

## What Makes Korea's New Regional Policy Workable?

Myung-Rae Cho\*

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**Abstract** : The Korean miracle of economic growth or development has been quite well known across the world up to now, while being subject to theorization of its model. Compared with this, however, it is quite surprising to see how little about the spatial aspect of Korean development has been exposed in the field of development studies. In fact, for Korea, competent regional policy has turned out to be an important success factor for the spatial upgrading of a low-tech growth regime into a hi-tech one. This paper dissects Korea's regional policy experiences in three aspects from which it draws up a three-tier lesson. The first aspect is the conventional (overall) regional spatial upgrading policy of a developmental regime put in place since the 1960s onwards. The second is the new regional policy tailored to the regionalization of technological and industrial diffusion for new knowledge-based economy. The third is the prospective regional policy for the future advancement of the Korean economy.

**Keywords** : new regional industrial policy, spatial upgrading, new knowledge based economy, balanced development, mega-regional development

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### 1. Introduction

This paper is designed to draw lessons from Korea's recent regional industrial policy experiences. The lessons should provide insights especially to third world countries with intent to go along a similar path of economic growth or industrial development which Korea has gone. The Korean miracle of economic growth or development has been quite well known across

the world up to now, while being subject to theorization of its model. Compared with this, however, it is quite surprising to see how little about the spatial aspect of Korean development has been exposed in the field of development studies.

It is a clear proposition that any economic activity geared to generating value for human beings takes place in a spatial organization woven out of the locations of various economic activity

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\* Dankook University, Seoul, Korea

factors. Corporate or industrial activities, whether individual or collective, can get enriched in spatial constellations which enhance their performance efficiency and effectiveness. It is why one stage of economic growth requires intrinsic form of locational and spatial organization distinguished from that of the other stages. The existing literature of development studies reveals that economic development at an early stage entails a tendency of concentration of leading economic activities and supportive function in growth centers like metropolitan areas. This then turns into a tendency of dispersal after developmental expansion reaches a peak. Catalytic to this spatial transformation is the government's location-bound intervention into the process of technological and industrial development.

In fact, for Korea, competent regional policy has turned out to be an important success factor for the spatial upgrading of a low-tech growth regime into a hi-tech one. This paper dissects Korea's regional policy experiences in three aspects from which it draws up a three-tier lesson. The first aspect is the conventional (overall) regional spatial upgrading policy of a developmental regime put in place since the 1960s onwards. The second is the new regional policy tailored to the regionalization of technological and industrial diffusion for new knowledge-based economy. The third is the prospective regional policy for the future advancement of the Korean economy.

## 2. The Spatial Upgrading of Growth Regime: Lessons from the Territorial Management of Growth

Korea has undergone a compressed step-wise economic development setting off in the early 1960s and sustaining with few downturns until now. Korea's trajectory of economic development can be divided into three periodic stages: 1961-1980, 1981-1997 and 1998-date.

*The first stage* (1961-1980) may be characterized as 'the phase of foundational industrialization' in terms that a base of backbone industries for Korea's ever-growing economy was laid down with regard to capital, labor and technology. Particularly strategic industries for the heavy chemical industrialization launched in the early 1970s formed a womb to give birth to conglomerate business groups called 'Chaebol' like Samsung, LG and Hyundai, as well as a seed to blossom out into Korea's current leading technologies and industries with competitiveness in the global market. This early developmental success was entirely owed to the Park Jung-Hee government's stewardship which was exercised to discipline and encourage all economic players for the promotion of export-oriented industrialization. In this phase, the geography of industrial development was featured by a growing territorial bipolarization in which state-initiated heavy chemical industries like oil refinery, machinery, shipbuilding and motor-vehicles were heavily concentrated in the southeastern region, especially around state-designated industrial complexes, while foot-loose light industries for export located

mostly in the Seoul metropolitan area. For the sake of the territorial organization of early industrialization, the Korean government utilized regional policy instruments which included, for instance, statutory 10-year territorial plan, urban planning, locational intervention into major industrial investment, provision of industrial estates and logistic infrastructure (like Gyeongbu Expressway), regional development for agrarian improvement and resource exploitation (e.g., water, coal, forest).

*The second stage* (1981-1997) is specified as the phase of stabilizing industrialization in that heavy chemical industrial investment in the previous stage got stabilized into the private sector's expanding corporate business, leading to the ascendance of microelectronics as a cutting-edge industry for Korea's new industrial economy. Although the first half of this phase was ruled by new military governments, officers in economic ministries were allowed to exercise mandatory autonomy to implement rational policies attuned with market principles. Midway in the phase (1986-88), 3 year lasting nation-wide labor disputes, as an aftermath of state-initiated pro-capital industrialization, gave a big spur to the spread of labor-saving production technologies (e.g., FA, computer-aided flexible production system, etc), which were made available largely due to government-led R&D investment. In effort to foster a market driven development of regional territorial shape, less interventionist policies were chosen supporting further settlement of the existing heavy industries on site and of the new micro-electronics based industrial ventures in foot-loose locations around large cities. The excessive concentration and expansion of Seoul metropolitan

area was a key feature in the development geography of this phase. This gave rise to an institution with high-handed planning regulation on a metropolitan location of big-firm related investment.

