

# Korea's Economy 2008

Korea's Economic Achievements and Prospects

The Graying of Korea: Addressing the Challenges of Aging

Financial Asia Rising: Asian Stock Markets in the New Millennium

Korea's Money Market

Ingredients for a Well-functioning Capital Market

The Capital Market Consolidation Act and the Korean Financial Market

Progress in Corporate Governance

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U.S.-Korea Economic Relations: View from Seoul

U.S.-Korea Economic Relations: A Washington Perspective

Peering into the Future: Korea's Response to the New Trading Landscape

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Realistic Expectations of the Future Role of the IFIs on the Peninsula

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# THE GRAYING OF KOREA: ADDRESSING THE CHALLENGES OF AGING

By Jerald Schiff and Murtaza Syed

## Introduction

This past year—2007—was another solid one for Korea’s economy. Buoyed by continued strong exports and a pickup in domestic demand, real GDP is estimated to have grown by nearly 5 percent in 2007, similar to the previous year, while inflation remained well under control, at about 2.5 percent on average for the year. Prospects for this year are also generally favorable, with growth expected by the IMF to moderate slightly, to about 4.5 percent, in line with slowing global growth and inflation remaining moderate.

It is true, of course, that the current volatility in global financial markets has intensified risks to this outlook. The direct impact on the Korean financial system of the ongoing global turmoil related to the U.S. subprime crisis appears limited. But with a sharp slowdown in the United States and the European Union, Korea’s exports—along with those of the rest of Asia—would surely slow. Higher oil prices also have the potential to slow growth and raise inflation pressures. Nevertheless, Korea seems well positioned to weather any such contingencies.

In the longer run, however, Korea faces a sterner test. In particular, a rapidly aging population will threaten Korea’s growth potential and impose enormous fiscal pressures. These issues are not unique to Korea—other advanced economies are also growing older—but Korea is aging faster than perhaps any other country in history. Without a forceful policy response to this dramatic shift, the Korean labor force will begin to decline within the next decade,<sup>1</sup> while spending on pensions, health care, and long-term care will rise precipitously over the next half century.

The good news is that the full effect of these pressures should not be felt for several decades. There is, then, still time to address these problems. Moreover,

Korea’s history of fiscal prudence provides confidence that the necessary steps will be taken. But the window of opportunity is actually much smaller than one might think, and early action will be needed to allow a smooth transition to a significantly older Korea. More concretely, the key will be to use a broad range of policy tools, including pension and health care reform; tax base broadening and improved tax collection; a reallocation of public expenditures; and measures to boost labor force participation rates of, in particular, women and older workers. Perhaps the first step is to move the policy debate forward by raising consciousness of the challenges ahead and laying out policy options.

## The Graying of Korea

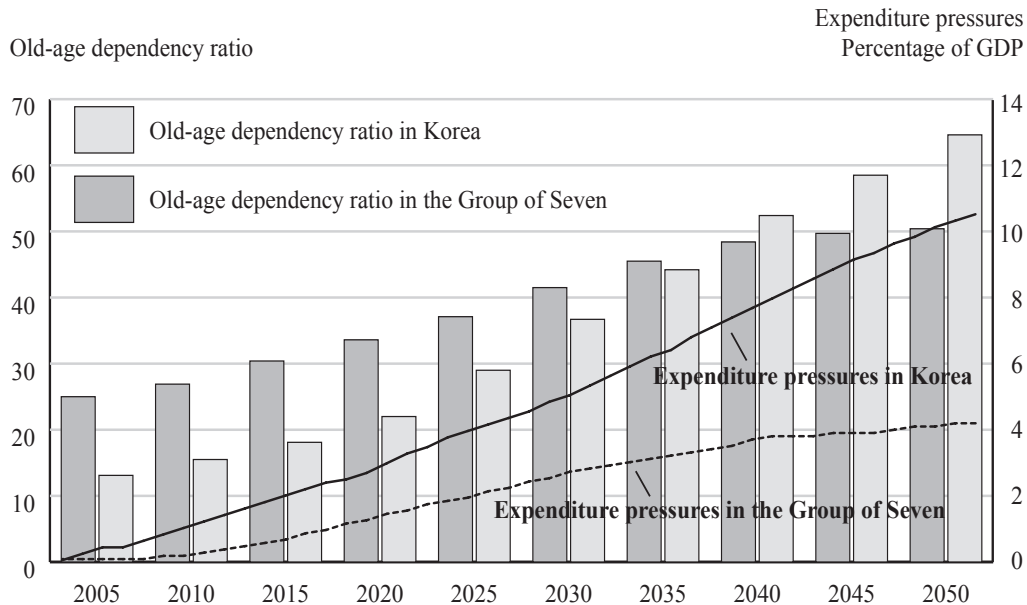
Koreans are living longer and having far fewer children than in their past. As a result, the country is facing a rapid aging of its population. In particular, Korea’s fertility rate has fallen from around 6 in 1960 to just over 1 in 2006, among the lowest in the world. At the same time, life expectancy has increased from 53 in 1960 to the current 77 and is projected to rise by another 7 years over the next half century.

