© OECD 2012

Assessment and Recommendations

Among the fastest growing economies in the world

Korea has proven itself to be one of the world's fastest-growing countries, despite few natural resources and constant demographic pressures within a relatively small territory. Highly compressed economic growth since the 1960s propelled Korea to bring its per capita GDP to the level of developed countries. This strong economic performance has been supported by economic development strategies that have successfully evolved over time to adapt to changing priorities and global conditions. Total GDP was approximately USD 1 344 billion in 2008 (converted to Korean University of Technology PPP), while estimated national income per capita was about USD 27 000 in PPP in 2009, slightly below the OECD average. Korea has also consistently shown resilience to recent economic shocks, including the 1997 Asian financial crisis and the 2009 global economic crisis. It has been one of the first OECD countries to show signs of recovery from the most recent crisis, thanks to the implementation of a large fiscal stimulus package composed of additional public expenditures (3.2% of GDP) and tax cuts. However, a high level of household debt, exceeding 150% of household income, the heavy dependence of domestic consumption on imports, relatively low levels of labour productivity, and an ageing workforce have been identified as potential threats to Korea's continued economic success.

Economic development has been correlated with rapid urbanisation…

Korea's economic development since the 1960s has gone hand in hand with fast and unprecedented urbanisation. As industrialisation has advanced, more labour forces and capital have been absorbed into urban areas. Indeed, since the modernisation of the Korean economy, the shares of urbanisation and industrialisation have been strikingly and consistently correlated. While the real GDP of Korea increased almost 16 times between 1970 and 2009, its share of urbanisation also doubled during the same period, from 40.7% to 81.9%. As one of the most dense and urbanised countries in the world, its population density has consistently ranked highest among OECD countries since the 1970s. Further, Korea's population is increasingly concentrated in urban areas. While the percentage of the global population residing in urban areas increased from 33% to 51% between 1960 and 2010, Korea's share of urban residents jumped from nearly 28% to 83%, during this period. The country's urbanisation trajectory since the 1960s shows urbanisation patterns similar to those of developing countries, but more recent trends indicate that its current rate of urbanisation is comparable to trends in developed countries.

… and fuelled by large cities, especially Seoul

Urbanisation has taken place in a strongly polarised pattern. Most of the population increase and economic growth has occurred in a preponderance of large cities and their surrounding areas. In 2009, seven metropolitan cities, including Seoul, Busan, Daegeon, Incheon, Daegu, Gwangju and Ulsan, generated roughly 46% of national GDP and accounted for an equal share of the national population. The Capital Area, comprised of Seoul, Incheon and Gyeonggi-do, exerts an overwhelming influence in the Korean economy, representing 48.7% of Korea's GDP, 49% of its population, 46.8% of its firms and 49.6% of all jobs in 2009. In turn, the provinces of Gangwon, Chuncheongbuk, Jeollabuk and Jeju, which do not include any metropolitan cities and are comprised of large rural areas, continue to show a limited contribution to national GDP and employment. The emergence of some mid-sized cities is also of note. The population growth rate of mid-sized cities has surpassed that of large cities since 1990, and employment growth has steadily increased, particularly in cities with a strong manufacturing base. Unlike large and mid-sized cities, however, most small cities have experienced population loss, further reinforcing unbalanced growth patterns.

Unbalanced education attainment and demographic change may constrain Korea's future competitiveness…

Korea's overall progress in tertiary education attainment has been unprecedented among OECD countries, but advancement has not been uniform. While large cities have registered the greatest advances, cities with annual population growth rates lower than the national average tend also to register below-average rates of attainment in tertiary education. As a result, a shortage of human capital in smaller and/or lagging cities may threaten these areas' long-term competitiveness. Further, demographic changes are under way that will place increasing pressure on the labour force in general, and urban areas in particular. Over the past three decades, the share of Korea's elderly population has increased sharply, and the ratio is expected to exceed 14% by 2013. Korea is expected to become a "super-aged society" by 2026, according to Korea's National Statistical Office. Along with the accelerated ageing rate, low fertility rates will also contribute to the shrinking of the labour force. Between 2000 and 2005, the fertility rate in Korea had fallen to an average of 1.2 births for women of child-bearing age, less than half of the global average (2.7 births). Currently, given that the percentage of foreign skilled labour and the participation of female workers are well below the OECD average, the labour force will probably need to be supplemented with domestic or international workers.