*The third stage* (1999-date) is depicted as the phase of diffused industrialization in the sense that technological and industrial clustering has been established across all regions, where innovative systems were widely diffused. IT and other new hi-techs (e.g., BT., ET, CT.) spearheaded the diffused industrialization entailing the shift of heavy industrial economy into knowledge economy. The 1998 financial crisis, called the IMF Crisis in Korea, offered a stimulus to the shift, by pushing the post-crisis government of Korea (Kim Dae-Jung administration) to seek the Korean economy's global competitiveness through IT based industrialization. 'Making Korea a strong IT country' was a catchword to represent the Korean government's effort for crisis recovery. The 1998 crisis also compelled the Korean government to shed off conventional interventionist hands and get to a neo-liberalist manner in governing the new economy in tune with globalization. The diffusion of IT based knowledge economy began with the innovation-oriented policies of two consecutive progressive governments (Kim Dae-Jung and Roh Moo-Hyun administrations), but gained significant momentum forward with the pro-corporate policies of the current Lee Myung-Bak administration (Choi, 2011).

The current geography of development features the regionalization of innovative networking or clustering as the combined effects of the Roh Moo-Hyun government's political decentralization and the Lee Myung-Bak government's economic

localization. The territorial reorganization suitable to knowledge based economy has been undertaken by an array of national-priority regional policies such as relocation of administrative capital, dispersal of Seoul-based public agencies, regional innovation system, regional industrial promotion, mega-region strategy, etc. All policy efforts to this end are within the blueprint of the current government's umbrella policy conception called 'New Regional Policy' which is illustrated in the following section.

If Korea's half a century long industrial development is proved to be successful, it can be attributable, among others, to the compressed but step-wise advancement of a development regime. An inflection point in the 3-stage growth curve is somewhere in between the late 1980s labor dispute and the 1998 financial crisis. While passing this transitional period, Korea's notable development system gave a way into a post developmental institution that is amicable to market principles and sensitive to the national shift from low-tech industrial economy into high-tech based knowledge economy with greater global competitiveness. Yet, this would not be possible without the public and private sectors' cooperation in geographical reshuffling of technological and industrial growth regime. It is important to note that leading policy mechanisms for the geography of development have changed significantly over time.

In the first half of the development phase, the Korean government put policy efforts overwhelmingly into technological and industrial catch-up in select sectors. In the government's planning and policy system, aspatial policy like economic plan and industrial policy was the top

priority, while spatial policy came second. Spatial policy in the early stage of the economic development tended to be confined mostly to the provision of locational supports for leading industries including the building of industrial estates. Statutory long-term territorial plan, as a spatial counterpart of the economic plan, had been put in effect since 1972. However, it remained merely as a territorial blueprint with a narrative voice. However this assertion should not be taken to indicate the insufficiency and inappropriateness of the Korean government's regional policy undertaken in this period, but rather to disclose that no rigid restriction was made on the foot-loose location of most growing economic activities, whilst strong selective interventions were made in order to help industrial ventures with national significance settle down. This policy mix of planned location and free location resulted in on one hand, overwhelming concentration of a majority of new-born technological and industrial ventures in the SAM and on the other hand, concentration of a handful of strategic back-bone industrial firms in state-designated sites mostly in the southeastern regions.

Differing regulations characterized by planned and free location, resulted in a territorial bipolarization. Such territorial division functioned as a spatial divider of labor between the production sphere and the consumption in Korea's development regime coined as 'peripheral Fordism'. This territorial regime of development proved to be highly productive up to the inflection point in the development curve (e.g. the late 1980s and the early 1990s), after which the market-driven concentration of new hi-tech industrial business in the Seoul metropolitan area began to reveal its

diseconomy to the full. The 1998 crisis became a watershed in Korea's regional policy. To reduce the widening regional disparity between the Seoul metropolitan area and the non-Seoul metropolitan area, the post-crisis government embarked on regional industrial promotion in close link with new IT based industrialization.

This has led to a noteworthy change in the Korean government's territorial management in the way that regional policy is substantially combined with industrial policy under the guidance of competent ministries like the Ministry of Knowledge Economy. With new regional industrial policy put in effect, policy focus had numerous shift, for example, from locational supports for strategic industries to the territorial organization of knowledge economy; from the expansion of production bases to the networking of knowledge for innovation; from the building of industrial complexes to the shaping of innovative clusters; and from state direct regulation over industrial location to governance over place-bound innovative networking. Underlying such changes of regional policy is the rise and spread of New Regionalism with a strong emphasis on the rediscovery of region-specific endogenous value and potential for regional competitiveness build-up (Kim, Y. S., *et. al.*, 2007; Kim, Y. S., *et. al.*, 2009). What follows is a detailed examination of the success factors of New Regional Policy with an aim at drawing vicarious lessons for other developing countries.

### 3. The Regionalization of Technological and Industrial Diffusion: Lessons from 'New Regional Policy'

#### 1) Political Commitment

In response to the need to curb ever-increasing metropolitan concentration and to accommodate a post-crisis boost for new competitive economy, the Korean government strengthened regional industrial policy. New regional policies are the insertion of distinct spatial dimension to technological and industrial development and the embedding of technological and industrial relations yielding to innovation in a specific region. Yet it must be highlighted that such change of regional policy would not have been possible without a strong political commitment of the top decision maker to such regionalization of technological and industrial advancement as a way of reducing an enlarged territorial disparity.

