

# Dynamics of Constraints on Sustainable Development : Korea's Experience

Associate Professor, Taehoon Moon  
Department of Urban and Regional Planning , Chung Ang University  
San 40-1 Daeduck Myun Ahnsung Sung City, Kyung Ki Do  
Republic of Korea, 456-756  
(e-mail: [thmoon@post.cau.ac.kr](mailto:thmoon@post.cau.ac.kr) )

## Abstract

The purpose of this paper is to examine dynamics of sustainable development in Korea from a system dynamics perspective. Since Rio's Earth Summit in 1992, government as well as civil based organization , NGOs, have been trying to put forward the sustainable development in Korea. However, achieving a sustainable development in Korea was easier said than done. Even if the Rio's Earth Summit gave a great impetus to Korean society for a sustainable development, there are at least three layers of constraints that prevent Korea from a sustainable development. Those constraints come from international, national, and local level that have to be overcome for a sustainable development. Constraints in each level show their own dynamic characteristics. This paper examines dynamics of three level of constraints using causal loop analysis. Having understood the dynamics of constraining factors of sustainable development, some suggestions were made for a sustainable development in Korea.

## 1. Introduction

Since the publication of the Brundtland Report, commonly known as *Our Common Future* in 1987, the term sustainable development have become a familiar words for those who are concerned with environment and development. Balancing the environmental and developmental concerns were clearly demonstrated in the Preamble of Agenda 21, which states "integration of environment and development concerns and a greater attention to them will lead to the fulfillment of basic needs, improved living standards for all, better protecting and managing ecosystems and a safer, more prosperous future".

Sustainability is now widely regarded as an essential guideline and characteristic for most human activities. But, like other suddenly fashionable words and phrases, these have been misunderstood and misused frequently. Sometimes, they have been used to misinform so as to gain advantage for narrow and special interests. Furthermore, despite all the calls for the integration of environmental and developmental objectives, the fact remains that in general such integration did not take place in full scale, yet. Issues of population growth and concentration, desertification, pollution and resource exploitation continued to be the responsibility of specialized departments, while macroeconomic policies focused on the maximization of economic growth. Environmental impacts were addressed to some extent by environmental agencies without much influence on the process of socio-economic decision-making in the central government. In addition, judging from the flurry of publications on the sustainability or non-sustainability of economic growth and development, it appears that there is no consensus yet on sustaining current socio-economic activities and trends, nor on the exact meaning and implications of the new concept of sustainable development.

This paper reviews constraints on sustainable development in Korea from system dynamics perspective. Having reviewed constraints on sustainable development, some suggestions was made for a sustainable development in Korea.

## 2. Concept and Dimension of Sustainable Development

Development is generally accepted to be a process that improves the living conditions of people. It is any and all kind of activities or process that increase the capacity of people or the environment to meet human needs or improve the quality of human life. Also, most may agree that the improvement of living conditions relates to non-material wants as well as to physical requirements. Development goals that call for the increase of human welfare or the improvement of the quality of life reflect this agreement.

Thus, development includes not only the extraction and processing of resources, the establishment of infrastructure, and the buying and selling of products, but also activities such as health care, social security, education, nature conservation, and supporting the arts with equal importance. This people-centered concept of development is precisely what the Copenhagen Declaration of the World Summit for Social Development was aiming for. At the conclusion of the WSSD held 1995 in Copenhagen Denmark, a Declaration and Programme of Action was adopted which represents a new consensus on the need to put people at the center of development. It pledged to conquer poverty, realize full employment, and foster stable, safe and just societies.

The concept of sustainable development emphasize one more dimension to the above mentioned concept of development, the environmental dimension. Besides, since the sustainable development is improving the quality of human life while living within the limits of natural resources, it has social and economic as well as environmental component. First of all, environmental component of sustainability refers to ecological sustainability, which means the capacity of an ecosystem to support healthy organisms while maintaining its productivity, adaptability, and capability for renewal. Economic component of sustainability depends on the relationship between benefits and costs; more precisely, it requires that benefits exceed or balance costs. Social components of sustainability reflects the relationship between development and current social norms. An activity is socially sustainable if it conforms with the social norms or does not stretch them beyond the community's tolerance for change(Munro, 1995). In this sense, a development that neglect poverty, employment, social integration, safe and just societies which were the major concerns of the Copenhagen Declaration, cannot be a sustainable one. Thus, sustainable development is a broad concept that encompasses traditional concept of development as well as people-centered and environment-centered concept of development. However, pursuing this concept at the international, national, and local level was not an easy task(Bartelmus, 1994).

