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LESSONS FROM KOREA

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Industrial Policy and Territorial Development

Lessons from Korea

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Foreword

The relationship between industrial and technological catching up and territorial development is a major economic development puzzle, both in theory and in practice. Industrialisation and technological catching up are key ingredients for national development; but there are no automatisms that guarantee that the benefits will be equally distributed across the territory and the society, and that positive backward and forward linkages will be established, thus fostering an inclusive and more resilient production structure. How to support industrialisation avoiding territorial and social exclusion is a common concern for OECD and non-OECD economies. There will be no unique response to this challenge, but there are good policy principles that can be shared and lessons to be learned from the experience of other countries.

In the framework of the OECD Development Centre work on production development and innovation and as part of the knowledge sharing initiative, this report reviews the Korean experience in fostering industrialisation and technological catching up, highlighting the reforms and policies that have been put in place to address regional development. Korea is a well known success case of catching up, but less is known about the policy efforts to support a more balanced development and to foster the development of regional innovation systems. This report describes the process of integrating the territorial perspective into the national development strategy and identifies some lessons for developing economies.

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Preface

The OECD Development Centre, as a policy dialogue platform between OECD and non-member countries, undertook this study with the aim of sharing knowledge with developing and emerging economies from the Korean experience in industrial and territorial development. Emerging and developing economies are heterogeneous. They differ in assets, resources and institutional capabilities; but there are common features of the development process that make knowledge sharing a valuable exercise for policy making.

Industrial development and innovation are recognised as drivers to sustain inclusive and sustainable growth in the long term. For this, governments will need not only to facilitate the efficiency of markets and to ensure the expansion of current endowments and capabilities, but also to ease the creation of new sectors and new enterprises. In successful catching up countries, such as Korea, development entailed a combination of industrial and innovation policies, effective rent management schemes, investments in human capital and infrastructure and private sector commitment. However, less is known about the territorial side of development strategies; in particular *when* in the development phase and *how* governments can intervene to support a more balanced development pattern and mobilise untapped sources of growth.

Territory matters indeed for development. On the one hand, social, economic and institutional characteristics of the environment contribute to the productivity of firms and their capacity to cope with rising competitive pressures. Among other things, territories are, in fact, the expression of know-how linked to cultural, social and institutional dimensions that are not easily transposable and which shape development trajectories. The experience of OECD and non-OECD economies shows that institutions and policies are needed to address the territorial dimension in national development strategies both for reasons of efficiency (untapping new potential sources of growth) and of equity (creating balanced opportunities and equal service delivery). On the other hand, regional governments can be pivotal in supporting new business models or forms of innovation and could mobilise production development in their region, if endowed with capacities and resources. Support to development of micro-enterprises and small and medium enterprises is also more effective when done in partnership with local agencies and actors. Usually, externalities and complementarities between policies are more apparent at the local level.

This study reviews the development strategy of Korea, focusing on the evolution of industrial policies for regional development. It analyses the learning process in policy making and identifies lessons that could be helpful for developing countries today. Regions can become growth engines for national development. For this, local governance must be strengthened, functional regions defined and resources assigned to regions with clear targets. This study is a timely reflection upon the interplay between industrial policies and regional development as several emerging and developing countries face today the double challenge of finding new engines of growth and achieving social equity.

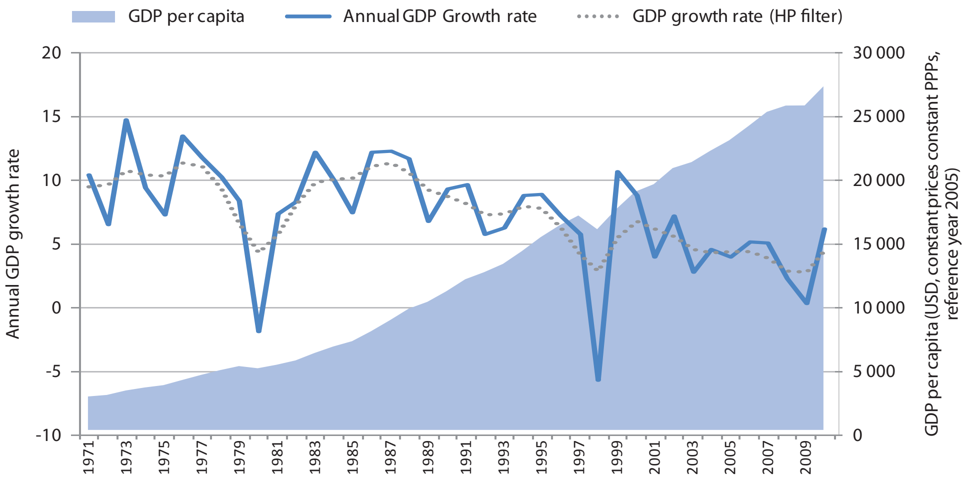
Mario Pezzini
Director
OECD Development Centre
April 2012

Executive summary

Korea is a well-known case of successful catching up achieved through an effective government-led export-oriented strategy.

Korea is one of the few countries in the world that has managed radically to transform its domestic economy from one based on agriculture to that of a leading world industrial power, with a constant increase in income per capita and a high growth pattern (Figure 1). Industrialisation and the shift from light to heavy and chemical industries boosted the rising growth pattern and favoured a virtuous integration into foreign markets (Figure 2).

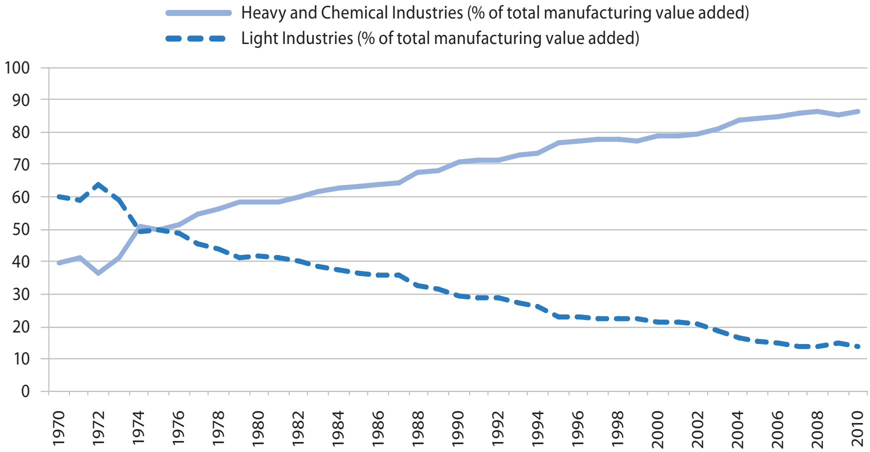
Figure 1. **GDP growth and income per capita, Korea, 1971-2010**



Note: Hodrick-Prescott (HP) filter is commonly used to smooth trends of macroeconomic series such as GDP to identify the long run path of economic series.