'New regional policy' began to germinate its embryo with the Kim Dae-Jung government's regional industrial promotion strategy called the '4+9 regional industrial policy', which commenced in 1998 and continued up to 2008 with several program modification. It was a big turning point for regional development because regionally industrial policies were maintained not by the centralized administration system usually by Ministry of Construction & Transportation (MOCT), but by local governments with Ministry of Commerce, Industry & Energy (MOCIE). Industry policy in the local autonomy system was established substantially after adopted a local

autonomy system since the early 1990s. The executives of local governments and local council members have only been recently elected through a popular vote. Despite the introduction of the local autonomy system, the autonomous power of local governments was still limited because of the limited devolution of government power and the lack of financial and managerial capability by local governments. As a leader of first democratic and progressive regime in Korea (1998-2003), President Kim Dae-Jung suffered from regional discrimination; yet, he strongly committed himself to regional technological and industrial promotion in selected lagged regions. This was done with a view that regional industrial policy was the embodiment of political commitment to regional democratization.

Such political commitment overwhelmed others during the reign of the Roh Moo-Hyun administration (2003-2008) with a strongly progressive disposition. The Roh government took up 'Balanced National Development' as an overriding national-priority agenda, with which its various reformist attempts were made at the reshuffling of existing government and institutional systems. The word 'national' in the term 'Balanced National Development' was intentionally chosen instead of 'regional' so as to demonstrate a strong political commitment that balance should be struck across all sectors and regions of the nation. As a progressive political leader, President Roh made his highest political commitment to the radical reform of Korea's centripetal power structure vested in Seoul through changes in territorial space. To this end, balanced national development projects were carried out simultaneously in three areas: decentralization (devolution) of central

government function and power, distribution of government offices and public agencies over the non-Seoul metropolitan area, and establishment of self-sufficient regional productive system. President's direct command lent a regime-level endorsement to these 'balance' policies including regional innovative systems. This kind of integrative reformist undertaking for the spatial rearrangement of Korean political and economic system was a first trial in Korea.

This political commitment to regional industrial policy has sustained without major break-up in the current Lee Myung-Bak administration (2008-2012) with the command heights system almost intact. However, reflecting the liberalist disposition of the new government, the policy conception of 'balance' has been replaced by the one of 'competitiveness' and the scale of region has been extended to secure the economy of scale at a level of mega region. Moreover, the weight of political support for regional industrial policy has been allotted onto rendering new regionally technological and industrial relations yielding outcomes such as products and job creation. This political endorsement at a top decision-maker level became highly instrumental to the region-wide operation of productive and supportive industrial strategies.

## 2) Territorial Reorganization

With heightened political commitment to the 'spatial reform of Korea', various institutional attempts have been made at territorial reorganization in which technological and industrial networking for knowledge economy could be nested in a reproducible way. Territorial

reorganization is not part of the regional industrial policy, but rather, the other way around, forms an overarching territorial framework to diffuse the effect of regional industrial policy, which, otherwise, would be likely to be outwardly absorbed into the Seoul-based center of growth. Fatal to the building of a new de-centered territorial structure is both the expelling of governmental command heights function out of Seoul and embedding them evenly over less competitive local regions beyond the Seoul metropolitan area. For this goal, President Roh himself came forward with a breakthrough election promise that was the relocation of all central government offices including Presidential Office into a new administrative capital in a central locus of Korea. Though highly volatile and controversial over last 10 years or so, this project is now underway in a modified form of planned city called 'multi-functional administrative city', where 12 government ministry offices and agencies mainly responsible for economic policies are planned to move in by 2012. The city, due to be complete by 2030, is not an ordinary new city, but a policy city designed to shape a new territorial centrality which is connected with new growth centers in all provinces except for the Seoul metropolitan area. The construction of new administrative capital in place of ever-concentrating Seoul metropolis remained a long-lasting dream for territorial restructuring since the Park Jung-Hee administration (1961-1971).

Alongside the administrative capital project, another ground-breaking relocation project is in progress. This is a project to remove 175 public agencies out of Seoul is in progress. All to-be-relocated agencies are categorized by industrial

function and shall move as a group into 10 localities in all provinces except for Seoul and Chungnam where a new administrative capital is located. In these new sites, public organizations carry out a task to build the network of technological and industrial innovation together with their affiliated partners such as municipal governments, subcontracted firms, supportive units and universities. By doing so, these sites are reborn into a model of what is officially named 'Innovation City'. As of now, 10 Innovative Cities are under construction. These cities perform as a new growth engine to lead innovation-oriented regional development in link with the new administrative city. Inter-regional developmental linkages among nation-widely scattered power institutions will affect to shape a new spatial order favorable to territorial balance as well as competitiveness

While an innovative city is a foothold of public-sector led innovation, the private-sector's counterpart can be found from Enterprise Cities. Proposed by an association of large firms including Chaebol in line with the government's balance policies, the enterprise city project has been initiated entirely by private firms with an aim of building their own corporate town using their own capital. But the location of the project as such was chosen through bidding among municipal governments as a recipient of investment, whereby public-private partnerships are incorporated into the performing process of the project. Yet, in an aftermath of recent global crisis, 4 out of 6 projects survived so far. There are many other projects, such as Free Economic Zones and techno parks, undertaken by either public or private sectors. With the government's all-out effort, all these

attempts contribute some way or another to territorial reorganization, accommodating Korea's new industrial development spatially.

