highly qualified human capital in the global market, domestic policies regarding immigration and education for foreign students need to be more accommodative.

Lifelong learning and vocational training

Lifelong learning in Korea tends to be considered a matter of individual choice. The central government budget for lifelong learning is 0.8 trillion won (0.1% of GDP) and is managed by diverse ministries carrying out fragmented activities in a sporadic manner (KEDI, 2004). Three-quarters of this amount is devoted to vocational training and job placement programmes. While the overall participation rate in lifelong education is low at around 20%, it rises with the level of education, as in most OECD countries. Indeed, the participation rates in Korea were 5% for those with a primary-school education, 9% for lower secondary, 19% for upper secondary and 43% for tertiary (NSO, 2004). This pattern raises the risk of social polarisation (OECD, 2002c and World Bank, 2003). The limited scale of lifelong learning may reflect weak incentives facing workers, given that wages are heavily determined by seniority. However, changing demand for skills in the labour force in the context of the shift to a knowledge-based economy suggest a rationale for a public role in lifelong learning. This is particularly true in Korea, given its rapid pace of structural change and population ageing. A coherent strategy, including a well functioning system of recognition and certification of learning, shared financing between public and private sources, quality control, and better policy co-ordination within government and between social partners is required (OECD, 2003a).[32]

Although there is a growing emphasis in the OECD area on upgrading workers' skills, as reflected in the *OECD Jobs Strategy* (OECD, 2004h), spending on training in the Korean business sector fell from 2.1% of total labour costs in 1996 to 1.5% in 2003. It is thus lower than the 2.3%

Figure 4.12. **Human resources in science and engineering in 2002**



1. Excludes tertiary-type A second degree programmes.
2. Average of shares for countries available. Excludes Canada, Portugal and Luxembourg.
3. National estimates.

Source: OECD Education Database and OECD, *Science, Technology and Industry Scoreboard*, 2005.

average in the EU countries in 1999 (Eurostat, 2002). In Korean SMEs, training outlays were only 0.5% of total labour costs, well below the level in large firms. In addition, assistance for vocational training is regarded to some extent as a fringe benefit for workers. As firms have become more sensitive to pressures to achieve profitability, they prefer to "buy" rather than "make" workers. There is thus a risk of underinvestment in human capital, which in turn hinders the development of internal labour markets. This may reflect the generally weak priority attached to career development on the part of both employers and employees, combined with a lack of compensation for additional training (Soon-Hie Kang *et al.*, 2001).

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Many countries have introduced strategies, such as training levies and spending requirements on employers, tax incentives, loan guarantees and training vouchers, to promote vocational training (OECD, 2003e). However, the key to upgrading workers' skills appears to be a shared vision about vocational training between employers and workers. Co-operative efforts to develop and fund vocational training schemes would be enhanced by more harmonious relations among social partners and more structured involvement of employee representatives (Ok and Tergeist, 2003). Vocational consortia and collective training should also be encouraged, especially for smaller companies, as shown in the cases of Samsung Heavy Industries and Volvo, which pooled resources to create joint training centres for partners, including suppliers, distributors and subcontractors, most of whom are SMEs (OECD, 2004h).

Conclusion

In sum, Korea is well positioned to achieve high total factor productivity growth and catch up to the leading OECD countries, given its large investment in R&D and education and world-class ICT infrastructure. However, the development strategy, while promoting rapid growth, has resulted in a dualistic economy divided between a highly competitive, export-oriented manufacturing sector and a much less dynamic domestic demand-oriented sector. Large companies in the ICT and automobile industries are the leading innovators, while smaller companies, particularly in the service sector, lag behind. The challenge for Korea is to maintain an innovation framework that enables the leading firms to remain at the world technology frontier, while encouraging greater innovation efforts and the diffusion of technology to the lagging sectors of the economy. This requires expanding the stock of knowledge and ensuring that optimal use is being made of the existing stock of knowledge to enhance economic growth. Accomplishing these objectives requires improving the R&D framework, in part by using effective policies to promote private-sector R&D, reforming product market regulations so as to encourage innovation and ensuring adequate human capital, notably through reform of tertiary education. Restructuring Korea's national innovation system is thus a top national priority. Specific recommendations in each of these areas are summarised in Box 4.5.

Box 4.5. **Summary of recommendations to encourage innovation**

The R&D system

- Better co-ordinate policies concerning science and technology, education and industry and integrate them more fully in the overall strategy of economic development.
- Maintain flexibility in setting priorities, thereby limiting the risks inherent in concentrating R&D efforts in the sectors identified as future growth engines.
- Increase the responsiveness of public R&D expenditures to the private sector in part through a performance-based evaluation system.
- Strengthen linkages in R&D among businesses, universities and government research institutes, in part by enhancing labour market flexibility and favouring co-operative projects in the allocation of funding.
- Upgrade the R&D role of the universities, which account for only 10% of R&D performed in Korea.

Box 4.5. **Summary of recommendations to encourage innovation** *(cont.)*

- Promote technological co-operation between domestic and foreign players, in part through ensuring openness to inflows of foreign direct investment.
- Follow through on plans to encourage the diffusion of knowledge by strengthening the business-university-GRI interface and bringing patent holders together with potential licensees.

Promoting private-sector R&D activities

- Ensure that tax incentives are effective in boosting R&D while limiting deadweight costs.
- Further improve enforcement of intellectual property rights and increase public awareness of their importance.

Regulatory reform and the framework for encouraging innovation

- Further strengthen product market competition by lowering entry barriers, streamlining regulations including those on land use, and replacing multiple contact points and administrative procedures by one-stop shops.
- Continue to deregulate and foster competition in services, in particular, retail trade, professional services and social services.
- Simplify the regulatory framework for land and make it more transparent.
- Use the Regulatory Reform Committee to eliminate unnecessary regulations.
- Effectively implement the new unified insolvency law to provide more efficient ways for firms to re-organise or exit, while reducing reliance on informal workouts, thus preventing delays and reducing uncertainty.
- Abolish remaining policies that discriminate in favour of manufacturing.
- Concentrate government's role in the risk capital market on leveraging private-sector participation, especially by institutional investors, through improved standards for transparency and disclosure.
- Restore investor confidence in the second-tier stock market through strengthened screening procedures, disclosure requirements and delisting conditions.
- Abolish the government certification system for venture businesses in 2005 as scheduled.
- Relax employment protection, which reduces incentives to innovate, while creating a dual labour market.

Development of human capital

- Improve the quality of education at the primary and secondary level to better prepare students to participate in a knowledge-based economy.
- Enhance the autonomy of individual schools in practice and diversify the types of schools and curricula at the secondary level.
- Continue to diversify the university entrance system, in part by reducing the weight of the entrance exam.
- Restructure the tertiary education sector through competition by disclosing performance information for each university and develop a transparent mechanism, such as an independent national body with clearly defined criteria and standards, to assess the quality of educational services.
- Allow the entry of foreign institutions in order to strengthen competition.
- Further deregulate tertiary education.

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Box 4.5. **Summary of recommendations to encourage innovation** *(cont.)*

- Re-balance financial resources in favour of tertiary education to reverse the decline in its quality.
- Increase scholarships and loans to ensure access to tertiary education for low-income students.
- Encourage efforts by universities to diversify with an aim of establishing centres of excellence.
- Implement incentive schemes for universities to strengthen industry-university relationships, including the commercialisation of technology developed in universities.
- Expand lifelong learning opportunities, particularly for those with lower educational attainments.
- Encourage vocational training through co-operative efforts among social partners including labour, management and government.

Notes

1. Productivity per worker in Korea's manufacturing sector is 90% of the OECD average compared to only 54% in the service sector.
2. R&D and patents are used here as proxy variables of innovation input and output, supplemented by surveys based on self-assessment, *i.e.*, the Korean Innovation Survey. For more discussion of the concept of innovation and relevant data, see a paper on innovation in Germany by Fuentes *et al.*, 2004.
3. Indeed, it was ranked 18th out of 29 OECD countries in "generation of new knowledge", 22nd out of 23 in "industry-science linkage/technology diffusion" and 16th out of 30 countries in "industrial innovation".
4. This amounts to about 60% of total business R&D. Moreover, one-half of Korean patents at the European Patent Office (EPO) are in the ICT area (OECD, 2004a).
5. The five are Samsung Electronics, LG Electronics, Hyundai Motors, Hynix Semiconductors and GM Daewoo Auto & Technology.
6. This survey (Um, 2004) followed the OECD Oslo Manual (OECD, 1997b). Small, medium-sized, and large enterprises were defined by employment of between 10 and 49, 50 and 249, and 250 or more employees, respectively.
7. According to the Third Community Innovation Survey (CIS3) for 16 European countries (Eurostat, 2004).
8. Linkages can take the form of joint research, personnel exchange, cross-patenting, licensing of technology, purchase of equipment and a variety of other channels (OECD, 1997a).
9. However, the number of Korean patents filed in the United States and Japan are higher than the expected level given Korea's income level and amount of R&D spending.
10. These include: *i)* participation of the private sector in the NSTC and the boards of the research councils of GRIs; *ii)* preferential treatment of the private sector in funding national R&D programmes; and *iii)* reduction of block funding to the GRIs to encourage them to seek external funds from the private sector.
11. The study also found that in addition to a higher number of barriers in the non-manufacturing sector, those barriers are stronger compared to the manufacturing sector. The scope of legal entry barriers in the study covered eight types of regulations, including state monopoly, licensing, approval and registration. However, the ratio of industries under legal entry barriers declined from 45% to 36% between 1992 and 2001.
12. The relatively small gap between manufacturing and services in the OECD area is due to high labour productivity levels in some service industries. In particular, labour productivity in finance, insurance, real estate and business services is about 80% higher than in manufacturing.

13. The share of unpaid workers is especially high in the distribution, hotel and restaurant category (Table 4.4, Panel C), which accounts for 26% of total employment and 40% of service-sector employment. Labour productivity is low at only 29% of that in manufacturing.
14. Many of the recommendations in the special chapter in the 2004 *OECD Economic Survey of Korea* aimed at strengthening competition in services. These recommendations, as well as progress in their implementation, are shown in Annex 1.A1.
15. At the same time, extending active labour market policies, such as job-placement service and vocational training, to non-wage workers would help them adjust to structural changes in services (Keum *et al.*, 2003).
16. One measure to achieve this would be to introduce private health insurance. According to a 2001 task force report submitted to the government, tight regulation of medical spending aimed at promoting the financial stability of the National Health Insurance has hindered innovation and competition in the health sector.
17. This section draws on Baygan (2003) and OECD (2003b).
18. For more information concerning highly-skilled workers in S&T in Korea, see Sim (2005).
19. See indices showing attitudes toward school, students' sense of belonging at school, principals' perceptions of the morale and commitment of teachers, and student learning time (OECD, 2004e).
20. For example, private tutoring in 1990 was estimated at 1.2% and 1.4% of GDP by two separate studies (Taejong Kim, 2004 and Choi *et al.*, 2003).
21. There are two kinds of private tutoring. One (PT1) is for improving talents such as drawing, music, and developing skills in the "3Rs" (reading, writing, arithmetic). The second (PT2) is aimed at raising academic achievement in such subjects as Korean, English and Math. Expenditure on PT2 does not so much compensate for poor school quality, but is geared largely towards the university entrance exam. According to the KEDI survey, 83% of those with private tutoring received PT2 (Choi *et al.*, 2003).
22. The "equalisation policy", which replaced competitive entrance exams by a system of random allocation, was introduced for lower secondary schools in 1969 and for upper secondary schools in 1974. However, adoption of the policy for the upper secondary level depends on the decision of the provincial educational governments. In 2004, the policy was applied to 57% of general high schools and 72% of students. Most of the areas where this policy is not applied are located in rural regions.
23. The criteria for determining satisfaction included the effectiveness of teaching and the availability of individualised teaching.
24. In Korea, private schools at the secondary level follow the same programme as public schools and receive public funding (Lundsgaard, 2002). The pilot programme begun in 2000 to allow independent private schools has resulted in the creation of six such schools.
25. Around 23% of workers think that they are overqualified, and the shares are especially high for those with a post-secondary non-tertiary level education and the graduates of vocational junior colleges (Nam *et al.*, 2004). Between 1990 and 2003, the wage gap between graduates of upper secondary schools and vocational junior colleges narrowed from 17% to only 2%.
26. Another survey of 600 companies and 200 universities targeted at the science and engineering area showed similar concerns about the quality of education (Jung and Choi, 2002). However, students have a somewhat different perspective: another survey reported that 60% believe that tertiary education promotes the development of core competencies (Kim *et al.,* 2002).
27. For example, no Korean universities were included among the world's top 50 universities according to a ranking by the *Times* in 2004.
28. Moreover, the ratio of non-full-time faculty (such as part-time lecturers and adjunct professors) to full-time faculty rose from 0.9 to 1.6 between 1990 and 2004 in universities, and from 1.0 to 2.7 in vocational junior colleges (MOEHRD and KEDI, 2004).
29. The issue of trade liberalisation in educational services has been included in the current negotiations under the General Agreement on Trade in Services in the WTO. While still limited in scale, institutional mobility has become an increasingly important feature of cross-border education, with British and Australian educational institutions as the main suppliers, while those from the United States, France and Canada are active as well (OECD, 2004d). Currently, the OECD and UNESCO are drafting non-binding guidelines on quality for the provision of cross-border higher education. The guidelines can be found on the OECD's website at *http://www.oecd.org/dataoecd/34/42/34732302.pdf*.

30. The BK 21 project, which mainly targets graduate schools, invested about 1.4 trillion won during the period 1999 to 2005, and the government plans to introduce a post-BK 21 project for the next period 2006-12. Meanwhile, the NURI project, which started in 2004, plans to invest 1.4 trillion won in local universities over the period 2004-08.
31. Over 70% of universities have filed a patent in ICT or electronics (OECD, 2003h). The law allows universities and firms to decide how to share the gains from the commercialisation of research results.
32. This issue is also discussed in OECD (2004), *Co-Financing Lifelong Learning: Towards a Systemic Approach*.

Bibliography

Bank of Korea (2004), "Explanation on Industry Relationship Analysis", Bank of Korea, mimeo, Seoul (in Korean).

Bassanini, Andrea and Ekkehard Ernst (2002), "Labour Market Institutions, Product Market Regulations, and Innovation: Cross-country Evidence", OECD Economics Department Working Paper No. 316, Paris.

Baygan, Günseli (2003), "Venture Capital Policy Review: Korea", OECD Directorate for Science, Technology and Industry Working Paper No. 2003/2, Paris.

Blöndal, Sveinbjörn, Simon Field and Natalie Girouard (2002), "Investment in Human Capital through Post-Compulsory Education and Training: Selected Efficiency and Equity Aspects", OECD Economics Department Working Paper No. 333, Paris.

Brandt, Nicola (2004), "Business Dynamics, Regulation and Performance", OECD Directorate for Science, Technology and Industry Working Paper No. 2004/3, Paris.

Branstetter, Lee, Rayond Fisman and C. Fritz Foley (2005), "Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U.S. Firm-Level Panel Data", Quarterly Journal of Economics (forthcoming).

Cho, Hyun-Dae *et al.* (2003), "Establishing A Strong Korea in S&T Resources: Key Issues and Policy Recommendations", Science & Technology Policy Institute Policy Paper No. 2003-16, Seoul (in Korean).

Choi, Sang-Keun *et al.* (2003), "A Study on the Reality and Volume of Private Tutoring Expenditure", Korean Educational Development Institute Research Paper No. CR 2003-19, Seoul (in Korean).

Chun, Seung Hoon (2004), "Tax Expenditure System and Policy Issues", National Assembly Budget Office Economic Brief No. 2, ISBN 89-91444-10-5 93320, Seoul (in Korean).

Chung, Sung Chul *et al.* (2004), "The Relationship between Patent, Technology Innovation and Economic Development", Science & Technology Policy Institute Policy Paper No. 2004-15, Seoul (in Korean).

Conway, Paul, Véronique Janod and Giuseppe Nicoletti (2005), "Product Market Regulation in OECD Countries, 1998 to 2003", OECD Economics Department Working Paper No. 419, Paris.

Eurostat (2002), *European Social Statistics: Continuing Vocational Training Survey (CVTS2)*, ISBN 92-894-4330-8, Luxembourg.

Eurostat (2004), *Innovation in Europe: Results for the EU, Iceland and Norway*, ISBN 92-894-7262-6, Luxembourg.

Freudenberg, Michael (2003), "Composite Indicators of Country Performance: A Critical Assessment", OECD Directorate for Science, Technology and Industry Working Paper No. 2003/16, Paris.

Fuentes, Andrés, Eckhard Wurzel and Margaret Morgan (2004), "Improving the Capacity to Innovate in Germany", OECD Economics Department Working Paper No. 407, Paris.

Gwartney, James and Robert Lawson (2004), *Economic Freedom of the World: 2004 Annual Report*, The Fraser Institute, ISBN 0-88975-209-5, Calgary.

Ha, Joonkyung (2004), "R&D and Economic Growth: Theory and Empirics for Korea", Seminar proceeding of the Korea Economic Institute of America and Institute for Monetary & Economic Research of the Bank of Korea, Seoul.