These changes will have far-reaching effects on Korean society. The old-age dependency ratio (the ratio of the elderly to the working-age population), a critical indicator, will rise from 13 percent today to 65 percent in 2050. In other words, while today there are more than 7 persons of working age to support every older Korean citizen, in a bit more than 40 years—when those currently entering the labor force are retiring—there will be only approximately 1.5 workers for each senior citizen. Korea is not the only country confronting population aging, of course, but the speed and severity of its demographic transition is unmatched (*Figure 1*). As a result, Korea will be transformed in record time from one of the youngest populations

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1. “Population Projections for Korea: 2005–2050” (Seoul: Korea National Statistical Office, 2006).

**Figure 1: Age-Related Expenditure Pressures and Dependency Ratios in the Group of Seven and in Korea, 2005–50 (est.)**



Sources: European Commission, Organization for Economic Cooperation and Development, and International Monetary Fund staff calculations.

in the Organization for Economic Cooperation and Development (OECD) to among the oldest.

What does this mean for the Korean economy? First, the decline in working-age adults will, other things equal, reduce the growth potential of the Korean economy. Korea is already facing challenges to its growth because of a loss of its low-skilled manufacturing base to China and other low-wage producers and of the resulting shift of Korean workers to the services sector, where productivity has been stagnant. Staff of the International Monetary Fund have projected that, absent reforms, these developments combined with the expected decline in the labor force will lead to roughly a halving of Korea’s potential growth, from the current 4.5 percent to something more like 2 percent over the long term.<sup>2</sup>

But this is only part of the story. In addition, with the graying of Korea, public age-related expenditures could increase by as much as 11 percent of GDP over the next half century. This reflects a rise in pensions of four to five percentage points of GDP, and a rise in health care and long-term-care expenditures of six to seven percentage points of GDP.<sup>3</sup> Reflecting the severity of population aging in Korea, this rise in spending dwarfs the expenditure pressures faced by a number of aging industrial countries in Europe and is almost three times as large as for the average Group of Seven economy. Without appropriate measures, this trend will eventually threaten Korea’s traditionally sound fiscal stance and severely constrain its macroeconomic performance.

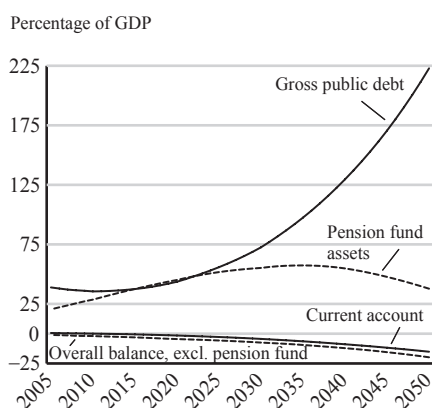
2. V. Chensavasdijai, 2006. “Korea’s Transition to a Knowledge-Based Economy: Prospects and Challenges Ahead,” in Republic of Korea: Selected Issues, IMF Staff Country Report, no. 06/381 (Washington, D.C.: International Monetary Fund, 2006), [www.imf.org/external/pubs/ft/scr/2006/cr06381.pdf](http://www.imf.org/external/pubs/ft/scr/2006/cr06381.pdf).