The spatial scope for regional policies has been changed from the administrative districts to economic and geographic districts in the Lee administration, which was a big trend in European countries and Japan having mono-centric development around capital area. Because those mega regions would be more appropriate to establish autonomous and competitive economy for unity but not uniformity comparing to smaller administrative districts. Even though delineated and considered as a policy spatial range, the Economic Regions have not implemented perfectly yet. However, it is meaningful to co-operate each other to develop a specific area among local governments.

### 3) Planning

Planning is another critical component to rendering new regional industrial policy workable. Korea's economic development success owed very much to the government's discrete use of planning mechanisms to conduct the build-up of market economy. However, a fatal drawback in the operation of Korea's planning system was the separation between economic or industrial planning and territorial or regional planning, with the latter functionally subordinated to the former. In this respect, the 5 Year Balanced National Development Plan, initially made up in 2004 by the Roh government, was a sort of first attempt at combining two areas of planning in the national regional planning of Korea. This plan was set up with a nominal objective to achieve territorial

balance and competitiveness, but specified as a comprehensive plan for regional industrial promotion. Territorial balance cannot be achieved without the build-up of regional competitiveness based on technological and industrial capability.

In fact, the 5 year plan focused on the promotion and establishment of regionally-designated strategic industries as a regional innovation system. In this regard, this was more or less the upgrading of the previous government's 4 strategic industry promotion project (1999-2003) into a systematic plan by incorporating new 9 strategic industry promotion projects, revitalization business projects supported by executive devices like budget and legality. With the Lee administration launched, the 5 year plan has succeeded to the 5 Year Regional Development Plan, resulting in a significant change in several aspects, albeit almost same as the previous in its structure. Key differences in the new 5 year plan include the change of regional development principle from 'balance' to 'competitiveness', the alteration and extension of a planning unit from narrow administrative zones to mega economic regions and the enlargement of local government's planning autonomy.

With regard to new regional policy, the 5 year plans have put into action with a substantive effect on pushing forwards regional industrial and technological development. This is thanks to high executive power embedded in the plans. *First*, the 5 year plans are a comprehensive guideline to dictate the detailed courses of long-term regional industrial development in a rational and foreseeable manner. *Second* they are a statutory plan based on the 'Special Act on Balanced National Development' in effect from 2003 and



amended in 2008 providing a legal rationale for planning and thus underlining the legal effect of all acts stated in the plans. *Third*, in accordance with the Act, the Presidential Committee on Balanced National Development, replaced by the Presidential Committee on Regional Development in 2008, plays a role of strong political back up to the execution of the plans at the level of central government, while their regional counterparts, especially Economic Region Committees in the Lee administration, conduct a mission to formulate a local chapter of 5 year plan from bottom and induce collaboration among stakeholders involved in the implementation of the planning. *Fourth*, the plans are endorsed by the special account in the Act which secures stable financial source for the uninterrupted execution of industrial promotion projects. Thus, all these constituents of the 5 year plan are combined to yield a strong power for rendering complex processes of hi-tech centered regional development workable (Kim, S. B, *et. al.*, 2009; Kim, Y. S. *et. al.*, 2007).

#### 4) Industrial Promotion

Due to recent technological innovations, production systems based upon Fordism are rapidly changing to post-Fordist production systems, and also regional endogenous growth is emphasized with emerging globalization and localization. For new regional policy, industry is the most important component of regional development related to investment, job creation and financial improvement. In this respect, it is noticeable to see how the Korean government has kept renewing its policy role for regional industrial promotion (Cho, M. R. and R. Hassink, 2009).

Compared with previous one, new regional policy relies more upon an evolutionary and substantive approach to regional industrial promotion, focusing on gradually raising technological and industrial capability for competitive regional economy. Overall, the good performance of new Regional Industrial Policy Plan (RIPP) is attributable to the combined effect of a number of working factors related to regional industrial development (Cha, M. S. *et. al.*, 2008).

*First*, RIPP, from the beginning, has been targeted at the structural reform of strategic industries in line with a trend of new knowledge economy. The root of current 'new industrial policy' lies in the Kim Dae-Jung government's RIPP for 4 strategic industries (textile, optical, footwear and machine industries) in 4 provinces (Daegu, Kwangju, Pusan and Kyungnam). Focus of this first stage RIPP (1999-2004) was on restructuring existing industries into innovative and competitive ones by providing various institutional supports for infrastructural improvement, technological development, labor force training and other business services.

*Second*, RIPPs have extended and diversified the scope and type of target industries for promotion. In addition to 4 province project, the Korean government, particularly the Ministry of Commerce, Industry and Energy, MOCIE, (the former Ministry of Knowledge Economy MKE), extended the scope of RIPPs to include new industrial promotion projects (2002-2007) for 9 provinces where three or four strategic industries in each area were selected. With '4+9 PRIPs', the Roh government formed a core part of the '5 year Balanced National Development Plan', in which each regional authority select and foster four

strategic industries whereby to shape a regional innovative cluster. This policy category of 32 regional strategic industries, a core target object of industrial promotion, is included into the strategic industries of 7 economic regions in the 5 year Regional Development Plan of the Lee administration.