Source: OECD Development Centre on the basis of OECD Database, National Accounts and Economic Outlook No.90, December 2011.

Figure 2. **Structural change: from light to heavy and chemical industries, Korea, 1970-2010**



Note: Light industries include: food products, beverages and tobacco, textiles, leather products, wood, paper, printing and publishing products, furniture and miscellaneous activities. Heavy and chemical industries include: petroleum, coal and chemical products, non-ferrous metals, metal, general machinery, electrical and electronics, precision equipment, transport.

Source: OECD Development Centre on the basis of Bank of Korea, Korea Statistical Information System (KOSIS).

The Korean catching up has been the result of a deliberate national development strategy which fostered industrialisation in heavy and chemical industries through sequenced and complementary policy interventions. The government targeted the creation of domestic industrial capacities (through a mix of export promotion and import controls), the development of education and skills, infrastructure building, and actively managed capital markets.

Key policy tools have been the Five Year Economic Development Plans. From 1962 to 1992, the Korean government established seven plans which set clear targets, identified lines of actions and assigned resources to achieve them. A distinctive characteristic of the multi-annual plans has been the gradual upgrading of targets as objectives were achieved. Actions in key policy fields were sequenced and coherent with each other. Industrial policy prioritised industries with increasing knowledge content, trade policies selectively managed import restrictions and export incentives, and exchange rates were managed to favour exports of national products. Policies for human capital prioritised first literacy and later excellence in training and research, accompanying the rising demand for skilled labour by the domestic industry.

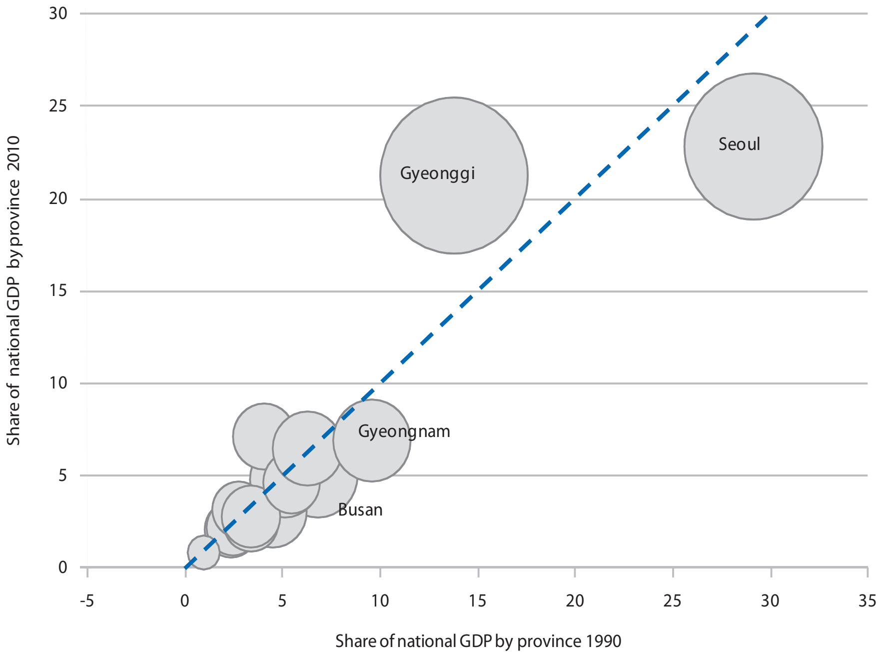
The government supported modernisation and technological upgrading of domestic industries by gradually promoting the creation of domestic scientific and technological capabilities and by supporting learning. In the first stages the government focused on reverse engineering and learning from foreign best practices; since the 1970s it has invested in the creation of government research institutes to favour the development of domestic capabilities. Since the 1980s, the government carried out research and development (R&D) and gave incentives to the private sector for investing in R&D. By the 1990s, the *chaebols* (Korean conglomerates), were highly committed to R&D and the government widened the policy mix for R&D to include support to venture business in line with the rising demand from the private sector.

But the catching up has not been translated into equal opportunities for all the provinces in the country.

The industrialisation process shaped the economic organisation of the territory. It favoured the development of the Capital Region and the coastal areas in line with the country's export-orientated strategy. The government targeted public investments in specific locations chosen to host industrial complexes and scientific and technological centres. The proportion of the population living in urban areas rose from 20% in the 1950s to 80% in 2010, while population increased from 32 million in the 1970s to almost 49 million in 2010. Korea is the OECD country with the highest share of its national population living in large metropolitan regions (*i.e*. predominantly urban regions with a population of at least 1.5 million). In 2008, 70% of the total population were living in large metropolitan areas, compared with an OECD average of 38%.

The catching up has not been translated into equal opportunities for all the provinces of the country. About 50% of total national GDP is generated by Seoul and Gyeonggi provinces (Figure 3). Although all Korean provinces have experienced an increase in Gross Domestic Product (GDP) per capita since the 1990s, they are growing at a slower pace than before and there has been an increase in disparity of income per capita between regions (Figure 4). Since the mid-1990s, several attempts have been made to counterbalance the trend of over-concentration of economic activities, business services, and top quality education in the Capital Region. In recent years, there have been some improvements, with the development of specific industries in the non-Capital Region. However, regional development is a recent priority in the Korean development strategy and the country is in the process of defining the governance, the tools and the incentives for addressing territorial imbalances. Some results have been achieved, but Korea still has progress to make in creating business development opportunities more equally in its provinces.