3. The projected rise in public pension expenditure is based on government estimates, while the rise in public health spending is based on OECD projections; see “Projecting OECD Health and Long-Term Care Expenditures: What Are the Main Drivers?” Economics Department Working Papers, no. 477, ECO/WKP (Paris: OECD, 2006), <http://massetto.sourceoecd.org/vl=4163310/cl=11/nw=1/rpsv/cgi-bin/wppdf?file=519x36wg1cxs.pdf>.

## The Fiscal Challenge

How big a fiscal problem could Korea face? One way to put this into perspective is to think about what might happen if policies stay unchanged and nothing is done to accommodate the spending pressures generated by population aging (*Figure 2*). Given Korea's history of fiscal prudence, it is highly likely that the government would in fact take steps to deal with these pressures, but examining the implications of such a baseline is a useful way to gauge the size of the adjustment required.

**Figure 2: Macroeconomic Effects of Unchanged Policies in Korea, 2005–50 (est.)**



Source: Korean authorities and International Monetary Fund staff estimates.

Our analysis suggests that, without any adjustment (such as measures to raise revenue or reduce other government spending), increasing pension and health care expenditures are likely to push the fiscal balance into substantial deficit in coming decades. To finance this spending, the government will likely be forced to borrow, resulting in a mushrooming of the public debt and running up an increasing interest bill. The next several decades look deceptively benign, mainly because the still quite new pension system will continue to run surpluses and accumulate assets. But fiscal deficits and the debt burden will eventually begin to rise very rapidly, leading to other macroeconomic imbalances as growth is severely constrained and strong private domestic demand, supported by the large public spending, results in a sharp rise in imports and a ballooning current account deficit. It is crucial that the government take advantage of the window provided during

the coming years because attempting to adjust once the debt dynamics turn unfavorable would, as discussed below, be considerably more painful.

What options, then, does Korea have to address its long-run fiscal challenges? And what can be said about the optimal mix of such policies? We turn to these questions next.

## Halting the Tide: What Can Be Done?

Fortunately for Korea, it is not the first country to face fiscal pressures from aging, and it has the opportunity to learn from the experiences of others. Most OECD countries have already taken steps to ensure fiscal sustainability in the face of aging populations, notably by reforming their pension systems. Moreover, despite the nearly unprecedented magnitude of the fiscal pressures it faces, Korea benefits from several advantages compared with most industrial economies now confronting large increases in age-related expenditures: Korea is growing faster, has more scope for boosting revenue, and has a relatively low level of public debt. These traits provide it with relatively more room to maneuver.

Korea has a number of options to meet the population-aging challenge and ensure fiscal sustainability. First, demographic projections are not etched in stone, and the shift described above would be eased if the fertility rate in Korea could be raised to slow the projected decline in the working-age population. Equally, policies to boost long-term growth, notably raising service sector productivity and ensuring that manufacturing continues to move up the value-added chain, would help meet some of the spending needs. Realistically, however, given the size and speed of the expected transition, aging is not a problem that Korea can outgrow or reverse solely on the basis of population planning. Accommodating the resulting expenditure pressures is likely to require significant changes in fiscal policies.

### *Increase Workforce Size by Boosting Participation*

To help offset the projected decline in the working-age population, steps could be taken to increase the share of the working-age population in the labor force, particularly for women and older workers. The overall participation rate in Korea is below the OECD average, mainly because participation for prime-age

women (ages 25 to 49) is the third lowest in the OECD. The difficulty for women of combining child rearing and work outside the home (for example, because of short parental leave and the high cost and low quality of child care) is a key barrier to labor force participation. And Korea's seniority-based wage system leads to the common practice of firms' setting a mandatory retirement age well below the full pension eligibility age of 60. Key steps then would include boosting women's participation through family-friendly policies and creating conditions to encourage older workers to stay at firms, perhaps by making the wage system less tied to seniority and putting in place a corporate pension system to replace the retirement allowance system that makes it expensive for companies to retain employees.<sup>4</sup>