*Third*, after it began in 4 provinces in 1999, RIPP has evolved by taking one step up and moving forwards, despite government changes in the midway. The first stage projects in 4 provinces (1999-2004) succeeded to the second stage (2004-2008) which was then accelerated through actively leveraging on the innovative infrastructure constructed in the first stage. The first stage projects in 9 provinces (2002-2007) were also pursued by the second stage (2008-2012) which is on-going within the enlarged framework of RIPPs. Furthermore, the Roh government's RIPPs has been replaced by that of the Lee government's with a shift of emphasis from balance to competitiveness in regional industrial policy objective.

*Fourth*, while progressively evolving over one decade, RIPPs gave birth to a hierarchical industrial system upon a three layer regional system (supra-economic region, economic region, local areas). Each distinct area is focused on a particular industrial base: leading industry in economic regions, strategic industry in provinces and region-specific industry in local areas. Adding up to 20 projects for 12 leading industries since 2009, leading industry nurturing projects, in economic regions are the latest addition to RIPPs and assume the largest volume in the national account for RIPPs (Kwon, Y. W. *et. al.*, 2009).

Overall, the performance of RIPPs has turned

out to be successful with regard to not only obtainment of its targeted objectives, but also the substantial upgrading of regional industrial systems. Korea's conventional development policies focused on national dimensions and improvement of the overall national economy. This, however, with no focus on regional dimensions, segregated point-wise development was carried out around in the center-of-gravity of national economy, leading to one pole growth in the Seoul metropolitan area. But, after 1998, up to the Lee government, new industrial development policies with regional dimensions have been introduced first to reduce regional disparity, then to shape a region-wise divisional system of industrial development (Kim, Y. S. *et. al.*, 2009). Considering all these, it is no doubt that RIPP is a core policy instrument in establishing new regional growth regime. In order to realize RIPP, 18 techno-parks have been established and played an important role as regional innovation organizations in supporting technology development, business consulting and even employment education, etc. Furthermore, the Leading Industry Development Project has been planned and carried out at the Economic Region level to reinforcing competitiveness in regional industry since 2009 in the Lee administration. These on-going Projects have accelerated industrial structure from manufacturing based economy to knowledge based economy in the non-Seoul metropolitan area in that several local governments worked together for scaled regional industries by building multi-lateral network and ecological business environments.

## 5) Cluster and Networking for Innovation

Unlike traditional regional policies directed to point-wise industrial development, RIPPs, initiated in 1999, was predicated, from its inception, to spearhead innovation-driven and cluster-based industrial development. This means that RIPPs are not focused on development of individual technology or industry in segregated manner, but on forming the cluster of innovative networking around a number of strategic industries in a region. This policy direction proves to be commensurate to a shifting trend towards knowledge based economy rising in a region. Regional industrial cluster includes industrial firms, various R&D agencies, universities, producer services, financial institutions, public support agencies, all linked to each other around the development of strategic industries. Therefore, a successful formation of regional cluster developed as it internalized an autonomous local productive system within a region.

The industrial cluster policy began to be fully implemented since 2000 and now is being executed nation-wide. In relation to RIPPs, cluster projects have been undertaken not only in 13 provinces with 32 strategic industrial development projects, but also in R&D and science parks like Daedeok to link R&D with production functions. Pilot innovative clusters have been launched in old industrial complexes in Changwon, Gumi, Ulsan, Gwangju, Banwol - Shiwa and Wonju, in order develop model cases that illustrates conversion of a region from a conventional industrial complex to an innovative cluster. The major portion of cluster projects has been given to enhance the existing structure of strategic industries as well as to

generate new businesses in strategic industry sectors. Together with this, rigorous efforts were made to cultivate manpower with an innovative mindset by setting up projects in collaboration with local universities. In line with the extension of spatial scope for RIPPs in the Lee government, industrial clusters are enlarged and established on a scale of mega region.

Regional clusters are built with cooperative networks that expedite the interaction between local authorities, industrial firms, universities, producer service units and other local non-governmental organization. This way of cluster formation affects the transformation of a regional economic structure into an innovation-driven one, thus giving rise to a regional innovation system (OECD, 2001). In fact, for the Roh government, its regional cluster policy was focused, from its outset, on promoting and organizing regional strategic industries into a regional innovative system. To support this, the regional innovative councils were established in 16 provincial governments to aid in joint learning and innovation creation for various innovation parities in universities, enterprises, R&D agencies, local municipal governments and even local NGOs. Essential to the building of a regional innovation system was the collaboration of all parties involved in creation of sustainable innovation from regional strategic industries. Knowledge sharing through collaboration, most critical to innovation creation, is facilitated by the networking of technological innovation designations such as Techno Parks, Technology Innovation Center, Regional Research Center and Inno Café. Alongside the introduction of the mega region notion by the Lee administration, much of this role is played by Economic Region

Developments Councils in cooperation with central government organizations (e.g., PCRD, MKE) and local counterparts (e.g., local universities, local business associations). Working in parallel with leading industries, inter-province cooperative projects are launched to foster a significant synergy effect for the regions and industries involved, giving rise to a mega-regional innovation system (Presidential Committee on Regional Development and Ministry of Knowledge Economy, 2010, 2011)..

