

REGIONAL INNOVATION POLICY OF SOUTH KOREA, COMPARED WITH, AND LEARNING FROM, THE EUROPEAN UNION*

Haknoh Kim**

I. INTRODUCTION

This paper compares regional innovation policy of the Roh Moo-hyun administration, or so-called the “participatory government,” of South Korea with that of the EU (European Union), with a view to drawing some lessons from the latter for the former. Since regional innovation policy of the participatory government has too short a period of time to have had substantial effects, it is too early to evaluate the performance of the policy. Also, Korea and EU are different in terms of territorial scale, which may make direct comparison more difficult than otherwise would be. Yet, it is still possible and desirable to compare regional innovation policies of the two, in terms of their underlying approaches to the subject and their governing models, if not in terms of their specific programs. Such a comparative exercise would be of special help to Korea, since Korea has recently begun to design and implement regional innovation policy with a fundamental shift in the policy paradigms for national development.¹

In this paper, I identify the main features of EU regional innovation policy in three aspects. First, EU regional innovation policy is an area where innovation policy and regional policy, among others, come together. It seeks both territorial cohesion, the main objective of regional policy, and innovative competitiveness, the main goal of innovation policy, at the same time, viewing innovation as the most promising route for curing regional disparities. Second, the EU focuses its activities on promoting regional innovation “systems” rather than providing specific policy measures themselves. “Regional experimentalism,”² which advances reflective and interactive learning among related actors through decentralized coordination, catches well the

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** Marshall-Monnet Scholar-in Residence, UW-Madison; Associate Professor, Department of Political Science and Diplomacy, Yeungnam University, Korea.

¹ Cf. Lee and Lee 2002; Lee, Kim and Kim 2005.

² Sabel 1996.

essence of the EU's approach to promoting innovative processes at the regional level. Third, "experimentalist governance," coined by Sabel and Zeitlin to refer to the underlying governance arrangement of framework rule-making and revision in the EU,³ may well depict EU regional innovation policy, though with some qualifications.

Compared to these features, the basic approach of the South Korean government to regional innovation policy reveals some similarities and differences. First, like the EU regional innovation policy, Korean regional innovation policy also combines the goals of regional equity and competitive development through the concept of regional innovation. Second, it also tries to develop regional innovation "systems" and emphasize interactive learning; yet the Korean approach is quite different from the EU's "regional experimentalism" and lacks, in particular, in participation of major actors. Third, whereas the participatory government's approach represents a big advance from the previous governments' approaches, it is still characterized by much of "dirigiste" governance mechanism which is quite different from the "experimentalist governance" of the EU. It is my intention to show that there are some important elements in EU's regional experimentalism and experimentalist governance from which the Korean government and society may learn, if Korea seriously wants to achieve its dual goals of spatial balance and innovative competitiveness.

II. INNOVATION AND BALANCED DEVELOPMENT

1. EU: Cohesion and Competitiveness

Regional innovation is a policy domain overlapped by many policy areas, such as research and development policy, competition policy, internal market policy, taxation measures, education and vocational training policy, environmental policy. In particular, mainly two EU policies, regional policy and innovation policy, overlap in regional innovation policy. As such, EU regional innovation policy has two core objectives: (1) enhancing territorial cohesion by balancing spatial inequalities across countries and regions, and (2) strengthening Europe's international competitiveness via promoting innovative activities. DG Region and DG Enterprise, the two Directorates responsible for the two core objectives of regional innovation policy,

³ Sabel and Zeitlin 2006.

therefore jointly support measures such as RIS (Regional Innovation Strategy) and RITTS (Regional Innovation and Technology Transfer Strategy) projects.⁴

The EU has, on the one hand, been playing a pivotal role in innovation policy since the early 1980s as a major way to strengthen the international competitiveness of European economies. With multiannual Framework Programs, the first of which covered the period of 1984-1987, EU has been supporting R&D activities in a number of strategic technological fields such as biotechnology, information technology, material sciences and telecommunications. The EU began to emphasize region as the key site for innovative activities and experimentation, as the need for a tailored approach to innovation at regional level was increasingly recognized with growing globalization and intensified international competition. Innovation, rather than comparative advantage in costs or geographical location, is identified as the key factor affecting firms' competitiveness in a globalized economy. And, a "systemic" view sees innovation originating from close and frequent learning interactions between firms, public authorities, and producers and proliferators of knowledge and technology such as research institutes and universities. The regional level has emerged as particularly appropriate for such learning interactions.⁵ Since the mid-1990s, therefore, EU deployed various innovation policies targeted specifically at regional level such as RIS- and RITTS-schemes and IRE (Innovating Regions in Europe). These EU projects supported regional innovation strategy formation in more than 100 European regions. Also, these EU initiatives prompted Member States such as the Netherlands and France, which, unlike Germany, had little tradition of innovation policy at regional level, to refocus on and develop regional innovation strategies.⁶

On the other hand, regional policy, or cohesion policy, provides an important complement to EU innovation policy. The primary objective of regional policy is to promote territorial cohesion by balancing spatial discrepancies across countries and regions. Thanks to cohesion policy, disparities in income and employment across EU countries have been falling across the EU especially since the mid-1990s. Yet, discrepancies between countries have been falling more rapidly than those between regions, which indicates the continuing imbalances in regional-level

⁴ Bruijn and Lagendijk 2005, p. 1156.

⁵ European Commission 2006, pp. 2-3

⁶ Kaiser and Prange 2005, pp. 247-249, p. 260n.

development. Furthermore, the “big bang” of EU membership in 2004 widened more the discrepancies across EU countries and regions. It is estimated that more than 90% of the people in the new Member States live in regions with GDP per capita below 75% of the EU average.⁷

Regional policy came across innovation policy as innovation was identified as the best promising way to help less developed regions to catch up with advanced regions. Originally, in its old regional policy, the EU spent most of its Structural Fund resources on establishing “physical infrastructures” in less-favored regions. With the RIS project launched in 1993-1994, the EU regional policy took innovation system approach seriously and reoriented itself more towards creating “intangible infrastructures.”⁸ Since then, EU regional policy has regarded innovation at regional level as one of the most important route for balancing regional disparities.⁹ In particular, innovation gap is identified as one of the decisive factors for regional discrepancies, both R&D and high-tech activities being highly concentrated in only a few core regions.¹⁰ Hence a “dynamic” concept of cohesion. Unlike a passive concept of cohesion which limits cohesion to value redistribution and transfer, a dynamic concept seeks to create value by targeting the factors of economic competitiveness and employment.¹¹ Cohesion and competitiveness are seen mutually reinforcing and, as Hübner, European Commissioner responsible for Regional Policy, says, they “go hand in hand.”¹² Regional innovation policy intends to balance disparities by supporting innovation system at regional level which contributes also to EU’s overall growth and competitiveness.

In particular, the Lisbon strategy has tilted regional policy more towards emphasizing innovation and competitiveness. The Lisbon agenda, adopted in March 2000, aspires to make the EU “the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” by 2010. It was renewed at the March 2005 European Council with the adoption of the partnership for growth and jobs. In line with this strategy, the objectives for the Structural Fund for 2007-2013

⁷ European Commission 2004, pp. vii- xiv; European Commission 2005a, pp. 4-7.

⁸ Landabaso and Mouton 2005, pp. 216-225.

⁹ Bruijn and Lagendijk 2005, p. 1157.

¹⁰ Guth 2005, pp. 333-334.

¹¹ European Commission 2004, p. xxv.

¹² Hübner 2006.

are defined and simplified as (1) the “Convergence” Objective (replacing the previous Objective 1), (2) the “Regional Competitiveness and Employment” Objective (replacing the previous Objective 2 and 3), and (3) the “European Territorial Cooperation” Objective (replacing the previous *Interreg* Community Initiative).¹³ Also, seeking to link the cohesion policy to the Lisbon agenda, the following three priorities are identified by the Commission in its “strategic guidelines” for EU cohesion policy 2007-2013: (1) improving the attractiveness of Member States, regions and cities; (2) encouraging innovation, entrepreneurship and the growth of the knowledge economy, and (3) creating more and better jobs.¹⁴

Closely interlinked in promoting regional innovation, though, the two policies may contradict each other. For, while the primary goal of regional policy is catching up and cohesion, the rationale of innovation policy is efficiency and competitiveness. “Inherently they comprise different policy positions: one is about winners and losers, while the other is about redistribution.”¹⁵ This conflict between two rationales in a single program is often blamed for the lack of clear success of the Structural Funds in fueling innovation in lagging regions such as Burgenland, an Objective 1 region in Austria.¹⁶ Also, one may encounter the fundamental dilemma of innovation, or “innovation/polarization dilemma.” That is, innovation may not only improve the employment and income opportunities, but also cause job redundancies which work against social cohesion.¹⁷

The potential conflict between regional policy and innovation policy reveals more clearly in spatial terms. Whereas balanced spatial development is needed for a cohesion purpose, innovation tends to require and give rise to spatial concentration. That is, regional policy aims to balance spatial disparity by supporting innovative activities in lagging regions, yet innovation entails close interaction between the related actors to form “poles of excellence” and hence spatial concentration.¹⁸ An image of European space with central nodes and, in particular, the so-

¹³ Council of the European Union 2006, pp. 25-26; DTI 2006, pp. 7-8. These reflect the Commission’s suggestions in its Third Report on Economic and Social Cohesion. Cf. European Commission 2004, pp. xxvii-xxxii. As for objectives for the period of 1994-1999 and 2000-2006, see European Commission 2000, pp. 9-14.