## 3. Constraints on Sustainable Development

Sustainable society is a society that meets the needs of the present without harming the ability of the future generation to meet their own needs. Then, in order for a society to be a sustainable one, economic and social development coincide a healthy balance while those development do not deteriorate but to improve our natural environment which is the ultimate base both for economic and social development. This triangular supports -the economic, social, and environmental development- together can move society toward a sustainable utopia.

Korean economy has been growing so rapidly during the last four decades. From the early 1960s to the late 1990s until the economic crisis began in late 1997, Korea has achieved a remarkable economic growth. Up until the turn of 1960s, Korea was a typical underdeveloped,

largely agrarian country. However, thanks to the success of export oriented industrialization within a short period of time, the country transformed itself into a modern industrialized country. Economic growth averaged over 8 percent per annum for more than thirty years, its GDP volume soared from 2.1 billion US dollars in 1961 to 484 billion US dollars by 1996, just before the economic crisis, while its per capita GNP also leaped from 82 dollars to 10,543 dollars over the same period (The Bank of Korea, 1998).

But this very rapid and successful growth of Korean economy has made Korean society less sustainable. Thus, constraints on sustainable development in Korea can be found first of all, in the legacies of Korean economic growth. Besides, irresistible world wide trend of globalization, which Korean society has not been well prepared for, is posing unprecedented constraints on Korean society for a sustainable development. Just for the explanatory convenience, these constraints can be grouped into three level of categories; constraints from global, national, and local level.

### 1) Constraints from Global Level

As far back as the late 1980s, globalization entered the collective consciousness as well as the lexicon of individuals all over the world. Since the Soviet Union, East Germany, and other communist countries collapsed under the weight of their poor economy, the western proponents of international free trade were loud in crediting capitalism as the only system that was applicable. Now, almost a decade after, multilateral agencies and international economic cooperation organization have permanently established free trade agreements and forging new financial treaties to further open up economies. Armed with neo-liberalist arguments, globalization is being strongly pursued by a few advanced capitalist countries, headed by America. It prescribes liberalization, deregulation and privatization for economic prosperity and social stability.

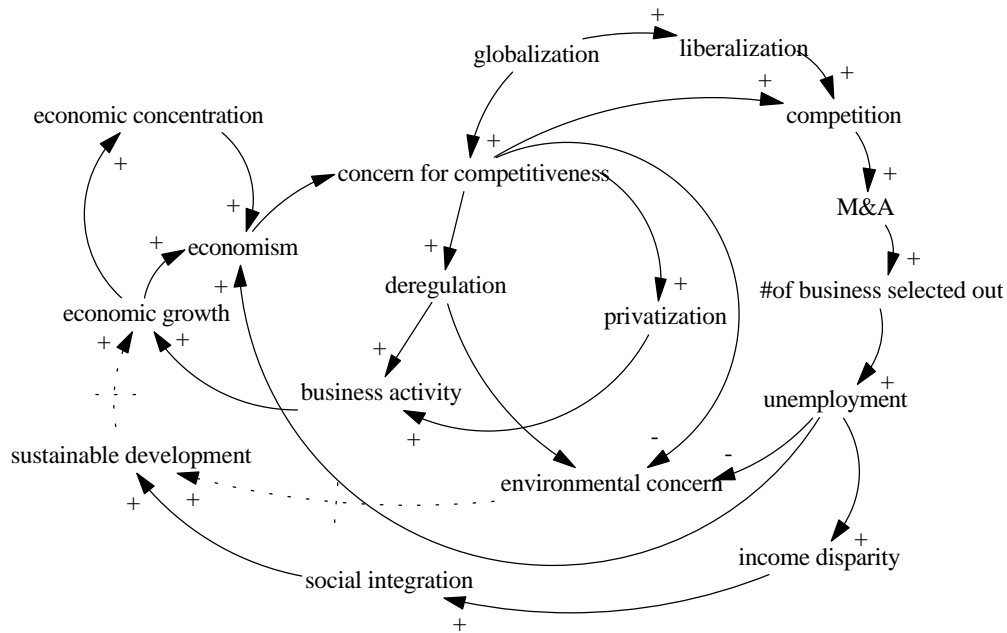
Initiated by President Kim Young Sam's strong concern, Korea joined the globalization since the late 1994. However, with distorted economic structure characterized by heavy economic concentration on a few large businesses, weak financial institutions which was unduly influenced by large business and government, the result was a disastrous economic crisis in the late 1997 (Ahn, B.Y, 1998:9).