## 6) Special Accounts and Local Autonomy

As the government's strategic policies, RIPPs had necessitated the input of a huge amount of financial resources contributed from public and private sectors. In the first stage of RIPPs in the Kim administration, the total budget for infrastructure, technology development, training labor force and business services amounted to about 1.9 trillion KRW including 1.1 trillion KRW from the central government, all from the national account. Except for a large amount, there was no indication in financial operation about how much the government was dedicated to RIPPs as a national priority project, compared with others. Yet, with the Roh government in office, its strong commitment to balanced regional development was reflected in the establishment of the special accounts exclusively for the policy projects of 'balance-oriented regional development'. The Special Act on the Balanced National Development passed by the National Assembly in December 2003 provided a legal rationale for securing stable fiscal resources to finance balanced national development and regional innovation businesses. The special accounts, consisting of regional

development account, regional innovation account and Jeju account, started with the volume of 5 trillion KRW. This volume was pooled mostly by the capital gains earned from land development in the SEOUL METROPOLOTAN AREA and a sum of individual budgets for regional development projects in the hands of various government ministries. Thus, both the budget volume of the accounts and the priority allocation of budgets were indicative of the extent to which the government was devoted to RIPPs for innovative regional development.

The current Lee government has significantly adjusted the special accounts in accordance with its new regional policy objectives in two ways. First, the regional innovation account has been switched into the mega region account which the central government distributes rather evenly to 7 mega regions for mega-regional 'leading industry' development projects. Second, for the regional development account, its operational procedure incorporated new feature called 'block grant'. Previously, budgets in the regional development account were allocated for specific projects, but now it is allocated not by projects but by local governments' need in order to allow more autonomy for local governments to use this account for their own development projects within a ceiling.

It is noticeable that, while the total budget for regional development between 2004 and 2011 has increased 1.9 fold from 15 trillion KRW to 28 trillion KRW, the one for the special accounts has rocketed 6.7 fold from 1.4 billion KRW to 9.8 trillion KRW. Along with the tremendous expansion of financial resources legally bound to regional development, it is also significant that

local autonomy for regional development has been also greatly enhanced. This has been done through the devolution of central government's regional agencies, the transfer of development authority to municipal governments for autonomous planning and implementation, the redistribution of taxes between central and local governments, etc. All assist upholding local governments' capabilities to manage endogenous industrial development with given resources.

## 7) Institutional Governance

Regional clustering of numerous technological and industrial constituents cannot be formed without its supporting institutions at work, in the absence of which it is not to even mention incapability of the constituents to live up to its role of innovators in regional development. Governance, a mode of cooperative rule or collaborative management by parties involved, is a prerequisite for the regular working of innovative regional clusters in varied regional scopes. In the first phase of RIPPs in the Kim administration, a governance system for regional policy was still to be organized in that each ministry had conducted regional development policy within the bound of its ministerial responsibility. The MOCIE was solely responsible for planning and executing industrial promotion projects, without a systematic collaboration with other ministries.

Considering that participation and cooperation between public and private actors in the production of public goods are the key feature of governance, the first instituting of governance in regional industrial development came along with the Roh government called 'Participatory

Government'. Committees and commissions in the Roh government were institutional forms of governance based on public-private partnership, through which non-governmental agents were engaged in the governmental process such as decision-making and implementation of policies. With regard to RIPPs, the Presidential Committee on Balanced National Development (PCBND) and its local counterpart, the Regional Innovation Associations (RIAs), were the case in point. The PCBND was a typical governance body composed of cabinet members and civilian specialists, with a statutory status of planning and mediating any policies related with the balanced national development. As a presidential advisory body, the PCBND could conduct a governance function with presidential authority to empower the execution of all balanced national development projects. The RIAs carried out a similar kind of governance function at a local level, by forming a horizontal and vertical collaborative network with local government, local business community and local NGOs. Comparing to the PCBND with deliberation function, however, the RIAs' function was directed more towards execution. As regards the execution of regional policy at a central government level, the MOCIE was charged with responsibility for regional industrial policy in carrying out the 5 year Balanced National Development Plan. Since the PCBND was an advisory body, the most regional industrial policies were managed by the MOCIE with a support division for the PCBND. The PCBND and the MOCIE collaborated with each other around the function of planning, deliberation and approval for major regional industrial development projects. The MOCIE cooperated with other ministries in carrying out regional

industrial development policies at a central government level.

This governance structure of the Roh administration has been handed over to the following Lee administration without a disruptive change. However, there were some significant alterations with regard to governance layers, organizational titles and functional focus. Alongside amendment of the Special Act on the Balanced National Development into the Special Act on Regional Development, the PCBND has been substituted by the Presidential Committee on Regional Development (PCRD), but the structure of governance in the PCRD is almost the same as the PCBND. As economic region is included as a new regional scope for securing regional competitiveness, a new governance unit for an economic region is added into the overall structure of governance corresponding to a maga-regional development system. Accordingly, the RIAs have been replaced by the seven Economic Region Development Committees (ERDCs). To expedite the establishment of knowledge-based economy nationally and regionally, the MOCIE is renamed into the Ministry of Knowledge Economy. Compared with the MOCIE, the MKE is much more empowered in nurturing regional industries in three spatial scopes, with enhanced responsibility for governing all related projects in the 5 Year Regional Development Plan. Leading industries in the 7 Economic Regions, Strategic Industries in 13 provincial regions and Region-Specific Industries in the 163 local areas, all are under the supervision and supportive control of the MKE. The collaboration and cooperation of the MKE with other ministries like the Ministry of Education, Science and Technology become much

deeper and more diversified comparing the MOCIE. Knowledge institutions like research institutes, universities, R&D agencies are networked with the MKE for better performance in entangled regional development projects.