Figure 3. **Contribution to national GDP by province, Korea, 1990 and 2010**

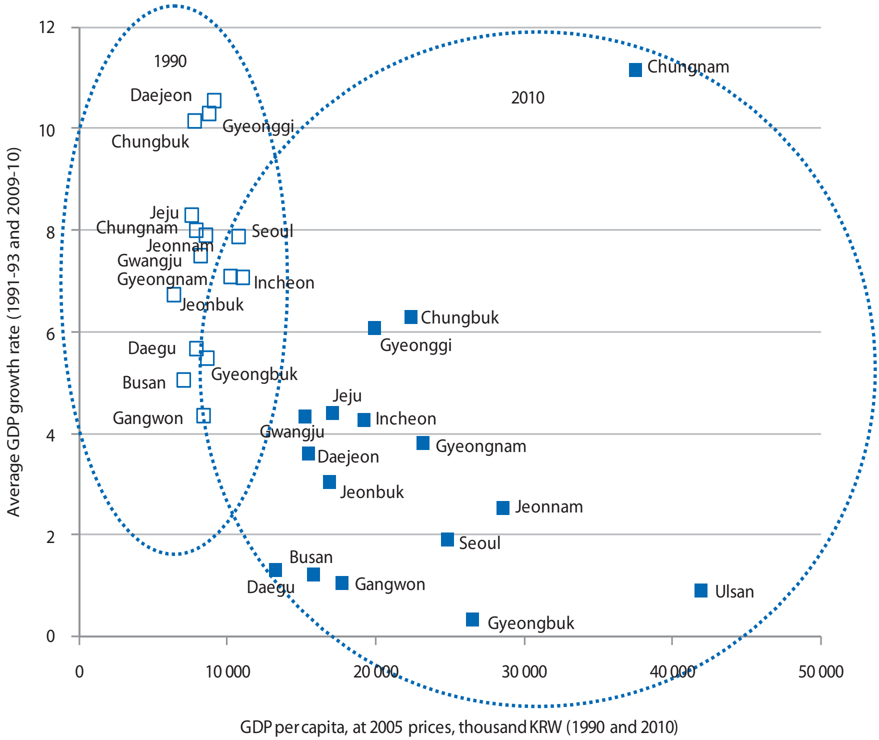


Note: bubble size is the share of national population by province in 2010.

Source: OECD Development Centre on the basis of Korea Statistical Information System (KOSIS).

Regional disparity is linked to limited access to top quality education and a shortage of opportunities for entrepreneurial development in the regions. The country has been able to deliver infrastructure and public services, such as health, to citizens reasonably evenly across the country through effective national development programmes, but education and business opportunities are still highly concentrated in the Capital Region.

Figure 4. **GDP growth and GDP per capita by province, Korea, 1990 and 2010**



Source: OECD Development Centre on the basis Korea Statistical Information System (KOSIS). Note. Gyeongnam in 1990 included Ulsan.

During the early catching up phase national policies favoured an "efficiency approach" in territorial planning over equity.

During the early catching up phase, national policies nurtured investment in the Capital Region and in strategic locations for exports. This, beyond the financial constraints of the early 1960s, was also explained by the highly top-down and centralised approach to policy making and by the reliance on big national conglomerates as main production agents. This phenomenon, coupled with the scant financial autonomy available at provincial levels, left local levels with reduced demand and supply capacity to stimulate the local economy.

There are no automatic mechanisms that favour the trickledown effect of catching up within countries. Targeted policies are needed to support a more balanced growth and to foster the development of successful local and regional production systems. In Korea the prevailing approach has been focused, until quite recently, on reducing concentration in the Capital Region instead of a pro-active approach targeted at supporting development in regions.

The consolidation of democracy, the search for new sources of growth in the aftermath of the Asian financial crisis of 1998, and the shift towards the knowledge economy paradigm determined the upsurge of the "regional development question" in Korea in the mid-1990s.

As the democratisation process advanced, reforms were introduced to give more power and responsibilities to sub-national governments. The introduction of elections for the executive councils of local governments and for local council members in 1994 established the institutional basis for a more bottom-up approach in policy making. The birth of the regional development question in Korea is due to the combination of three factors:

- The Asian financial crisis of the late 1990s required finding new sources of growth. Greater attention was directed towards local and regional innovation systems to relaunch national growth.
- The emerging priority of the knowledge economy required broadening the technology-centred focus of industrial policy to incorporate innovation. As a result, Korea started to prioritise knowledge-based industries and information technology. The innovation imperative has been matched by a rise in the attention paid to local and regional production dynamics on the basis of international experience that showed the importance of environment, location and interactions for innovation.
- The 2008 financial crisis added calls for new solutions to relaunch growth and address social and environmental concerns. The new, uncertain scenario gives a new role to the territories as socio-economic spaces in which competences, know-how, and potential breakthroughs are nested. Regions appear as key allies in the mobilisation of talents and capital for creating jobs and new business opportunities in greener and more equitable societies.

In Korea, the debate on regional development started later than in other countries; however, the discussion caught up quickly, shifting from compensation logic to the competitiveness approach.

Regional development policies started to feature explicitly in the Korean national development agenda only from the end of the 1980s. In the early phases of the Korean catching up strategy regions were mainly "locations" where priority industrial complexes were built. Regional governments were managed by governors appointed by the central government and did not have an active role in policy planning or implementation. This differed from the trajectory of other OECD countries, in which regional development emerged in national policy agendas as early as the 1950s and 1960s together with the boom in industry.

Consideration of the territory as an agent for policy planning and implementation has been largely neglected in Korea. However, the country rapidly caught up in the policy paradigm compared with other countries. Since the end of the 1990s, Korea first introduced specific programme targeting activities in selected regions, then extended promotion programmes to all provinces (excluding the Capital Region) by targeting balanced growth. Since 2008, in line with current trends in OECD and emerging economies, Korea has been prioritising regional competitiveness and has introduced a more sophisticated policy package for supporting regional development targeting actions on different spatial scales, beyond administrative boundaries.