¹⁴ European Commission 2005, pp. 12-29; cf. DTI 2006, pp. 8-9.

¹⁵ Lawton-Smith et al. 2003, p. 865; recited from Bruijn and Lagendijk 2005, p. 1160.

¹⁶ Kaufmann and Wagner 2005, p. 597.

¹⁷ Guth 2005, pp. 334-337.

¹⁸ European Commission 2005, p. 18; Kaufmann and Wagner 2005, p. 584.

called “pentagon” of London-Paris-Milan-Munich-Hamburg as its competitive corners is therefore juxtaposed with an image of cohesive and balanced European space. The EU’s efforts to strike a balance between the agglomerative pull of the “Pentagon” and the goal of territorial cohesion and balanced development by strengthening a “polycentric network,” however, does not look promising.¹⁹

2. Korea: Balanced Development and Competitiveness

According to Jung-Woo Lee, who served as a special advisor to President Roh until November 2006, the economic vision of the participatory government narrows down to “reform and open-door policy, social integration, regionalization, and long-term horizon.”²⁰ In particular, “regionalization,” or “decentralization and devolution,” is one of the main policy goals widely proclaimed by the participatory government. As President Roh emphasizes several times, “regional innovation and balanced development are among the top national strategies of the administration.”²¹

Balanced development is not a new policy goal in South Korea. Two basic facts — too heavy a concentration in the “Seoul capital region”²² and a very limited degree of political decentralization — have aggravated the disparities across regions in Korea for a long time. First, the uneven growth strategy of state-led industrialization since the 1960s has resulted in a severe concentration of political, economic, social, and cultural resources and activities in the Seoul capital region. As can be seen in Table 1, the Seoul capital region, only 11.8% of the South Korea’s total areas, accommodates 46% of the population, 57% of all manufacturing firms, about 70% of enrolled university students, 2/3 of financial activities.²³ Severe regional disparities

¹⁹ Bruijn and Lagendijk 2005, p. 1159. Cf. European Commission 1999.

²⁰ J-W Lee 2005, p. 282.

²¹ The President’s speech to the third Korea Regional Innovation Convention & Exposition (KRICX) in Gwangju, on November 7, 2006, (http://english.president.go.kr/cwd/en/archive/archive_view.php?id=a5785c18ed1f0a29755ab7cd&meta_id=en_korea_net)

²² The Seoul capital region consists of Seoul City, Incheon City and Gyeonggi Province which surrounds Seoul.

²³ The Seoul capital region also hosts 73% of total R&D institutions, 77% of Korea’s venture companies, 88% of all headquarters of large conglomerates (such as Samsung and LG) and 84% of all national governmental offices. Seoul accounts for the largest share of Korea’s FDI inflows, accounting for 60.9% of total FDI in Korea in 2003. The hyper-concentration in Seoul capital region is striking, compared to other countries which have reputations of having heavy concentration in capital areas. In the year of 2000, for example, the population concentration in capital region was 32.6% in Japan and 18.7% in France, both much lower than 46% in Korea. Cf. W-S Lee 2004, p. 4; J-W

accompany this hyper-concentration. While the Seoul capital region suffers from problems of over-concentration such as intolerable transportation congestion, air pollution, and land price, the other provinces suffer from economic stagnation, weak social vitality, and decrease in population.²⁴ Still, since most values are concentrated in Seoul, including high quality of education, high-paying jobs, important political and judicial institutions, people prefer to stay in the capital region despite all the environmental and economic costs. Hence the vicious circle of concentration and increasing gap between the capital region and the other provincial regions.

Table 1. Concentration in the Seoul capital region (2000)

Indices		Nation (A)	Capital region (B)	Seoul (C)	Rate of Concentration	
					B/A (%)	C/A (%)
Area (km ²)		99,461	11,705	606	11.8	0.6
Population (1,000)		46,136	21,354	9,859	46.3	21.3
Mfg. Industry	Firms	98,110	55,874	48,401	57.0	18.8
	Employees (1,000)	2,653	1,235	279	46.6	10.5
University	Number	161	66	39	41.0	24.2
	Student Enrollment (1,000)	1,665	653	423	69.2	25.4
Finance	Deposits (billion Won)	404,661	275,393	209,820	68.1	51.9
	Loans (billion Won)	310,804	202,797	147,874	65.2	47.6
Public Office	Central Gov't Agencies	36	25	15	69.4	41.7
	Gov't Invest. Agencies	18	15	10	83.3	55.5

(Source: W-S Lee 2004, p. 5.)

Second, the very limited degree of political decentralization worsens the problem. With a long tradition of highly centralized government and unitary state system, Korea has introduced political decentralization only in the mid-1990s long after the President Park Chung-hee wiped out the local self-government system in the 1960s. As Hassink succinctly put, until 1995 when the local election took place for the first time in more than 30 years, regional authorities remained nothing but local branches of the central administration. It is only in the 1990s that local residents began to pick their own mayors, governors and councilors.²⁵ Even after the

Lee 2005, pp. 297-298; OECD 2006

²⁴ It is assessed that Korea is losing 3-4% of its GDP in congestion costs. OECD 2006.

²⁵ Currently, there are 16 provincial-level governments (including 7 big cities), and 235 local-level municipal

introduction of local self-government and direct popular election of local governments in the 1990s, however, the *de facto* autonomy of local governments is still much constrained. In implementing policies decided by the central government, for example, local governments are heavily dependent on the central government for financial resources, due to the imbalances in the distribution of revenues between the central government and local governments and to the very limited tax-levying competences of local governments.²⁶

The limited degree of political decentralization and the concomitant limit of local autonomy aggravate the problems of regional discrepancies. Though every government recognizes the severity of the unbalanced development between the capital region and provincial regions, central governments' policies to alleviate regional discrepancies rarely represent the perspectives of local residents. Most decentralization policies aimed at regional balanced development, such as large-scale heavy industrial complexes in the south-eastern parts of Korea built in the 1970s and Taedok Science Town in Taejon in the 1980s, were implemented top-down. As many Korean scholars realize, the top-down approach to balanced development policy cannot lead to effective and sustaining regional development strategies.²⁷

Upon inception, the participatory government framed its regional policy within the broader policy framework of "balanced national development" which replaced the previous concept of "balanced regional development." Three special bills were passed on December 29, 2003: (1) The Special Act on Balanced National Development, (2) The Special Act on Decentralization (of administrative power), and (3) The Special Act on Construction of the New Administrative Capital. Based upon these special laws, the government established the Presidential Committee on Balanced National Development, the Presidential Committee on Multi-functional Administrative City, and the Presidential Committee on Government Innovation and Decentralization. These Presidential Committees became the key players in making policies

governments. By "provincial regions" in contrast to the Seoul capital region, I mean those 8 provinces and 5 big cities excluding Seoul, Incheon and Gyeonggi province from the 16 provincial-level governments.

²⁶ Local governments do not have their own judicial, prosecution, police, or education systems. These functions are monopolized by the central government. Furthermore, the central government still appoints one of two deputy mayors and governors in local executives who, under the aegis of the Ministry of Government Administration and Home Affairs, actually runs administrative matters of local government. Cf. http://www.korea.net/korea/kor_loca.asp?code=C0104

²⁷ Hassink 2001, p. 1381.

about spatial planning and regional development, and initiated many “decentralization and devolution” policies.

What makes the balanced national development policy of the participatory government distinct from its predecessors’ regional policies is not just its strong political commitment to spatial equity across regions. A more important distinction is that, unlike the previous governments, the participatory government has fashioned regional development and decentralization as a means to strengthening the competitiveness of the country as a whole.²⁸ Two basic paradigm shifts in national policies are interlinked here: one, from input-driven and nationally-led to innovation-driven and regionally-led growth strategy, and the other, from integrative balance to dynamic balance.

Table 2. Shift in national development paradigm

The first Take-off (1960s-1990s)		The second Takeoff (2000s)
Centralization and concentration	⇒	Decentralization and Dispersion
Nationally-led growth		Regionally-led Growth
Input-driven strategy		Innovation-driven Strategy
Standardization by region and discontinuing development		Specialization by Region and Continuing Development
Passive laissez-faire policy in FDI		Active Laissez-faire Policy in FDI

(Source: Kim 2004.)