### Comprehensive Pension Reform

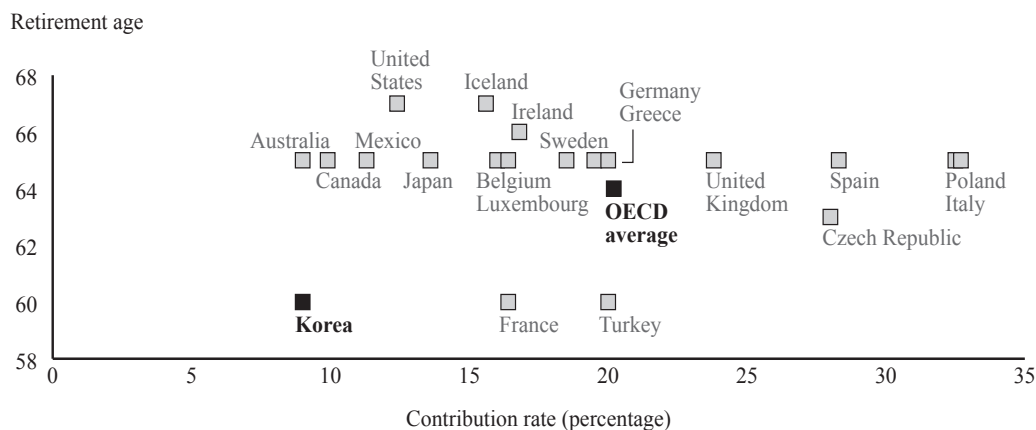
To meet the rising pension needs of its aging population, Korea needs to consider a thorough reform of its public pension system. Introduced only 20 years ago, Korea's National Pension Fund (NPF) is a relatively young system, and its assets will continue to build up over the medium term, peaking in the mid-2030s at close to 50 percent of GDP. As the number of pension recipients increases, however, the system's assets are projected to diminish rapidly.

The government passed a pension reform in 2007, under which the replacement rate (pension payment as a share of average lifetime earnings) will be gradually reduced by 2028 from the current 60 percent to 40 percent. Although this reform will delay the pension fund's depletion, it does not resolve the NPF's problems: without further action, the assets of the pension fund would still be depleted, but depletion would occur 13 years later than the pre-reform date of 2047.

What more can be done? First, in line with rising life expectancy, consideration could be given to raising the retirement age toward OECD levels. At 60, the retirement age in Korea remains well below the OECD average of approximately 65. Second, there is some scope for raising pension contribution rates: Korea, together with Australia, has the lowest rate among OECD countries—9 percent compared with an average of about 20 percent (*Figure 3*). Of course, neither of these alternatives is particularly appealing and could be difficult to achieve politically.

In this context, it is worth noting that broadening the contribution base would both boost the pension system's revenue and limit the need to raise contribution rates or reduce benefits. In Korea, there is tremendous scope for such a policy: more than one-third of Korea's labor force does not contribute to the national pension

**Figure 3: Comparison of Pensions in OECD Countries, 2007**



Source: Organization for Economic Cooperation and Development.

4. Under the retirement allowance system, firms are obliged to pay as a lump sum upon termination of employment at least one month of salary for each year that a worker was employed. Older workers are thus more expensive to retain as they are likely to require a bigger payment, both because of their longer job tenure and because their final salary, upon which the allowance is based, is usually higher under Korea's seniority-based wage system.



system (compared with less than one-sixth for the OECD as a whole). This mainly reflects the large number of self-employed and non-regular workers who reportedly fail to properly state their taxable incomes. The base has also been eroded by generous allowances that decrease taxable wages and a relatively low ceiling on the contribution base, which has been fixed in nominal terms for the past 20 years. If revenues could be boosted by bringing more workers into the system as allowances are capped and the contribution ceiling raised, the pension fund could be placed on a sound financial footing with only a modest adjustment in contribution or replacement rates.

Moreover, it appears that the pension fund is not maximizing the returns on its considerable assets. In particular, because the fund is projected to keep accumulating assets over the next two decades, boosting the rate of return could have sizable benefits and would go a long way toward placing it on a sounder financial footing. Since 2000, the NPF has earned a real return of around 4 percent per year, barely keeping up with the growth in real per capita incomes in Korea. By contrast, the rate of return for a number of other public pension funds, such as those in Canada, New Zealand, and Sweden, has been almost twice as high as the real return in Korea. What explains this large gap?