Hwang, Soo Kyeong and Jin-Ho Jeong (2005), "Recent Labour Market Trends and Forecast in 2005", Korea Labour Institute, Labour Review No. 1, Seoul (in Korean).

IMD (2004), *World Competitiveness Yearbook 2004*, International Institute for Management Development, Lausanne.

Jang, Hawon (2001), "Growth and Employment Outlook in Service Sector", Korea Development Institute, Research Monograph No. 2001-04, Seoul (in Korean).

Jang, Soomyung (2002), "Economics in Tertiary Education", Korea Labour Institute, *Quarterly Journal of Labour Policy*, Vol. 2 Issue 1, Seoul (in Korean).

Jung, Jin-Wha and Youngsup Choi (2002), "Developing Human Capital for Industry", Korea Institute of Industrial Economics and Trade Working Paper No. 462, Seoul (in Korean).

Jung, Jin-Wha and Sangwon Ko (2004), "Developing Industry-Academia-Science Interface in R&D", in Seil Park *et al.*, *Reform in Tertiary Education: The Second Step*, Korea Development Institute and Korea Research Institute for Vocational Education and Training, Seoul (in Korean).

Jung, Tae Hwa and Byung Wook Lee (2003), "Study on Academic Cliques", Korea Research Institute for Vocational Education and Training, Research Report No. 03-45, Seoul (in Korean).

Kang, Dongsoo, Joon-Kyung Kim and Yong-Seok Choi (2004), "Empirical Analysis on Corporate Restructuring in Asia", Korea Development Institute, Research Monograph No. 2004-04, ISBN 89-8063-198-7, Seoul (in Korean).

Kang, Du-Yong *et al.* (2004), "Technological Input & Output Structure of Korean Manufacturing Industries in 2004", Korea Institute of Industrial Economics and Trade Issue Paper 2004-177, ISBN 89-90789-70-2 93320, Seoul (in Korean).

Kang, Soon-Hie, Me-Rhan Kim, Ahnkook Kim and Jang-Soo Ryu (2001), *Investment in Vocational Education and Training in Company and Its Challenges*, Korea Labour Institute, Seoul (in Korean).

Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi (2003), "Governance Matters III: Governance Indicators for 1996-2002", World Bank Policy Research Working Paper No. 3106, Washington D.C.

KDI (2003), "Comprehensive Study on Industrial Competitiveness of Korea", Korea Development Institute, Knowledge Economy Team Research Monograph 2003-07, Seoul (in Korean).

KEDI (2003), "Measures against Private Tutoring: Material for the Fifth Public Hearing", Korean Educational Development Institute, RM 2003-32-5, Seoul (in Korean).

KEDI (2004), "Leap to the Learning Country: Lifelong Education", Korean Educational Development Institute, RM 2004-32, Seoul (in Korean).

Keum, Jae-Ho *et al.* (2003), "Policy Issues for the Self-employed in the Labour Market", Korea Labour Institute Working Paper No. 2003-17, Seoul (in Korean).

Kim, Anna, Byungshik Rhee, Soomyung Jang and Nam-Gi Park (2002), "Quality Management in Higher Education for the Development of Core Competency in College Students", Korean Educational Development Institute Research Report No. RR 2002-19, Seoul (in Korean).

Kim, Dongbae, Juil Kim, Kiu-Sik Bae and Jungwo Kim (2004), *Flexibility and Human Resources Management*, Korea Labour Institute, Seoul (in Korean).

Kim, Dong-Ju and Joonghae Suh (2003), *Innovation Clusters and Regional Economic Development: International Perspectives*, Korea Research Institute for Human Settlements and Korea Development Institute, ISBN 89-8063-177-4, Seoul.

Kim, Hyunjin (2004), "Analysing the Effects of the High School Equalisation Policy and the College Entrance System on Private Tutoring Expenditure in Korea", *Journal of Educational Policy,* Vol. 1 No. 1, Korean Educational Development Institute, Seoul.

Kim, Jaehong (2002), "Entry Regulation: Theory and Practice", Korea Economic Research Institute, ISBN 89-8031-240-7, Seoul (in Korean).

Kim, Joon-Kyung (2004), "Overview of Korean Corporate Restructuring since the Financial Crisis: Focusing on Profitability and Financial Soundness", Korea Development Institute Policy Forum No. 168 (2004-01), Seoul (in Korean).

Kim, Sung-Yeol (2002), "Autonomous Administration in the School Level", in Seil Park *et al.*, *Reforming Schools in Korea: Beyond the "Equalisation Policy" Debbate*, Korea Development Institute, ISBN 89-8063-137-5, Seoul (in Korean).

Kim, Taejong (2004), "Shadow Education: School Quality and Demand for Private Tutoring in Korea", KDI School of Public Policy and Management, mimeo, Seoul.

KIPO (2004), *Intellectual Property Rights White Book*, Korea Intellectual Property Office, Seoul.

KIPO and KIPRIS (2005), "Patent Trends in Korea in 2004", Korea Intellectual Property Office and Korea Institute of Patent Information, Seoul (in Korean).

Ko, Sangwon, Chulkoo Min, Jaemin Park and Eunkyong Lee (2001), *Mobilising Science and Technology Personnel for Innovation: Main Policy Challenges*, Science & Technology Policy Institute, Seoul (in Korean).

Kongsrud, Per Mathis and Isabelle Wanner (2005), "The Impact of Structural Policies on Trade-related Adjustments and the Shift to Services", OECD Economics Department Working Paper No. 427.

Kumar, Nagesh (2002), "Intellectual Property Rights, Technology and Economic Development: Experiences of Asian Countries", Commission on Intellectual Property Rights.

Lee, Young and Sang-Jin Ban (2004), "Public Funding to Tertiary Education", in Seil Park *et al.*, *Reform in Tertiary Education: The Second Step*, Korea Development Institute and Korea Research Institute for Vocational Education and Training, Seoul (in Korean).

Lee, Kong-Rae, Sang-Wan Shim, Byung-Seon Jeong and Jung-Tae Hwang (2003), "Knowledge Intensive Service Activities (KISAs) in Korea's Innovation System", Korea Science & Technology Policy Institute, Seoul. Also available on the OECD Directorate for Science, Technology and Industry's webpage, "Sectoral Case Studies in Innovation: Knowledge Intensive Service Activities".

Lundsgaard, Jens (2002), "Competition and Efficiency in Publicly Funded Services", *OECD Economic Studies*, No. 35, 2002/2, Paris.

Martinez and Guellic (2004), "Overview of recent changes and comparison of patent regimes in the United States, Japan and Europe", in *Patents, Innovation and Economic Performance: OECD Conference Proceedings*, Paris.

MOEHRD and KEDI (2004), "Educational Statistics Analysis II", Ministry of Education & Human Resources Development and Korean Educational Development Institute, SM 2004-7, Seoul.

MOST (2004), *Report on the Survey of Research and Development in Science and Technology*, Ministry of Science and Technology, Publication No. 11-1350000-000529-10, Seoul.

MPB (2004), *2004-2008 Five-year Fiscal Plan*, Ministry of Planning and Budget, Publication No. 11-1050050-000135-10, Seoul (in Korean).

Nam, Jaeryang *et al.* (2004), *Basic Report on the Sixth Annual Korean Labour and Income Panel Study*, Korea Labour Institute, Seoul (in Korean).

Nguyen-Hong, Duc (2000), "Restrictions on Trade in Professional Services", Australia Productivity Commission Staff Research Paper, ISBN 1 74037 010 4, AusInfo, Canberra.

Nicoletti, Giuseppe and Stefano Scarpetta (2003), "Regulation, Productivity and Growth: OECD Evidence", OECD Economics Department Working Paper No. 347, Paris.

Nicoletti, Giuseppe and Dirk Pilat (2004), "Regulation and Performance in Services Sector: Réglementation et Performance du Secteur des Services", in Pierre Cahuc and Michèle Debonneuil, *Productivité et Emploi dans le Tertiaire*, Conseil D'analyse Économique Rapport No. 49, ISBN 2-11-005687-8, Paris (in French).

NSO (2004), *Social Indicators in Korea*, National Statistical Office, ISSN 1599-0907, Seoul (in Korean).

OECD (1997a), *National Innovation Systems*, Paris.

OECD (1997b), *Oslo Manual: The Measurement of Scientific and Technological Activities, Proposed Guidelines for Collecting and Interpreting Technological Innovation Data*, Paris.

OECD (2000), *OECD Reviews of Regulatory Reform: Regulatory Reform in Korea*, Paris.

OECD (2001a), *The New Economy: Beyond the Hype – The OECD Growth Project*, Paris.

OECD (2001b), *Science, Technology and Industry Outlook: Drivers of Growth*, Paris.

OECD (2002a), *Benchmarking Industry-Science Relationships*, Paris.

OECD (2002b), *Dynamising National Innovation Systems*, Paris.

OECD (2002c), *Education at a Glance*, Paris.

OECD (2003a), *Beyond Rhetoric: Adult Learning Policies and Practices*, Paris.

OECD (2003b), *Economic Survey of Korea*, Paris.

OECD (2003c), *Education at a Glance*, Paris.

OECD (2003d), *Governance of Public Research: Toward Better Practice*, Paris.

OECD (2003e), *OECD Employment Outlook*, Paris.

OECD (2003f), *OECD Science, Technology and Industry Scoreboard*, Paris.

OECD (2003g), *The Sources of Economic Growth in OECD Countries*, Paris.

OECD (2003h), *Turning Science into Business: Patenting and Licensing at Public Research Organisations*, Paris.

OECD (2004a), *Compendium of Patent Statistics*, Directorate for Science, Technology and Industry, mimeo, Paris.

OECD (2004b), *Economic Survey of Korea*, Paris.

OECD (2004c), *Education at a Glance*, Paris.

OECD (2004d), *Internationalisation and Trade in Higher Education: Opportunities and Challenges*, Paris.

OECD (2004e), *Learning for Tomorrow's World: First Results from PISA 2003*, Paris.

OECD (2004f), *Main Science and Technology Indicators*, Vol. 2004/2, Paris.

OECD (2004g), "Networks, Partnerships, Clusters and Intellectual Property Rights: Opportunities and Challenges for Innovative SMEs in a Global Economy", Background Report for the Second OECD Conference of Ministers Responsible for SMEs, Istanbul.

OECD (2004h), *OECD Employment Outlook*, Paris.

OECD (2004i), *OECD Health Data 2004*, Paris.

OECD (2004j), *OECD in Figures*, OECD Observer 2004/Supplement 1, Paris.

OECD (2004k), *OECD Information Technology Outlook*, Paris.

OECD (2004l), "Science and Innovation Policy: Key Challenges and Opportunities", Meeting of the OECD Committee for S&T Policy at Ministerial Level, Paris.

OECD (2004m), *Science, Technology and Industry Outlook*, Paris.

OECD (2004n), *Understanding Economic Growth: A Macro-level, Industry-level, and Firm-level Perspective*, Paris.

OECD (2005a), *Education at a Glance*, Paris.

OECD (2005b), *Measurement Issues Concerning the Internationalisation of R&D: Challenges and Opportunities,* Paris.

Ok, Wooseok and Peter Tergeist (2003), "Improving Workers' Skills: Analytical Evidence and the Role of the Social Partners", OECD Social, Employment and Migration Working Paper No. 10, Paris.

Park, Joon-Kyung (2003), "Industry-Science Linkage", Korea Development Institute Research Monograph No. 2003-01, Seoul.

Pain, Nigel and Florence Jaumotte (2005), "Innovation Policies: Innovation in the Business Sector", OECD Economics Department Working Paper (Forthcoming), Paris.

Pilat, Dirk (2003), *ICT and Economic Growth-Evidence from OECD Countries, Industries and Firms*, OECD, Paris.

Scarpetta, Stefano, Phillip Hemmings, Thierry Tressel and Jaejoon Woo (2002), "The Role of Policy and Institutions for Productivity and Firm Dynamics: Evidence from Micro and Industry Data", OECD Economics Department Working Paper No. 329, Paris.

Sim, Hagbong (2005), "Developing Highly-skilled Workers: Review of Korea", OECD Directorate for Science, Technology and Industry, forthcoming, Paris.

Suh, Joonghae (2000), "Korea's Innovation System: Challenges and New Policy Agenda", United Nations University Intech Discussion Paper Series 2000-04, Maastricht.

Suh, Joonghae (2003), "Performance Evaluation System and Guidelines for R&D Investment in Korea", in Jay-Hyung Kim *et al.*, *Performance Evaluation System and Guidelines with Application to Large-scale Construction, R&D, and Job Training Investments*, World Bank and Korea Development Institute Conference Proceedings, Seoul.

Suh, Joonghae (2005), "Enhancing Productivity through Innovation: Korea's Response to Competitiveness Challenges", *Journal of Economic Policy,* Vol. 27 No. 1, Korea Development Institute, Seoul.

Um, Mi-Jung *et al.* (2004), "Korean Innovation Survey 2003: Service Sector", Science & Technology Policy Institute Survey Paper No. 2004-01, Seoul (in Korean).

Um, Mi-Jung (2004), "Korean Innovation Survey 2003: Manufacturing Sector", Science & Technology Policy Institute Survey Paper No. 2004-02, Seoul (in Korean).

United Nations (2003), "Consideration of Reports Submitted by States Parties under Article 44 of the Convention, Concluding Observations: ROK", UNHCHR CRC/C/15/Add.197, Geneva.

Warda, Jacek (2004), "R&D Tax Treatment in OECD Countries: A 2003-2004 Update", JPW Innovation Associates Inc., Material for OECD Directorate for Science, Technology and Industry, mimeo, Paris.

WEF (2004), *The Global Competitiveness Report 2004-2005*, World Economic Forum, Geneva.

Wölfl, Anita (2005), "The Service Economy in OECD Countries", OECD Directorate for Science, Technology and Industry Working Paper No. 2005/3, Paris.

Woo, Cheonsik, Jhung-Soo Park and Young Lee (2002), "Direction and Task for Reform in Educational Funding", in Seil Park *et al.*, *Reforming Schools in Korea: Beyond the* "Equalisation Policy" *Debate*, Korea Development Institute, ISBN 89-8063-137-5, Seoul (in Korean).

Woo, Cheonsik and Kyung-Young Lee (2004), "Reform in Administrative and Financing System of Universities", in Seil Park *et al.*, *Reform in Tertiary Education: The Second Step*, Korea Development Institute and Korea Research Institute for Vocational Education and Training, Seoul (in Korean).

World Bank and OECD (2000), *Korea and the Knowledge-based Economy: Making the Transition*, Paris.

World Bank (2003), *Lifelong Learning in the Global Knowledge Economy: Challenges for Developing Countries*, ISBN 0-8213-5475-2, Washington D.C.

World Bank (2005), *Doing business in 2005*, ISBN 0-8213-5748-4, Washington D.C.

Yang, Seung-Shil (2004), "The Effects of New University Entrance System after 2002 and Future Tasks", Korean Educational Development Institute Position Paper No. 1-11, Seoul (in Korean).

Youn, Taehoon, Chang-Gyun Park and Yong-Seok Choi (2003), "Economic Impacts of Intellectual Property: Empirical Analysis Using Patent Data", Korea Development Institute (a government-commissioned report) Seoul (in Korean). Available at the Korean Intellectual Property Office's webpage.

Youn, Taehoon (2004), "Economic Analysis of Regulation on Market Activities: From the Competition Policy Perspective", Korea Development Institute Policy Analysis Series No. 2004-08, ISBN 89-8063-221-5, Seoul (in Korean).

Yun, Yunkyu and Jaeho Lee (2004), "Promoting Regional Industries and Building Up Regional Innovation Systems", Korea Development Institute Research Monograph No. 2004-13, ISBN 89-8063-211-8, Seoul (in Korean).

ANNEX 4.A1

Progress in regulatory reform in Korea

Korea launched a major regulatory reform effort in 1998. In particular, the Regulatory Reform Committee (RRC) was created and charged with eliminating half of the 11 095 regulations then in effect (see the 2000 *OECD Economic Survey of Korea*). The RRC succeeded in eliminating 49% of the regulations, while nearly half of the remaining regulations were improved. The RRC was also assigned the role of reviewing proposed regulations. However, since then, the number of regulations has increased to nearly 8 000, reflecting the emergence of new issues and concerns. Moreover, there has been criticism that regulations are hampering the creation of new enterprises and employment. The authorities have recently launched several initiatives to reform regulation.

The Regulatory Reform Task Force Team

The government established the Regulatory Reform Task Force Team (TFT) in the Prime Minister's office in August 2004 with the goal of boosting growth and creating jobs. The TFT, which is composed of 25 private-sector experts and 26 government officials, is focusing on 65 strategic tasks selected by businesses (Table 4.A1.1). The emphasis is on solving practical problems identified through opinion surveys of firms. The TFT, which will operate for two years, is distinct from the RRC, which sets the basic regulatory reform policy and reviews new regulations. Quarterly plans to implement the TFT's decisions have been established and the results are reported to the Prime Minister.