The brighter side of globalization removes all unnecessary government regulations and trade barriers and thus, fosters economic efficiency to bring an economic prosperity. However, Korean government was too optimistic and unprepared to see the dark side of globalization. One of the most common mind sets under the globalization is the tendency to exaggerate the importance of economic efficiency and try to submit all decisions, without exception, to the rules of economic discipline. Decision makers judges a policy and development strategy exclusively on the basis of economic reasoning. Under these rules, social and environmental policies are almost always regarded as 'inefficient' or 'externals', which are then ignored. Consequently, 'economism' becomes a trap that is difficult to escape from, especially in times of economic difficulties, adjustment processes, structural reform, all of which tend to give an even greater weight to economic decision-makers (Gligo, 1995:64).

Furthermore, cut-throat competition is inevitable and as a result, the gap between rich and poor, industrial and non-industrial alike are widening rather than narrowing. Moreover, with the trend toward mergers and acquisitions grew, increasingly much more wealth and power concentrated in the hands of the few and the working class, dissipated, causing a widespread unemployment and job insecurity. Environmental abuse accelerated in the name of economic efficiency and the gains of social movement in all aspects, political, social and cultural began to erode. In addition, globalization can be a threat to democracy since 'economism' overwhelms

other non-economic values and state sovereignty is eroded through the bilateral agreement with IMF and World Bank, multilateral pacts under the WTO regime, and regional and other arrangements. All of these dark side of globalization are posing a great constraints on sustainable development. Only economic props among triangular supports -economic, social, and environmental development- necessary for a sustainable development, become a matter of great concern, while other two supports being so much neglected.

<Figure 1> Constraints on Sustainable Development from Global Level



## 2) Constraints from National Level

### (1) Growth First Development Policy Orientation

One notable thing we can observe in the history of Korea's developmental policy is that government concern about economic development has been strikingly consistent across all the policy areas throughout the past four decades. There was, of course, some reflections and reactions to this growth first developmental policy during this period. In this sense, the year 1980 was an important turning point for Korea's developmental policy because in 1980, the government announced a shift in its major policy thrust from "government initiative" to "private initiative", which began to withdraw its intervention from market place gradually, promised to improve social justice through stability first economic policy, welfare policy, and environmental policy which have been neglected during the 1960s and 1970s. However, the development of related laws and agencies did not necessarily produce a commensurate improvement of policies. One important reason was the government's deep concern for a rapid economic growth that was deeply imbedded in all policy areas.

Even though a strong governmental concern for economic development deserves a credit for Korea's rapid economic development, this concern is now a constraint for the government itself to produce an effective change to develop appropriate mechanisms to ensure development of non-economic policies, including social and environmental policies. Situation became even worse since the economic crisis in late 1997.