The country faces increasing environmental pressures…

Korea's economic model and rapid growth over the past four decades, underpinned by a highly urbanised spatial form, have led to increased resource consumption and put growing pressure on the environment. Higher living standards, rapid urbanisation and an expanding industrial sector have made Korea one of the most energy-intensive economies and, in 2008, the tenth-largest energy consumer among OECD countries. Energy

consumption in the industrial sector, in particular, increased by 506% between 1980 and 2009 and continued to account for the largest share (nearly 58%) of total energy consumption. Producing less than 20% of its total primary energy supply, Korea depends heavily on foreign imports of oil and gas to meet national energy demand. As such, it is more vulnerable to fluctuations in international oil prices. The country's high levels of energy consumption have also been closely linked with rising levels of greenhouse gas emissions. Korea's greenhouse gas emissions almost doubled between 1990 and 2005, the highest growth rate in the OECD area. Concerns also exist that increasing air pollutants may degrade the environmental value in Korea, and especially in urban areas. Despite the implementation of strict regulations on air pollution since the late 1990s, air quality in Korean cities remains poor compared to other OECD countries. The Capital Area has the largest share, accounting for nearly one-third of all air pollutants in 1999 and again in 2007, reflecting its high concentration of population, infrastructure and transportation.

… resulting from the transportation and building sectors in particular

These growing environmental concerns underscore the need for Korean policy makers to target interventions in the transportation and building sectors. Together, these sectors comprise roughly 40% of the country's total energy consumption, after the industrial sector. Energy consumption in the transport section increased tenfold between 1980 and 2009, to 19.7% of the country's total consumption, sector, due in part to a 3 285% jump in vehicle registration applications during this period. As a result, CO_2 emissions have risen sharply (157% over the same period). There is also scope to reduce energy consumption in the building sector by improving the energy efficiency of buildings. Urban sprawl is a key concern among policy makers, and could be addressed through integrated land use and transportation planning. Despite progress in waste and water management, cities from heavily industrialised regions still generate high levels of waste, though waste recycling has improved, albeit unevenly, in cities. Disparities in access to clean water can be observed between large cities and rural areas. Finally, climate change impacts, including rising sea levels and temperatures, increasing precipitation and rising surface temperatures, also pose a significant threat to Korea's urban population, infrastructure and economic well-being. Korea, surrounded on three sides by the sea, has a large number of cities that rely on the sea for the fishing industry and the development of coastal areas for tourism, housing and port operations.

Urban policy has evolved over time to promote urban competitiveness

These socio-economic and environmental challenges threaten the competitiveness of many of Korea's cities and national urban policy will be required to adapt to changing conditions and priorities, as it has done with relative success in the past. While the industrial modernisation strategy of the 1960s-80s centred on polarised growth poles was effective in encouraging economic and industrial development, it nevertheless resulted in an over-concentration of population and industry in a few large cities, notably Seoul. This in turn led to shortages in housing and infrastructure, as well as urban sprawl. In the 1980s and 1990s, national urban policy objectives shifted to decentralise the Capital Area and

support more balanced territorial development. A second wave of reform occurred in the 2000s, with the adoption of the Fourth Comprehensive National Land Plan, signalling a shift in urban policy toward more qualitative urban development and a goal of maximising urban competitiveness. The Plan divides the country into seven mega-regional economic zones, which are linked with and complemented by supra-economic regions and 161 daily living spheres. Nevertheless, Korea's new three-tiered territorial framework could be limited unless the government assists in building co-operative programmes that are significant in terms of budget and economic impact.

Yet efforts are needed to improve policy co-ordination and coherence among ministries…

Policy co-ordination across central governments and between central and local governments could be enhanced in Korea. Despite the wealth of initiatives to foster the competitiveness of urban areas, Korean urban policy typically exhibits a certain lack of co-ordination at both the ministerial and local levels and would benefit from the development of a more comprehensive, multi-sectoral approach to urban development. As in many OECD countries, an integrated approach to urban development in Korea has been stymied due in large part to the fragmentation of administrative mandates across a range of central ministries. The Presidential Committee for Regional Development (PCRD) emerged in 2008 as the main national body for resolving inter-ministerial issues, yet lacks the statutory powers to enact policies and determine priorities among matters administered by a range of independent ministries. To foster the development of a co-ordinated national strategy, Korea could consider establishing an interministerial regional development agency at the national level to implement the regional policy of the government, similar to the *Délégation Interministérielle à l'Aménagement du Territoire et à l'Attractivité Régionale* (DATAR) in France. Its task would be to co-ordinate and implement the regional policy of the government. It could also help to promote the internationalisation and competitiveness of Seoul and other large cities.