Since 2008, the government has introduced a paradigm shift in regional development policy aligning the national debate with international trends (Table 1). The Organisation for Economic Co-operation and Development (OECD), as well as other international organisations including the European Union (EU) and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) have recently re-emphasised the role of territory and of regions in shaping virtuous national development trajectories. Also, a rising number of countries, including Germany, Italy, and Spain, as well as Argentina, Brazil and India, are prioritising regional development to industrial competitiveness and inclusive growth. In Korea, since 2008 regional development policy has no longer been considered as compensation for regions outside the Capital Region, but as a tool for supporting competitiveness in regions.

Table 1. **The paradigm shift in regional policy: from balanced growth to competitiveness**

Korea	Traditional policy paradigm	New policy paradigm
Role of regional policy	Eradicating spatial problems created by economic development	Promoting economic development
Goals/objectives	Expanding production size economic efficiency	Stimulating competitiveness enhancing quality of life
Implementation	Central government initiatives	Local government and private sector initiatives
Investments	Equal investment to all localities	Selective investments on the competitive sector and areas
Policy priority	Economic growth	Strengthening innovation capability

Source: KIM, Y. (2009), *Spatial Changes and Regional Development Policy in Korea*, Chungnam Development Institute.

The policy for regional development in Korea evolved from specialised programmes targeting specific regions to a more articulated scheme in which different programmes support industrial development on different spatial scales (supra and intra-regional scales).

The paradigm shift in policy, from balanced growth to competitiveness, required adjustments in governance, in resource allocation, and in the policy mix (Table 2).

During the first phase (1998-2003) regional policy was a “specialised” policy implemented through specific programmes targeting strategic industries in few selected provinces. The Ministry of Commerce, Industry, and Energy introduced the Regional Industrial Promotion Programme (RIPP) to develop industrial clusters outside the Capital Region (*e.g.* textiles in Daegu, footwear in Busan, optical electronic industries and photovoltaics in Gwangju, and machinery in Gyeongnam Province).

Throughout the second phase (2003-08), the government introduced balanced development as a national priority. It established the legal foundations for the national policy on regional development and introduced the first governance improvements towards more decentralised policy approaches. In this phase the objective was to reduce disparities between regions and favouring deconcentration outside the Capital Region. Major policy tools have been the techno parks.

In the third phase (2008-11) regional development policy started to focus on mobilising growth in regions. In this phase the government increased the resources for regional development; designed new programmes to foster cross-regional collaboration, mainly managed by the Ministry of Knowledge Economy; and created Economic Regional Committees to support bottom-up initiatives and development planning in regions.

Today regional policy aims to mobilise untapped sources of growth and marshal innovation potential in all regions by stimulating bottom-up initiatives and networks. The logic shifted from a distributional to a discriminatory approach which targets all regions but in a differentiated way according to their challenges and potentials. The new paradigm calls for a greater space for private sector development and local government actions. The transition is recent and it is still ongoing, but the evolution in governance and resource targeting, as well as in the policy mix, are promising steps.

Table 2. **Evolution of policies for regional development in Korea**

<table>
<tr><th colspan="2">KOREA</th><th>1998-2003
Kim
Administration</th><th>2003-08
Roh
Administration</th><th>2008-12
Lee
Administration</th></tr>
<tr><td rowspan="2">National development strategy</td><td rowspan="2">Main growth model</td><td colspan="3">Export-led growth – focus on the knowledge economy</td></tr>
<tr><td>Globalisation</td><td>Balanced growth</td><td>Green growth</td></tr>
<tr><td rowspan="5">Regional development policy (RDP)</td><td>Phase</td><td>Origins of RDP specialised policy targeting specific industries in specific regions.</td><td>Expansion of RDP and creation of legal framework.</td><td>Consolidation, focus on “Economic Regions”.</td></tr>
<tr><td>Rationale</td><td>Finding new sources of growth
Consolidation of democracy at provincial and local level.</td><td>Promoting balanced growth
Addressing excessive concentration in Capital Region.</td><td>Supporting regional competitiveness.</td></tr>
<tr><td>Main targets</td><td>Promotion of industrial development in 4 selected provinces.</td><td>Promotion of industrial development in all Korean provinces.</td><td>Promotion of industrial development by targeting functional regions (economic regions, provinces and local areas).</td></tr>
<tr><td>Governance</td><td>Central government initiative</td><td>Establishment of the Presidential Committee on Balanced National Development (PCBND)
Creation of Regional Innovation Agency (RIA).</td><td>Creation of Presidential Committee on Regional Development (PCRD)
Establishment of Economic Region Development Committees (ERDC).</td></tr>
<tr><td>Plan and resources</td><td>No major institutional changes for addressing regional development.</td><td>5-Year Plan for Balanced National Development (2004-08)
Special Account for Balanced National Development.</td><td>5-Year Plan for Regional Development (2008-13)
Special Account for Regional Development.</td></tr>
</table>

KOREA		1998-2003 Kim Administration	2003-08 Roh Administration	2008-12 Lee Administration
National development strategy	Main growth model	Export-led growth – focus on the knowledge economy		
		Globalisation	Balanced growth	Green growth
Regional development policy (RDP)	Policy programmes and tools.	Regional industry promotion programme (RIPP) (4 major specialised industries in 4 metropolitan cities and provinces).	Regional industry promotion programme (RIPP) (in the 4 provinces and support to additional 9 provinces) Techno parks.	Leading Industries (5+2 Economic Regions) Strategic Industries (provinces) Region Specific Industries (local areas).

Source: OECD Development Centre; draws on and updates KIM, D., D. LEE, G. KIM, S. JUNG and M. CHO (2011), *Regional Industrial Policies in Korea*, background document elaborated for the OECD Development Centre by KIET, unpublished.

The Korean institutional framework is highly centralised; but the shift towards increasing the margin of manoeuvre of regional authorities is in progress.

Since the mid-1990s the country has implemented a series of reforms to increase decentralisation in the public sector in line with the objective of balanced growth. However, decentralisation efforts are recent and the potential for improving the policy space for regional development has still fully to be realised. Local governments, which have been elected since 1994, have little autonomy and space for strategic planning; national priorities play a key role over the demands of the local constituency. This is increased by the limited financial autonomy of local governments which are highly dependent on central government transfers for the implementation of policies and service delivery.