Reforming existing regulations

At the August 2004 ministerial-level meeting on regulatory reform, it was decided that all regulations should be examined and reformed, starting from a zero base. All government ministries are participating in this initiative and are selecting regulations for reform based on proposals from enterprises and the public. About 1 000 of the total 7 900 regulations under the responsibility of the ministries have been selected for improvement in 2005. These include, for example, deregulation of the securities company business, extension of the term for tariff drawbacks, and simplification of burial ground reporting procedures. As of the end of April 2005, the number of reforms completed by the ministries had reached 403. The regulatory reform implementation progress will be monitored and the results will be assessed at the end of the 2005.

Table 4.A1.1. **Strategic tasks of Regulatory Task Force Team**

Month and year	Task
August 2004	Procedures for starting businesses and establishing factories Construction of golf courses
November	Establishment and operation of large-scale retail stores Administrative investigation system Investments in the logistics industry University administration system
December	Traditional markets Self-governing bodies
January 2005	Construction industry (including supervision of bidding) Public infrastructure investment by the private sector Air transportation Cultural affairs and artistic creativity
March	Small-scale construction of apartment houses Ground transportation Maritime transportation Vocational training system
May	Traffic-related systems (including driver's licences) The start-up and establishment of corporations Personal information protection Use of public information E-commerce
June	Overlapping administrative regulations Internal regulations on administration Tourism and leisure industry New technology and new product development Development of medical supplies and the food industry Medical services
July	Industrialised zones Housing and real-estate finance
September	Business education Distribution of agricultural and maritime products Various indicator systems Outdoor advertising system Broadcast advertising system
October	Various mandatory employment systems Various statutory expenses (quasi-taxes) Entry and operation in the financial industry Financial supervision and the depositor protection system
November	Network industry equipment Management system for national and publicly owned property Entry and operation in the IT business Entry and operation in the broadcasting business
December	E-government Water quality preservation area
February 2006	New distribution sector Public financial system Private insurance
March	Software industry Various heavy taxation systems IPO market system Administrative reports for elementary and middle schools Establishment of institutions of higher education
April	The establishment of private educational institutions Lifelong education Regulations related to foreigners
May	Industrial accidents Safety and health Job creation support measures for social welfare-related firms
June	Large enterprise discrimination Admission to business organisations and their activities Employment security system
July	Various impact analysis systems Permit and reporting procedures related to environmental regulations Waste treatment and recycling Labour union activity

Reforming quasi-administrative regulations

The government has commissioned a growing number of administrative duties to quasi-public organisations, resulting in an increasing number of “quasi-administrative” regulations. These include rules regarding the articles of incorporation of such organisations and on the activities of their members. All of the regulations imposed on the 512 quasi-public organisations have been reviewed since the beginning of 2005. Of these, 269 were abolished and 763 were improved. Such changes, for example, include the free withdrawal of the members from quasi-public organisations and abolishing the requirement that the relevant ministry approve the executives elected to head them. The relevant ministry will examine and monitor quasi-public organisations in order to reform problematic regulations.

The establishment of a Business Difficulties Resolution Center (Ombudsman System)

In order to resolve difficulties faced by firms due to unreasonable regulations or the actions of the civil servants in administering regulations, a Business Difficulties Resolution Center was established in the Prime Minister’s office in April 2004. The staff of 11 had resolved 356 of the 598 cases it had received by the end of June 2005. The Center appears to be successful in resolving the concerns of companies, while encouraging appropriate regulatory actions by ministries and local governments. In the future, the Center will take an active role to identify priorities for improving the efficiency of regulatory procedures.

ISBN 92-64-01438-1
OECD Economic Surveys: Korea

Chapter 5

The labour market: enhancing flexibility and raising participation

This chapter analyses the increasing dualism in the Korean labour market and the need to encourage greater labour force participation. Although the rising proportion of non-regular workers lowers labour costs and increases employment flexibility, it has a negative impact on both equity and efficiency over the long term. Relaxing employment protection for regular workers and increasing the coverage of the social safety net for non-regular workers would help limit the extent of dualism. Population ageing is projected to be exceptionally rapid in Korea, leading to a significant decline in the workforce by mid-century. Steps to boost the participation of women through family-friendly policies are a priority. It is also important to encourage employees to stay at firms beyond the age of 50. Making the wage system more dependent on productivity and less on seniority and implementing a company pension system in place of the retirement allowance would help maintain the employment of older persons.

The labour market remains a key item on the policy agenda in Korea. In contrast to the significant progress in the corporate and financial sectors (see Chapter 6), labour market reforms are lagging and the institutional framework is poorly adapted to the rapidly changing economy. Given the growing role of high-technology sectors and Korea's increasing integration in the world economy, it is essential to enhance labour market flexibility. Employment protection for regular workers has encouraged the hiring of non-regular workers, who now account for almost one-third of salaried employees, one of the highest proportions in the OECD area. This creates both equity and efficiency concerns. The determined opposition of workers to relaxing constraints on dismissals is due in part to the limited social safety net in place to protect the jobless. Underlying these difficult issues is the problematic state of industrial relations, which has weakened investor confidence. Over the longer term, the transformation from one of the youngest populations in the OECD area to one of the oldest (Figure 1.4) makes it important to boost the labour force participation rate, especially for women, which is still relatively low. In addition, the practice of workers leaving firms at around the age of 50 is inappropriate in an ageing society. This chapter focuses on the major challenges of reducing labour market dualism and boosting participation, with the key recommendations presented in Box 5.1.

Reversing the trend toward increased labour market dualism

The revision of the labour law in 1998 to allow collective dismissals for "urgent managerial reasons" has not sufficiently enhanced labour market flexibility in practice. This reflects the conditions attached to dismissals, notably exhausting "all means" to avoid dismissals, discussing proposed dismissals for at least two months with workers and notifying the government.[1] In practice, rulings by the Supreme Court have introduced some flexibility in certain cases, for example, by not requiring the fulfilment of all the conditions and allowing dismissals aimed at preventing a future crisis. Nevertheless, given the constraints in the labour law, firms have relied on more expensive methods to reduce employment, such as early retirement packages and incentives for voluntary departures. More importantly, companies have increased the proportion of non-regular employees in their workforces to enhance flexibility. In addition, the strength of unions representing regular workers and the seniority-based wage system, which reduces the flexibility of the wages of regular workers, has encouraged the hiring of non-regular workers. Indeed, the proportion of non-regular employees has nearly doubled from 16.6% in 2001 to 29.7% by 2004 (Table 5.1),[2] the second-highest in the OECD area. Workers on fixed-term contracts, primarily for one year or less, account for more than half of non-regular workers.

The high and increasing proportion of non-regular employees has negative implications for both equity and efficiency. Non-regular workers are paid 20% to 27% less than regular workers, after adjusting for age, experience, education and other attributes (Jeong, 2003). Moreover, a third of non-regular workers are not covered by any worksite-based social insurance system. In short, the emergence of a dualistic labour market in which one segment is subject to lower wages, less protection from the social safety net and

Table 5.1. **Non-regular workers in Korea**

Per cent of employees

		2001	2002	2003	2004
Workers with a fixed-term contract	Less than or equal to 1 month	5.6	5.2	6.7	5.6
	More than 1 month to less than 1 year	2.8	2.7	4.9	4.7
	Exactly one year	1.5	1.9	3.3	4.4
	More than 1 year to less than 3 years	0.6	0.6	1.3	1.7
	3 years or more	0.5	0.6	0.7	0.8
	Subtotal	11.0	10.9	17.0	17.1
Workers without fixed-term contract, whose job is not expected to continue due to involuntary reasons		2.9	3.8	4.3	7.6
Temporary agency workers		1.0	0.7	0.7	0.8
On-call workers		2.2	2.9	4.2	4.6
Total [1]		**16.6**	**18.1**	**25.9**	**29.7**
Memorandum item:					
Total dependent employment (thousands)		13 540	14 030	14 149	14 584

1. Total is adjusted for overlapping categories. The Supplementary Survey is carried out each August. There have been a few changes that may influence recent results. *First*, the sample of the monthly *Economically Active Population Survey* was replaced starting from January 2003 and the question on fixed-term contracts was moved to this *Survey*. *Second*, workers who assess the durability of their employment to be unlimited because their contract is renewed on a regular basis have been moved to the "temporary" category since 2002.

Source: Ministry of Labour, Economically Active Population Survey; and Supplementary Survey of Economically Active Population Survey.

greater job precariousness creates equity concerns and has probably contributed to the deterioration in income equality since the 1997 crisis (see the 2004 *Survey*). Dualism is reinforced by the limited mobility between different segments of the labour market. Indeed, the probability of non-regular workers becoming regular workers was less than 1.5% during the second half of the 1990s. A rising share of non-regular employees also boosts the rate of worker turnover; the share of employees with tenure of less than one year is 34% in Korea compared to 22% in the United States, a country with relatively high turnover. High turnover reduces firm-provided training in Korea (Chung and Lee, 2005).

The 2004 *OECD Economic Survey of Korea* concluded that a comprehensive package that balances the interests of labour and management is essential to create a consensus for reform to address dualism. However, progress in the Tripartite Commission toward such a reform package has been limited during the past year.[3] Relaxing employment protection for regular workers is a key to reducing dualism. In addition, it would be likely to spur job creation and help unemployed persons to find work more quickly. Flexibility could be enhanced by changing the labour law to specify the conditions in which dismissals are allowed, taking recent Supreme Court decisions as a guide. The Research Committee for the Advancement of Industrial Relations Systems, a panel of experts established by the government, recommended in 2004 that the required consultation period be shortened depending on the scale of dismissals involved and that companies involved in bankruptcy proceedings be at least partially exempted from the conditions for dismissals (see the 2004 *Survey*).

Instead, the main objective of the draft labour bills submitted to the National Assembly in November 2004 is to stop discrimination against non-regular workers and prevent their overuse by firms. The main contents of these bills[4] are as follows:

- Unjustifiable discriminatory practices against workers with fixed-term contracts, part-time employees and temporary agency workers are prohibited. Employees subject to discriminatory working conditions or wages can submit complaints to the Labour Relations Commission.

- Firms must establish a written contract when hiring fixed-term and part-time workers.
- The maximum duration of fixed-term contracts is extended from one to three years.[5] Firms cannot dismiss workers after three years of contract work, even when their contract expires.
- Overtime work by part-time employees is limited to 12 hours a week.
- The maximum period for employing temporary agency workers is extended from two to three years, although no maximum period is set for those above age 50.
- The use of temporary agency workers is expanded from 26 occupations at present to all occupations other than those expressly forbidden by the law.

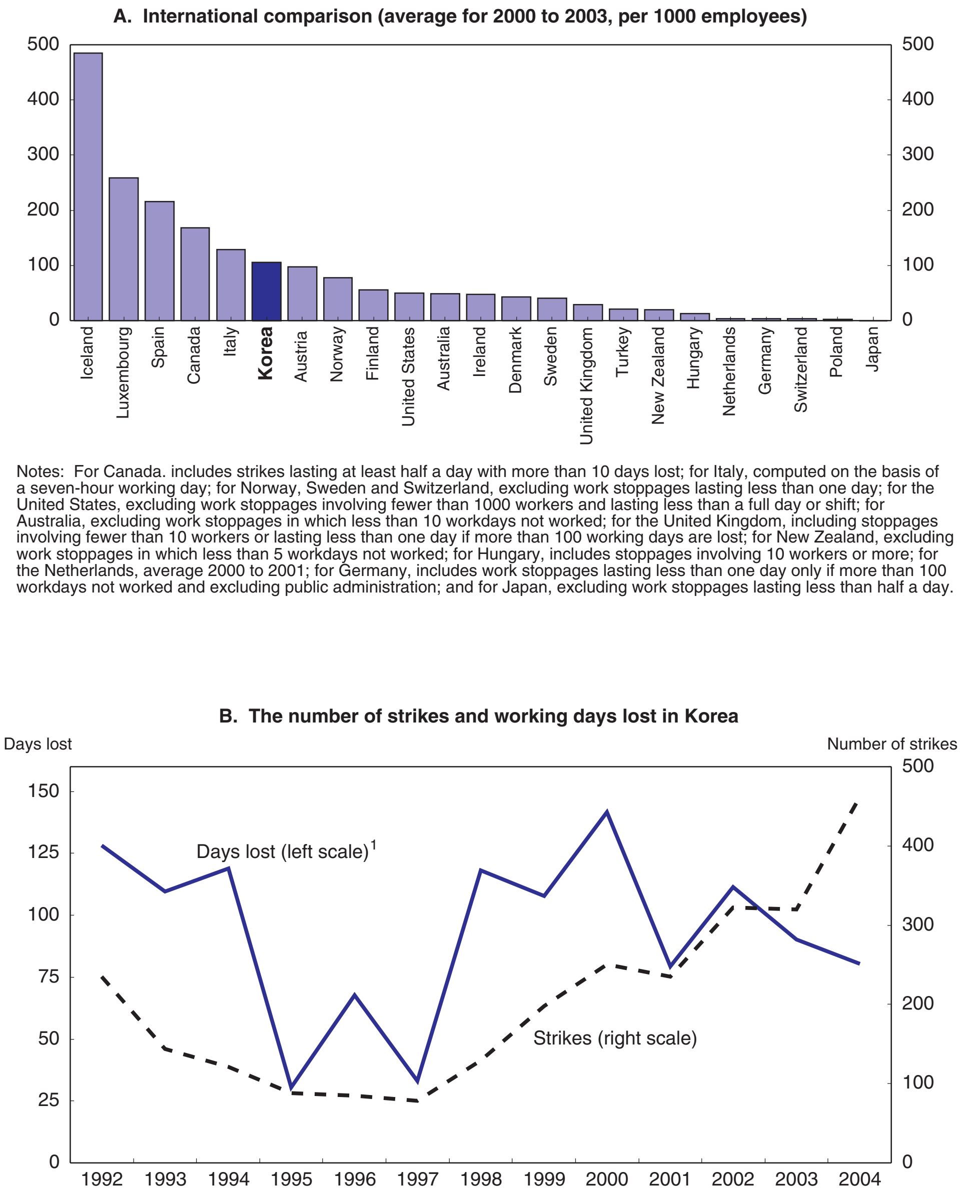
However, the bills have thus far failed to pass the National Assembly in the face of strong opposition from both labour and business organisations. Employers argue that allowing workers alleging discrimination in wages and working conditions to appeal directly to the Labour Relations Commission would result in costly and time-consuming litigation and that the prohibition on letting fixed-term workers go after three years reduces employment flexibility. On the other hand, the labour confederations complain that the bill does not go far enough toward their goal of having non-regular workers treated as regular workers. In particular, they want the principle of "equal pay for work of equal value" enshrined in the law. In addition, the unions believe that the maximum length of fixed-term contracts should be shortened and object to the proposed easing of rules covering workers from temporary agencies.

Labour's demand for equal treatment of non-regular workers culminated in a national strike in June and the withdrawal of the Federation of Korean Trade Unions, the nation's largest labour confederation, from the Tripartite Commission. These developments are indicative of the difficult state of industrial relations in Korea. Over the period 2000 to 2004, the number of working days lost due to strikes (per 1 000 employees) was the sixth-highest among the OECD countries reporting data (Figure 5.1), and well above other Asian economies, including Japan, Chinese Taipei and Hong Kong, China. Moreover, industrial actions in Korea are sometimes accompanied by violence and occupation of workplaces.[6] Contentious labour-management relations have a negative impact on business confidence and investment. However, the number of working days lost due to strikes has been on a downward trend in Korea since its peak in 2000, although the number of strikes is increasing (Panel B).[7] Implementing the roadmap for improving industrial relations is one aspect of overcoming labour-management problems (see the 2004 *Survey*).

The limited development of the social safety net helps explain the strong opposition of workers to dismissals. In December 2004, only 23.6% of unemployed persons received unemployment benefits, reflecting in part the strict conditions to qualify for benefits as well as their relatively short duration. However, it was also due to the limited coverage of the Employment Insurance System (EIS). The proportion of employees eligible for the EIS jumped from 66% in 2003 to 85% in 2004 (Table 5.2) as coverage was extended to daily workers employed for less than one month, newly hired persons over the age of 60 and persons participating in public works programmes. In addition, the threshold for part-time workers was lowered from 18 to 15 hours per week. These changes helped to boost the share of employees actually insured to 54%. However, more than one-third of the employees that should have been covered by the EIS at the end of 2004 were not, reflecting the difficulty of

 OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

Figure 5.1. **Working days lost due to strikes**



1. Per 1 000 employees.

Source: International Labour Organisation, *Yearbook of Labour Statistics*.

ensuring compliance. Increasing the effective coverage is complicated by the frequent turnover of non-regular employees and the large number of small firms. Indeed, there were 2.6 million firms with less than ten employees as of 2002.