In sum, the transition to the new regional policy was a major turning point in Korean economic history. First of all, initiated by the government, earlier industrial development in Korea tended to be concentrated in a number of locations, either metropolitan cities or government designated industrial complexes. This pattern of territorial development called 'point-wise regional development' has been replaced by a new pattern of 'division-wise regional development' which features a regional clustering or system conducive to enhancement of regional self-sufficient innovative capacity (World Bank, 2009). Without the concerted government policy efforts, competitive knowledge economy based on regional balance that we witness now would have been something impossible to pass the long tunnel of restructure process to finally shine.

Equally important, this transition to a new pattern of regional development was accompanied by and reinforced in its turn, the significant change in governance structure. The local autonomy for regional industrial policy has been greatly enhanced. It appears that whilst the governance structure of the Roh administration was geared more to empowerment and institutionalization, that of the Lee government is tuned more to execution and performance. To be sure, this is a result of positive evolution in organizing and implementing regional industrial development policies since 1999.

## 4. Looking Ahead: Lessons from Challenges to the Future of Regional Industrial Development

In the previous section, we have reviewed how well Korea's new regional industrial policy has been organized in accordance with a shifting trend toward new knowledge based economy. The organization of new regional policy appears to be far more outstanding in its effect on the construction of regional clusters as a regionalized innovation system. To the extent that such effect has been created, new regional policy has evolved progressively to affect the gradual upgrading of Korea's growth regime through regional balance. This is a very important point to offer an explanation about the *raison d'être* of new regional policy. Yet, it is early to confirm entire lessons drawn from hitherto policy operation as positive because most development projects are still ongoing with problems to be addressed as they move ahead. These problems may pose challenges to the future of regional industrial development.

### 1) Evaluation and One Stage Up

In line with the incessant growth and diversification of the Korean industrial economy, regional industrial policy will continue to evolve some way or another by generating a differing effect in the due course of development and spread of prosperity across regions. It is now high time that 10 year lasting new regional policies should be subject to thorough scrutiny and evaluation with regard to its overall performance

before it embark on a next 10 year stage. In doing so, it is important to get rid of redundancy or excessiveness in policy measures as well as over-politicization of regional policy. On the basis of this evaluation and adjustment, both post 4+6 province-based industrial projects and the second stage of the Leading Industry projects should be prepared for a significant step up and forward.

### 2) Policy Integration

What is most necessary in policy adjustment is to inscribe coherence and predictability into the operation of new regional policies. After over 10 years of operation, new regional policies have been overly diversified and fragmented in its responsibility structure and executive program. If this circumstance is let alone, it will cause many conflicts and instability within the policy operation. This is not just a matter of improving policy coordination but also a matter of instituting a new policy management system. Among others, an integrative approach seems to be urgently demanded. This, however, does not refer to the amalgamation of separate policy programs scattered across the divisional boundary of government organizations. The integrative approach should be applied through the way in which policies are combined categorically and stakeholders invited to policy discussions in a coherent and systematic manner. The MKE should be an agent with competence for such policy integration.

### 3) Green Growth and Win-win Growth

Unfortunately, new regional policies do not

actively incorporate the elements of green growth in strategy and executive program, to the extent that the central government puts emphasis on green growth as a strategic paradigm shift in Korea's mode of development. Many Leading and Strategic Industries selected by far tend to focus on the aspect of technological competitiveness and innovativeness which can be valuably appreciated in current market. However, there is a great margin of opportunity to be filled if eco-efficiency should be added as a new overriding criterion into the overall performance of these industries of national significance. In the meantime, it is important to note that eco-efficiency is not just a technical and economic matter, but a matter that concerns a system-wise socio-economic activities. Green growth at a regional level cannot sustain itself unless the constituents of green growth are deeply couched in the entire everyday culture of region such as production, consumption and administration. Shift toward regional 'green growth' is now posing a radical challenge to new regional policies which are about to reveal rigidity against change. Korean government also faced to another unbalanced growth, which is large unbalanced growth between large firms and small or medium firms, especially for regional governments. The central and local governments are struggling with how to enhance the cooperation between large and small-medium enterprises in the non-Seoul metropolitan areas. Several committees related to the win-win growth were built up, including the win-win growth committee supported the President.

#### 4) Business Ecology and Creative Development

What is most challenging in a short term is how to render already chosen Leading and Strategic Industries viable. Considering the structural tendency of concentration into one pole growth center, a.k.a., Seoul metropolitan area, we should not be too optimistic about new high-road industries firmly embedded in regional soils. Operating with complex intra-and inter-linkages, new policy industries require characteristically a well-organized supporting system rooted in regions. This means that a new local milieu should be created to provide tailor-made business services for new industries. This is therefore another important challenge to new industrial policies in the sense that the focus of policy supports should move from region-wide introduction of new technology and industry to region-wide creation of business ecology. Perhaps this task regarding business ecology may be beyond the current scope of policy competence and manageability suited to narrow industrial viability. This is why new policy is necessary and, to do so, policy makers in the government should renew the policy vision for evolving business ecology with greater efforts in realization of creativity. Business ecology or ecosystem is an organism of the business world where, over time, members of the business community co-evolve their capabilities and roles, and tend to align themselves with the directions set by one or more business leaders. The function of business ecology or ecosystem is valued by the community where it enables members to move towards shared visions to align with their investments and to find mutually supportive roles.