Korea, when compared with other unitary countries, shows an intermediate degree of delegation of powers to local authorities in the fields of industrial and technological development, taking into account both the institutional setting (*i.e*. whether the country is a federation or a unitary country and whether regional authorities are elected or appointed by the central government) and the effective empowerment of regional institutions in the fields of industrial and technological development (Table 3). This depends on a variety of factors including effective delegation of responsibilities, financial capacities, institutional development at the regional and local level, and the existence of spaces for dialogue and consultation between levels of government.

Table 3. **Institutional framework for regional industrial and innovation policy**

	National multi-level governance setting		
Degree of devolution of STI issues to sub-national authorities	Federal countries	Countries with elected regional authorities	Countries with non-elected regional authorities or decentralised state agencies
High (Significant role of States/Regions in STI issues)	Austria, Belgium, Germany, Australia, Canada, Switzerland, United States, Brazil	Italy, Spain, United Kingdom (Scotland, Wales, Northern Ireland)	--------------------
Medium (Some decentralisation in STI issues to States/Regions)	Argentina Mexico Russia Malaysia	France, Netherlands, Poland, Sweden (pilot regions), Norway, Denmark (autonomous regions) Korea, Colombia	United Kingdom (English regions), Sweden (except pilot regions)
Low (Scant role of Regions in STI issues)		Denmark, Slovak Republic, Turkey, Czech Republic, Portugal (autonomous regions) Chile, Japan South Africa	Hungary, Ireland, Portugal (mainland) Greece, Finland, Luxembourg, Iceland, New Zealand, Slovenia Indonesia Morocco

Note: The degree of devolution of competences in innovation-related matters is subject to change. Information reported in this table refers to the first semester of 2010 for OECD countries, and to second semester of 2011 for non OECD economies. STI means Science, Technology and Innovation.

Source: Draws on and updates OECD (2011), "Regions and Innovation Policy", *OECD Reviews of Regional Innovation*, OECD, Paris.

In the 2000s Korea established a Presidential Committee for Regional Development, assigned a specific (and rising) budget to regional development by the creation of a Special Account, and identified different spatial scales for targeting resources to regions.

Addressing regional development requires strong political support and a mechanism to target resources at regions. In 2004, Korea introduced a Special Account for Regional Development with the double objective of increasing resource transfer to regions and of targeting specific national programmes at regions outside the Capital Region.

The Special Account for Regional Development in Korea is composed of three accounts:

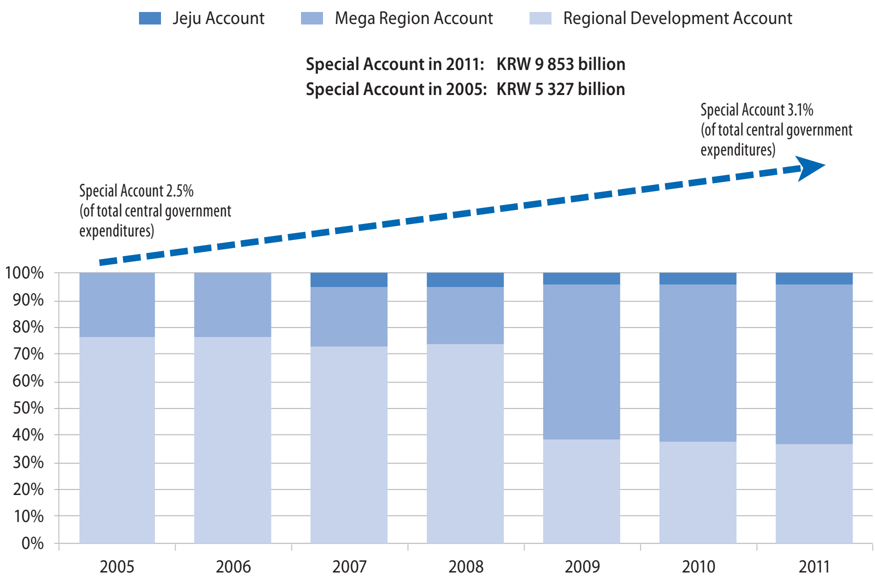
- Mega Region Account (59% of the Special account in 2011) is distributed to different ministries for implementing regional targeted programmes in 13 provinces, excluding the Capital Region. It requires line ministries to compete for access to the resources. The MKE administers around 25% of the Mega Region Account, assuming the core responsibility in managing regional development programmes. The Ministry of Land, Transportation and Maritime Affairs administers about half of the Mega Region Account. Other ministries such as the Ministry of Education, Science and Technology also carry out regional projects in their respective fields.

- Regional Development Account (37% of the Special Account in 2011) is transferred directly to all provinces; it increases the margin for local government to draw up and present programmes in line with their priorities.

- Jeju Account (4% of the Special Account in 2011), a special account for the only island province of Korea.

The Special Account for Regional Development increased from KRW 5 327 billion in 2005 to KRW 9 853 billion in 2011, raising its share from 2.5% in 2005 to 3.1% in 2011 over total central government expenditures (Figure 5). A key challenge is to increase the capacity of local governments to draw up high quality plans for accessing the resources that they need.

Figure 5. **Budget for regional development, Korea, 2005-11**



Source: OECD Development Centre on the basis of data from the Korean Ministry of Knowledge Economy.

The Presidential Committee on Regional Development (PCRD) in Korea identified four relevant scales for policy action according to the type of intervention (Figure 6):

- 5 Supra-Economic Regions have been identified to support infrastructure development projects and to foster cross-provincial collaboration in technological development.
- 5+2 Economic Regions are composed by provinces and have at least 5 million inhabitants, with the exception of Jeju and Gangwon.
- Provinces: specific programmes are developed to target all Korean provinces (13, excluding the three which form the Capital Region).
- 163 Local Areas have been identified as targets for investment to support local development in counties, excluding those located in the seven Metropolitan Cities (Seoul, Busan, Daegu, Incheon, Gwangju, Daejeon, and Ulsan).