Increasing the labour force participation rate

The total population and the labour force are projected to peak in 15 years. The extent of the subsequent decline in the workforce will have a significant impact on the prospects for economic growth and the burden of population ageing. The total labour force would fall by about 15% from its current level by 2050 if participation rates for each age cohort were

Table 5.2. **Coverage of the Employment Insurance System**

Number of workers in thousands and per cent

	1995 July	1999 July	2000 Dec.	2001 Sept.	2002 Oct.	2003 Nov.	2004 Dec.
Wage and salary earners	12 824	12 603	13 142	13 265	13 932	14 672	14 584
Eligible for EIS	4 280	8 342	8 700	9 269	9 269	9 651	12 389
Actually insured	4 204	5 876	6 747	6 884	7 102	7 180	7 905
Eligible as a per cent of wage and salary earners	33.4	66.2	66.2	69.9	66.5	66.0	84.9
Insured as a per cent of eligible workers	98.2	70.4	77.6	74.3	76.6	74.4	63.8
Insured as a per cent of wage and salary earners	32.8	46.6	51.3	51.9	51.0	49.1	54.2
Proportion of unemployed receiving benefits[1]	…	13.5	…	16.0	…	19.1	23.6

1. Annual averages.

Source: Ministry of Labour.

to remain at their current levels for both men and women (Figure 5.2). Increasing the labour force participation rate – or at least preventing a decline – is a key to coping with population ageing. The rate for prime-age men is near the OECD average, while that for older persons, both men and women, is relatively high (Figure 5.3). This reflects the fact that many older persons in Korea remain active as self-employed workers after leaving firms in order to supplement their retirement income and savings. Nevertheless, the overall participation rate is below the OECD average, primarily because the rate for prime-age women is the third-lowest in the OECD area (Panel D).

Boosting the labour force participation rate of women

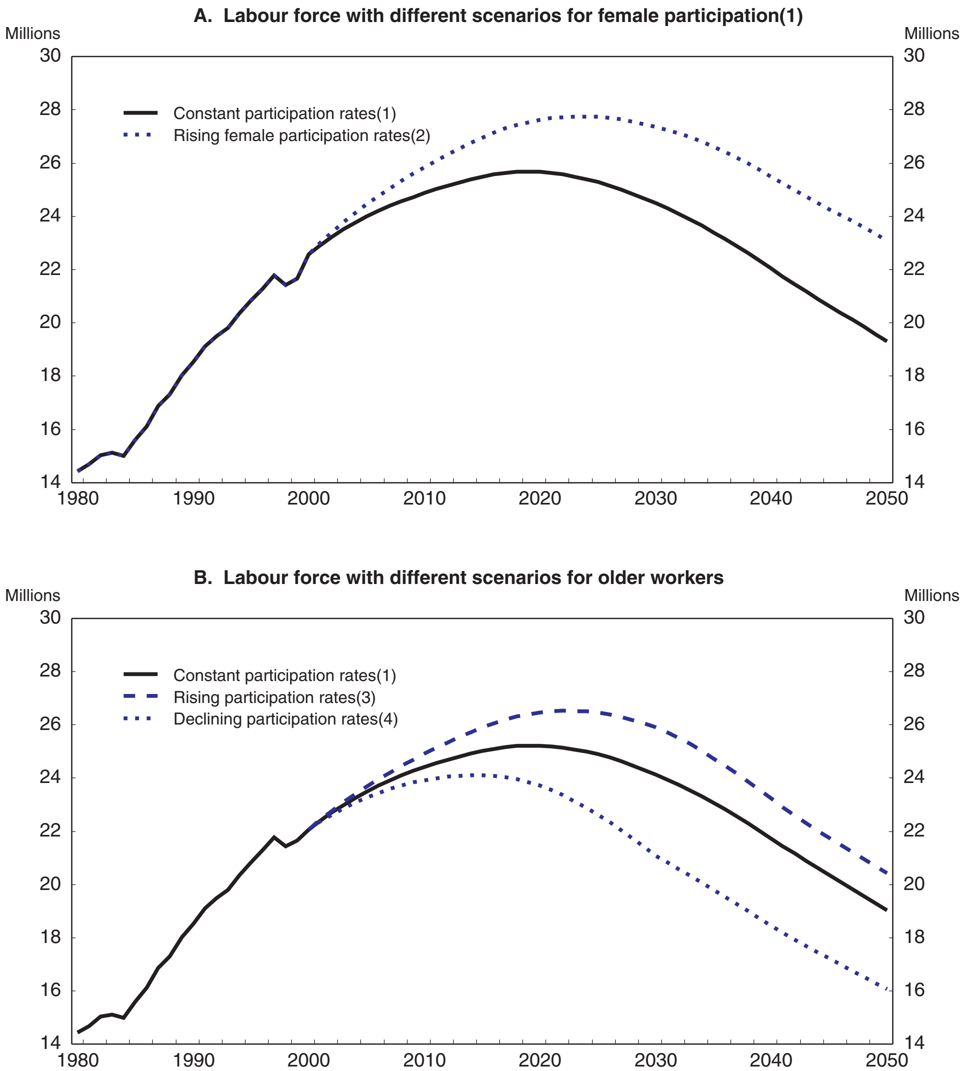
If the participation rate for women were to increase to the same level as for men by mid-century, the labour force in 2050 would be 20% higher than in the case of unchanged participation (Figure 5.2). The low participation rate of women is generally attributed to the traditional division of roles between men and women. Although Korea introduced an anti-discrimination law in 1988, women are paid significantly less than men, as in many other OECD countries. After adjusting for workers' characteristics, the gender gap in wages is estimated at about 20% for regular workers (Jeong, 2003).[8] A significant proportion of women withdraw from the labour force at the time of childbirth (age 28 on average). Consequently, the life-time participation pattern is M-shaped, with peaks in the 20 to 24 and 45 to 49 age groups (Figure 5.4). The pattern remains similar to that in 1980, although the trough has been pushed back to the 30 to 34 age group, reflecting the trend toward later marriage.

The evolution of family structure may tend to boost the labour force participation of women. *First*, the divorce rate (per 1 000 persons) has risen from 0.4% in 1970 to 2.8%, increasing the number of households headed by women. *Second*, the fertility rate has fallen from 4.5 to 1.2 over the same period, reducing childcare responsibilities. *Third*, the prevalence of three-generation households has declined with the urbanisation of Korea. Only about half of the elderly now live with their children, thus reducing the burden of caring for aged parents, although this also reduces the availability of childcare.

Government policies also influence female labour force participation. Korea has avoided policies such as taxing married women more heavily than men or single women and granting child benefits, measures which have been found to reduce female participation in

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

Figure 5.2. **Long-term projections of the labour force**



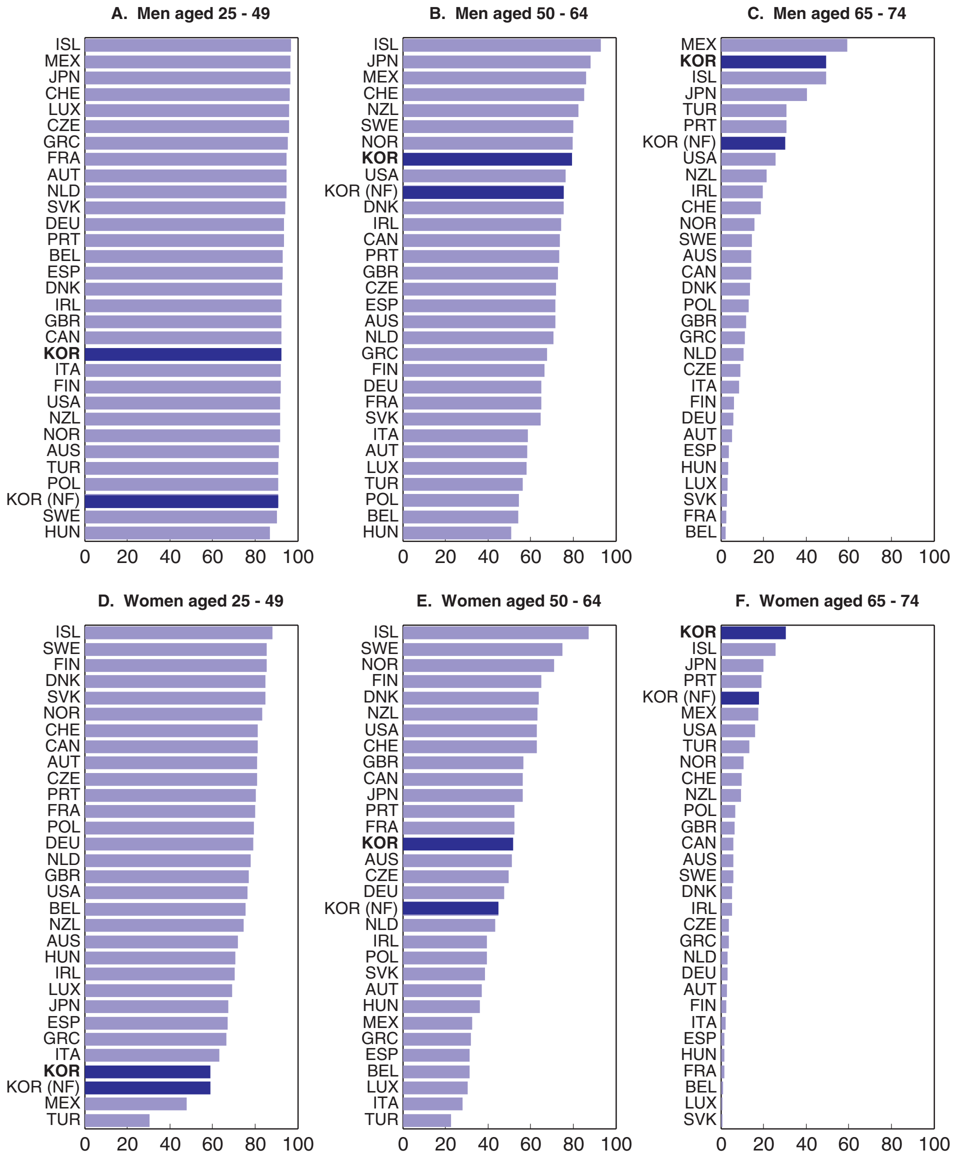
1. The participation rates for men and women remain at their current levels for each age group.
2. Female participation rates reach current male rates in each age group by 2050.
3. The participation rates converge by 2030 to the maximum value in the OECD for each gender and age group over 50, while the rates for younger workers remain at their current levels.
4. The participation rates converge by 2030 to the average value in the OECD for each gender and age group over 50, while the rates for younger workers remain at their current levels.

Source: OECD (2004a), *Ageing and Employment Policies: Korea*.

other OECD countries (Jaumotte, 2003).[9] On the other hand, paid parental leave and childcare subsidies have a significantly positive impact on female participation rates. These policies are likely to be effective in Korea as well given that a significant portion of women withdraw from the labour force at the time of childbirth. Maternity leave was lengthened in 2001 from 60 days (paid by the employer) to 90 days, with the additional month paid by the EIS.[10] However, to qualify for the last 30 days, women have to have been insured by the EIS for at least 180 days. As noted above, with only about half of employees

Figure 5.3. **Labour force participation rates by age and gender**

Per cent, 2002[1]



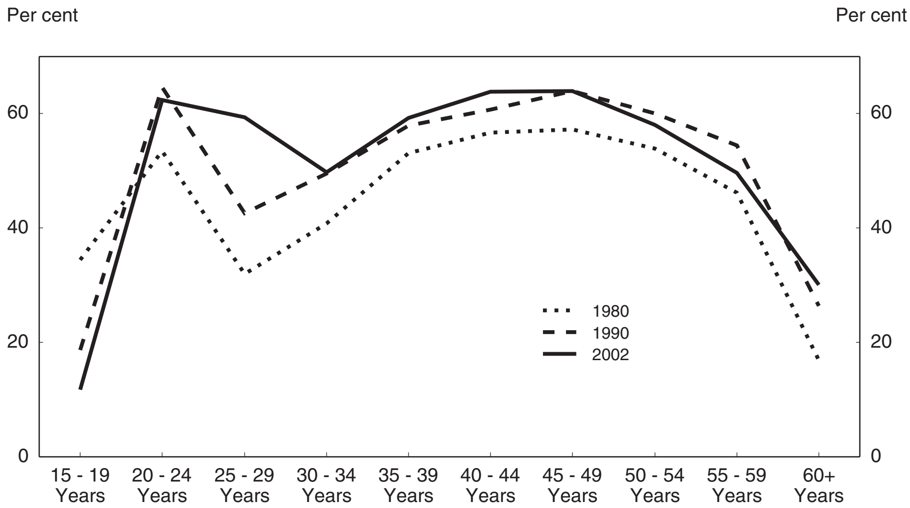
1. For Korea, the data are shown for all households (KOR) and for non-farm households only (KOR NF).

Source: OECD (2004a), *Ageing and Employment Policies: Korea*.

actually insured, a considerable proportion of women do not receive maternity leave paid by the EIS. The government recently announced that the EIS will pay all 90 days of maternity leave for women working at SMEs in order to reduce their financial burden. However, publicly-financed maternity leave still remains relatively short compared to other OECD countries.

Regarding childcare, about a quarter of children under the age of five in Korea are enrolled in such facilities, with 95% of them in private institutions.[11] The authorities plan

Figure 5.4. **Labour force participation rate of women by age cohort**



Source: Korea National Statistical Office.

to increase the number of public facilities, which have a reputation for higher quality than those in the private sector, by 400 a year. This would double their share of total childcare facilities to around 10% by 2008. However, there is a 16% vacancy ratio for childcare, reflecting underutilisation of more expensive private facilities. This suggests that the scarcity of jobs paying well enough to make the net income gains of employment attractive is a more important factor hindering female employment than the absolute amount of childcare available.

While more generous maternity leave and increased subsidies for childcare may reduce the proportion of women who leave the labour force after childbirth, there remains the issue of attracting women into employment once their children are older. Although the proportion of young women leaving the labour force at the time of marriage and childbirth has fallen over time, the peak participation rate (at 64% in the 45 to 49 age group) is no higher than in 1990. This may reflect the increasing educational attainment of women, which makes them reluctant to accept low-skill, low-paying jobs. Indeed, Korea is the only OECD country in which the employment rate of female university graduates (55%) is less than the overall rate for women (56%). In contrast, education strengthens the attachment of women to the labour market in nearly all other OECD countries by increasing their potential earnings.[12] Indeed, the average employment rate for female university graduates in the OECD area, at 82%, was significantly higher than the 69% rate for all women.

Female labour force participation is also discouraged by the fact that many of the jobs available to women tend to be non-regular positions, reflecting the rising share of such jobs in recent years, as noted above. Indeed, women are over-represented in non-regular positions: only 37% of female wage employees in 2004 were classified as regular workers, compared to 62% for men.[13] This reflects labour market practices in firms that act as a barrier to outsiders. Even women employed as regular workers prior to interrupting their careers for children find it difficult to return as regular workers (Hwang and Chang, 2004). In addition, part-time jobs and flexible working hours may be preferable to some married women in order to balance work and family responsibilities.[14] The tradition of long working hours – an average of 47.5 hours per week in 2001 – makes it difficult to combine regular employment with family responsibilities. However, the negative aspects of non-regular jobs – significantly lower wages, employment insecurity and less coverage by the social safety net – appear to discourage female participation. Finally, the seniority-based wage system, in which age and tenure play a dominant role, is another negative factor for female participation, as women who have left the labour force are locked into low salaries regardless of their performance. The weaker attachment of women to the labour force is reflected in the drop in their participation rate from 49.5% to 47.0% in the year following the 1997 crisis, while the rate for men was virtually unchanged at about 75%.

In sum, more generous childbirth leave and childcare support may reduce the proportion of women leaving the labour force when they have children. As for women who have left employment, the rising share of non-regular jobs and the concentration of women in such jobs may discourage more highly educated females from returning to the labour force. Efforts to reduce labour market dualism may thus also have a positive impact on female employment. In addition, replacing seniority-based wages with a system that links pay to performance would also encourage the employment of women.

Maintaining a high participation rate for older workers

By the middle of the century, more than one-third of Korea's population will be over the age of 65 and about half of all workers will be aged 50 or older. Meanwhile, the number of prime-aged persons in the 25 to 49 age group will fall by about half (Figure 5.5). If participation rates were to remain at their current levels, the labour force would decline by an estimated 19% from 22.4 million in 2004 to 19 million by 2050. However, it would be 7% higher (around 20.4 million) if the participation rates for the 50 to 64 age group were to increase to the maximum level in the OECD area in 2000 (Figure 5.2, Panel B). Conversely, if the participation rate for older workers were to decline to the OECD average in 2000 for that age group, Korea's labour force in 2050 would be 16% smaller (around 16.1 million) than in the case of unchanged participation rates. The sensitivity of the size of the labour force to the participation rate of older workers demonstrates the importance of policies to encourage those over age 50 to remain economically active.