Such underlings in business ecology will affect the transformation of regional growth pushing for a model of 'creative development'. The creative development of regional economy is a direction at which new regional policy, with its own share of creativity, should be set from now on.

### 5) Quality of Working Labor

Business ecology is made up of the business organisms of interacting organizations and individuals in the business community, whose members includes suppliers, lead producers, competitors and other stakeholders. However, such business ecology cannot be sustainable essentially without the creative production of goods and services. Creation in industrial production depends upon producers' capacity of creativity. Particularly, for knowledge based economy, acquisition of creative knowledge is a prerequisite for enhancement of the quality of labor suitable to high creativity. Considering all these, one of tough challenges which new regional policies are faced up with is how to supply a new quality of labor fit with the creative development of regional industries. Most regional composition of labor force is now undergoing a significant change in the labor's dominant age, skill, value-orientation and discipline. So far, a large part of new regional policy efforts have been allotted onto mobilizing knowledge of human resources mainly around local universities. However, henceforth it reaches out to daily lives of producers and workers as well as that of the customers and consumers. Without improving the overall quality of labor in the regional community, it is impossible to bring creative development in place. For this purpose,

new regional policy should extend its scope to enable to deal with reorganizing the existing regional labor force for better quality of labor.

### 6) Local Empowerment and Global Involvement

The current mega-region focused regional policy, despite its ostentatious superiority, comes across an obstacle to be overcome in its execution. The main problem is a lack of administrative and institutional authority to exact a mega-region-wide policy. This raises again the problem of Korea's local autonomy system. In order to sustain endogenous regional industrial development in various spatial scopes, as stressed in previous chapter, it is fatally 'necessary to accelerate decentralization through more authority transfer regarding regional development policies'. Decentralization should not be confined only to the area of public administration, but take place in the entire sphere of region. In parallel with the enhancement of local autonomy in administration, a civil society in region should be revitalized so as to produce creative local citizens to cooperate with governmental and market agents in path towards creative regional development. On the other hand, the local empowerment regarding regional industrial policies should be of help for improving the participation rate and quality of local industrial business in global economy. In an era of globalization, regional competitiveness can be warranted once it is equipped with qualification for global competitiveness. In this regard, the local management of regional policies is set at the level of global management. This poses another crucial challenge to new regional policy which tends to be

focused on enlarging regional competitiveness.

## 5. Conclusion

In this paper, we have reviewed how Korea's new regional policies have been formulated and implemented with a view to diffusion of knowledge-based innovative industrial development through regions. As much as Korea's traditional economic policies without spatial dimension have been well organized, new regional policies with industrial focus have been well developed and implemented, in certain aspects with especially sophisticated manner. Interim evaluation on new regional policies reveals mostly a good performance and numerous achievements. This success is attributable to a number of factors, such as evolutionary (step-wise) approach, incessant improvement of policy goals and instruments, linkage between industry and space, political commitment, regional organization of industrial development, clustering and networking for innovation, productive governance structure and the like. However, after over a decade long operation, new regional policies are now facing serious challenges to overcome in order to move forward and step upward. Based on comprehensive examination of hitherto performance, new prescriptions for policy betterment are required. Integrative approach, green growth strategy, business ecology creation and pursuit of creative development, enhancement in the local empowerment and global involvement of regional industrial business, all should be taken into account as possible items of prescription for

the better performance of new regional police in years to come.

From the perspective of countries willing to learn something from Korea's new industrial policies, success factors and challenges might have some limited implication to be directly applicable to the very country. But of self evidence is that Korea's new industrial policies have been formulated in so intensive and compressed way as to comprise various policy components simultaneously together. Thus, in order to assess a meaningful implication, it may be useful to place the focus of interpretation on such aspect of policy characteristics. A key point for learning is how industrial development takes place through regional spaces and how new regional policies help this.

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Correspondence: Cho, Myung-Rae, Professor of Urban and Regional Planning, Dankook University, e-mail: mrcho55@kornet.net  
교신: 조명래, 단국대학교 도시지역계획학과 교수, 이메일: mrcho55@kornet.net

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## 신지역정책의 작동요인에 관한 연구

조명래\*

**요약:** 한국의 경제발전은 세계적으로 잘 알려져 있고, 또한 많은 이론화의 대상이 되어 왔다. 이에 견주어 한국발전의 공간적 차원에 대해선 그렇지 못해 왔다. 사실, 한국의 지역(산업)정책은 한국의 발전레짐을 공간적으로 업그레이드시키는 데 주요한 역할을 했다. 이 논문은 한국의 지역산업정책을 산업경제를 바탕으로 했던 구지역정책과 신지식경제를 바탕으로 하는 신지역정책으로 구분하되, 특히 후자의 성공적 작동 요인을 분석하는 데 초점을 두고 있다. 한국경제의 선진화와 더불어 직면하게 되는 새로운 지역정책의 도전을 살펴해보면서 지역정책의 향후 보완과제도 함께 검토한다.

**주요어:** 신지역산업정책, 공간적 업그레이딩, 신지식기반경제, 균형발전, 광역경제권발전

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\* 단국대학교 교수