First, the concept of regional innovation strategy is employed as a part of the national development strategy. The participatory government brings forth a paradigm shift in national development strategy from input- or capital-driven to innovation-driven growth (see Table 2). It is based upon the perception that the input-driven growth strategy, which was the core factor for the rapid growth of the Korean economy for the last 30-40 years, has now come to its limits, due to, among others, the increased costs of labor and land in Korea. Also, the government recognizes the need to upgrade the economy to knowledge- and innovation-based economy in an era of globalization and increasing international competition, especially faced with intensified competition from the rapidly catching-up China in the field of mature industry. In this context, region has emerged as the very level appropriate for innovation-driven growth, for innovation needs close interactions among related actors and their interactive learning . Regional innovation

²⁸ W-S Lee 2004, p. 11.

strategy, to be promoted to awaken the innovative potentials of regions and SMEs (small- and medium-sized enterprises), is now conceived as a pivotal part of the national development strategy²⁹

Second, regional innovation strategy also entails a fundamental shift in the country’s decentralization paradigm, as is shown in Table 3. In the old paradigm, decentralization aims at value transfer or value distribution between regions. It seeks basically “integrative balanced development” which promotes balance of results between regions. Its equity-seeking orientation may result in a decrease in the overall efficiency of the country as a whole by taking resources away from the more dynamic and growth-generating center. In contrast to this zero-sum game concept, decentralization in the new paradigm seeks a win-win situation in which the Seoul capital region as well as other provincial regions can prosper together. It pursues “dynamic balanced development,” a process of value creation, not just value transfer, through “competition and cooperation” among regions. Its emphasis on efficiency as well as equity may take for granted inequalities of results between regions. In a sense, it tends to give a priority to efficiency than equity, despite its proclaimed intention of pursuing dynamic balance in parallel with integrative balance, and exploits the differences in performance as an incentive to enhance self-innovative efforts of regions.³⁰

Table 3. Shift in decentralization paradigm

Old paradigm of decentralization	New paradigm of decentralization
zero-sum game	win-win game
value distribution	value creation
equity	efficiency
integrative balance	dynamic balance

(Source: Kim 2005, p. 7.)

In short, regional innovation strategy is conceptualized as a part of innovation-driven development strategy for the country as a whole on the one hand, and as a decentralization strategy, aiming simultaneously at equity and efficiency. The participatory government embraces the new concept of dynamic balance and combines regional innovation strategy with its

²⁹ J-W Lee 2005, p. 282; Kim 2004.

³⁰ Kim 2005, pp. 7-8; Han 2006, pp. 22-23. Seong 2003..

decentralization policies. Regional innovation strategy is, therefore, approached “bottom-up” rather than top-down, in the sense that regions may accept the differences in results when regions themselves are responsible for them. What regional innovation strategy entails is, in principle, “independent localization” through “endogenous development” by regions themselves, rather than deconcentration led by the central government. The central government is supposed to support, not lead, “localization from below.”³¹

In comparison, in both the EU and Korea, innovation is regarded not just as a productive factor but the most important factor, the driving force for growth in the era of globalization, and regions, not nations, are recognized as the appropriate site for cultivating and realizing innovative potentials. The concept of “dynamic balance” is very similar to that of “dynamic cohesion.” Both try to overcome the bipolar distinction between equity and efficiency by contributing to the overall competitiveness of the economy as a whole. Regional policy and innovation policy come together in both the EU and Korea in a mutually reinforcing relationship. It seems that while the potential contradiction between these two policy goals has sometimes come to the attention of policy-makers and commentators in Europe, it goes yet unnoticed in Korea. An important implication of the bottom-up approach in Korea, though, is that local actors themselves are responsible for the inequalities between regions resulted from the self-innovative strategies and efforts of regions.

III. REGIONAL INNOVATION SYSTEM AND REGIONAL EXPERIMENTALISM

1. EU: Learning and Regional Experimentalism

To stimulate innovation at regional level, the EU focuses its activities on promoting regional innovation “systems” rather than providing specific policy measures themselves. Regional innovation system is defined as a system in which:

firms and other organizations [such as research institutes, universities, innovation support agencies, chambers of commerce, banks, government departments] are systematically engaged in interactive learning through an institutional milieu characterized by embeddedness.³²

³¹ Seong 2003; J-W Lee 2005, p. 301.

³² Cooke et al. 1998, p. 1581; recited from Hassink 2001, p. 1377.

The basic premise of the concept, “regional innovation system,” is that it is at the regional level, rather than national level, that innovation policies can better be tailored to firms’ specific demands. Also, perhaps more importantly, the emphasis is not just on regions as the right site/level for innovation but on the “systemness” whereby innovating actors engage themselves in a mutually learning process.³³

The EU takes such a systemic approach to innovation which sees innovation generating above all from the quality of cooperative interactions among various actors such as firms, consumers, public authorities, and producers and mediators of knowledge and technology. A systemic vision differs from a linear view which understands innovation as coming directly from research laboratories to business firms.³⁴ Learning is considered as a crucial factor for innovation in a systemic approach. Learning is above all an “interactive social process,” not just a lonely behavior acquiring new knowledge and inventing new ideas.³⁵ Social learning, or learning by interaction, is the key for a regional community to develop innovative activities. Thus, regional innovation system programs of the EU aim mainly at helping learning to take place and spread, and at constructing framework conditions and governance systems at local and regional level which promote interactive learning among various actors. Rather than focusing just on technological aspects, the EU tries to help build and strengthen individual and institutional capacity to learn and innovate and to facilitate the interactivity among the relevant actors in innovation systems.³⁶

The pilot projects initiated to promote innovation are thus aimed mainly at stimulating learning interactivity within and between regions. These include: STRIDE (Science and Technology for Regional Innovation in Europe), started in 1990; RTP (Regional Technology Plan) between 1990 and 1993; RIS (Regional Innovation Strategy) and RISI (Regional Information Society Initiatives), launched in 1994-1999 and continued later under RIS/RIS+; RITTS (Regional Innovation and Technology Transfer Strategies); PRAI (Regional Programmes of Innovative Actions), 2000-2006; RIS-NAC (Regional Innovation Strategies in Newly

³³ For theoretical review, see Lambooy 2005; Iammarino 2005.

³⁴ European Commission 2006, p. 3.

³⁵ Henderson 2000, p. 348.

³⁶ Guth 2005, p. 335; Lee and Lee 2002, pp. 23-24.

Associated Countries), first generation for 2001/2-2005 and second generation for 2005-2008; and PAXIS program, since 1999.³⁷

Informal and formal networks combine regional innovation system building with inter-regional cooperation: For example, ERISA (European Regional Information Society Association), IANIS (Innovative Actions Network for the Information Society), IRE (Innovating Regions in Europe), ERIK (European Regions Knowledge based Innovation Network), CoorInnA (Coordination of Italian Innovative Actions), Innovation Relay Centers, Innovation Regions in Europe network, PAXIS program, and so on. These networks facilitate exchange of good practices between regions, and give their members opportunities to share new ideas and tools. Besides, more direct and bilateral arrangements between regions such as study visits and twinning of regions, within the framework of the RIS-NAC initiative, are made to help interregional learning.³⁸

According to Henderson, who has conducted an empirical study on how RTP/RIS was implemented in Wales, these various schemes for building regional innovation systems are very similar to what Sabel calls “regional experimentalism.”

Under the guise of *regional experimentalism* Sabel (1996) has outlined a conceptual model advocating a more reflexive approach to regional policy in which the state, firms and intermediaries work in small-scale repeated interactions in an attempt to (re)define regional development support services and priorities in a collective manner, establish specific targets and responsibilities, and monitor outcomes in a way that facilitates learning on the part of those in a position to respond. This regional development agenda relies less on learning as a means of incremental adaptation to existing routines, than as a form of strategic and experimental goal-setting which, it is argued, can help firms and regional support organizations question the validity of existing support structures and adapt to future challenges.³⁹

Regional experimentalism applies to regional policy the “decentralized coordination” approach of advanced firms based on “learning-by-monitoring.” The essence of learning-by-monitoring is “disciplined coordination,” where “[c]o-ordination is attained by a form of

³⁷ Cf. <http://www.innovating-regions.org/>

³⁸ Cf. European Commission 2006, pp. 22-27.

³⁹ Henderson 2000, p. 349. (italics in original).

disciplined goal-setting that links discussion of actual performance by the co-operating parties — monitoring — to discussion of how to improve operations given the performance — learning.”⁴⁰ As a more reflexive approach, regional experimentalism aims “to create an organization capable of re-evaluating and revising its substantive purposes.” It tries to go beyond a mere incremental learning of acquiring new knowledge and goals provided by other actors such as universities or the government. Instead, regional experimentalism entails a more “interactive” and “discursive” approach and encourages “deliberate, experimental revision of the definition distribution of tasks.” Regional actors do not just compare, and learn from, the “particular programs” for innovation of different regions, but they also compare, and learn from each other, “the architecture of regional economic policy as a whole.”⁴¹ In short, in regional experimentalism, regional actors come together in an iterative process of collaborative problem-solving, monitoring, and evaluating. Participation and dialogue is essential in this process to build mutual trust which is vital to interactive learning.