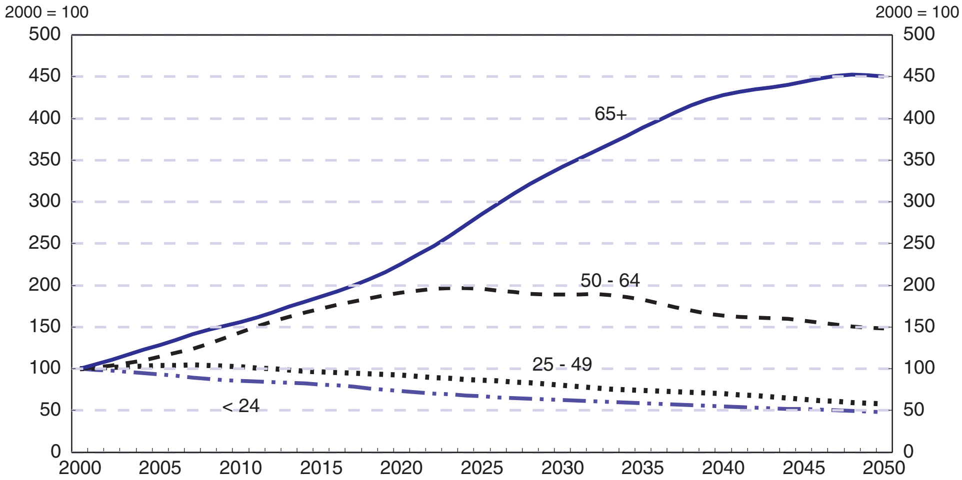
In contrast to most other OECD countries, there has been no long-term decline in participation rates for older workers. Indeed, the rate for men in the 50 to 64 age group and for both men and women over 65 remains relatively high, even after adjusting for the large share in agriculture (Chapter 5.3, Panels B, C and F). The high and stable level of participation reflects several factors. *First*, pensions, both public and private, are at an early stage of development. Older persons, therefore, depend to a large degree on earned income, as well as transfers from family members, to supplement savings.[15] *Second*, the labour market appears to be functioning efficiently in the sense that employees, who on average leave firms at a relatively young age, continue to work, though at lower wages more in line with their productivity. Nevertheless, the practice of workers leaving firms at around age 50 is not optimal in a rapidly ageing society.

Early departure from companies

The practice of retiring workers from companies at a relatively young age reflects the importance of seniority – rather than individual performance – in determining wage levels. To avoid being saddled with a large number of expensive older workers, most firms set a mandatory retirement age that is well below the age of 60 recommended in the Aged

Figure 5.5. **Population projections by broad age group**

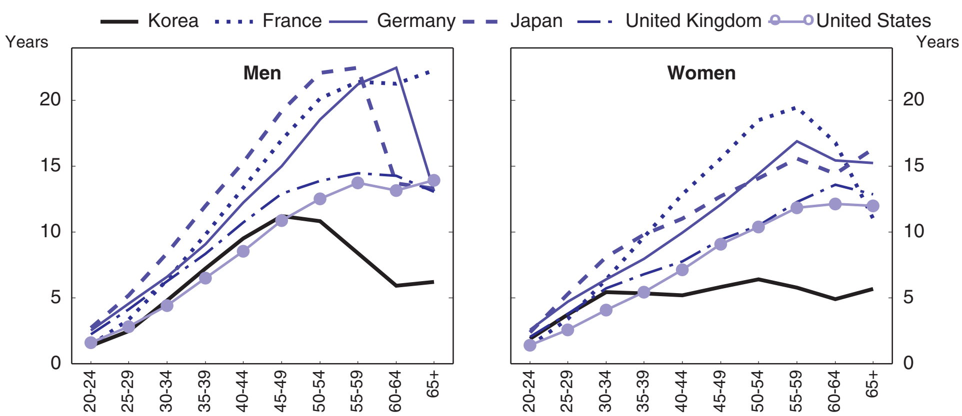
Index 2000 = 100



Source: Population projections (medium variant) made by the Korea National Statistical Office in 2001.

Figure 5.6. **Average job tenure by age and gender in selected OECD countries**

2000[1]



1. The data for Japan and Korea refer to regular workers in enterprises with ten or more regular workers, excluding the agricultural, hunting, forestry, fishing and general government sectors. The data for the other countries are based on labour force surveys covering all workers.

Source: OECD (2004a), *Ageing and Employment Policies: Korea*.

Employment Protection Act. A mandatory retirement age also helps firms to adjust their workforces, given the difficulty of dismissing regular employees (Cho and Lee, 2005). As a result, average employment tenure peaks at 11 years in the 45 to 49 age group in Korea – compared to the 55 to 64 age group in most other OECD countries – and then drops sharply (Figure 5.6). Consequently, the wage level also peaks in the 45 to 49 age group, except for men with tertiary education.

Although some of the employees leaving companies retire, about three-quarters move into self-employment, which on average is characterised by low productivity and income. This boosts the proportion of self-employed in the over 50 age group to 57%, compared to only 27% for those under the age of 50. As for workers who remain as employees past the age of 50, two-thirds worked in firms with less than 100 workers and only one-third were regular workers in 2002. Overall, 65% of workers over age 50 are in physically-demanding jobs, such as manual work, which tend to be low-paid.

Policies to promote the employment of older workers

The pattern of employees leaving firms at a relatively young age may have an increasingly negative impact on participation in the future. As the average education level of older age cohorts increases over time, workers over age 50 may become less interested in accepting self-employment and jobs at small companies offering significantly lower remuneration. It is thus important to encourage "continuous employment" at firms through greater flexibility in wages within firms. Requiring firms to set the minimum age for mandatory retirement at an age closer to the pension eligibility age – or forbidding the use of mandatory retirement altogether – would be beneficial. Firms agree to seniority-based wages on the condition that they can force older workers to leave. Without mandatory retirement, firms would insist on wage systems that more closely reflect productivity. One option under discussion is the "peak wage system", which allows wages to decline after some point in exchange for guaranteed employment to an agreed upon age.[16]

In addition, the retirement allowance system should be reformed, as part of the introduction of a company pension system, in order to reduce incentives to retire older workers. By law, firms have been required to pay a lump sum of at least one month of wages to each departing employee for each year worked, although in practice many large firms agree to pay about double that amount. Given the short average tenure of employees in Korea, this payment has lost its link to retirement income as most workers receive such lump sums numerous times during their working life.[17] For firms, the cost of the severance payment, which is based on an employee's final wage, increases the disincentives to keep older employees. In 2004, the government introduced a company pension system, which will take effect in December 2005, with the following provisions:

- Each workplace may establish, based on an agreement between labour and management, a defined benefit pension plan or a defined contribution pension plan. This is in addition to the current system of lump-sum retirement allowances, which are still mandatory for all firms with more than five employees.
- Firms that adopt pension systems must entrust fund management to financial institutions.
- The above requirements will be eventually applied to all firms, including those with less than five employees, which are exempt from the retirement allowance system.

Employees prefer to keep the lump sum retirement allowance, which it considers to be deferred wage payments. Moreover, the lump sum is often used to start a small business after leaving a firm. However, funded company pensions would provide a more secure source of savings than the retirement allowance system, which is generally unfunded and whose payment depends on the firm's continued existence. Management, on the other hand, is reluctant to add a company pension system to the existing retirement allowance system.

In sum, the government should take several steps to encourage the development of an effective company pension system to reduce incentives to retire employees early and to encourage private-sector savings for retirement. *First*, the tax preferences for the retirement allowance, which allow the lump sum to be taxed over a number of years at low

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

rates, should be removed, thus reducing workers' preference for the traditional system. *Second*, a company pension system based on defined contributions, rather than on defined benefits, should be encouraged in order to promote pension portability and thereby labour mobility.

There is also a risk that the participation rate for older workers will decline as the National Pension Scheme (NPS) matures. It is essential, therefore, to avoid incentives for early retirement, which depend on the combined effect of the replacement rate – the level of pension income relative to wage earnings – and the change in pension wealth when continuing to work. A high replacement rate encourages withdrawal from the labour force as would a loss in pension income if the person continues to work. The planned increase in the pension eligibility age from 60 to 65 in 2033 will limit incentives to retire early. Another concern regarding the pension system is the lack of portability between the NPS and the occupational pension schemes (for civil servants, teachers and the military), which reduces labour mobility. A presidential commission is currently considering how to introduce portability.

One major challenge to employing older persons is their relatively low level of education. Two-thirds of unemployed persons over the age of 50 failed to complete secondary school and three-quarters worked previously as daily or temporary workers (Chang, 2004). This contributes to a significantly higher rate of poverty for households headed by someone over the age of 60 (Table 2.6). The government offers three different subsidies to encourage firms to hire and retain older workers (Table 5.3) and the take-up of these grants has increased markedly in recent years. The number of workers covered by these subsidies increased from 88 thousand in 1996 to more than a quarter of a million workers in 2004.

Table 5.3. **Wage subsidies to encourage employment of older persons**

Billion won in 2004

Objective of subsidy	Conditions	Amount paid to employers in won	Number of workers subsidised[1]	Amount spent in billion won
1. New employment of older workers	Worker between 50 and 64 who are unemployed for at least 3 months	300 000 per month for first six months, 150 000 for the last six months	664	0.4
2. Maintaining a large share of older workers	Workers over 55 accounting for between 4% and 42% of a firm's labour force[2]	150 000 per quarter for every worker over the threshold for 5 years	265 150	40.7
3. Re-employment of older workers[3]	Workers between 45 and 60 who are re-hired by a firm between 3 months and 2 years after leaving	300 000 per month for six months	56	0.1
4. Continuous employment past the firm's retirement age[4]	Workers whose continuous service extends more than 18 months beyond the retirement age or who are re-employed within three months after retirement	300 000 per month for six months	n.a.	0.2
Total			265 870	41.1[5]

1. In number of man-years. With around 2½ million wage earners over the age of 55, approximately one-tenth were covered by employment subsidies, although the exact proportion is uncertain as some workers were covered by more than one programme.
2. The proportion of older workers necessary for a firm to qualify for a subsidy varies between sectors: 4% for manufacturing, 17% for business services, 42% for real estate services and 17% for other sectors.
3. This subsidy was abolished in February 2004.
4. This subsidy was introduced in March 2004. It applies to workplaces where the retirement age is set above 57.
5. This is equivalent to about 3% of expenditures on active labour market policies.

Source: Ministry of Labour.

The subsidies for the employment of older workers have recently been reformed and expanded as shown in Table 5.3:

- The coverage of the subsidy for hiring older workers was expanded from the 55 to 59 age group to 50 to 64 and the payment period was extended from six to 12 months. In addition, the amount of the subsidy was increased.
- The re-employment subsidy for firms that re-hired former workers was replaced by a subsidy for continuous employment of workers past the firm's retirement age.
- To limit deadweight costs, the threshold for receiving the subsidy for maintaining a large share of older workers was changed from 6% to between 4% and 42%, depending on the sector, and the maximum duration of the subsidy was limited to five years. In addition, only those who worked more than one year are eligible for the subsidy.

Real estate service firms account for about two-thirds of the companies receiving subsidies and they also receive about two-thirds of the total subsidies paid, with the majority concentrated in building maintenance services. The concentration of these subsidies in one business line raises doubts as to their effectiveness in boosting the employment of older workers. Indeed, 92% of firms receiving the subsidy responded that they would have hired the same number of workers in the absence of any assistance (Chang, 2004). Such an estimate is consistent with research in other OECD countries showing deadweight costs as high as 90% (Martin and Grubb, 2001). Even the impact on the number of older employees appears to be weak. Less than 20% of firms replied that they would have hired young persons instead of older workers in the absence of the subsidy.

Given the generally low skills and educational attainment of older workers, improving their employment prospects may depend on training. Government expenditures on lifelong learning, including vocational training, amounted to only 0.8 trillion won (0.1% of GDP) in 2004. Moreover, the participation rate in lifelong learning is less than 10% for those who failed to complete secondary school. The government has moved to increase financial and tax support for the training of middle and old-aged workers, although the return on such training is limited by their relatively short remaining working life. It is also important to ensure that the social safety net limits poverty among older persons during the transition period while the NPS is not yet mature and traditional means of old-age support are weakening.

Conclusion

The top priorities for labour market policy should be to reverse the trend toward increasing dualism and to boost participation rates. The key measure to stop dualism is to increase employment flexibility for regular workers in practice, which is also essential in an economy that is rapidly restructuring and specialising in volatile high-technology industries. Higher participation, particularly for women, and measures to extend the employment of older workers are essential to cope with population ageing. Detailed recommendations are shown below in Box 5.1.

Box 5.1. **Summary of recommendations for the labour market**

Reverse the trend toward Increasing labour market dualism

- Reduce employment protection for regular workers, in part by shortening the minimum consultation period necessary before dismissal and specifying in the law the conditions under which dismissals are permitted, drawing on recent Supreme Court rulings.
- Increase compliance with the Employment Insurance System, in part through enhanced co-operation with other social security administrators and the tax administration.
- Expand the coverage of non-regular workers in social insurance systems based in workplaces.
- Resist pressure to level the playing field between regular and non-regular workers by imposing regulations on non-regular employment, as this approach would tend to reduce overall employment.
- Develop more co-operative industrial relations, in part by implementing the roadmap proposed by the Research Committee for Advancement of Industrial Relations Systems.

Enhance labour force participation, particularly of women and older persons

- Encourage greater labour force participation by women by introducing more family-friendly policies, such as lengthening the duration of publicly-financed maternity leave and increasing assistance for childcare.
- Raise the effective retirement age by imposing a minimum for company-set retirement ages, or discourage them altogether.
- Reduce the importance of seniority in setting wages in order to encourage the employment of older workers by allowing wages to reflect productivity more closely.
- Encourage the replacement of the retirement allowance system with a company pension system based on defined contributions in order to enhance labour mobility.
- Ensure that the public pension system does not create incentives, once the system reaches maturity, for older workers to leave the labour force before the normal retirement age.
- Decrease wage subsidies to avoid high deadweight costs, while ensuring that other active labour market policies are cost-effective.

Notes

1. In addition, regular workers in large unionised companies also receive protection in collective bargaining agreements.
2. In the Labour Force Survey, non-regular employees – defined as those working for a fixed length of time and those who are not entitled to certain allowances, such as the retirement allowance – accounted for 49% of employees in 2004. However, this overestimates the precariousness of employment since although many employees at small companies are not entitled to certain allowances, a significant proportion expect to remain with the same firm on a long-term basis.
3. The Tripartite Commission, which aims at developing a consensus among the social partners on labour market reforms, remains limited by the refusal of the two main labour confederations to participate.
4. The Act on the Protection of Fixed-term and Part-time Employees and the Act on the Protection of Dispatched Employees.

5. The time limit on fixed-term contracts does not apply to those above age 50.

6. In 2004, 13% of the strikes were illegal due to a failure to follow required procedures during negotiations or because the objective of the strike did not fall within the categories permitted in the labour law.

7. While the number of working days lost due to strikes fell by 8% in 2004, the number of strikes jumped by 44% to reach its highest level since the late 1980s when the newly independent labour unions staged frequent strikes.

8. The study of the global gender gap by the World Economic Forum ranked Korea 54th out of 58th, placing it below all other OECD countries (Korea Economic Institute, 2005).

9. The marginal rate is 8% on both a second earner in a household and a single worker at two-thirds of the average production worker's wage (APW). It is 10% and 9%, respectively, at the APW level, suggesting that the tax system is not an important influence on participation. In the OECD area, in contrast, the average marginal rate on the second earner is 6 to 7 percentage points higher than on a single person, depending on the income level (Jaumotte, 2003).

10. Childcare leave is also available for both men and women but is not widely used, reflecting a low monthly stipend that is only 4% to 5% of the average wage in manufacturing.

11. About 10% of the 24 000 private institutions receive government support.

12. The Japanese labour market, which shares a number of similarities with Korea, also stands out. The employment rate in Japan for female university graduates is identical to the overall female rate of 62.7%.

13. This is based on the *Annual Report on the Economically Active Population Survey*, which classifies dependent employees into regular, temporary and daily workers.

14. According to a 2001 survey, women spent three hours and forty-five minutes a day on household work compared to 46 minutes by men. In households where both adults work, only 8% of couples shared household duties equally according to the National Statistical Office (Kim and Kim, 2004).

15. According to the sixth Labour and Income Panel Study in 2003, 93% of retirees depend on transfers from family and 14% on asset income, but only 12% received public pensions (Ji Kyung Kim, 2004).

16. One major car manufacturer has proposed such a system that would guarantee employment past the current mandatory retirement age of 56, though at lower wages. The union, though, is demanding that the mandatory retirement age be raised to 58, while maintaining the current wage system.

17. In fact, employees are allowed to receive this lump-sum payment while still employed to help them finance major expenditures, including housing.

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

Bibliography

Chang, Jiyeun (2004), "Grants to Promote Employment of the Elderly in Korea – Introduction and Evaluation", Korea Labor Institute Issue Paper No. 35, Seoul.

Cho, Joonmo and Seung Gil Lee (2005), "Labour Market Reform: Issues for Employment Promotion of the Elderly", *KDI Annual Report*, Korea Development Institute, Seoul.

Chung, Jaeho and Byung-Hee Lee (2005), "Flexibility, Turnover and Training", Korea Labor Institute Issue Paper No. 41, Seoul.

Hwang, Soo Kyeong and Jiyeun Chang (2004), "Female Labor Supply and Labor Policies for Female Workers in Korea", Korea Labor Institute Issue Paper No. 30, Seoul.

Jaumotte, Florence (2003), "Labour Force Participation of Women: Empirical Evidence on the Role of Policy and Other Determinants in OECD Countries". *OECD Economic Studies*, No. 37, 2003/2.

Jeong, Jin-Ho (2003), "Wages in Korea", Korea Labor Institute Issue Paper No. 25, Seoul.