Figure 6. **Targeting functional regions: spatial scales for regional policy, Korea, 2011**

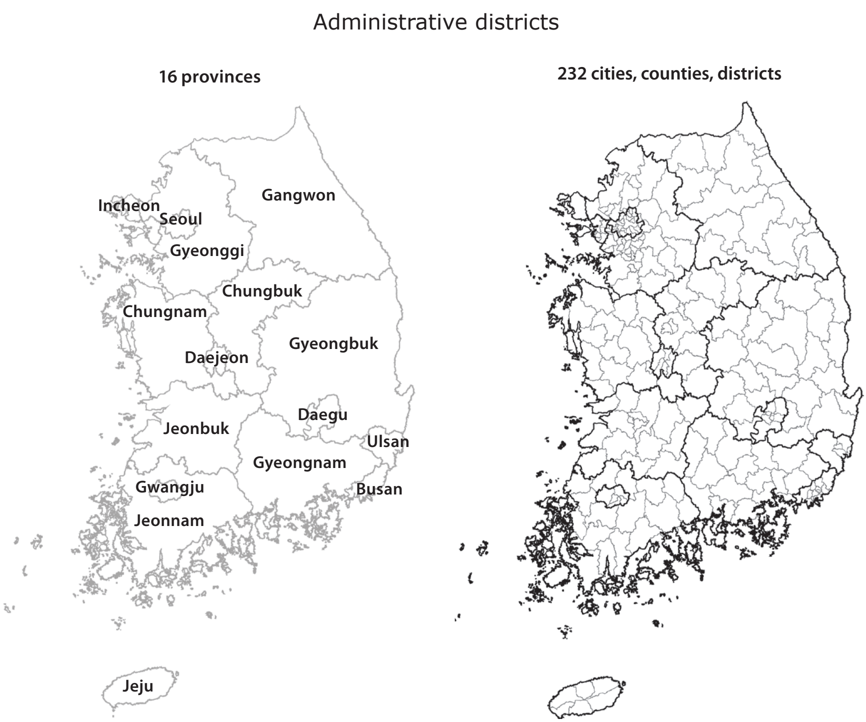


Figure 6. **Targeting functional regions: the spatial scales for regional policy in Korea, 2011** *(contd.)*

Functional regions

Source: OECD Development Centre on the basis of maps and information provided by the Ministry of Knowledge Economy and the Presidential Committee on Regional Development.

Techno parks in Korea played a key role in mobilising regional innovation.

Techno parks have been introduced in Korea since the mid-1990s on the basis of the successful experience of techno parks in other countries. In 1997, the government invested KRW 25 billion over five years in the creation of each of the six pilot parks. In the light of the success of this pilot experiment the government backed the creation of additional parks. Techno parks have played a key role in mobilising the development and innovation of production at the regional level and provide additional services such as business coaching, management and marketing advice, infrastructure provision and R&D support.

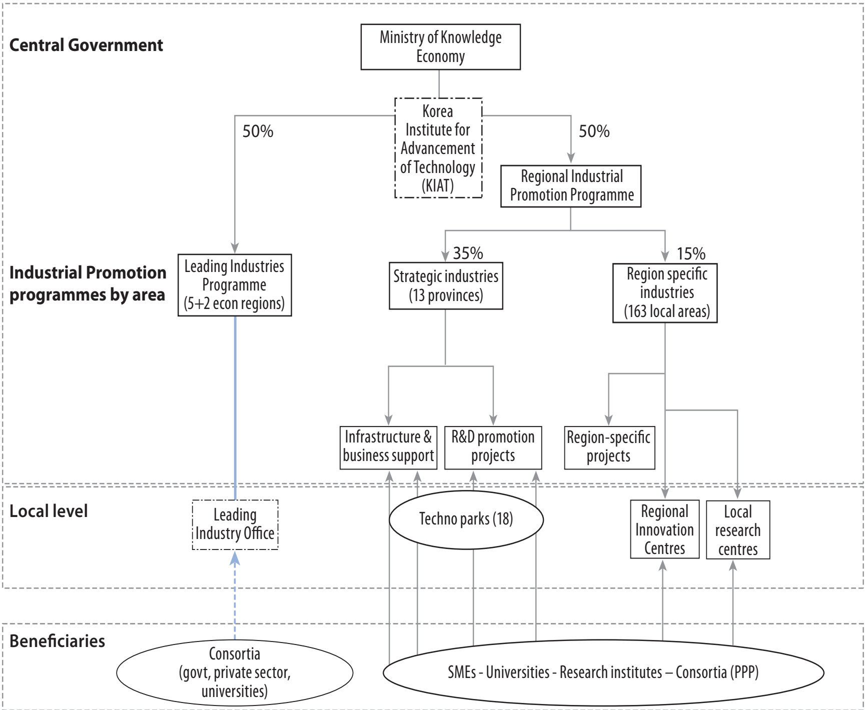
Techno parks in Korea tend to be specialised in different industries, some are green-field developments, and others build up on installed industrial capacities. Some support business creation, others favour technological upgrading of existing firms and others perform both functions. The government has carried out several impact evaluation studies. Assessments show that there are performance gaps between the 18 techno parks; but on average the parks contributed to technology transfer, venture business and rising sales and employment in the hosting province. At the beginning techno parks mainly contributed to build research infrastructure and to catalyse small business development in the provinces; then they evolved and started to perform functions similar to those of a regional development agency.

The new instruments managed by the Ministry of Knowledge Economy (MKE) are contributing to foster regional industries and to create employment, but are also challenging the local governance structure.

Since 2008 the MKE has introduced three programmes to support industrial development targeting different spatial scales (Figure 7):

- The Leading Industry Programme targets industrial development in 5+2 Economic Regions (*i.e.* regions composed of neighbouring provinces up to 5 million inhabitants). The programme supports the R&D activities of cross-regional consortia. Priority orientations are established by the Economic Development Committee instituted in each of the Economic Regions.
- The Strategic Industries Programme supports industrial development in 13 Korean provinces (*i.e*. all provinces excluding the Capital Region); it targets business development and R&D in companies, universities, and techno parks located in each province.
- The Region Specific Industries Programme supports industrial development in the Local Areas (a sub-provincial spatial unit created to foster industrial development at the local level) and supports projects which address specific local development challenges.