… and local governments

Co-operation among local governments has historically been weak in Korea, as local governments have tended to see each other as competitors, rather than partners, in urban development. The proliferation of separate plans to guide spatial planning, economic development and sectoral development at the sub-national level have further hindered an integrated approach to urban development. To improve inter-municipal policy co-ordination, local resources could be pooled to deliver urban services including transport, training and urban regeneration, based on an urban functional area (rather than administrative boundaries). The development of a "micropolitan" scale, similar to the metropolitan statistical area in the United States, could be a useful tool for reinforcing inter-municipal partnerships among Korea's 161 daily living spheres. As in many OECD countries, developing city networks and delivery agreements by mandating or incentivising contractualisation at the metropolitan or micropolitan levels could also be applied to Korea. Various approaches to inter-municipal contractualisation (particularly the introduction of multi-sectoral contractual procedures at the metropolitan level) have been successful in France, Switzerland and Canada.

Urban policy will need to adapt to changing demographic conditions…

Urban policy could also be reformed to adapt to demographic trends, notably an ageing and more ethnoculturally diverse population. Public expenditures will be under pressure to expand in order to provide appropriate health services for the elderly, posing an increasing financial burden on urban areas, especially in declining cities, which generally have a higher share of elderly residents and suffer from limited financial revenues. Changes will also be needed at the level of housing, the built environment and transportation policy to adapt to a growing senior population. The Korean government could increase the supply of independent senior housing, as has been attempted in Japan. Zoning regulations could be modified to permit small, vacant spaces for construction projects for the elderly, as in Denmark and Sweden, or to allow accessory dwelling units, as in Portland. Transportation policy could be adapted to take into account the fact that the elderly typically travel shorter distances. Strategies could be pursued to facilitate alternative service provision to the elderly, calling on voluntary organisations to provide services to seniors and equipping the elderly with information and communication technologies to bring services closer to home. To better incorporate the growing immigrant population into the urban economy, the government could adopt measures that encourage immigrant entrepreneurship, promote cultural diversity and incorporate ethnocultural elements into urban design, as has been pursued in Sydney, Australia, and elsewhere.

… and tailored to the needs of different cities

National urban policy in Korea could be refined to become more flexible and tailored to the specific aspects of different cities. Urban policies could be developed in consideration of the differences in city size, geographical characteristics and economic performance. Seoul, as the driver of the country's global competitiveness, should be the subject of a specific urban strategy. To enhance the competitiveness of the Capital Area, policy intervention at both the state and metropolitan level would need to address the negative externalities of agglomeration, including high density and heavy congestion costs, and intense competition in both low- and high-tech industries from other countries with lower labour costs. The competitiveness of large cities outside the Capital Area with high growth potential could be enhanced by improving innovation capacity and integrating the innovation policies of central cities with their hinterlands. France's experience with the competitiveness poles and Finland's development of eight large city-regions outside Helsinki could provide useful benchmarks. To regenerate the economic functions in lagging cities, particularly those of many small- and medium-sized cities, policies could look beyond past regeneration projects that focused solely on housing construction and instead develop lively urban spaces that restore economic value, improve public and community services and assist local residents in business creation, as experiences in the UK have demonstrated. Facilitating cross-border co-operation at the urban level could also help to enhance the competitiveness of cities.

To improve planning outcomes, Korea could make greater use of urban modelling…

As in many OECD countries, urban planning does not always generate the expected outcomes, particularly in areas where development pressure is high. For instance, target populations are often over-estimated in order to secure additional budget resources from the central government, leading to overdevelopment and overinvestment in certain areas. Further, it is often difficult to assess whether the long-term strategic plans in Korea have their intended impact, due in part to a weak link between planning, implementation and monitoring – a challenge faced by many OECD countries. In order to close the gap between the expected and actual outcomes of urban plans and policies, Korea could consider increasing the use of modelling as a means of testing potential policy outcomes prior to policy implementation. An urban modelling exercise applied to the Capital region, for instance could be used as a tool to help policy makers make more informed decisions about spatial infrastructure. These types of exercises require that more geospatial data be made available to local governments. While the Korean government is currently establishing national spatial data infrastructure, further improvements could be made to update the data and generate historical data (*e.g.* the National Historical GIS in the US and the Great Britain Historical GIS in the UK).