Henderson finds that the Wales RTP programs are essentially similar to Sabel’s conceptual model of regional experimentalism. The RTP, later modified as RIS to encourage regions to focus more on the non-technological aspects of innovation, embodies a process of institutional capacity building for Wales, rather than a strategy of employment creation *per se*. The RTP/RIS is, first of all, about a strategy-making process rather than simply implementing a prearranged strategy. It helps cultivate strategic thinking and build a strategy-making process, which promotes dialogue and self-reflection between “previously separate” regional actors. RTP/RIS has induced key regional actors to reflect and reconsider their priorities and practices during the process of dialogue, and to better communicate and understand what other actors (e.g. firms) really need and how to support them. In particular, it has stimulated regional institutions to strategically think about the needs of local firms, the way to strengthen innovative capabilities in the region and the appropriate roles for public authorities in stimulating innovation. In short, the exercise has embarked a sustainable network of learning and dialogue among regional actors, which lead to engendering collective, rather than individual, learning.⁴²

⁴⁰ Sabel 1996, p. 32

⁴¹ Sabel 1996, p. 27, pp. 43-45

⁴² Henderson 2000, pp. 350-355.

Not just similar to regional experimentalism, the EU also explicitly urges regions themselves to experiment with new ideas and strategies. The Commission, for example, encourages member states and regions to experiment innovative ideas in building regional innovation system itself, by spending relatively small amount of resources on an ongoing basis to test new ideas and approaches, and to include experimentation in their operational programs.⁴³ According to the Commission, regional experimentation can serve simultaneously as “example” and “catalyst.” For regional authorities can persuade other local actors into the process of innovation, making most of the successful experimentation of other regions as examples and best practices. Thus, regional innovation policy should take risk-taking rather than risk-averse posture, and try and support pilot actions that otherwise would be considered too risky to be implemented.⁴⁴ Notwithstanding an evaluation to the contrary,⁴⁵ European co-financing and sharing of risk indeed entices regional authorities to instigate new actions on an experimental basis, which creates “an opportunity to open up an ‘activity niche’ outside traditional procedures and programmes.”⁴⁶ The inter-regional networks, mentioned above, certainly help share and learn from each other these experimentation results.

“Partnership,” the principle introduced to regional policy in 1988, is the key word here for regional experimentalism and reflective learning in EU regional policy. Building on the experiences of decades of regional policy, the Commission identifies four key components for regional innovation strategy: foresight evaluation, partnership, communication, and continuous evaluation.⁴⁷ Above all, partnership between Member States, regions and other stakeholders is the most important factor for successful regional innovation strategy. Partnership and involvement of key actors in the designing stage of the innovation strategy from the beginning is crucial, for the regional actors themselves have the best knowledge of what their region needs and which measures have already generated good results. Partnership in leading and

⁴³ Hübner 2006.

⁴⁴ European Commission 2006, pp. 4-8.

⁴⁵ Some argue that the Structural Funds framework does not look appropriate to stimulate innovation because of its risk-averse nature. See, for example, Kaufmann and Wagner (2005, p. 598).

⁴⁶ European Commission 2006, p. 15.

⁴⁷ Foresight and continuous evaluation provide a solid analysis of the region’s needs, its competitive situation and change of it, effectiveness of policy tools, and so on. They provide the basis for debate and learning. Communication contributes to the regional innovation strategy by raising the awareness of the issues, identifying and mobilizing relevant actors, and sharing and learning innovative ideas from each other.

implementing the strategy is also vital, for it provides the mutual confidence and trust, essential elements for learning and consensus-building through a sustainable process of debate and deliberation. Partnership in defining and leading the strategy enables the involved actors to influence the strategy, and thereby ensures ownership of the strategy by the key actors. This ownership contributes not only to successful implementation of the strategy but also to constructive communication and coordination between the actors.⁴⁸ Indeed, as Hübner affirms, partnership approach is one of the very important intangible assets of EU regional policy.⁴⁹ An empirical evaluation of RIS and RIS+ projects has also identified “promotion of public and private partnerships and business networks” as one of “the most visible results of the projects.”⁵⁰ Thanks to the principle of partnership, a tradition of coordination is well established in the EU regional policy.⁵¹

2. Korea: Regional Innovation System, yet without Regional Experimentalism

Like the EU, the participatory government of South Korea promotes building regional innovation systems, but it is quite short of regional experimentalism. Various measures categorized under Group 2 in Table 4 are mostly related to promoting building regional innovation systems.⁵² In contrast to policies aiming at spatial transformation into a multi-polar development system (Group 1 in Table 4),⁵³ those policies promoting regional innovative

⁴⁸ European Commission 2006, pp. 8-14.

⁴⁹ Hübner 2006.

⁵⁰ Landabaso and Mouton 2005, p. 230.

⁵¹ Cf. MacPhail 2006, pp. 63-66.

⁵² As can be seen in Table 4, major policies for balanced national development can be organized into two groups: one, policies for decentralization (Group 1 and 3), the other, policies for regional innovation (Group 2). While policies in Group 3 promote devolution of administrative and financial powers to local governments, policies in Group 1 concerns deconcentration of the hyper-centralized capital region by relocating public institutions and establishing multiple poles for development in the provincial regions. Despite its proclaimed goals for “devolution and decentralization,” the participatory government shows less, than promised, zeal for devolving its own policy competences and resources, which makes the implementation of policies in Group 3 retarded than expected.

⁵³ The most controversial among the policies for constructing decentralized multi-poles for growth was the attempt to move the capital city from Seoul to one of other provincial regions. Faced with vehement opposition from those living in the Seoul capital region and the established in the political and social sphere as a whole, the issue was sent to the Constitutional Court. The Court ruled in October 2004, against the special law for constructing a new administrative capital on the ground that it was contrary to the long tradition of “custom” constitution that saw Seoul as *the* capital in Korea. This awkward ruling notwithstanding, the government improvised several measures to build a new multi-functional administrative city at Yeongi-Gongju region in Chungnam province. About 70+ state organizations out of the total 269 central government institutions are scheduled to move to this new administrative city, including most organizations in the presidency but excluding the National Assembly and other major constitutional institutions such as the Supreme Public Prosecutor’s Office. Parallel to the attempt to build a new

development are supposed to be formulated autonomously by the local governments themselves. Among these, apart from policies aimed at revitalizing underdeveloped areas which require transfer of considerable value from the capital region and the central government away to the lagging areas and local governments, most of the policies promoting innovative development at local level are trying to build self-sufficient regional innovation “systems.”

Table 4. Major policies for decentralization and devolution

Category	Policy
Developing the stronghold for balanced development (Group 1)	Multi-functional administrative city
	Relocation of public functions and construction of innovative cities
	Enterprise cities
Regional innovative development (Group 2)	Regional innovation system
	Creating innovative cluster
	Fostering regional strategic industries
	Supporting local universities
	Revitalization of underdeveloped areas
Strengthening local government (Group 3)	Devolution of financial functions
	Devolution of administrative functions

(Source: Suh et al. 2005, p. 25.)

In building regional innovation systems, regions are asked to concentrate on their relative strengths. The principle of “selection and concentration,” as the participatory government emphasizes, applies to constructing regional innovation systems. This requires selecting “strategic” industries at regional level, defined as the principal industries that serve as a driving force for regional economic growth, or “propulsive industries.”⁵⁴ While Korea had focused on “national” strategic industries until the 1990s, the government began to emphasize “regional” strategic industries as political decentralization, albeit limited, took place in the 1990s. For instance, the RIPP (regional industrial promotion projects) began in 1999 by focusing on 4

administrative city, the government is also building “innovative cities” and “enterprise cities.” 10 innovative cities, or “innocities,” are to be constructed in provincial regions outside the Seoul capital region, excluding the Chungnam Province which hosts the new administrative city. Each innocity will accommodate a few public agencies with similar functions to be relocated from the capital region. A total of 346 out of 410 public institutions are located in the Seoul capital region. The plan is to relocate 175 out of the 346 public organizations outside the Seoul capital region. Relocation of public institutions is expected to stimulate innocities to develop innovative clusters around relocated public agencies. The government also pushes for “enterprise cities” in provincial regions which are to be constructed under the initiative of the private sector, especially private companies. Six enterprise cities are selected as model projects; 1 industry/trade type, 2 knowledge-based type, and 3 tourism/leisure type. Cf. W-S Lee 2004, pp. 12-14; <http://innocity.moct.go.kr/eng/public/public03.jsp>; <http://enterprisecity.moct.go.kr/eng/about/overview.php>.

⁵⁴ Lee et al. 2006, p. 207.

regional industries in Daegu, Busan, Gyeongnam and Gwangju, and 9 more regional industry promotion projects were added later in 2002.⁵⁵ Yet, they were still approached top-down in that the central government identified the main industries for regions. In contrast, the participatory government proclaims a “bottom-up” approach to identifying regional strategic industries when it extends the RIPPs. The provincial-level governments are asked to establish their own regional innovation development plan, in which they define and choose regional strategic industries with due consideration of their respective strengths and weaknesses.⁵⁶

Further, regions are encouraged to actively construct “industrial clusters” and “innovative clusters” centering on their selected strategic industries. Korea has a considerable tradition of “artificially” constructing production, industrial, and innovative clusters through government policies,⁵⁷ Daedeok R&D complex being the prime example. To foster industrial clusters, various measures are implemented which support building direct and close links between research institutes, universities, and business firms. For example, innovation infrastructures such as Technoparks, Technology Innovation Centers, and Technology Business Incubators are constructed. They serve to link universities and business, develop regionally specialized technology, and help start-up business by providing technological assistance, financial support, office space, and other related information. RRCs (Regional Research Centers) are also set up to support establishing science and technology research centers in local universities to strengthen the competitiveness of regional industries, by providing local firms with manpower with specialized knowledge which can be utilized right away into the industry.⁵⁸

In particular, the participatory government allocates considerable amount of resources to NURI (New University for Regional Innovation) program, a single most important program aspiring simultaneously to strengthen competitiveness of local universities, foster regional development by cultivating excellent human resources, and contribute to the formation of regional innovation clusters. Making active use of the principle of selection and concentration, NURI promotes “competition” within respective provincial regions by concentrating financial

⁵⁵ For details, see Choi and Hwang 2005, pp. 311-315.