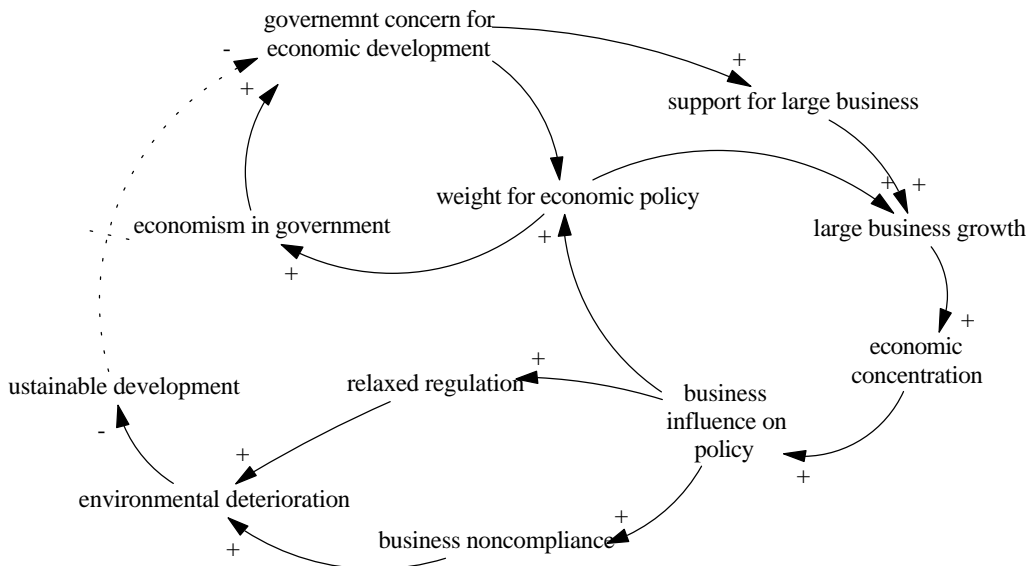
## (2) Economic Concentration and Business Influences

In addition to the government's deep concern for its economic growth, economic concentration and large business' growing influence over governmental policies seemed to have affected the development of non-economic policies, especially policies aiming for a fair distribution of wealth. During the last four decades, government in general saw the large business as the key to economic growth. While business needed government support for growth, the government needed business cooperation for economic growth on which government largely relied for its political legitimacy. Thus, large businesses were a major beneficiary of government's developmental policy and economic concentration to couple of large businesses was a natural consequences.

The first comprehensive policy measures to curb large businesses' economic concentration began in 1981 with enactment of Monopoly Regulation and Fair Trade Act. However, government policy against economic concentration was not effective and found its efforts to curb economic concentration was very sloppy. Government was responding by strengthening regulation on economic concentration since then, but curbing economic concentration was easier said than done. As a key force in the Korean economy, with a higher degree of its own power now, business continued to expand their economic power despite government regulations.

Problems was that the economic power of the large businesses gave them new leverage to deal with the government, both politically and economically. For example, in case of an environmental policy, business opposition to government actions based on economic arguments was one of the major deterrent factors of environmental preservation. Large businesses effectively articulated their interest through business associations, and through a client-patron relationship with government agencies. Rather than to oppose the Ministry of Environment directly, business often worked with economic ministries to weaken the environmental policy; this strategy worked effectively because the MOE's status was weak compared to other government agencies. Business' compliance with even the relatively loose policies was weak, with several examples of non-compliance. The result was almost always relaxed regulations and despite strong verbal commitment to environmental policy, governmental implementation remained weak in 80s and even in the 90s.