Kim, Ji Kyung (2004), "Reasons for Retirement and Sources of Retirement Income", Korea Labor Institute Issue Paper No. 37, Seoul.

Kim, Tae-Hon and Hye-Kyung Kim (2004), "Reconciling work and family: Issues and policies in the Republic of Korea", International Labour Office, Geneva.

Korea Economic Institute (2005), *Korea Insight*, Volume 7, Number 6 (June), Washington.

Korea Employers Federation (2004), *Current Labor Economy and Industrial Relations in Korea*, Seoul.

Korea International Labour Foundation, *Korea Labor Review*, various issues.

Martin, John and David Grubb (2001), "What works and for whom: a review of OECD countries' experience with active labour market policies", *Swedish Economic Policy Review*.

OECD (2004a), *Ageing and Employment Policies: Korea,* Paris.

OECD (2004b), *Economic Survey of Korea,* Paris.

ISBN 92-64-01438-1
OECD Economic Surveys: Korea

Chapter 6

Reform of the corporate and financial sectors

This chapter analyses challenges in the corporate and financial sectors. The key priority is to restructure small and medium-sized enterprises (SMEs) to reverse the secular deterioration in their performance. This requires scaling back government assistance, including credit guarantees for lending to SMEs. It is also essential to maintain an open environment for foreign investors and to improve corporate governance further. In the financial sector, the privatisation of government-owned banks should continue, while encouraging banks to upgrade their credit analysis skills. The weak situation of some non-bank financial institutions requires prompt corrective action by financial supervisors. A major priority in this area is to develop the capital market, in part by strengthening credit rating agencies. In addition, there is a need for more long-term financial instruments in the context of population ageing. Finally, it is necessary to resolve the household delinquency problem through increasing reliance on court-based procedures.

The impact of Korea's reform programme following the 1997 crisis was strongest in the corporate and financial sectors. Nearly half of the 30 largest business groups, the chaebol, have disappeared since the crisis, suggesting that "too big to fail" is no longer valid. Large enterprises, which have had to restructure and reduce debt to survive, have significantly boosted their profitability. Meanwhile, the number of financial institutions has fallen by 40% since 1997. The large-scale use of public funds has focused on restructuring the banking sector, which is now profitable and well capitalised.

However, progress has been uneven in the corporate and financial sectors. While the performance of large companies has improved, the financial results of small and medium-sized enterprises (SMEs) have deteriorated overall. In the financial sector, the performance of some non-bank financial institutions has worsened, in contrast to the banking sector, and the capital market remains underdeveloped. Although the financial sector has made considerable progress in overcoming the collapse of the credit bubble, the delinquent borrower problem in the household sector remains severe. This chapter addresses the key challenges in these sectors before presenting the major policy recommendations in Box 6.1.

The corporate sector

Corporate restructuring and the strong growth of exports has significantly improved the performance of firms in the manufacturing sector during the past two years (Table 6.1). In particular, the ratio of ordinary profits to sales increased further in 2004 as de-leveraging has reduced financial costs. Moreover, the debt to equity ratio has fallen from nearly 400% before the crisis to around 100% in 2004. However, the picture is less positive if all externally-audited firms are included. In particular, the number of firms with an interest coverage ratio of less than one jumped by 16% in 2003 (Panel B), reflecting the weaker performance in services. The combined debt of these firms, which did not earn enough profit to cover even their interest payments, increased to nearly 20% of GDP, indicating that there is a large amount of restructuring still to come. In addition, there has been a polarisation between large firms and SMEs, which did not go through a restructuring period following the 1997 crisis. This section first discusses the problems of the SMEs, followed by foreign investment and corporate governance.[1]

The small and medium-sized enterprises

While the chaebol receive much of the attention in Korea, SMEs play a large and growing role, accounting for 99.8% of firms, 87% of employment, nearly 50% of manufacturing output and 40% of industrial exports in 2003.[2] However, the SMEs have experienced a secular downtrend in their performance in recent years. For small and medium-sized manufacturing firms classified as low-tech, average return on assets declined from 5.6% in 1996 to 3% in 2003 and 2.2% in 2004 (Figure 6.1). For high-tech SMEs, the deterioration was even greater (Panel B). In addition, the proportion that was profitable fell from 90% to 60% over that period. Compared to large companies, SMEs have lower

OECD ECONOMIC SURVEYS – ISBN 92-64-01438-1 – © OECD 2005

Table 6.1. **Performance indicators for the corporate sector**

Per cent

A. The manufacturing sector

	1997	1999	2000	2001	2002	2003	2004
Financial indicators							
Debt-equity ratio	396.3	214.7	210.6	182.2	135.4	123.4	104.2
Total borrowings-assets ratio	54.2	42.8	41.2	39.8	31.7	28.3	24.0
Current ratio[1]	91.8	92.0	83.2	97.9	106.1	109.8	117.0
Asset turnover ratio	0.90	0.82	0.96	0.98	1.08	1.10	1.20
Profitability indicators							
Operating profit-sales ratio	8.3	6.6	7.4	5.5	6.7	6.9	7.6
Labour cost-sales ratio	11.4	9.8	9.7	10.0	10.1	10.3	9.7
Labour cost-total operating cost ratio[2]	13.6	11.5	11.5	11.7	11.9	11.8	11.3
Ordinary profit-sales ratio	–0.3	1.7	1.3	0.4	4.7	4.7	7.8
Financial expense-sales ratio	6.4	6.9	4.7	4.2	2.6	1.9	1.3
Average interest rate	10.6	11.5	10.5	9.4	7.7	6.8	5.9
Interest coverage ratio[3]	129.1	96.1	157.2	132.6	260.3	367.1	575.8

B. Firms with interest coverage ratio[3] below one

Years below one	2002 only	2003 only	2002-2003	2001-2003
Number of firms	2 312	2 679	1 127	572
As percentage of all externally audited firms	26.3	27.5	11.6	5.9
Total debt (trillion won)	106.6	139.7	33.5	24.0
As percentage of GDP	15.6	19.4	4.6	3.3

1. The ratio of liquid assets to short-term liabilities.
2. Total operating cost = current manufacturing costs + selling and administrative expenses.
3. The ratio of operating profits to interest expenses.

Source: Bank of Korea for Panel A. Joon-Kyung Kim (2004) for Panel B.

operating and net profits, return on equity and interest coverage ratios but higher wage costs relative to sales (Table 6.2). In addition, the increased share of bank lending to SMEs, while large firms were de-leveraging, has boosted their debt to equity ratio above that for large companies.

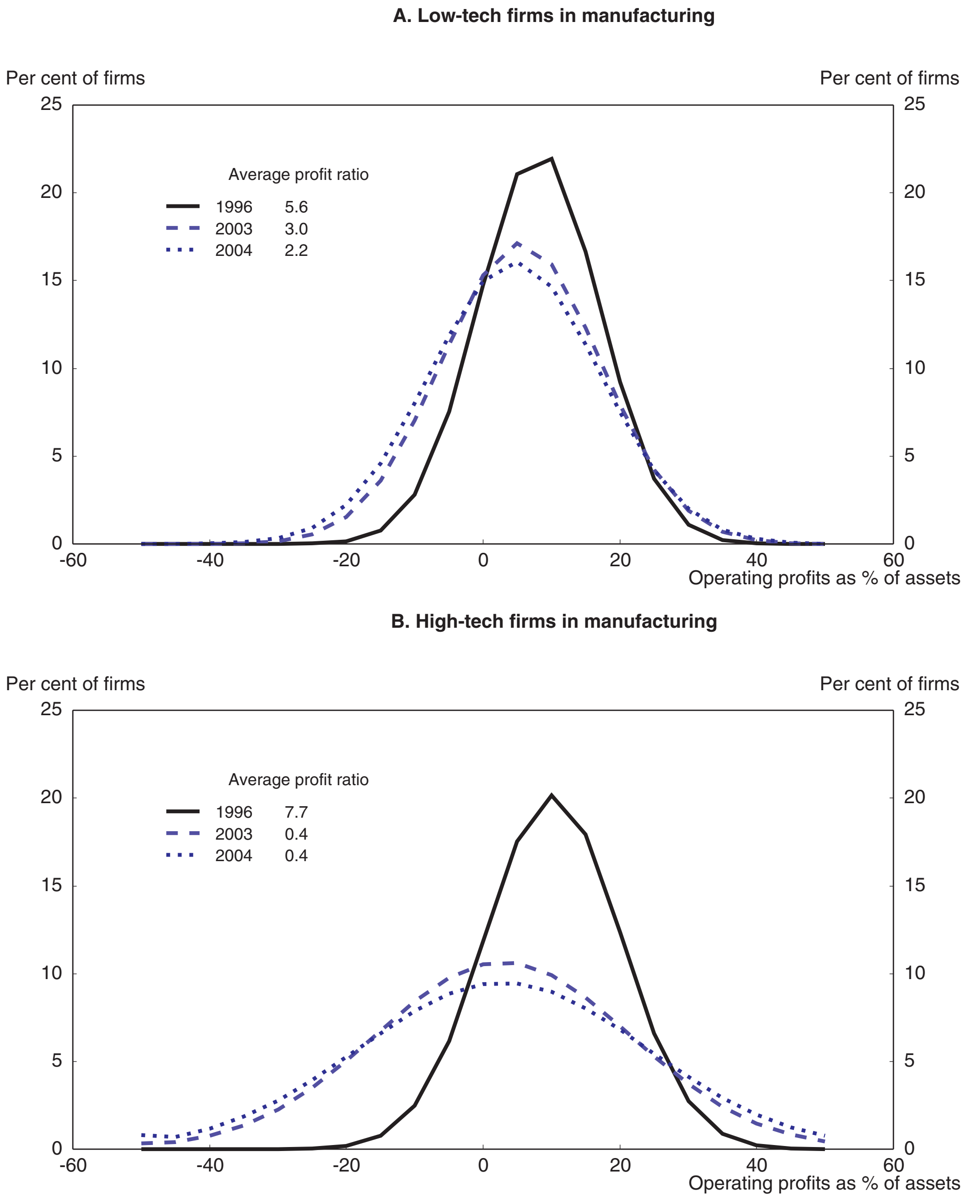
Table 6.2. **Comparison of large companies and SMEs**

Per cent

	SMEs		Large companies	
	2002	2003	2002	2003
Interest costs/sales	1.9	1.8	3.0	1.9
Wage costs/sales	12.3	12.7	8.9	8.9
R&D/Sales	0.8	0.8	1.7	2.0
Operating profits/sales	5.3	4.6	7.5	8.2
Ordinary profits/sales	3.4	2.5	5.4	6.0
Net profits/sales	2.5	2.1	8.4	4.8
Return on equity	8.3	6.5	21.1	10.8
Debt to equity ratio	152.1	147.6	128.9	113.4
Interest coverage ratio	273.7	255.9	255.4	428.8

Source: Kang (2005).

Figure 6.1. **The profit ratios of SMEs are declining**



Source: Joon-Kyung Kim (2005).

The deterioration of the SMEs' performance is due in part to cyclical factors, notably depressed private consumption in the wake of the collapse of the household credit bubble, resulting in sluggish private consumption growth and weak activity in the construction sector. Moreover, the export boom has had less positive impact on SMEs. But the secular decline in their performance indicates that there are structural factors at work. *First*, SMEs have faced more intense competition from China and other lower-wage economies. *Second*, traditional subcontracting arrangements with large companies have weakened over time. However, perhaps more important is that while large firms were restructuring, small companies received government support that has eroded their competitiveness, independence and viability.

SMEs are supported by a wide range of measures. In 2004, there were 76 different programmes, supervised by 12 ministries (Table 6.3). Despite a 9% cut, spending totalled 5 trillion won (0.6% of GDP). In addition, two public institutions, the Korea Credit Guarantee Fund (KCGF) and the Korea Technology Guarantee Fund (KOTEC), guarantee loans to SMEs (Table 6.4).[3] While the stock of guarantees was reduced slightly in 2004, they are still large at 6% of GDP and cover almost a third of total lending to SMEs, a high level by international standards.[4] Loan guarantees for SMEs account for 0.2% of GDP in the United States, 0.6% in France and 1.5% in Chinese Taipei, an economy with many similarities to Korea (IMF, 2005). The size of support is an obstacle to restructuring and should be scaled back. Indeed, a recent study found that SMEs that are beneficiaries of government lending programmes

Table 6.3. **Programmes to assist small and medium-sized enterprises**

Billion won in 2004

Ministry	Outlays	Number of programmes	Selected programmes
Small and Medium Business Administration	2 767	17	– Restructuring support – Start-up support – Stable operation support – Regional SME support – Technology development support – Venture company support
Ministry of Commerce, Industry and Energy	861	20	– Industrial technology development support – Modernisation of distribution network support – Activation of industrial complex support – Energy saving support
Ministry of Agriculture and Forestry	112	3	– Rice processing factory support – Agricultural product processing support – Agricultural machine product support
Ministry of Information and Communication	439	8	– Information and communication technology development support – Leading technology development and distribution support – Multi-media industry support – Software development support
Ministry of Labour	288	10	– Workplace accident prevention support – Workplace environment improvement support – Company nursery facility support
Ministry of Environment	69	4	– Anti-pollution facility support – Environmental technology development support – Recycling industry support
Ministry of Culture and Tourism	153	4	– Film promotion fund support – Sporting goods development support
Ministry of Science and Technology	154	4	– Technology development support – New technology project investment support
Ministry of Maritime Affairs and Fisheries	32	3	– Marine product distribution support – Fishing net support
Ministry of National Defence	10	1	– Defence industry support
Ministry of Construction and Transportation	69	1	– Standardising construction material support – General freight terminal construction support
Ministry of Health and Welfare	8	1	– New drug development support
Total	**4 962**	**76**	

Source: Small and Medium Business Administration.

Table 6.4. **Credit guarantees for SMEs**

Trillion won[1]

	(1)	(2)	(2)/(1)	
	Balance of guarantees	Defaults	Default rate %	Net loss
1995	11.7	0.9	8.1	0.8
1996	13.8	0.8	5.7	0.7
1997	17.1	1.2	6.9	1.2
1998	32.8	3.0	9.2	2.6
1999	30.9	1.1	6.0	1.3
2000	35.1	1.2	3.4	0.8
2001	41.7	1.6	3.9	1.5
2002	49.0	1.0	2.0	1.1
2003	49.5	1.6	3.2	0.7
2004	47.1	1.1	2.3	0.5

1. Guarantees are provided by the Korea Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund.

Source: Small and Medium Business Administration.

did not perform any better than those that do not receive assistance. This suggests that government assistance reduces incentives to innovate and compete (Hyeon-Wook Kim, 2005).

The government announced in June 2005 a plan to streamline financing programmes that support SMEs as well as to reverse the increase in government guarantees on bank loans to SMEs. In addition, non-viable companies and those receiving long-term assistance will no longer receive public credit guarantees beginning in 2006, a move that would spark restructuring.[5] However, it is also essential to improve aspects of the credit guarantee programmes, in addition to reducing their size. *First*, guarantees should be concentrated in new start-ups rather than being used to preserve existing firms. Although 70% of KCGF guarantees have a one-year maturity, the typical firm has been covered for five years. *Second*, the proportion of the loan amount that is guaranteed, typically 80% to 90% should be scaled back to reduce moral hazard. *Third*, the price of guarantees, which average 1 percentage point, covers only a small share of the losses from defaults and should be raised significantly (IMF, 2005).

To address the problems in the SME sector, the government announced an extensive policy package in May that focuses on restructuring service industries, notably retail trade, hotels and restaurants, road freight and taxis (Annex 6.A1). The plan called for restricting new entry in the service sector and weeding out uncompetitive businesses. However, entry barriers would protect existing businesses, thus reducing competition and efficiency. In addition, it would discriminate against older workers, given that a large share become self-employed after leaving jobs in firms, often as early as age 50 (see Chapter 5).

Foreign investment

Prior to 1997, the domestic financial market was largely de-linked from international financial markets by regulations limiting inflows and outflows of direct and portfolio investment. The liberalisation of such controls and the intense restructuring in the wake of the crisis have led to a surge in inflows. Foreign direct investment inflows have averaged 1.2% of GDP since 1998 compared to only 0.3% between 1990 and 1997, while the foreign share of listed companies has risen to 42%. According to a survey by the Ministry of

Commerce, Industry and Energy, labour productivity in foreign-invested companies was 25% higher than in domestic firms. However, increased foreign investment has also prompted public concern about foreign investors.[6]

The "5% rule", originally introduced in 1991, was revised in March 2005 (FSC, 2005). This rule, which applies equally to domestic and foreign entities, requires investors acquiring 5% or more of a publicly-traded company's shares (or changing their ownership by 1% or more) to disclose it within five days of the transaction. Moreover, the investor must declare the objective - either Investment Only or Exercising Influence on the Management. Under the amended rule, the investors must disclose the identity of its officers and largest shareholder and the source of its investment capital.[7] The new rule also mandates a five-day "cooling-off" period during which investors declaring that they intend to influence management are prohibited from acquiring any additional shares or exercising voting rights. According to the Financial Supervisory Commission, the primary objective of this rule is to prevent unfair trading in the stock market and to create a transparent and level playing field for the acquirer and the target in the M&A market.