⁵⁶ Lee et al. 2006, pp. 214-215.

⁵⁷ For overview, see Lee 2003, which also provides a very interesting success story of RRC.

⁵⁸ Lee et al. 2006, pp. 220-222. Regional Research Center and Technology Innovation Center are integrated into Regional Innovation Center in 2006.

support on excellent projects selected in each region. It is worth noting that local universities form the project headquarters in NURI programs. They should include in their project teams other regional innovation actors such as other interlinked universities, research institutes, local authorities, business firms, or NGOs. This way, the principal universities serve to build and expand innovative networks between business, academia, public authorities, and other related actors.⁵⁹

Most important of all, based on the Special Act on Balanced National Development, RIC (Regional Innovation Council) is newly institutionalized as the key instrument in building regional innovation system. RIC is composed of various regional actors such as local authorities, business firms, professors, researchers, and other local interests. The tasks of RIC include: (1) as a coordinator, RIC deliberates regional innovative development plans and strategies, and sets the priorities for innovation projects; (2) as a facilitator, RIC establishes innovative networks between regional actors and promotes building regional innovation systems; (3) as a bridge, RIC serves as a channel for communication between the central government and regional governments; and (4) as an innovator, RIC itself proliferates innovative culture across local communities. In short, RIC is designed to be the key instrument for building and maintaining regional innovation system, as it is the arena to provide with innovation networks among regional actors and a governance structure for regional innovation system. Being independent from both the central and local governments, RIC should not turn into another kind of consultative body to local governments, nor a mere transmission belt of the Presidential Committee on Balanced Development.⁶⁰

While RIC serves to construct and strengthen horizontal innovation networks among business, universities and research institutions, and governments within each region, a handful of measures try to build networks among regions. In particular, “regional innovation convention and exposition,” annually held since 2004, serves as a forum for inter-regional communication and learning. It holds various activities such as exhibitions of regional innovation cases, success story

⁵⁹ <http://www.krf.or.kr/nuriApp/index.jsp>; Suh et al. 2005, pp. 118-121. Indeed, universities, especially local universities, are recognized as the basis for knowledge creation and a major institute of human resources development. Local universities emerge as a key vehicle for innovation and regional development, the core innovator who leads regional innovation. Building cooperative networks between industry, university and regional authorities becomes the key policy target for regional innovation system. Kim 2005, p. 8.

⁶⁰ Kim 2005, p. 14; Suh et al. 2005, pp. 84-85; cf. http://www.innoregion.net/ris/jsp/info/innovation_info2.jsp

exchanges, conference on regional innovation theories and cases, giving prizes to persons for commitment to and excellence in regional innovation. Its goals include: identifying and disseminating success models; learning and sharing of best practices; reviewing past practices and efforts of innovation and discussing future directions for innovative efforts; proliferating innovation culture across the country; and cultivating popular consensus about decentralization and regional innovation.⁶¹

Though similar to the EU in promoting regional innovation systems, however, real “systemness” is still lacking in regional innovation systems being built in Korea. “[T]he relatively stable and regular flows of information among the members of the regional innovation community,” from which “systemness” derives,⁶² is quite difficult to find in Korea. At the heart of the problem lies the lack of “regional experimentalism” found in Europe. To begin with, regions lack sufficient autonomy and independent resources despite the participatory government’s emphasis on “bottom-up” approach. The limited capacity of regional governments to think strategically and initiate autonomous measures makes regional innovation “systems” too difficult for them to effectively build. Though regions have essential elements of regional innovation systems such as regional innovation councils, universities, research institutes, and innovation supporting arrangements, they are mainly managed and guided by the central government, remaining as “isolated *dirigiste* local innovation systems,”⁶³ and fail to constitute a system of their own. The end result is a lack of meaningful innovation “system” at the regional level.

Since the central government defines the overall architecture of regional innovation policy, it is hardly possible to experiment on a decentralized basis to find and try out new ideas and approaches.⁶⁴ Regions thus do not have sufficiently differentiated approaches to developing their own innovation systems. Strategic regional industries, for example, are not distinctively

⁶¹ <http://www.kricx.or.kr/welcome/outline.asp>

⁶² Cooke 1998, p. 16.

⁶³ Hassink 2001, p. 1390.

⁶⁴ Related to this, the Special Accounting for Balanced National Development does not give special consideration of the possibilities for failure, and regional innovation policies concentrate on secure and safe activities rather than venture and new, risky, innovative activities at regional level. Given the slow progress in devolving administrative and financial resources to regions (Group 3 in Table 4), the lack of sufficient attention to experimentation makes experiments difficult to initiate at the regional level. Bae 2006, p. 43.

specialized across regions, despite the procedural legitimacy associated with the proclaimed bottom-up approach whereby each region submits proposals and defines its own strategic industries, and despite the acclaimed process of double check and consultation with various interest representatives, outside experts, technical experts, regional authorities, central government ministries, and so on. Most regional strategic industries tend to center around a small number of high-tech industries overlapping each other; for instance, bio industry is identified as regional strategic industry in almost 10 provincial regions. Nowhere to find prospects for regional specialization according to particular conditions and environments of each region.⁶⁵ It is not surprising then that among 139 regional programs related to innovation infrastructure construction, RIS pilot projects, strengthening regional innovation capabilities, and regional innovation network building, there are only 77 programs congruent with the regional strategic industries selected for respective regions.⁶⁶

Regional innovation councils, allegedly the key vehicle for building regional innovation systems by networking and coordinating different actors, are themselves initiated by the central government and therefore quite homogeneous across regions. Though the Presidential Committee on Balanced National Development does not impose specific directions about the organization, roles, competencies and operational methods of regional innovation councils, it does not induce regional authorities to experiment with regional innovation councils, and regional innovation councils lack capabilities for planning, organizing, systematizing, and mobilizing consensus. Rather than acting as the key promoter and initiator of regional innovation and experimentation, most regional innovation councils turn out to be a kind of advisory board, composed mainly of local notables, and confirm what regional authorities under the guidance of the central government have already decided to pursue.⁶⁷

While regional innovation councils do not contribute much to promulgating learning interactivity within regions, there is not sufficient mechanism for learning between regions either. The annually-held “regional innovation convention and exposition” aims at promoting communication between regional innovation system participators such as business, universities,

⁶⁵ Suh et al. 2005, 113; Lee et al. 2006, p. 215.

⁶⁶ Lee et al. 2006, p. 223.

⁶⁷ Suh et al. 2005, p. 93; C-W Lee 2004, p. 17.

research institutes, public authorities, but it has one-off event character and still needs to mobilize local residents to participate.⁶⁸ It is supposed to promote learning process among various regional innovative actors, but in actuality remains focused on learning and promulgating specific innovation cases rather than exchanging between regions their own experimental approaches to building institutional capacity to learn. Compared to EU's systemic approach to regional innovation systems, the Korean approach does not seem to pay sufficient attention to learning capability, and rather tends to focus on more concrete examples. In other words, whereas regional experimentalism allows systematic comparison of both particular programs and overall architectures of regional innovation policies, the learning activity between regions in Korea takes place mainly about their respective particular programs and fails to reach their overall architecture of regional innovation policy as a whole.⁶⁹

The most important problem is found in the lack of meaningful participation of various stakeholders and communication among them. In particular, regional innovation councils as they stand now are characterized by very limited participation of key actors.⁷⁰ Among others, the participation of business, the main actor for regional innovation, is quite limited in setting up regional innovation councils and selecting regional strategic industries. As is shown in the example of Daegu-Gyeongbuk (Table 5), business as well as women, labor, civil society organizations, and agricultural sector, are under-represented in regional innovation councils. Given that “[m]embers, especially firms, must take ownership by having a stake in the network. ... to ensure continuity of meetings, information flow, learning by interacting, and so on,”⁷¹ the limited participation of firms deprives regional innovation councils of their core meaning. On the other hand, most regional innovation councils tend to center around universities and public institutions. Actually, universities implement 85.5% of total innovation policies. Even in making proposals for establishing “enterprise cities,” it is not companies but local authorities which initiate and lead the preparation process in many cases.⁷²

⁶⁸ Suh et al. 2005, p. 92.

⁶⁹ cf. Sabel 1996, p. 44.

⁷⁰ Cf. Han 2006, pp. 31-32; Jeong 2005, p. 142..

⁷¹ Cooke 1998, p. 11.

⁷² Lee et al. 2006, p. 81, p. 224.