… and ex post *evaluation*

To improve the continued relevancy of municipal urban plans and ensure that plans meet expected outcomes, the Korean government could provide technical assistance to local authorities to measure plan implementation and compliance. Methods might include conformance-based approaches, such as the application of a "planning monitor" to measure the extent to which the goals and the objectives of the plan are met. Developing indicators to measure "effectiveness" and "relevance" of municipal urban plans could be useful to assist the national government in understanding current urban spatial structure and assessing the policy impacts on urban competitiveness. The guidelines for planning evaluation established by the United Nations Human Settlement Programme, as well as the experience of Portland, Oregon (United States) may prove instructive.

The first country to produce a comprehensive national green growth strategy…

Korean urban policy has also permeated cross-cutting policy issues, such as green growth. In the midst of a global financial crisis that revealed the limits of the traditional Korean growth model and as a response to growing economic and environmental pressures, Korea launched the *Green New Deal* (2008), a stimulus package of USD 38.5 billion, followed by the *National Strategy for Green Growth up to 2050* (2009). These flagship initiatives signalled a new growth paradigm to guide long-term economic development. The strategy, which aims to mitigate climate change, create new engines for economic growth and improve quality of life, marks a shift from Korea's historically quantity-based consumption model, dependent on a highly energy-intensive industrial sector, to a quality-based model centred on green technological advancement and low-carbon production from renewable energy sources. The Strategy is accompanied by a Five-Year Plan, which identifies specific policies,

quantifiable objectives and concrete projects designed to meet the objectives of the national strategy, and includes explicit allocations from the national budget to meet each objective. Over half of the plan's budget (KRW 61 trillion) is allocated to two major national infrastructure projects: the ongoing expansion of Korea's high-speed rail network and the Four Major Rivers Restoration project.

… with an explicit urban dimension

The effectiveness of Korea's green growth agenda will largely hinge on the contribution of urban areas toward more sustainable, greener growth. The nationally led, top-down institutional approach to green growth in Korea, co-ordinated by the Presidential Committee on Green Growth (PCGG), is compelled to incorporate an urban dimension, given the key economic role and environmental footprint of cities. Legal and institutional frameworks have been established to implement the National Strategy for Green Growth at the local level. Preliminary evidence suggests that the National Strategy has been effective in spurring green growth actions at the local level. For instance, the national government's commitment to cut greenhouse gas emissions by 30% relative to the projected level in 2020 has spurred a number of metropolitan city and provincial (*do*) governments to set their own emissions reduction goals and to establish local greenhouse gas inventories. Several demonstration projects have been launched to invest in renewable and clean energies or develop green technologies. Some local governments have also taken an active role in raising public awareness on green growth, for instance encouraging a network of volunteers to spread a low-carbon lifestyle, which now exists in over 200 cities and lower levels of government.

Stronger outcomes could be achieved by greening transportation…

Given that the implementation of Korea's National Strategy for Green Growth is still in its early stages, a robust assessment of its economic and environmental impacts would be premature. Nevertheless, several preliminary recommendations could be made in order to enhance green growth outcomes at the local level. The transportation sector could be further "greened" via the expansion of market-based instruments, such as fees, tariffs, taxes or tradable permit schemes. Local governments could consider implementing parking policies in highly congested zones that differentiate pricing based on resident and non-resident status, location, time of day and/or types of vehicle. Combining disincentives for private vehicle use with incentives for alternative modes (*e.g.* public transit, walking and cycling) could be effective. Seoul's limited congestion charge could be expanded to other areas of Seoul, and to other cities, provided that complementary measures (such as improvements to public transport) are pursued to increase political acceptability. Further, market-based instruments could be combined with a non-market-based approach. Flexible zoning regulations that limit vehicle access (or the access of certain types of vehicles, such as heavy trucks) in congested zones could be implemented. Governments could commit to invest revenues from other fines into public transportation improvements and urban amenities. Finally, transit-oriented development (TOD) projects, which emphasise higher density and mixed-use development, could be more actively pursued and combined with public investment in public transport.