Similar rules exist in other OECD countries, including the United States, in order to prevent takeovers by stealth. However, many of these countries also have an active market for corporate control, including unsolicited takeovers, and well-established shareholder rights. Korea, in contrast, has only had a few unsolicited takeovers and corporate governance practices are still inadequate (see below). It is important to ensure that the amended 5% rule does not send the wrong signal about Korea's openness to foreign capital in the context of rising domestic uneasiness about foreign investment. The government has, in fact, responded to this issue: "Expressing concern over anti-foreign capital sentiment, the Korean government calls for a more balanced view of foreign-invested companies" (MOFE, 2005). Despite these concerns, foreign investors who enter with the objective of Investment Only are not prevented from the legitimate exercise of shareholder rights by the 5% rule.[8]

Upgrading corporate governance

A number of indicators suggest that corporate governance in Korea has improved significantly since the crisis. One index, which measures 39 elements relating to shareholder rights, board structure and procedures, audit, disclosure and ownership parity for 525 firms, shows an increase in the average score from 24 in 1998 to 41 in 2003.[9] Moreover, the quality of corporate governance in a firm was found to have a significant impact on its share price, suggesting that it is in the own interest of firms to improve their practices in this area.[10] However, Korean companies still have a long way to go to reach best practices in corporate governance. In the index mentioned above, the top individual firm score of 96 was far above the average score (Black *et al.*, 2005b). Moreover, weak corporate governance is thought to be a main explanation of the Korea discount – the undervaluation of Korean firms relative to non-Korean firms after taking account of the various factors that explain the price-earnings ratio. A "Code of Best Practices for Corporate Governance" was introduced in 2003 by the Corporate Governance Service.[11] The principle of "comply or explain" is not mandatory, as most of the rules in the Code are legally mandated.

Given the weaknesses in corporate governance, the Korea Fair Trade Commission still imposes regulations on firms affiliated with the large business groups (chaebol). In particular, it limits the total amount of shareholding in other domestic companies and cross-shareholding within the groups, regulates loan guarantees within a group, prevents financial affiliates in a group from voting shares of their holdings, and polices "undue" transactions within a group. A new rule limits the voting rights of financial units owned by chaebol with assets exceeding 2 trillion won from 30% to 15% by 2008. The KFTC considers these functions to be as important as competition law enforcement. It recently announced a roadmap that would allow chaebol to graduate from the 25% shareholding ceiling[12] by meeting one of four conditions: *i)* an excellent internal monitoring system; *ii)* a narrow gap between cash flows and voting rights; *iii)* an uncomplicated shareholding structure and having five or less affiliates; and *iv)* adopting a holding company structure. Of the 18 large business groups, four public-sector groups and five private-sector chaebol have met one of these criteria thus far.

There have been numerous reforms to improve corporate governance, financial soundness (see below) and transparency[13] since 1997, which are helping to clear up opaque corporate structures. With further progress in this regard, the phasing out of the 25% shareholding ceiling would be appropriate, which may have a beneficial impact on business activity. In addition, the KFTC should focus more on competition policy, while issues related to internal cross-holdings and guarantees, and to intra-group transactions that amount to misuse of corporate assets should be dealt with by regulators responsible for financial and securities matters, notably the Financial Supervisory Commission and the Financial Supervisory Service. Transactions that have an exclusionary or distorting effect on product market competition in particular cases should still be subject to competition-law control.

The financial sector

The results of restructuring have been positive in creating a stable and more market-oriented financial system. However, the long legacy of an insulated, repressed and government-controlled financial sector complicates the development of an appropriate lending culture and a vibrant capital market. Moreover, market mechanisms have been weakened since the crisis by repeated government intervention in the capital market, which it argues has been necessary to limit systemic risks.

The banking sector

After the negative impact from their credit card activities and a financial scandal at a major company, the after-tax profits of the nation-wide banks rebounded to a record high of 6 trillion won (0.8% of GDP) in 2004 (Table 6.5). Meanwhile, loans classified as substandard or below declined to a record low of 2% of total lending. There was also further progress in the privatisation of the banks that had been re-capitalised using public funds.[14] This process has substantially boosted the foreign presence in the banking sector. Indeed, foreign investors have become the largest shareholders in eight of the 14 commercial banks, with a substantial presence in two of the others (Table 6.6). According to the Bank of Korea, the combined foreign ownership share of the Korean commercial banks rose from 8.5% in 1997 to 27% in 2002 and to 59% in September 2004. The large foreign presence ensures a definitive end to the banks' role in the pre-crisis era as key instruments for implementing government policies. While foreign ownership had been concentrated in investment funds following the crisis, the recent entry of major foreign banks[15] may have an even stronger effect on competition in the Korean banking sector. The comparative advantages of foreign banks can have a positive impact by upgrading practices at domestic banks.

The privatisation steps in 2004 enabled the government to recover another 7 trillion won of the 165 trillion won (29% of 2000 GDP) in public funds spent for financial-sector

 OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Table 6.5. **Indicators of bank profitability**

Nation-wide banks, in trillion won

	1998	2001	2002	2003	2004
Before-tax profits					
Net profits	–3.2	9.0	9.0	10.7	12.8
Net profits minus loan loss provisions	–10.1	3.6	3.7	0.3	6.0
After-tax profits	–10.1	3.4	2.9	0.2	5.9
Return on equity (per cent)	–48.63	16.30	10.95	0.87	18.23
Return on assets (per cent)	–2.99	0.79	0.56	0.04	0.89
Total loans (A)	263.9	353.2	432.2	463.9	473.0
Substandard loans or below[1] (B)	19.0	11.7	10.6	13.1	9.4
Ratio to total loans (%) (B/A)	7.2	3.3	2.4	2.8	2.0
Loan loss reserves (C)	12.1	8.8	8.8	10.7	9.1
Reserves to substandard loans or below[1] (%) (C/B)	63.8	75.3	83.5	82.1	96.6
Capital adequacy ratio (BIS ratio)	8.22	10.81	10.46	10.34	11.31
Number of branches	4 164	4 052	4 304	4 345	4 333

1. Includes loans classified as substandard, doubtful and estimated loss.

Source: Financial Supervisory Service.

restructuring (Table 6.7). By the end of 2004, 70 trillion won (43%) of these outlays had been recovered, although 69 trillion won is classified as irretrievable. Moving ahead with the privatisation of the three banks in which the government holds a majority ownership share would provide additional revenue while further reducing government influence on the

Table 6.6. **Government and foreign ownership of the commercial banks**

End of 2004, per cent

	Government ownership	Foreign ownership	
A. Nation-wide banks			
Choheung[1]	–	62.90	
Woori[2]	KDIC (86.84)	11.60	
Korea First		100.0	(Standard Chartered Bank)
Korea Exchange	Ex-Im Bank (13.87), Bank of Korea (6.12)	71.69	(Lone Star 50.53, Comerz Bank 14.64)
Kookmin	–	76.32	(ING Bank NV 4.01)
Shinhan	–	63.34	
KorAm[3]	–	99.82	(Citigroup 99.65)
Hana	–	68.30	(Temasek 9.89)
B. Local banks			
Daegu	–	55.80	
Pusan	–	59.20	
Kwangju	KDIC (86.84)	11.60	
Cheju	KDIC (31.96)	39.20	
Jeonbuk	–	12.10	
Kyeongnam	KDIC (86.84)	11.60	

1. As an affiliated company of the Shinhan Financial Group, the figure includes the foreign ownership of the Shinhan Financial Group.
2. As an affiliated company of the Woori Financial Group, the figure includes government ownership and foreign ownership in the Woori Financial Group.
3. Merged into Citibank Korea Inc. in November 1, 2004.

Source: Financial Supervisory Service.

banking sector. However, foreign interest in investing in these banks would be deterred if the proposal under consideration by the National Assembly to require that more than half the board of directors of banks be Korean nationals were to be approved despite government opposition. Such a proposal is difficult to justify on prudential grounds; instead, rules about residency may be more effective. However, more important than nationality or residency is ensuring that bank directors observe their fiduciary duty.

Given the problems in the SMEs noted above, there is concern about credit risk from lending to small companies. However, credit risk is limited by the fact that most of these loans are secured by public-sector guarantees or collateral, primarily real estate, with the loan to value ratio set at about 60%. A stress test by the Bank of Korea suggests that the credit risk on lending collateralised by real estate is relatively small.[16] However, household indebtedness is another source of concern as evidenced by the recent strains in the credit card sector. The rise in the share of household loans with floating rates to 84% by the end of 2004 may pose a greater risk to banks in a situation in which interest rates increase while household disposable income remains weak. In general, the reliance on guarantees and collateral reflects the

Table 6.7. **The financial-sector restructuring programme**

November 1997 to December 2004 in trillion won

A. Outlays by type of financial institutions

	Equity participation	Capital contributions	Deposit payoffs	Asset acquisition	NPL purchases	Total
Banks	34.0	13.8	–	14.4	24.6	86.8
The non-bank sector	28.2	3.9	30.3	1.4	12.0	75.9
Merchant banks	2.7	0.4	18.3	–	1.5	22.9
Securities/investment trusts	9.6	0.1	–	0.5	8.5	18.7
Insurance	15.9	3.1	–	0.3	1.8	21.2
Credit unions	–	–	4.8	–	–	4.8
Saving banks	–	0.2	7.3	0.6	0.2	8.3
Foreign institutions	–	–	–	–	2.4	2.4
Total	**62.2**	**17.7**	**15.9**	**30.3**	**39.0**	**165.0**

B. Outlays by source of financing

	Equity participation	Capital contributions	Deposit payoffs	Asset acquisition	NPL purchases	Total
Bond issuance	42.2	15.2	20.0	4.2	20.5	102.1
Recovered funds	6.0	2.3	7.4	5.2	17.4	38.3
Public money	14.0	–	–	6.3	–	20.3
Others	–	0.2	2.9	0.1	1.1	4.3
Total	**62.2**	**17.7**	**30.3**	**15.9**	**39.0**	**165.0**

C. Recovery of expenditure

	KDIC	KAMCO	Government	Total
1998	–	2.4	–	2.4
1999	4.3	9.7	–	14.0
2000	6.1	8.9	–	15.0
2001	4.1	5.3	–	9.4
2002	2.6	3.8	6.6	13.0
2003	5.6	2.4	1.1	9.1
2004	5.7	1.4	0.2	7.3
Total	**28.4**	**33.9**	**8.0**	**70.2**

Source: Public Funds Oversight Committee.

underdevelopment of credit rating agencies (see below) and the limited capacity of banks for credit analysis, raising doubt about their effectiveness as financial intermediaries. Indeed, the decline in the banks' ratio of substandard loans or below, while the financial performance of SMEs deteriorates, may suggest that banks are rolling over the loans of weak SMEs. Moreover, as noted above, the rising use of loan guarantees raises moral hazards.

The non-bank lending institutions

The situation in the non-bank lending institutions is relatively unfavourable, particularly in regional institutions such as savings banks and credit unions. Although 51% of the savings banks and 36% of the credit unions were closed between 1997 and 2004, their loan quality has remained poor. For the non-bank lending institutions as a group, the share of substandard loans or below is more than 5% of total lending (Table 6.8), nearly three times higher than for the banks. Despite their weak financial position, the non-banks (excluding the credit card companies) expanded lending by 15% in 2004, compared to only 2% for the commercial banks. Their large exposure to the regional SMEs and households, combined with the delayed recovery of domestic demand, raises the risk of an erosion in asset quality.

Institutional investors and the capital market

Historically, the development of the capital market in Korea was limited by a restrictive regulatory framework and its insulation from international capital flows.[17] The 1997 crisis led to an acceleration of financial-sector liberalisation and an opening to international flows. After an initial increase, driven in part by the ICT bubble in 1999, the outstanding value of equities and corporate bonds has fluctuated between 70% and 80% of GDP (Figure 1.11). Corporate bonds amounted to 20% of GDP in 2004, compared to an average of 14% in the first half of the 1990s, while stock market capitalisation has risen from 38% to 57% over that period. The role of the capital market has been diminishing in recent years in terms of the share of the asset management industry, household financial asset portfolio and business sources of financing. The declining importance of the capital market is partly due to investors' "flight to quality" in the banking sector during the uncertain period of financial restructuring and external shocks. In particular, the collapse of Daewoo in 1999, the technology stock market crash in 2001 and the problems in SK Global and the credit card companies in 2003 have weakened investor confidence. In

Table 6.8. **Performance indicators of non-bank lending institutions**

	All non-bank lending institutions[1]			All non-bank lending institutions, excluding credit card companies		
	2002	2003	2004	2002	2003	2004
Loan quality (in trillion won)						
Total loans (A)	191.9	179.5	193.0	138.5	150.1	172.0
Substandard loans or below (B)[2]	10.7	11.2	10.7	8.6	8.0	9.4
B/A (per cent)	5.6	6.2	5.5	6.2	5.3	5.5
Net profit (in billion won)[3]	2 901	–10 643	–1 457	2 665	–169	–116

1. Includes savings banks, credit unions, merchant banks, mutual credits, credit card companies, leasing companies, finance companies and venture capital companies.
2. Loans classified as substandard, doubtful and estimated loss at the end of each calendar year.
3. Follows the fiscal year.

Source: Financial Supervisory Service.

addition, the de-leveraging of the chaebol and their strong cash flow in recent years have reduced the financing needs of the corporate sector.

The capital market needs to play an important role in providing corporate discipline. In addition, it is crucial to develop the capital market and a sound collective investment sector to provide long-term saving vehicles for households preparing for retirement. The rapid accumulation of assets by the National Pension Scheme and the introduction of a company pension system provide important opportunities for such development. However, it will require addressing fundamental structural factors, including strengthened law enforcement and sanctions. In addition, upgrading corporate governance and auditing practices, in line with the new framework (see the 2004 *Survey*), is necessary to improve transparency and protect investors.

The vulnerability of the corporate debt market to shocks such as Daewoo and the credit card companies reflects the weakness of the credit rating agencies in providing accurate and timely information on the loan repayment abilities of debtors.[18] Until 1998, almost all bonds were guaranteed, primarily by banks, limiting the demand for credit rating services. Although the overall performance has improved since the 1997 crisis, surveys report that fund managers lack confidence in credit rating agencies. This is primarily a result of distortions in ratings and lagging rating changes due to the relationship between debt issuers and the rating agencies (Lim, 2004). A number of reforms are necessary to foster a credit rating industry that is free of conflicts of interest that would compromise the integrity of its analysis, a point that is stressed in the OECD's Code of Corporate Governance. *First*, given that the activities of credit rating agencies affect financial institutions, ownership of the agencies by financial institutions should be restricted to avoid conflicts of interest. *Second*, there should be transparency about the ancillary services, such as consulting, that are provided by an agency for the rated companies. *Third*, the authorities may consider requiring debt issuers to change rating agencies – as is now the case in accounting – after a certain period to encourage objectivity.

The lack of long-term instruments is another obstacle to the development of the capital market. Three years is the normal maturity for corporate bonds, while three-year bonds account for 30% of Korean Treasury Bond issues. The remainder are divided between five and ten-year bonds, which were only introduced in 2000. With population ageing, the role of pension funds and life insurers is expected to increase. These investors are likely to prefer long-term fixed-income securities to avoid a mismatch in maturities.

The problems in the capital market are closely linked to institutional investors, who have also been negatively affected by the shocks noted above. Further restructuring of this sector is a key element of strengthening the capital market and boosting the confidence of investors. In the *asset management industry*, the privatisation of the three largest investment trust companies was completed in 2005.[19] In addition, a private equity fund law was introduced in 2004. The *insurance industry* faces interest rate mismatches, given falling yields and the practice of guaranteed fixed-return policies. However, these risks are expected to be controlled in the long run as companies are establishing risk management systems as required by the supervisor. The domestic insurance market is still growing and competition is intensifying. As a result, two large companies have been taken over by stronger institutions, and another two are under prompt corrective action by the supervisors. Restructuring is also advancing in the *securities industry*, which is dominated by relatively small companies[20] and is highly dependent on brokerage fees. Vigorous M&A

activity helped reduce the number of employees and branches by 16% and 12%, respectively, between 2001 and 2004. In addition, the business area of securities firms was expanded to include trust accounts and securitised derivative markets, which should help revitalise the capital market.

The credit card industry and the household delinquency problem

The credit card industry has been going through extensive restructuring following the boom and bust cycle of the past few years.[21] Three of the nine credit card companies were merged with their parent banks, and the remainder have increased their capital. Cash loans from credit cards declined to 138 trillion won, only one-third of the amount in 2002 (Table 6.9), reflecting restructuring and sluggish domestic demand. Consequently, the performance of the remaining companies has improved significantly. The adjusted capital adequacy ratio rose from a negative 3.3% in 2003 to a positive 9.8% in 2004, and the delinquency rate, which includes low-quality rescheduled loans, fell from 28% to 16%.[22] In particular, LG Card, which narrowly escaped bankruptcy in January 2004 after a 5 trillion won bailout package co-ordinated by the government (see the 2004 *Survey*), has also returned to profitability. Its shareholders – 15 financial institutions including the government-owned Korea Development Bank – and its former parent, LG Group, agreed on an additional lifeline of 1 trillion won in late 2004. The PCA framework for the major credit card companies targets a reduction in the delinquency ratio to 10% by the end of 2006. The credit card loan problem indicates that banks and other financial institutions need to improve credit analysis skills for retail lending. In this regard, lenders were hampered by a lack of adequate information about the total household debt of borrowers.