Table 5. Composition of Daegu-Gyeongbuk regional innovation Council

Category	Number of councilors
Local/regional authorities (including civil services)	23
Research institutes	7
Civil society (including NGOs)	19
Universities	24
Business	9
Press	6
Innovation supporting agencies	12
Total	100

Source: Daegu-Gyeongbuk Regional Innovation Council, 2006.

The EU experience shows that regional experimentalism is essential for regional innovation system building and that learning based on decentralized experimentation is made possible by the principle of partnership of various stakeholders. In addition to partnership, those principles established at the European level such as subsidiarity, proportionality, and additionality help to put special emphasis on the several dimensions of governance issue in developing regional innovation policies in the EU.⁷³ Partnership, communication, and learning based on appropriate evaluation are essential elements in promoting interactive learning process, the key to regional innovation system. Limited participation of key actors and the consequent lack of communication among them make consensus on regional innovation strategy difficult to build in Korea.

IV. EXPERIMENTALIST GOVERNANCE VS. DIRIGISTE GOVERNANCE

1. EU: Experimentalist Governance

EU regional innovation policy fits quite well with what Sabel and Zeitlin call “experimentalist governance” or “directly-deliberate polyarchy (DDP)” though, of course, with some qualifications. Experimentalist governance refers to the underlying governance arrangement of framework rule-making and revision in the EU. Its key, distinctive from the traditional “Community Method,” lies in the “recursive redefinition of means and ends.”⁷⁴ The EU level establishes only framework goals and rules usually by joint action of the EU institutions and Member States, and lower-level actors such as Member states, subnational actors,

⁷³ European Commission 2005, pp. 10-12; European Commission 2004, pp. xxxv-xxxvi. Cf. European Commission 2000, p. 26.

⁷⁴ Sabel and Zeitlin 2006, pp. 44-45.

or regulatory authorities, carry on these ends with considerable autonomy as they see fit. While the EU level oversees the implementation of framework rules, it bestows national and subnational actors with substantial freedom to adapt these frameworks to their own circumstances and take their own distinctive means to pursue the shared goals. Through regular reporting on their performance, especially as measured by the agreed indicators, and peer review, the actors at the multi-levels compare with each other and learn from each other. Through this process of recursive deliberation, they may revise the framework goals, measures, and procedures themselves. Ideally, experimentalist governance combines the advantages of “decentralized local experimentalism” with those of “centralized coordination” through “learning from diversity”⁷⁵

The underlying mechanisms of EU innovation policy-making and regional policy-making, the two most important policy areas for EU regional innovation policy, correspond very much to the conceptual model of experimentalist governance. There is little doubt about this with regard to innovation policy, in that OMC (open method of coordination), one of the main routes for experimentalist governance, applies to EU innovation policy. Benchmarking and coordination are two main aspects of OMC in innovation policy. Since the Lisbon summit emphasized the role of R&D for competitiveness and growth, OMC in innovation policy operated primarily based on a continuous benchmarking of national R&D policies against best performing countries. Benchmarking contributes to identifying specific needs for each states or regions or sectors, and to sharing and disseminating of best practices. As the Barcelona Council in 2002 established the goal of increasing Member States’ R&D investments to 3% of GDP by 2010, of which two thirds to be provided by private sector, an OMC process towards the 3 percent target has embarked on, with the CREST (Scientific and Technical Research Committee) playing a key role. The Commission is also trying to close innovation gap between Europe and its main competitors, i.e., the US and Japan, by building an ERA (European Research Area), in which coordination based on the OMC is the main instrument. Rather than directly supporting national/subnational or sectoral innovation policies, ERA focuses on building networks between existing excellent centers of innovation and on co-financing networked national programs. By rebuilding European research networks and coordinating national activities, ERA aims to mobilize knowledge,

⁷⁵ Sabell and Zeitlin 2006, pp. 3-7.

research and technology across the EU.⁷⁶

Despite these efforts, the performance of OMC in innovation policy so far is not impressive. For instance, the average R&D investment of EU Member States remains below 2%, while just a few Member States come close to the target or exceed it (e.g., Sweden and Finland). Thus, even with the OMC process in place, some Member States are hardly likely to attain the Barcelona target.⁷⁷ This disappointing result may be ascribed to the very nature of the OMC process and the Lisbon strategy itself. Laffan and Shaw, for instance, find frequent “decoupling” of the Lisbon strategy and its OMC tools, which renders the Lisbon strategy tilted towards a discursive construction of an economic agenda rather than a coherent and concerted process of coordination. OMC, in this perspective, is primarily a “low commitment” process.⁷⁸

In addition, Kaiser and Prange point out two important “stumbling blocks” for applying the OMC in innovation policy: the multi-level character of EU innovation policy and a high diversity of national innovation systems. These complexity and diversity hinder “policy transfer” and “policy diffusion” through a process of mutual learning.⁷⁹ Yet, not only may these conditions be easily found in other policy areas too, but, more importantly, OMC is, in a sense, the very instrument designed for such diverse and complex situations. A more serious problem spot for OMC in innovation policy lies in the limited participation of various actors. While the Commission provides and leads OMC processes at the European level, it is up to the Member States to establish a coordination mechanism at the national level. Subnational actors such as regional and local governments and non-governmental actors such as NGOs and firms, thus, are not directly participating in designing and building OMC processes.⁸⁰ This may leave the coordination process at the national level not so open as the OMC template implies it should be. The participation of non-governmental actors and subnational actors has indeed proved to be uneven across countries. For an extreme example, the Italian NRP (National Reform Program)

⁷⁶ Gornitzka 2006, pp. 15-19; Bruijn and Lagendijk 2005, pp.1153-1154; Prange and Kaiser 2005, p. 297. Related to this, an OMC process has also proceeded in education and training policy. For OMC in education, see Gornitzka (2006, pp. 9-14).

⁷⁷ Kaiser and Prange 2005, pp. 254-255; Kaiser and Prange 2004, p. 254; Prange and Kaiser 2005, p. 296.

⁷⁸ Laffan and Shaw 2005, pp. 5-6, p. 31.

⁷⁹ Kaiser and Prange 2004, pp. 250-261; Kaiser and Prange 2005, 255-258.

⁸⁰ Kaiser and Prange 2005, p. 253.

for the Lisbon strategy was wholly written within the Prime Minister's Office with little input from other parts of the government, the social partners and local authorities.⁸¹

Whereas it is quite easy to find strong elements of experimentalist governance in EU innovation policy, it is more questionable whether EU regional policy resembles the conceptual model of experimentalist governance. To begin with, as MacPhail argues, a number of basic elements of regional policy suggest that it belongs to the old Community method: first, there is a clear legal ground for regional policy and a distinct budget for the Structural Funds; second, the partnership principle of regional policy clearly spells out the need for the participation of subnational actors, whereas there are no such established rules for actor participation in OMC; third, regional policy is based on multiannual programming of six years in contrast to the open nature of OMC; and, finally, unlike OMC, regional policy has binding rules and established principles, and the Member States must have their programs approved by the Commission to get the fund.⁸²

Actually, some Member States suggested applying the OMC process in regional policy as a way of improving its governance mechanism. For example, Datar (*la Délégation à l'aménagement du territoire et à l'action régionale*; Delegation for Spatial Planning and Regional Affairs) has as early as 2003 proposed to apply OMC in regional policy.⁸³ The British DTI (Department of Trade and Industry) also suggested adopting OMC to EU regional policy, while retaining the key strengths of existing regional policy such as multi-annual programming, inter-regional networks for sharing best practice, and the principle of partnership. OMC for regional policy, according to the DTI, would involve the following processes: sharing of framework objectives among Member States in the European Council; compiling the devolved strategies by Member States together with their regions; peer review process and multilateral surveillance, facilitated by the Commission; sharing best practice between all Member States, and so on.⁸⁴ Harnessing the OMC to regional policy would not only provide greater flexibility and autonomy to the Member States and regions. It would also ensure their involvement and stake in EU

⁸¹ Chiattelli 2006, pp. 9-10.

⁸² MacPhail 2006, pp. 62-63.

⁸³ Faludi 2006, p. 673.

⁸⁴ DTI 2003, pp. 1-4.

regional policy, which is essential for effective EU regional policy.⁸⁵

With or without OMC being applied, however, it seems that EU regional policy has already built strong elements of experimentalist governance. The partnership principle has encouraged establishing partnership committees, composed of not only representatives of the Commission and Member States but also subnational authorities and social partners. The partnership committees, which bear considerable autonomy and shared responsibility in selecting regional projects, remain “open-ended” in the sense that they are formed according to national rules and practices.⁸⁶ Thanks to this partnership principle, EU regional policy has a long tradition of coordination, which makes decentralized coordination among various actors possible in regional policy. MacPhail even finds regional policy process more autonomous and decentralized than the OMC process. According to MacPhail, OMC Employment process in Scotland contains a clear hierarchical structure with central government tightly holding the policy process, seemingly contradictory to the normative expectations for the OMC. On the other hand, Structural Fund process in Scotland carries a far more decentralized shape, with subnational authorities playing more active roles with more autonomy, and reveals more of a networked coordination between various actors across multiple levels.⁸⁷ No wonder why Scott and Trubek find an early example of “new” governance in the partnership principle in EU regional policy.⁸⁸

In particular, the “strategy approach,” adopted for the EU cohesion policy for 2007-2013, seems to move regional policy closer towards experimentalist governance. The strategic approach aims to establish clear EU objectives for regional policy, explicitly in tune with the Lisbon and Gothenburg agendas for growth, jobs and sustainable development. It consists of three stages: (1) Member States and the EU institutions first agree to shared priorities and a set of Community Strategic Guidelines; (2) Based on the Community Strategic Guidelines, each Member States submits a NSRF (National Strategic Reference Framework) reflecting the Community priorities and her own NRP for delivering the Lisbon Agenda; (3) A list of more detailed Operation Programs follows. Not only subnational actors and non-governmental actors

⁸⁵ Faludi 2006, pp. 674-676.