… and the building sector

To green the building sector, market-based measures such as grants, subsidies, tax cuts and credits could be developed to encourage investment in energy-efficient appliances and projects. In particular, the government could provide landlords and homeowners with incentives for implementing energy efficiency upgrades or offer direct subsidies to homeowners to install energy-efficient equipment, who are more likely than tenants to invest in energy-saving equipment. Non-market-based instruments could further increase Korea's greening capacity. In addition to current regulations that have recently been adopted, including reinforced building codes and the mandatory estimation of energy consumption, the government could establish incentives (or disincentives) for regulating the energy consumption behaviour of existing residences and look to increase consumer awareness of the benefits of green building through eco-friendly building certificates or energy efficiency grading instruments. Finally, special attention could be paid to integrating transportation and land use planning to achieve greener growth. A compact, transit-oriented development strategy could effectively underpin complementary market-based measures, such as comprehensive road charging in cities and parking tariffs, and non-market-based interventions, such as energy efficiency labelling and more sustainable building codes.

Cross-sector policy coherence should be prioritised…

To enhance the implementation of the National Strategy for Green Growth, especially in urban areas, there is a need for clear market signals and greater policy coherence across all sectors and levels of government. Korea faces co-ordination challenges as a result of the involvement of different government ministries and agencies and the co-existence of separate plans for municipal economic development, spatial development and sectoral development. The establishment of clearer pricing signals could help guide investment in green growth at the sub-national scale (*e.g.* putting a price on pollution or on the over-exploitation of a scarce resource through taxes or tradable permit systems), minimising costs and providing incentives for further efficiency gains. At the same time, a comprehensive, multi-sectoral national urban development plan could be pursued to generate more effective green growth outcomes. Employing partnership development tools such as a Memorandum of Understanding (which was successful in reconciling the divergent interests of central and local authorities involved in the Model City project in Gangneung) can help clarify roles and responsibilities. Policy coherence at the urban/regional level could also be pursued by integrating transportation and land use planning. Compact development strategies that mix land uses and improve mass transit services are relevant policy initiatives in this regard.

… and co-operation among local governments incentivised

Korea could foster greater horizontal co-ordination among local governments in order to maximise financial and human resources, facilitate knowledge spillovers and help tackle congestion, air pollution, health problems and greenhouse gas emissions. Horizontal co-operation for pursuing green growth actions is especially important, since local leaders

tend to have varying levels of fiscal and technical capacity to respond to climate change. Several policy mechanisms, including contractualisation tools, could be developed to achieve greater co-operation among local governments. These types of collaborative arrangements should, however, be adapted to different regional contexts to avoid a "one-size-fits-all" approach, an inherent risk of nationally led programmes.

Effective implementation will require more diversified funding sources at the sub-national level…

Green growth implementation in most urban areas is hindered by a dependency on central government funds, reflecting a more general problem of low self-reliance ratios in Korean cities (the average fiscal autonomy of Korean local governments was 52.2% in 2010). With the vast majority of the total green growth budget financed by the central government, the sustainability of local programmes is at risk, particularly in urban areas. Existing transfers from the central government could be redesigned to correct incentives in favour of green growth actions. New "green" revenue sources could be introduced at the urban level (congestion charges and road taxes). New financial instruments, especially public-private partnerships, could be actively pursued at the local level. The central state could assist by providing sample business models, developing guidelines and reinforcing the technical capacity at the local level. Local governments could also provide incentives related to their competences, for example sharing costs or offering infrastructure, in co-operation with the central government. There may also be scope to redesign the current property tax scheme which tends to incentivise urban sprawl; property tax could instead be reformed to encourage denser development within urban cores and around transportation linkages.

… and local capacity building efforts to assess progress over time

Finally, as in many OECD countries, inconsistent (or non-existent) methodologies for establishing local emissions inventories hamper the ability of Korean cities to assess progress toward green growth over time and across locations. Building capacity at the local level and developing measuring and monitoring tools could help address these challenges. The national government could assist local governments in enhancing their technical and fiscal capacity to develop inventories, by establishing a common methodology and by monitoring progress on the environmental and employment impacts of green growth policies. In particular, the development of harmonised city-scale greenhouse gas emissions inventories could help to monitor, support and compare mitigation performance across urban jurisdictions. The responsibilities of the Greenhouse Gas Inventory and Research Centre (GIR), established by the central government in June 2010, could be expanded to include the co-ordination of regional and local emissions data, in addition to the sectoral data it already collects from other relevant ministries.

From:

OECD Urban Policy Reviews, Korea 2012

Access the complete publication at:
https://doi.org/10.1787/9789264174153-en

Please cite this chapter as:

OECD (2012), "Assessment and Recommendations", in *OECD Urban Policy Reviews, Korea 2012*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/9789264174153-3-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.