In contrast to the rapid progress on the creditor's side, the resolution of the problems of debtors has been more hesitant despite a recent acceleration. The number of delinquent borrowers rose nearly 80% between 2000 and April 2004 to a peak of 3.8 million, before falling to 3.6 million – still about 10% of the working-age population – at the end of 2004. Although the number is no longer available since the registry system for credit delinquents was abolished in April 2005, the government believes that the number of delinquents has continued to diminish. The decline reflects more cautious lending behaviour by financial institutions and the restructuring of outstanding debt of more than half a million delinquent borrowers through a variety of approaches:[23]

- Financial institutions have arranged workouts for their borrowers who do not have multiple debts.

Table 6.9. **The use of credit cards**

In trillion won

	1998	1999	2000	2001	2002	2003	2004
Number issued (in millions)	42.0	39.0	57.9	85.0	104.8	95.2	83.4
Amount of sales using credit cards	30.8	42.5	79.9	175.5	268.0	240.7	229.9
Per cent of private consumption	12.9	15.5	25.6	51.1	70.3	62.0	57.3
Amount of cash loans from credit cards	32.7	54.3	157.3	304.9	412.8	276.6	138.1
Total amount of credit card use	63.6	96.8	237.3	480.4	680.8	517.3	368.0
Net profit[1]	0.0	–0.3	0.9	2.6	0.2	–10.5	–1.3

1. Includes only non-bank credit card companies.

Source: Financial Supervisory Service.

- The Credit Counselling and Recovery Service, a consortium of financial institutions, runs workout programmes for delinquent borrowers with debts to more than two institutions. Those qualifying receive a one-third reduction in both interest and principal.
- A "bad bank" (Hanmaeum) was established by financial institutions and the Korea Asset Management Corporation (KAMCO) in 2004 to assist those with debts to more than one institution. Qualifying debtors were then given up to eight years to repay their loans interest-free.

In 2005, the government created a new "bad bank", as Hanmaeum had stopped accepting new applications, and added two new programmes to assist low-income delinquent borrowers. *First*, for those with income and assets below certain thresholds, interest and principal are frozen and the government provides support to ensure that income reaches subsistence level. *Second*, the owners of small SMEs who are delinquent on individual debt are to receive bank loans of up to 20 million won to revive their business. Although there are no precise figures, these programmes are each estimated to include 200 to 250 thousand delinquent borrowers. While they avoid moral hazard by not allowing the write-off of principal, these schemes provide income to support delinquent borrowers without resolving their fundamental problems. Moreover, for low-income debtors, the scheme provides an incentive not to work unless they can earn as much as the subsistence level of income plus the amount necessary to service their debt.

Although the government's approach thus far has generally limited moral hazard problems, it has failed to expedite the resolution of the bad debt. The rising number of schemes may encourage delinquent borrowers to wait in hope of more favourable terms in the future. Rather than create more programmes, the priority should be to resolve the delinquent borrower problem using the established legal framework. The personal bankruptcy procedure (Chapter 7) has traditionally been little used, in part due to the social stigma attached to bankruptcy. From the creditor's perspective, the process is lengthy and the amounts recovered tend to be low relative to legal fees. The Personal Debt Rehabilitation Act was introduced in 2004 to provide relief to debtors through court mediation without requiring the debtor to declare bankruptcy. However, only about 30 thousand of the 3.6 million individual delinquents have thus far gone through either of the legal procedures, in part due to capacity constraints in the judicial system. Activating the legal procedures would likely encourage the use of private bilateral arrangements between creditors and debtors.

The registry system for credit delinquents was abolished in April 2005 as noted above, in part to prevent it from restricting employment possibilities for debtors.[24] Its elimination requires financial institutions to improve their credit risk management and develop better means of sharing information, such as credit bureaus. While the elimination of the registry may help individual delinquents, it is important to discourage discrimination against them.

Conclusion

Despite significant progress since the 1997 crisis, there remains a need for further reform in many areas. Perhaps most urgent in the corporate sector is to restructure the SMEs to reverse its deteriorating trend, while upgrading corporate governance practices. In the financial sector, the priorities are to improve the performance of non-bank financial institutions and promote the development of the capital market. Major recommendations are shown below in Box 6.1.

OECD ECONOMIC SURVEYS: KOREA – ISBN 92-64-01438-1 – © OECD 2005

Box 6.1. **Summary of recommendations in the corporate and financial sectors**

The corporate sector

- Streamline and reduce the diverse programmes to assist SMEs.
- Scale back credit guarantees for SMEs to encourage restructuring.
- Shift the focus of credit guarantees from preserving existing weak firms to assisting start-ups.
- Reduce the proportion of loans that are guaranteed from the current 80-90% and raise the price of guarantees to cut the burden of defaults on the public sector.
- Ensure openness to foreign investment, including unsolicited takeovers.
- Encourage further improvement in corporate governance practices, in part by publicising the extent to which companies comply with the Code of Best Practices for Corporate Governance, and enhancing transparency.
- Concentrate chaebol-regulating functions that are related to finance and corporate governance in regulators responsible for financial and securities matters. Transactions that have an exclusionary or distorting effect on product market competition in particular cases should remain subject to competition-law control.
- With further progress in corporate governance practices, phasing out the 25% shareholding ceiling imposed on chaebol-affiliated firms would be appropriate.

The financial sector

- Continue the privatisation of the banks that became government-owned in the wake of the crisis.
- Avoid imposing nationality restrictions on the directors of banks, while ensuring that they meet their fiduciary duties.
- Encourage banks to improve their capacity for credit analysis, while reducing reliance on real-estate collateral and loan guarantees.
- Discourage banks from automatically rolling over their loans to distressed SMEs.
- Continue the restructuring of non-bank financial institutions through prompt corrective action.
- Promote the development of the capital market by upgrading law enforcement and sanctions.
- Strengthen the credit rating agencies to provide more accurate and timely information to creditors, in particular by preventing conflicts of interest.
- Increase the supply of long-term financial instruments, beginning with government bond issues.
- Accelerate the resolution of the individual delinquency problem by expanding the capacity of the judicial system.
- Avoid introducing new schemes that support delinquent borrowers without resolving the problem and limit debt write-offs to prevent moral hazard problems.
- Discourage discrimination against delinquent borrowers.

Notes

1. The issue of strengthening competition, in part through removing entry barriers and improving the exit framework, is discussed in Chapter 4.
2. The definition of SMEs varies between sectors. In manufacturing, it includes firms with less than 300 employees and no more than 8 billion won in paid-in capital. In the service sector, the employment threshold varies between 30 and 300 employees, and between 2 and 30 billion won in annual sales. The average number of employees per SME is only 3.5 in Korea, compared to between 6 and 7 in Japan and Chinese Taipei (Kang, 2005).
3. Moreover, the Small & Medium Business Administration provides 12 trillion won (1.5% of GDP) of loans, with three-quarters of the total going to firms more than three years old. In addition, Bank of Korea guidelines call for nation-wide and regional banks to allocate half of their new loans to SMEs.
4. The private sector helps to finance guarantees. Financial institutions provided 510 billion won (0.1% of GDP) in 2005 and they were encouraged to contribute more in the future.
5. The government also announced that KOTEC will provide 80% of its guarantees to companies with a technological edge, an objective in line with the Fund's original purpose.
6. Such criticism has been fuelled by the large profits earned by a foreign investment fund that purchased a Korean bank following the crisis and then sold it after successful restructuring. In addition, there was controversy concerning a foreign investment fund holding a large stake in a chaebol-affiliated company. The foreign investor had unsuccessfully attempted to remove a member of the board who had been convicted of accounting fraud. In most countries, though, persons guilty of such crimes would not be allowed to act as directors. The foreign investor has since sold its stake in the Korean company.
7. This only applies to investors who are business entities. The information on the source of capital is not required if the purpose is Investment Only (FSC, 2005).
8. The 5% rule clearly stipulates that investors with the intended purpose of "Investment Only" are only prevented from exercising certain shareholder rights, such as making shareholding proposals and calling a general shareholding meeting that could influence management decisions, such as the election of board directors.
9. This index, which has a minimum value of 0 and a maximum of 100, is described in Black *et al.* 2005b.
10. A moderate 10-point increase in the corporate governance index is estimated to raise a company's share price by 22%, while a change from the worst-to-best score in the index would result in a 160% increase. Moreover, there is a strong connection between board composition and share price. Companies with outside directors accounting for half of their board are estimated to have a 40% higher share price, after controlling for the rest of the index (Black *et al.*, 2005b).
11. This non-profit organisation, which attempts to promote good corporate governance, is supported by the Korea Stock Exchange, the Korea Securities Dealers Association, the Korea Listed Companies Association and KOSDAQ, among others. Under the principle of comply or explain, companies that fail to meet the code must disclose the reasons for non-compliance.
12. Companies belonging to chaebol with more than 6 trillion won are subject to a shareholding ceiling of 25% in other companies, even those belonging to the same group.
13. There has been a 60% rise in the number of CPAs from 5 310 in 2001 to 8 508 in 2005, while the number of CPA firms has more than doubled from 35 to 81 over that period.
14. Since the beginning of 2004, the government has sold 15% of its share of Woori Financial Group and its remaining 22% of Hana Bank and 51.5% in Korea First Bank.
15. Citigroup acquired KorAm Bank and transformed it into Citibank Korea, while Standard Chartered Bank is acquiring Korea First Bank in 2005.
16. Banks would suffer significant losses on collateralised lending if the delinquency rate rose to more than 5% (it was 1.7% in December 2004) and collateral value declined more than 15% (housing prices declined 2.1% in 2004). The Bank of Korea report found that the impact of the delinquency rate on banks' profitability is bigger than that of collateral value (Bank of Korea, 2004).
17. For example, bond and money markets were restricted to a limited range of maturities with no real secondary markets and issuance was dependent on bank guarantees. As for the stock market, there was a quota on new issues (Noland, 2005).
18. Indeed, both Daewoo and LG Card had AA ratings when they collapsed, and SK Global had a rating of A.

19. In 2004, Hyundai ITC, the third-largest, was sold to Prudential Financial and in 2005 Korea and Daehan ITCs, the largest two companies, were sold to Dongwon Financial Holding and Hana Bank, respectively.
20. The concentration in the securities and investment trust industry in Korea, as measured by the Hirschman-Herfindahl index, was 483 in 2004, much lower than in the United States (640) and Japan (2 065).
21. The government had promoted the use of credit cards through regulatory changes and the introduction of tax advantages for their use and lottery promotions (see the 2004 *Survey* for details).
22. The decline occurred despite the introduction of very conservative criteria for delinquency in order to better reflect the performance of the credit card companies. The new criteria include rescheduled loans, excluding the amount for which debt servicing capacity is considerably improved.
23. Once repayment begins on a restructured loan, the debtor is no longer counted as delinquent. As of October 2004, 560 thousand persons had participated in the debt restructuring programmes mentioned below (IMF 2005). More recent information has not been made public.
24. Previously, anyone who missed debt payments of 300 thousand won (about $300) for at least three months was listed as a defaulter.

Bibliography

Bank of Korea (2004), *Financial Stability Report No. 4*, Bank of Korea, Seoul (in Korean).

Black, Bernard, Hasung Jang and Woochan Kim (2002), "Does Corporate Governance Matter? Evidence from the Korean Market", KDI School of Public Policy and Management Working Paper 02-04.

Black, Bernard, Hasung Jang and Woochan Kim (2005a), "Does Corporate Governance Predict Firms' Market Values? Evidence from Korea", *Journal of Law, Economics and Organization*.

Black, Bernard, Woochan Kim, Hasung Jang and Kyung Suh Park (2005b), "Does Corporate Governance Predict Firms' Market Values? Evidence from New Panel Data", mimeo (May).

Financial Supervisory Commission (2005), *Press Release*, 31 March 2005, *www.fsc.go.kr*.

IMF (2005), "Republic of Korea: 2004 Article IV Consultation", IMF Country Report No. 05/49, Washington D.C.

Kang, Dongsoo (2005), "Corporate Distress and Restructuring Policy of the Korean Small and Medium-sized Enterprises", Korea Development Institute Working Paper 2005-01, Seoul.

Kim, Hyeon-Wook (2005), "The Effects of Policy Lending Programmes for Korean SMEs", *KDI Annual Report*, Korea Development Institute, Seoul.

Kim, Joon-Kyung (2004), "Overview of Korean Corporate Restructuring since the Financial Crisis: Focusing on Profitability and Financial Soundness", Korea Development Institute Policy Forum No. 168 (2004-01), Seoul (in Korean).

Kim, Joon-Kyung (2005), "Worksheet on the profitability of SMEs in Korea", mimeo, Korea Development Institute, Seoul (in Korean).

Lim, Kyung-Mook (2004), "Policy Recommendations for Enhancing the Role of Credit Rating Agencies in the Debt Market", Korea Development Institute Policy Study No. 2004-04, Seoul (in Korean).

Ministry of Finance and Economy (2005), "Foreign Companies, Important Economic Players", *Economic Bulletin* (June), Seoul.

Noland, Marcus (2005), "South Korea's Experience with International Capital Flows", National Bureau of Economic Research Working Paper 11381.

OECD (2003), *Institutional Investors: Statistical Yearbook 1992-2001*, Paris.

OECD (2004), *Economic Survey of Korea*, Paris.

Park, Chang Kyun and Kyung-Mook Lim (2004), "Policy Recommendations for the Capital Markets: Asset Management Industry and Long-Term Government Bond Market", Korea Development Institute Research Monograph No. 2004-16, Seoul (in Korean).

Yoo, Kyeongwon (2004), "Empirical Analysis of Precautionary Portfolio Analysis: Evidence for Korea", Bank of Korea Economic Analysis No. 10-3, Seoul (in Korean).

ANNEX 6.A1

The government's programme for small self-employed businesses

(MAY 2005)

1. **Mitigate overcrowding in services:**

- Expand information on service businesses by region and industry and construct a business environment database system for five hundred commercial areas.
- Reduce assistance for start-ups from the regional credit guarantee funds.
- Introduce or strengthen entry barriers in services (*e.g.*, certification system for beauty shops, laundries and bakeries, approval system for road freight, regional ceiling for taxi).
- Encourage firms to employ older workers in order to reduce their entry into overcrowded service areas.

2. **Induce transition or exit from the self-employed business sector:**

- Provide active labour market programmes to the self-employed who hope to transit or exit, and expand the coverage of the Employment Insurance System to those who wish to join.
- Restructure traditional markets and the retail trade sector.
- Create jobs in social services such as long-term nursing care.

3. **Provide business consulting:**

- Establish "The Regional Self-employed Consulting Centres" for tailored consulting/training services, with the costs to be borne by the government (500 thousand won per business).

4. **Stabilise the business activities of the small self-employed business sector:**

- Provide financial support to viable businesses using regional credit guarantee funds.
- Assist the self-employed in adopting IT technology.
- Reduce the tax burden on the self-employed, and assist those who are delinquent on individual loans to exit from "delinquent borrower" status.

5. **Measures to upgrade competitiveness through franchising**

- Treat franchising equally with manufacturing in government support programmes.
- Introduce a new special law to promote franchising and provide brokerage service between franchisers and franchisees.

Source: Special Commission on Small and Medium-Sized Enterprises.

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(10 2005 21 1 P) ISBN 92-64-01438-1 – No. 54439 2005
ISSN 0376-6438

Korea

Special Feature: Improving Conditions for Innovation and Growth

Economic Surveys
Most recent editions
Australia, February 2005
Austria, July 2005
Belgium, May 2005
Canada, December 2004
Czech Republic, January 2005
Denmark, March 2005
Euro area, September 2005
Finland, December 2004
France, September 2005
Germany, September 2004
Greece, September 2005
Hungary, July 2005
Iceland, April 2005
Ireland, July 2003
Italy, August 2003
Japan, March 2005
Korea, November 2005
Luxembourg, September 2003
Mexico, November 2005
Netherlands, July 2004
New Zealand, January 2004
Norway, October 2005
Poland, June 2004
Portugal, November 2004
Slovak Republic, September 2005
Spain, April 2005
Sweden, August 2005
Switzerland, January 2004
Turkey, December 2004
United Kingdom, March 2004
United States, May 2004

Non-Member Economies
Most recent editions
Baltic States, February 2000
Brazil, February 2005
Bulgaria, April 1999
Chile, November 2005
China, September 2005
Romania, October 2002
Russian Federation, September 2004
Slovenia, May 1997
Federal Republic of Yugoslavia, January 2003

Subscribers to this printed periodical are entitled to free online access. If you do not yet have online access via your institution's network, contact your librarian or, if you subscribe personally, send an e-mail to:

SourceOECD@oecd.org

www.oecd.org

OECD

OECD PUBLISHING

ISSN 0376-6438
2005 SUBSCRIPTION
(18 ISSUES)

Volume 2005/21 – November 2005
Supplement No. 3

ISBN 92-64-01438-1
10 2005 21 1 P