<Figure 2> Constraints on Sustainable Development from National Level

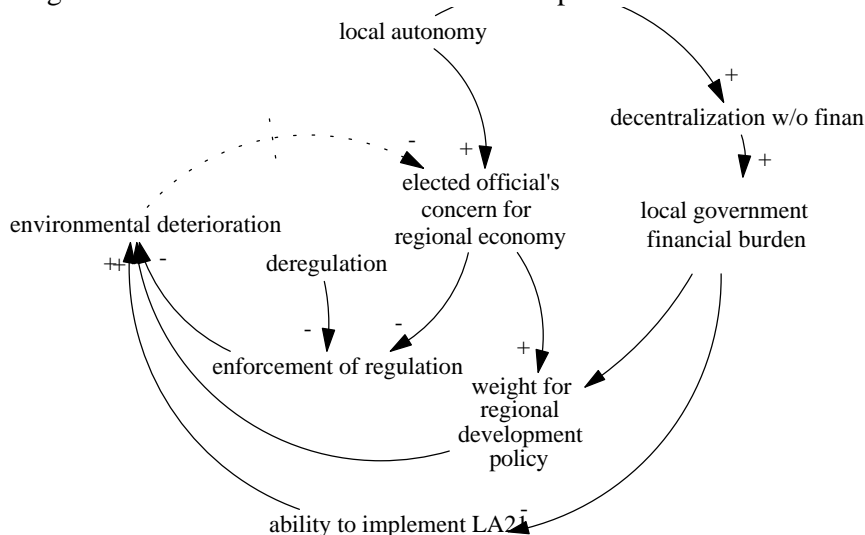


### 3) Constraints from Local Level

Awareness of local government's importance for a sustainable development had been increasing since the Earth Summit in 1992. Reviewing the implementation of Agenda 21, more than 1800 local government from 64 countries during the 1992-1996, ICLEI identified a number of common constraints to the local implementation of sustainable development as follows. First of all, the sustainable development strategies and projects of local governments had generally been isolated from overall municipal budgeting, local development planning, land-use control, and economic development activities. As a result, sustainable development strategies had resulted in a limited number of cases. Second, many national government had "down loaded" an environmental protection and social development responsibilities to local governments. However, this trend rarely had been accompanied by new revenue, generating powers or by transfers of its revenues. The result was an increase in the financial burden on the local governments, undermining their ability to implement Local Agenda 21 strategies. Third, reduced or poor national level regulation of economic activities was weakening the ability of local government to hold local businesses and other institutions accountable for the negative environmental and social impacts of their activities. Fourth, national and local governments continue to maintain policies, subsidies, and fiscal framework that inhibited efficient resource use and developmental control at the local level. Fifth, minimal incentives exist for transnational corporation and multi-lateral development institutions to be accountable and committed to local developmental strategies(ICLEI, 1997).

Things were similar in Korea too. As of 1999, about 154 local governments are involved in formulating and implementing Local Agenda 21. However, problem was that, municipal development plans and budget priorities did not reflect Local Agenda 21 or sustainable objectives. Centralized control of local budget and resources, and poor coordination of national investment plan with local priorities undermined the ability of local government to implement their Local Agenda 21 action plans. In addition, enforcement of regulation was lax, revenue generation option of local government were restricted by central government and thus, it was hard for local government to afford social development programs. Furthermore, since the beginning of the local autonomy in 1995, many local governments gave first priority to developmental policy, resulting in a substantial environmental deterioration.

<Figure 3> Constraints on Sustainable Development from Local Level

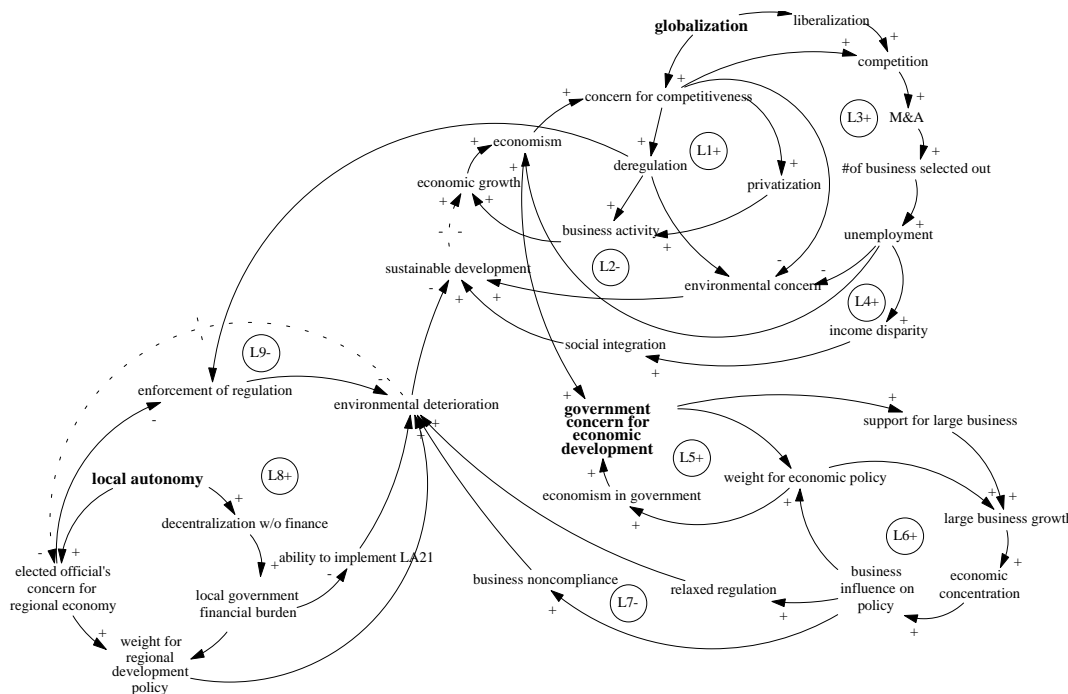


#### 4. Discussion

To be sure, Korea was successful in overcoming poverty and made an astonishing economic growth through growth-first developmental policy. Korea took an unbalanced growth strategy because there was no money to invest in every sectors for a balanced growth. Korea took industry oriented growth strategy because industry yielded more profit than agricultural sector and it took an outward oriented growth strategy because domestic market was too small. These choices during the period of developmental era were somewhat inevitable. However, the problem was not the strategy we pursued, but the government's inertia and adherence to the growth-first policy even after social-economic situation had changed. Government was successful in making the pie bigger, but failed to change and to distribute.