- The investment portfolio of the NPF is not very well diversified in terms of either asset class or geographic allocation. In 2006, the NPF allocated only 10 percent of its portfolio to equity investments, with bonds making up almost all of the rest. And only about 10 percent of its investments were made abroad. Public pension funds in the three aforementioned economies tend to invest a much higher proportion of their assets in equities (between 60 to 75 percent) and in investments outside their home countries (around 50 percent).
- Governance and management of the NPF are different from those in comparable economies. Falling under the Ministry of Health and Welfare, staff who make the pension fund's investment decisions are not insulated from government influence and can be guided by public policy considerations. There may be merit in exploring ways to bring the fund's governance closer to best international practice, notably by establishing an independent professional body to manage pension fund assets, as is being

considered by the government; focusing explicitly on maximizing risk-adjusted returns and minimizing public policy considerations; replacing strict limits on investment with a transparent structure and sound prudential requirements; and increasing the role of external specialists—including auditors, actuaries, and asset managers.

Even if comprehensive pension reform is implemented, however, rising health care costs would still threaten Korea's long-term public finances. Therefore, further measures to raise government revenues, reform the health sector, or contain other government expenditure would be needed. Below, we consider some options.

### *Tax reform*

There appears to be considerable scope for boosting tax revenue collections to accommodate Korea's future spending needs. At approximately 25 percent, the general government revenue-to-GDP ratio is very low relative to most OECD countries. For all major taxes in Korea, there is considerable scope for increasing revenues through base broadening, even without increases in tax rates. Key options include:

- **Personal income tax (PIT).** Although personal income tax rates in Korea are broadly in line with those in most countries, PIT yields are noticeably low, at 3 percent of GDP compared with an OECD average of 10 percent. A key reason behind this divergence is that relatively few people in Korea pay PIT: in 2003, the bottom 80 percent of wage and salary employees in the tax system accounted for only 10 percent of taxable income, while the bottom half had virtually no taxable income. This partly reflects generous wage deductions and the large number of allowable exemptions—such as those for insurance premiums, medical expenses, and education expenses—which are not subject to an overall ceiling. Capping such deductions and honoring related sunset clauses would help to broaden the PIT tax base. Improving tax administration by intensifying the auditing of the self-employed and strengthening penalties for misreporting income could also help.
- **Corporate income tax (CIT).** Corporate income tax is a core source of revenue in Korea, accounting

for 3 percent of GDP or 14 percent of total taxes, the latter the fourth largest among OECD countries. That makes it important to safeguard this source of revenue by limiting tax incentives that, in any case, are often ineffective in delivering intended results.<sup>5</sup> Honoring sunset provisions that exist for the elimination of various CIT incentives and introducing similar clauses for other special schemes (including those for various zones for foreign direct investment) would help. In addition, publishing on a regular basis ex post estimates and projections of revenue losses from tax incentives (so-called tax expenditures) would enhance fiscal transparency and contribute to the public debate on the use of tax exemptions.

- **Value-added tax and excises.** Korea makes relatively heavy use of consumption taxes, which raise more than one-third of all tax revenue. Korea's VAT rate of 10 percent is less than the OECD average of around 18 percent, however, and the VAT yield is around 4.5 percent of GDP compared with the OECD average of 7 percent. Although the Korean VAT is well designed, base broadening in line with international best practice could be a potentially significant source of additional revenue. In particular, there is scope for reexamining some of the less standard zero rates and exemptions, with a view to their elimination. To help offset any adverse impact on the most vulnerable, payments under social assistance programs could be adjusted upward. In the longer run, when gains from base broadening are exhausted, consideration could also be given to raising the VAT rate if necessary.

### *Expenditure reform*

On the expenditure side, discipline with respect to spending that is not age related and cost efficiency gains from health care reforms would also help. Today, approximately 60 percent of total central government expenditure in the median OECD country is in age-related categories such as education, health, and social protection; in Korea these expenditures come to only

around 25 percent. In particular, Korea allocates a relatively large share of GDP to public investment and economic affairs. The scope in Korea for reducing spending that is not age related appears limited, however, because overall public spending is already relatively low in Korea: at around 23 percent of GDP, total general government spending is around fifteen percentage points of GDP less than the average OECD economy and is the lowest after Mexico. Moreover, the government will likely face additional spending pressures from other sources, including its desire to strengthen the social safety net as well as the highly uncertain but potentially very large expenditures that could arise from reunification with North Korea.