Figure 7. **The policy mix for regional industrial development, Korea, 2011**

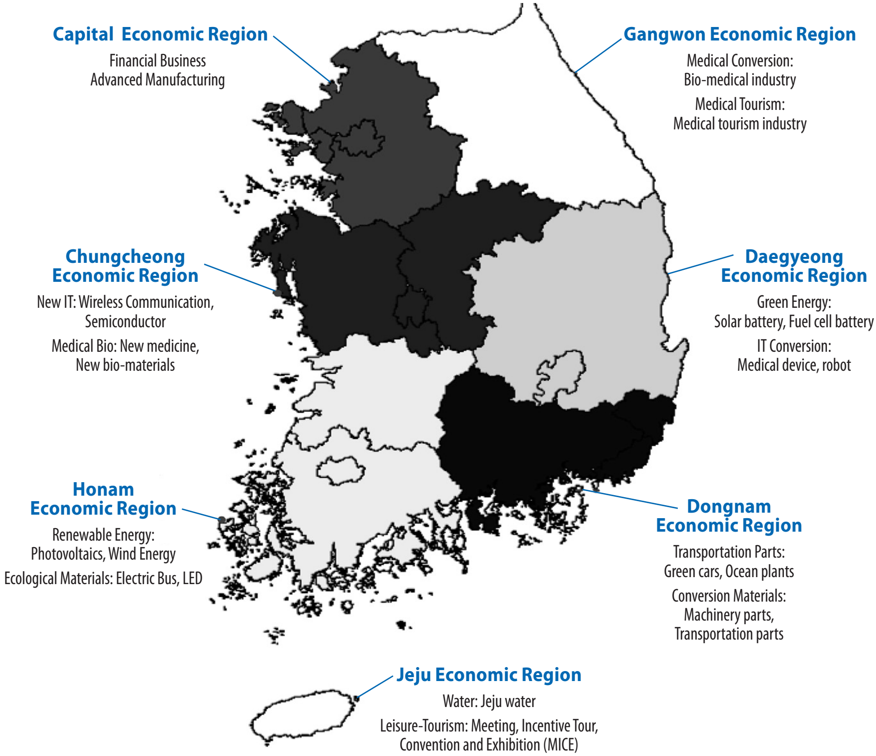


Source: OECD Development Centre on the basis of information from the Ministry of Knowledge Economy.

The Leading Industries Programme aims to support job creation and regional growth by targeting 12 Leading Industries in the Economic Regions (Figure 8). It started in 2009 with a three year budget of KRW 743 069 million. SMEs are required to provide matching funds of up to 25% of the total project cost, while big enterprises are required to finance up to 50% of it. Yearly evaluations are required to monitor the programme implementation. The programme targets consortia of companies and universities; 75% of total budget targets R&D development. Since 2009, 12 Leading Industries with 20 projects in six Economic Regions have been implemented. Monitoring showed that goals have been attained for creation of employment and sales, and for exports. New jobs have been created mainly in the renewable energy, automobile, and IT sectors. The support to local industry also helped increase foreign direct investment (FDI) in the regions.

The major lines of action for programme implementation derive from the Economic Region Development Committee which elaborates the development plan for each economic region. The Leading Industry Office instituted by the MKE in each economic region is in charge of programme execution. Leading Industries Offices aim to act as regional development agencies; they are currently headed by central government representatives, but it is planned that responsibilities will be devolved to regional constituencies as they become consolidated. The challenge is to empower these new institutions in a context in which techno parks in each province have been playing the role of regional development agencies.

Figure 8. **Leading Industry programmes in the Economic Regions, Korea, 2009**



Source: Ministry of Knowledge Economy, Korea.

Korea needs to move forward in the design of regional development policies by increasing the space for bottom-up initiatives and by empowering regions as agents of change.

The consolidation of the Korean model and its capacity to deal with current challenges will depend heavily on how the national development strategy can take into account the territory, and the local constituencies, as key elements for policy planning. A consolidation of recent efforts to mobilise actions for regional development is necessary if more inclusive and sustainable development is to be achieved in Korea.

After six decades of growth and development, Korea has achieved sound macroeconomic management, high and stable growth and a strong industrial base. Social cohesion and the green economy are two big challenges ahead. To face them the country needs to shift from a catching up logic in policy making to a frontier one. A centralised approach allowed the country to catch up, but it might not be the best framework for the country to sustain its development path and to achieve sustainable and inclusive development. Supporting development of SMEs, fostering basic research, and improving social cohesion are key challenges for Korea. And regions can be precious allies in this effort.

Korea needs further to improve the governance for regional policy and capabilities at the local level. Regions still have little margin for manoeuvre for target setting and planning. The success of the Leading Industry Programme will depend on its capacity to create synergies and incentives for collaboration between provinces and to align the actions of existing institutions.

The country needs to strengthen local government accountability to local civil society. Although progress has been made, the country is still highly centralised and local governments are frequently engaged in negotiations with central government which sets priorities and targets. Investing in the formation of a local sense of community and creating spaces of dialogue between citizens and local governments are key steps in raising the accountability of local governments to their electors. This also requires having a margin for manoeuvre for designing and implementing regional programmes. The Korean policy mix is mostly composed of central government policy tools rather than a mix of tools managed both by the central government and by local governments as happens in most OECD countries. In those countries local levels design and directly provide support to local industries through the management of specific tools such as innovation vouchers or incentives for the absorption of a skilled labour-force by local enterprises.

Regional development is much more than industrial upgrading. It includes well-being, quality of life, good employment opportunities, and delivery of high quality public services. To move forward in regional development policy Korea needs to shift from a "de-concentration" logic towards policies with a place-based approach. Public policies are not meant to mould population distribution over the territory; they are meant to foster local development, to improve connectivity and linkages, and to create the best opportunities for education, employment and consumption. Regional development is not only about reducing population concentration in the Capital Region, it is also about creating the opportunities for development in all the regions. This requires empowering regions as agents of change and broadening the regional policy mix to include educational and social cohesion policies.

A key challenge for regional development in Korea will be to encourage the attraction and retention of talent in regions and to go beyond a technology-centred vision of innovation. Some regions might benefit from diffusion of non-technological innovations which could be drivers of higher growth and a better quality of life.

The Korean experience in fostering industrial development in regions, although unique, offers interesting lessons to developing countries.