⁸⁶ Scott and Trubek 2002, p. 4.

⁸⁷ MacPhail 2006, pp. 69-70.

⁸⁸ Scott and Trubek 2002, pp. 4-6.

are encouraged to participate in this process according to the principle of partnership, Member States have considerable autonomy to figure out the specific means and measures appropriate to their own countries. In addition, from 2007 Member States should include in the annual implementation report on its NRP a section on the contribution of the Operational Programs towards the implementation of the NRP. The Commission will from 2008 provide a summary of Member States' reports in its Annual Progress Report to the Spring European Council. Also, by the end of 2009 and 2012, the Member States provide a strategic report which identifies (1) the socio-economic situation and trends, (2) achievements, challenges and future prospects in relation to implementation of the agreed strategy, and (3) examples of good practice. The Commission's strategic report summarizing on national reports will follow, based upon which various EU institutions (including the Committee of the Regions) and Member States exchange opinions on the policy. Through this regular reporting process, not only Community priorities and guidelines are subject to mid-term review and revision, Member States and lower-level actors may also learn from each other, exchange their experiences, and revise their own goals and strategic measures.⁸⁹ I find here essential elements of experimentalist governance, i.e., "recursive redefinition of means and ends" based on "decentralized local experiments" and "centralized coordination." In essence, we can expect various actors to engage in learning process from each other in the strategy approach.

2. Korea: Dirigiste Governance

In contrast to the experimentalist governance in EU regional and innovation policy, the way the Korean government tries to build regional innovation systems is characterized by a "dirigiste" governance despite the proclaimed bottom-up approach of the participatory government. This is the most striking difference between the EU and Korea in their basic approaches to regional innovation policy. Compared to other types of regional innovation systems such as "grassroots" and "integrated" ("network") types, the dirigiste type is typically initiated by central government policies and based on centrally provided funding.⁹⁰ (See Table 6).

⁸⁹ Council of the European Union 2006, pp. 42-44; cf. DTI 2006, pp. 8-9. With regard to the previous procedures for Structural Funds policies, see European Commission (2000, pp. 21-23).

⁹⁰ Cooke 1998, pp. 19-21.

Table 6. Typology of regional innovation support systems

	Grassroots	Integrated	Dirigiste
Initiation	Local	Multilevel	Central government
Funding	Local agencies	Diverse	National agencies
Research and support	Applied/near-market	Mixed	Basic
Specialization	Low	Mixed	High
Intraregional cooperation	High	Fair	Low
Coordination	Low	Potentially high	Potentially high, but often low

Source: Hassink 2002, p. 156; Hassink 2001, p. 1377 (adapted from Cooke 1998).

Of course, there is a huge difference in their approaches to the question of regional development between the participatory government and its predecessors. We cannot emphasize too much the positive aspects of regional innovation policy of the participatory government, regardless of its performance. For it is really a new, ground-breaking, attempt that a Korean government introduces policies aimed at building regional innovation systems through a bottom-up process.⁹¹ As mentioned earlier, the participatory government has introduced fundamental paradigm shifts in two aspects: from input-driven and nationally-led growth to innovation-driven and regionally-led growth strategy, and from integrative balance to dynamic balance. Kyoung Ryung Seong, the Chairman of the Presidential Committee on Balanced National Development, even mentions that the participatory government redefines its role in regional policy on the basis of the “subsidiarity” principle, whereby the central government performs functions only subsidiary to local governments.⁹² Not just is the government highly committed to the policy goals of decentralization and balanced development through regional innovation strategy more than any other previous government, but it also tries to guarantee regional autonomy in the process of policy formation. Each region, for instance, is encouraged to select its own strategic industries autonomously through internal process of coordination and establish its own regional innovation development plan with due consideration of its particular circumstances.⁹³ The emergence of regions as an autonomous and important policy actor is quite a novel phenomenon in Korean society.

⁹¹ Lee (2003, p. 32) finds a “bottom-up” process in operating RRC since the mid-1990s. This observation makes the participatory government’s approach less distinct from those of previous governments. Yet, what Lee identifies “bottom-up” process is quite dependent on the initiatives and leading roles of the central government, and thus carries with it a strong flavor of dirigisme.

⁹² Seong 2003.

⁹³ Park 2005, pp. 17-18.

Having admitted the positive side of these efforts for a bottom-up approach, however, a comparison with Europe shows that the participatory government still fails to go beyond the dirigiste tradition in Korea. As mentioned earlier, Korea has a tradition of “artificially” constructing production, industrial, and innovative clusters through government policies. The industrial districts developed during the rapid industrialization since the mid-1960s were almost entirely “exogenously, rather than endogenously, generated” in the sense that the central government and *chaebol* dominated their construction.⁹⁴ According to Hassink, who has conducted an empirical research on regional innovation policies of some regions in Korea as evolved in the 1990s, Korean regional innovation policy-making and -implementing has a still strong “dirigiste” character, though Korea has been undergoing a transition from dirigiste type to a more integrated type since political decentralization reforms in the mid-1990s. Coordination by “hierarchical top-down relationships” rather than networked negotiation still characterizes Korean regional innovation policy. The dirigiste governance type renders Korean regions “much further away from the ideal regional innovation support system, let alone a reflective learning region.”⁹⁵

Notwithstanding its proclaimed approach and committed efforts to the contrary, regional innovation policy of the participatory government still remains basically in the dirigiste line. It is mainly the central government, not regional authorities, who initiates, leads, and manages policy measures aimed at regional innovation. Provincial and local governments only co-finance and implement initiatives that are devised by central government. The “shortage of a planning project of local government itself due to the high weight of central government-leading project” is still the biggest problem in regional policy in Korea.⁹⁶ The central government agencies, especially the Presidential Committee on Balanced National Development and other Committees for administrative city and decentralization, are in control of virtually the whole policy agenda and process. Many ministries of the central government are involved as directed and moderated by the Presidential Committees. For instance, the Ministry of Commerce, Industry and Energy (MCIE) mainly leads the policy measures for constructing regional innovation, fostering regional strategic industries, and building regional innovative clusters.

⁹⁴ Hassink 1999, pp. 132-133.

⁹⁵ Hassink 2002, pp. 157-159; Hassink 2001, p. 1381, p. 1390.

⁹⁶ Choi and Hwang 2005, p. 303; H-Y Lee 2006, pp. 179-180

The fundamental reason for the lack of “regional experimentalism” and “systemness” in regional innovation systems, mentioned in the previous section, can be traced back to the dirigiste governance type of the Korean regional innovation policy. Unlike the EU where regions are recognized a status as an official actor in the policy-making process through the Committee of Regions, there is no such formal mechanism for regions to input their aspirations in the initial policy-making process at the central level.⁹⁷ Since the central government designs and initiates the overall strategies, it is difficult for regional innovation policy to give much priority to the demands within different regions. Defined by the central government, measures aimed at regional innovation promotion tend to be unvarying across regions and lack regional “embeddedness.” Regions thus do not have sufficiently differentiated or specialized approaches to developing their own innovation systems. The quite homogeneous configurations of regional strategic industries, regional innovation councils, and regional plans for innovation and industrial clusters reflect the dirigiste governance structure.

Dirigiste governance structure renders regions less active and independent than the participatory government would expect. Regional innovation councils, the supposedly key vehicle for building regional innovation systems, have turned out to be another advisory board to public authorities, far short of becoming a key promoter and initiator of regional innovation and experimentation. Even the annually-held “regional innovation convention and exposition” is heavily dependent on the central government’s participation and management. Kyoung Ryung Seong, the Chairman of the Presidential Committee on Balanced National Development, complains of the “cognitive gap” between the participatory government and regional actors. According to him, regional actors still have a strong tendency to be dependent on outside help, while the participatory government is trying to promote constructing regional innovation systems on a decentralized and independent basis. In particular, he complains that the regional innovation councils act as a channel for lobbying and pressing central governments for financial subsidies, instead of developing their own independent regional innovation strategies.⁹⁸ The participatory government is making efforts to find a way to fill this cognitive gap, yet for vain. The root cause

⁹⁷ Besides, in contrast to the situation in Europe, regions do not have a supranational sponsor for regional policy in Korea which would help strengthen regions vis-à-vis the nation-state by circumventing the latter. Hassink 2001, p. 1390.