What about health care reform? The projected growth of public expenditures on health and long-term care could be slowed, for example, by increasing contribution rates to the National Health Insurance (NHI). However, it is hard to argue that significant additional costs should be shifted to the consumers because the current system already puts a significant financial burden on them: it is estimated that the NHI finances only about 40 percent of total health care expenditure while consumers pay 42 percent; the remainder is covered by revenues from general tax, earmarked tobacco tax, and private insurance. In contrast, there is considerable scope for cost containment, for example, by implementing strict supply-side controls (including prices of inputs and fee charges) and enlarging the role of private health insurance schemes.<sup>6</sup>

### **Why Worry Now?**

Given that these pressures are still some decades away, it may be tempting to delay reform until the problems begin to manifest themselves more visibly. Such a strategy would be significantly more costly and disruptive. The closer to the time that action is undertaken, the larger the size of the required measures: to accommodate rapidly rising spending pressures, tax hikes will need to be larger and public services will need to be dramatically reoriented, with adverse macroeconomic impacts in the form of sizable

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5. For a review of the empirical evidence, see H. Zee et al., "Tax Incentives for Business Investment, Primer for Policymakers in Developing Countries," *World Development* 30, no. 9 (2002): 1497–1516.

6. See *OECD Reviews of Health Care Systems: Korea* (Paris: OECD, 2003).



declines in private consumption and investment, large current account deficits, and lower long-term growth. No matter what the precise package of reforms, the earlier the actions are taken, the less painful the adjustment because the needed realignment of revenue and expenditure policies can be more modest.

Acting earlier would not only entail a more modest fiscal effort but also deliver a bigger bang for the buck. If measures are taken within the next decade or so, for example, rather than later when the full effects of population aging begin to be felt around the mid-2030s, the size of the needed tax rate hikes or expenditure cuts, or both, could be reduced by one-third, while the macroeconomic environment would remain much more favorable. Implementing a combination of modest policies in a broad range of areas may not only introduce fewer distortions into the economy and generate superior long-run macroeconomic outcomes but may also prove more politically palatable, particularly if making reforms in any one area is deemed too difficult.

As elsewhere, of course, generating political and public support for the needed reforms will be difficult. Several industrialized countries that are facing fiscal pressures from changing demographics, including Australia, New Zealand, and the UK as well as the 25 member states of the European Union, have found that publishing a regular and publicly available long-term fiscal report can help to address long-term challenges in a comprehensive manner. Moreover, by helping to stimulate public debate and create an awareness of looming pressures that weigh on the conduct of fiscal policy, such reports can make it easier to build consensus around needed reforms. With the publication of its *Vision 2030* report, the Korean government has taken an important first step.

More can be done. Notably, the Korean government can project the long-term fiscal consequences of existing policies (the so-called bottom-up approach) as well as quantify the changes in revenue and expenditure that would be needed to achieve certain prespecified fiscal objectives, such as maintaining some desired level of public debt (the top-down approach). Under the top-down approach, a range of scenarios could be presented, each capturing a different manner in which spending and taxes can be adjusted to meet long-term

fiscal objectives and illustrating trade-offs that are likely to be faced.

## Conclusion

Aging faster than perhaps any other country in history, Korea is facing an unprecedented demographic shift. During the coming decades, Korea will be transformed in record time from one of the youngest populations in the OECD to among the oldest. In turn, this shift will challenge Korea's growth prospects and put tremendous pressure on the pension system and on expenditures for health care and long-term care, a situation that could lead to mushrooming debt levels and macroeconomic imbalances unless remedial actions are taken.

On the positive side, Korea has a tradition of fiscal prudence that inspires confidence that it will take steps to ensure that its fiscal position remains sound in the face of these pressures. Moreover, Korea benefits from a number of favorable initial conditions, notably still solid rates of economic growth, considerable scope for increasing tax revenue, and a low level of public debt. However, the unprecedented speed and magnitude of its demographic transition leave a relatively narrow window of opportunity. The key to achieving long-term fiscal sustainability is to act early and with a range of policy tools, including pension and health care reform, tax base broadening, improved tax administration, some reallocation of public expenditures, and boosting labor force participation rates of women and the elderly. Provided that the pressures associated with rapid aging are addressed early and with a judicious combination of measures, there is no reason why Korea cannot in coming decades continue to command a place at the center stage of the global economy.

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