The Korean experience is shaped by several unique factors. There is no single response to development challenges. Each country needs to identify its current opportunities and challenges, establish its own priorities and develop its own strategy, matching continuity in efforts with experimentation of new policies when new challenges emerge, as Korea has been doing.

However, the Korean experience might be helpful for developing countries which are in the process of fostering industrial development and catching up. It reveals the complexity of the relationship between industrialisation and territorial development and it shows the importance of leadership and a high level of commitment to: *i)* regional development; *ii)* the design of mechanisms to target resources to regions; *iii)* the gradual and complementary policy approach in increasing spaces for bottom-up initiatives; *iv)* the identification of mechanisms to target functional and economic regions; and *v)* the use of monitoring and evaluation as learning tools.

Once creation and upgrading of industrial capabilities are recognised as priorities in the national agenda, there is an unavoidable dilemma over the territorial location of new activities, and the targeting of investments to areas where they are most needed or where they could provide the highest spillovers. There are no optimal solutions, no blueprints. But there are principles which, if taken into account, could help to obtain better outcomes.

Guaranteeing continuity in public support and planning actions on a multi-annual basis is essential to achieve policy goals industrial and regional development. The outcome of policies will require mid and long term horizons to be materialised and co-ordination across several ministries (such as education, infrastructure and access to finance) is needed.

Plans alone, however, are not a guarantee of success. It is implementation that makes the impact. Korean plans are effective because they are endowed with "execution power"; *i.e*. with disposable resources to be implemented, an effective legal framework that allows actions to be taken, clear guidelines on different actions required to achieve the objectives, and efficient information diffusion that clarifies the assignment of targets and responsibilities, all of them subject to evaluation.

The long-term approach and guarantee of continuity in public support does not mean creating rigid frameworks for actions. It means assuring availability of resources over a minimum period of time to create the right commitment and incentives for action. In parallel, mechanisms to monitor implementation and adjust targets and actions are required to increase policy effectiveness.

Regional development will acquire importance in national policy only if there are mechanisms that ensure a high level political support. This is essential to ensure the co-ordination between different ministries which is at the heart of regional policy.

For regional development to become an item on the national agenda, high-level leadership on the issue is essential. Korea first instituted the Presidential Committee on Balanced National Development PCBND, later substituted by the Presidential Committee on Regional Development (PCRD). The PCRD is an advisory committee aimed at co-ordinating actions of sectoral ministries. The PCRD is composed of nine cabinet ministers and members from the civil society and the academy. The PCRD has the mandate to set visions and elaborate plans for regional development. It guarantees coordination between line ministries and defines the appropriate territorial scale for regional development policies.

A mechanism to target resources to regions is needed in order to create the incentives for regions to implement development strategies. Monitoring of implementation and assessment of performance are required to guarantee the effectiveness of resource transfers.

Taking into account the territorial perspective in sectoral programmes is not enough; a specific budget for regional development is needed. Addressing regional development requires targeting resources at regions. In 2003, the National Assembly approved a Special Act on Balanced National Development setting the legal framework for regional development. The Act instituted a Special Account for increasing resource transfer to regions and targeting specific national programmes outside the capital region.

The introduction of the Special Account required the strengthening of planning capacities at the local level for the administration of the resource transfers; it also created incentives to improve regional programmes administered by central ministries and targeted at regions. Since regions could choose between the different ministerial proposals, ministries had to compete between themselves to access the resources of the Special Account. As a result of the introduction of the Special Account, more resources were invested outside the Capital Region and some successful industries were created and upgraded in the regions (including the photovoltaic industry in Gwangju).

Supporting industrial development in regions requires designing specific programmes, targeting functional regions, and fostering cross-regional collaboration. Each local system has specific cultural, social and historical backgrounds that shape industrial development. Programmes "for" and "by" regions need to take into account this variety and design policies taking into account economic and not only administrative boundaries.

Economic activity is organised in spaces beyond regional administrative borders. The provincial level might be too small and actions need to be co-ordinated between different neighbouring regions. Korea introduced "economic regions" as a space for policy action and targeted programmes at developing industries in those economic regions. This required creating institutions to support economic development planning in the regions, such as the Leading Industries Offices and the Economic Regions Development Committees. The success of this policy will depend on the capacity to create synergies with the actions of pre-existing provincial-based agencies such as techno parks.

At the same time, there are production development challenges which are highly localised and which benefit from a smaller scale of action than the regional one. For example, the development of localised industries such as tourism will require *ad hoc* support which is better managed at a smaller scale than the provincial one. The identification of local areas in Korea aims to foster development programmes targeted to the specific needs of localities outside metropolitan areas.

Too often regional development turns into a competition between regions to attract or develop specific industries. It is common to find that in regional planning exercises all regions want to specialise in fashionable industries such as biotech or nanotechnology. Mechanisms to support regional collaboration allow for the pooling of resources and the achievement of the critical mass required for development.

Gradually increasing the space for bottom-up initiatives and empowering regions as agents of change are necessary steps. Regional development requires more than integrating the regional dimension in national policies. It is creating the incentives, the institutions and the policy spaces for making the territories active agents in national and regional strategy setting. This requires empowerment and a gradual approach to build the capabilities at the local level.

Korea has been gradually increasing the space for bottom-up initiatives in regional development. Regions today receive more resources to implement regional development plans and can, to a certain extent, decide on their own priorities by choosing from a menu of regional development programmes offered by the central government.

Increasing the space for bottom-up initiatives requires investing in capacity building at the local level. Korea nurtured improvements in the quality of public administration at the local level by promoting secondment practices from central to local governments and *vice versa* and by increasing the standards and variety of public administration training programmes.

In each Economic Region, an Economic Region Development Committee (ERDC) was instituted, composed of 15 members including the governors of the different provinces and representatives from the business sectors. They are in charge of drawing up regional economic development plans for better accessing resources from the Special Account. Targeted efforts to raise political accountability towards the local community are required. Recognising the local constituency as the principal actor takes time in a highly centralised structure where the central government remains the key reference point for the setting of priorities. A step further would be to increase the capacity of local institutions to design and implement policies that respond to local development needs. But policy capacity is not acquired overnight and experimentation, matched with learning and gradualism are key features of success.

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