This in-adaptability of government came from many sources: as was presented in the causal loop diagram, institutionalized economism in the bureaucracy obsessed with economic growth; increased business influence that gave businesses a greater bargaining power vis-a-vis government policy making and implementation; short-sighted political leader who relied their political legitimacy and popularity heavily on economic performance. <Figure 4> is a causal loop diagram that combines all the causal loop diagrams explained so far.

<Figure 4> Constraints on Sustainable Development in Korea



The situation seems quite worse for sustainable development because institutionalized economism in government further increase growth oriented policy which in turn increase

economic concentration. This economic concentration leads to more business influence on government policy. Globalization further accelerates economism because its concern centers around economic efficiency only.

There seems to be not much room for sustainable development under this kind of circumstances. We may urge the role of government, which had leaned too favorably toward economic supports, has to be strengthened in the area of social and environmental policy to keep a healthy balance of tripartite support -economic, social, environmental- of sustainable development. However, it seems unlikely that government would take a strong action for a sustainable development under such a structured constraint. The only alternative strategy may lie in the power of civil society. Civil organizations' movement and participation can make a strong balancing loop that can negate the trap of economism. Had the government agencies were effective in formulating policies and delivering services to the public, had the legislature bodies were effective in articulating and conveying public voice, we would not have witnessed such a mushrooming of civil organizations. Civil organizations are now regarded as an alternatives for governmental bodies that can monitor, correct governments' wrong doings and deliver services for communities' interest. Further, civil organizations are now regarded as guardians for democracy that can protect negative effect of globalization (Ahn, B.Y. 1998b). It is encouraging in this sense that civil society organizations are growing rapidly since the democratization process of the late 1980s in Korea. However, their participation in the policy process is still limited and their financial resources are far distant from fulfilling their expected role. Government must ensure the full and equal participation of civil society in the processes of economic policy and other developmental decision making. However, in order for this to be attainable, legal and institutional framework has to be changed to empower its citizen and other governmental groups.

#### References

- Ahn, Byung Young. 1999. "Social Welfare Policy in Korea" In Kim, Woon Tae *Korean Politics*. Seoul : Park Young Sa.
- Ahn, Byung Young. 1998a. "Reflections on Globalization -Myth of Globalization and Coping with the Globalization" *Quarterly Ideology (Gyegan Sasang)*. Winter. Seoul, Korea.
- Ahn, Byung Young. 1998b. "Challenge of Globalization and Democracy" *Social Science Studies*. Seoul, Korea : Yonsei University.
- The Bank of Korea. 1998. "The Korean Economy" <http://bok.or.kr>.
- Bartelmus, Peter. 1994. *Environment, Growth and Development*. NY:Routledge.
- Glio, Nicolo. 1995. "Sustainablism and Twelve Other "Isms" that Threaten the Environment". Thaddeus Trzyna (eds.) *A Sustainable World*. International Center for the Environment and Public Policy, California Institute of Public Affairs.



- ICLEI. 1997. "Local Government Implementation of Agenda21".  
<http://www.iclei.org/la21/la211gov.htm>
- Monro, David A. 1995. "Sustainability: Rhetoric or Reality?" In Thaddeus C. Trzyna A  
*Sustainable World*. CA: International Center for the Environment and Public Policy,  
California Institute of Public Affairs.
- MOE. 1999. "Workshop for Local Agenda 21". <http://www.moenv.go.kr>
- Moon, Taehoon. 1992. *The Relationship between Business and Government in Three Policy  
Areas in Korea*. Ph.D. Dissertation. SUNY at Albany.
- Moon, Taehoon. 1999. *Environmental Policy*. Seoul : Hyungsul