⁹⁸ Cf. “Local is Central, Local is Beautiful,” *Le Monde Diplomatique*, edition Coréenne, issue 8, January 15, 2007. (<http://www.lemonde.co.kr/news/articleView.html?idxno=220>).

of this dependence orientation of regions lies, however, in the very dirigiste governance type in Korea, i.e., the “coordination by hierarchy” instead of decentralized coordination by learning-by-monitoring. When led by the central government, there is a potential danger of bureaucratization and cartelization of networks, acting as interest groups instead of innovation networks.⁹⁹

Another major problem related to the dirigiste governance type is a weak mechanism for horizontal coordination between different agencies at the central level.¹⁰⁰ This problem is, at least in part, “due to strong vertical dependencies of agencies in the regions on their sponsor in the central government.”¹⁰¹ To begin with, different ministries of the central government are involved in the same policy areas. For example, with regard to the policy measures for building regional innovative clusters, besides MCIE there are other ministries involved, such as Ministry of Science and Technology, Ministry of Culture and Tourism, Ministry of Agriculture and Forestry, Ministry of Health and Welfare, Ministry of Construction and Transportation, Ministry of Information and Communication. The same situation is found in the policy area for strengthening regional innovation capabilities.¹⁰²

Furthermore, most regional innovation policies have self-contained programs, and there is too much overlap between different policies and programs. As Table 7 shows, there is lack of inter-policy linkage, for example, between (1) policies supporting underdeveloped areas and (2) those for regional innovation system construction, innovative clusters, or NURI. On the other hand, a close linkage in terms of policy goals and means exists (or must exist) between (1) policies for innovative cities and (2) those for regional innovation system, innovative clusters, or regional strategic industries. Yet, the inter-policy linkage does disappear in actual implementation, for there is not much consideration for linking them to regional innovation strategies, when the government decides the loci and development directions for innovative cities. Rather, exposed to lobbies, pressures from below (local residents) and above (politicians), the central government finds appropriate coordination much more difficult.¹⁰³

⁹⁹ Lee, Kim, and Kim 2005, p. 220.

¹⁰⁰ Lee et al. 2006, p. 223; W-S Lee 2005, p. 65.

¹⁰¹ Hassink 2002, p. 158.

¹⁰² Suh et al. 2005, p. 22.

¹⁰³ Suh et al. 2005, p. 208. cf. H-Y Lee 2006, pp. 182-183.

Table 7. Inter-policy linkages

		Stronghold for balanced development			Regional innovation development					Strengthen local government	
		Administrative City	Innovative city	Enterprise city	Regional inno. System	Innovative clusters	Strategic industries	Local universities	Lagging areas	Financial devolution	Administrative devolution
Stronghold for balanced development	Administrative City										
	Innovative cities	▲									
	Enterprise cities	×	▲								
Regional innovation development	Regional inno. system	×	□	▲							
	Innovative cluster	×	□	□	□						
	Strategic industries	×	□	▲	□	□					
	Local universities	×	▲	×	□	□	□				
	Lagging areas	▲	×	□	×	×	▲	×			
Strengthening local government	Financial devolution	▲	×	×	×	×	×	×	▲		
	Administrative devolution	▲	×	×	×	×	×	×	▲	□	

□(strong), ▲ (moderate), × (weak)

Source: Suh 2005, p. 207.

With many ministries of the central government competing in the same policy areas, close inter-policy linkages often turn into redundancies. For example, severe redundancy (rather than, or despite, close inter-linkage) exists among (1) regional innovation system, (2) creating innovative clusters, and (3) fostering regional strategic industries. Somewhat severe redundancies are also found between (1) relocation of public functions and construction of innovative cities and (2) enterprise cities. Policies supporting local universities and regional innovation strategies tend to give rise to some redundancies. That is, despite a close inter-linkage between (1) NURI and (2) regional innovation system, innovative clusters, and regional strategic industries, they are not really inter-coordinated when it comes to implementation by different

ministries.¹⁰⁴ As a result of redundancies, there are too many separate project teams to effectively coordinate; for example, 112 teams for NURI, 54 specialization centers in regional industry promotion programs, 13 teams for regional strategic industries, 7 teams for industrial cluster building, 24 centers in TIC, 54 centers in RRC.¹⁰⁵

In short, even though the participatory government proclaims a bottom-up approach to regional innovation policy, its overall approach still falls into a dirigiste type. In contrast to the EU's experimentalist governance, the dirigiste type renders regional innovation systems difficult to develop in a meaningful sense.

V. CONCLUSION

I have compared the basic approach to regional innovation policy of South Korea, especially of the participatory government, with that of the European Union. The main focus is placed on the overall orientation and governance arrangements of the policy, rather than its specific measures. Using three main features of the EU regional innovation policy as reference points, I have tried to analyze the underlying premises and approaches of the regional innovation policy of the participatory government. The three main features identified in the EU regional innovation policy are (1) the intersection of regional policy and innovation policy and their respective goals, (2) the focus on promoting regional innovation systems through decentralized coordination based on learning-by-monitoring, and (3) the underlying experimentalist governance mechanism characterized by the "recursive redefinition of means and ends." The identification of these features may itself be subject to debate, and I have purposely tried to see mostly the bright side of the EU regional innovation policy in order to use it as a guidance to reform the regional innovation policy of Korea.

Judging by these features, I could tell where the participatory government has made some progresses and where it is still lagging behind. To begin with, we cannot emphasize too much the advances made by the participatory government in the regional innovation policy. It is only with the participatory government that the issues of balanced development and devolution and

¹⁰⁴ Suh et al. 2005, pp. 209-212.

¹⁰⁵ Park 2005, p. 21.

decentralization have gained national salience in Korea. The participatory government introduced fundamental shifts in two aspects: from input-driven and nationally-led growth to innovation-driven and regionally-led growth strategy, and from integrative balance to dynamic balance. Its strong commitment to the policy goals of decentralization and balanced development through regional innovation policy is worth praising. The participatory government has embraced the new concept of dynamic balance and combined regional innovation strategy with its decentralization policies. The government has also approached the issue of regional innovation from a systemic viewpoint like the EU. It has tried to develop regional innovation systems and emphasize interactive learning, especially by building regional innovation councils which the government expects to form a nucleus in the development of autonomous and self-propulsive regional innovation systems. The participatory government has also encouraged regional autonomy in the very process of making and implementing these policy measures. Still dependent on the central government, the emergence of regions as an autonomous and important actor in the development of the country is quite a remarkable progress in Korean society.

Though similar to the EU in promoting regional innovation systems, however, Korea is lagging behind in that it lacks “regional experimentalism” found in Europe. The lack of regional experimentalism draws back from the dirigiste type of governance mechanism in Korea. Lacking sufficient autonomy and independent resources despite the participatory government’s emphasis on bottom-up approach, regions fail to initiate autonomous measures tailored to their unique needs to facilitate a stable and consistent learning process among various actors. Regions thus do not have sufficiently differentiated approaches to developing their own innovation systems. Regional innovation councils turn out to be another advisory board to regional authorities and work best as a channel to lobby the central government, rather than serving as the key promoter and initiator of innovative learning process and decentralized experimentation. The shortage of the meaningful participation of various stakeholders, business firms in particular, tells that regional innovation councils fail to promote interactive learning among the regional actors and constitute innovation systems at the regional level.

The underlying problem with the Korean approach to regional innovation policy lies in the dirigiste type of governance, a strong tradition in Korea. Though Korea might be moving from a

dirigiste type towards an integrated type of governance,¹⁰⁶ the overall approach of the participatory government to regional innovation policy is still based upon a dirigiste type of governance. In contrast to EU's experimentalist governance, the dirigiste type renders regional innovation systems difficult to develop in a meaningful way. Though the participatory government pursues "independent localization" through "endogenous development," the dirigiste governance it relies on makes such pursuit self-contradictory. For, dirigisme works against both independent localization and endogenous development. Due to dirigisme, innovation strategies and measures turn out to be highly homogeneous across regions and horizontal coordination among different policies and government agencies is problematic.

What can Korea learn from the experience of the EU? I would urge the Korean government and society to learn from the EU its regional experimentalism and experimentalist governance. A decade ago, Sabel recommended with regard to the EU regional policy that the role of central authorities should be "in many ways more limited than in the past, but more active than much of the current *de facto* decentralization of decision-making authority to regions would allow."¹⁰⁷ His recommendation applies to today's Korea too. The Korean government should be more limited than now in the sense that it should abandon the current mode of "coordination by hierarchy" and take a "decentralized coordination" based on "learning-by-monitoring." And, it also should be more active than now in the sense that it should actively apply and promote "regional experimentalism." What should be remembered in this process of promoting regional experimentalism is that "the organizations created for that purpose should themselves be decentralized and coordinated according to these very same general principles." That is, be they government agencies or economic institutions, "[t]hey will have to be reformed themselves in the very process of assisting in reform of others."¹⁰⁸

¹⁰⁶ Hassink 2003, p. 158.

¹⁰⁷ Sabel 1996, p. 43.

¹⁰⁸ Sabel 1996, p. 27.

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