A Note on Establishing a National Law System to Build a Circular Society in China

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Abstract

The present stage of economic development in China is already subjected to restrictions from the environment and resources, and a circular society is recognized as a new sustainable development strategy. Studies on the successful experiences and lessons learned from foreign law systems relating to a circular society are accumulating. The standpoint of “four factors”, namely law as a core factor, public as a basic factor, enterprise as the main body and technology as a decisive factor, for building a circular society, are discussed. Furthermore, concrete policy suggestions for establishing national laws to build a circular society are put forward based on the actual situation in China.

JEL Classification : H20, K30, Q58, R50

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1. Introduction

To build a circular society has been recognized by community of nations as a kind of new principle for sustainable development strategy. Many countries have already begun to ensure circular society development by pushing ahead with lawmaking.

Since the reform and opening-up over the past 20 years, China has acquired outstanding economic achievement. However, not only the total amount of resource consumed has increased sharply but also environmental pressure becomes greater, socio-economic system is of an important transformation period. Therefore, that the Central Committee of the Communist Party of China proposes developing strategy to build resource-conserving and environmental-friendly society is a great decision-making from China's national conditions. Therefore, comprehensive valuation criterion for circular society in China including territorial competition, involving both “hard” infrastructural networks and “soft” networks of human interaction, has become important (Stahmer [8]; Cheshire and Malecki [1]). Though the Cleaner Production (CP) Promotion Law has been enacted in 2003 for enterprises and firms, there has no law system concerning about circular society or circular economics in China (Feng [3]; Uesugi [9]).

Circular society is a kind of new principle of social development, and to build a circular society is a strategic and systematic control project in national overall level and needs common efforts of the whole society. Especially, it should be systematically analyzed and designed from such four

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respects as scientific establishment of law system, cultivation of public participation, promoting entrepreneur and establishment of system of technological innovation.

This paper reports on standpoint on “four factors” relationship. In particular the paper first outlines the importance of law system for circular society. Then, in section 3, experience of foreign countries for establishing law system concerning circular society was introduced. Section 4 provides consideration on establishing national laws to build a circular society in China. Finally, section 5 outlines the future national laws framework to build a circular society in China.

2. Importance of law system for circular society

China is a developing country with great population and deficient resource. With the reforming practice over more than two decades, China has developed rapidly in its economy. However, both stock of natural resources and carrying capacity of environment have become two factors restricting seriously the further development of China. In the past, what we walked for development is still an old road of western world with three “high” characteristics, namely high consumption, high energy consumption and high pollution. Although we have gradually been aware of the importance of environmental protection as well, we just adopt simple end-pipe treatment to control environmental pollution. Integral studying and analysis from viewpoint of source of pollutants for neither the system of social production and lifestyle nor building a circular society has been carried out.

Among “four factors” relating to building a circular society, we think that law is a core factor, public a basic factor, enterprise a main body and technology is a decisive factor.

Firstly, that to build a circular society needs participation of all social members. That to build a circular society request not only the transition in mode of economic growth, but also changing people's lifestyle. At the same time, since that to build a circular society involves every aspect of social economic life, it needs public general participation. At present, generally the foundation of general public in China is weaker, including that people is lack consciousness of worrying about resources, saving resource, protecting environment and reusing & recycling resource; and that people has not good lifestyle and behavioral manner in full compliance with circular society.

In order to cultivate foundation of general public with regard to circular society, people's principle for production and lifestyle would be changed fundamentally and their consciousness of worrying about resources, saving resource, protecting environment promoted through media to propagate and public opinion to conduct. Further, through a series of educational activities, such as seminar, lecture, etc., principle of circular economy and circular society would be guided and understood. Especially, education for teenagers would be promoted. Also, laws and regulations and policy relating to circular society would be formulated so that people can regulate their behaviors adopting green lifestyle and consumption pattern. In addition, it will be paid attention to the role of the general public's supervision in building a circular society.

Secondly, it will be paid attention to the role of enterprise's main body in building a circular society. Based on our research on regional economic development of Zhejiang province for many years, the cause that the Zhejiang economy can develop rapidly in China is due to circular economy (Du, et al. [2]). Circular economy focuses on the most efficient use of resources and environmental protection, and employs manufacturing, distribution, and recovery systems that allow those material inputs to be returned to fully productive use (not merely turned into products of lesser value, as in conventional recycling). Enterprises in the Zhejiang province have succeeded in reducing the production costs consumedly through recovering and recycling resources. Therefore, enterprises have inner motivation while developing circular economy. At the same time, in the process to build a circular society, enterprise can be stimulated to save resources, raise resource utilization rate and promote environmental protection through green financial and/or tax/ subsidy policy such as sales tax exemption or immediate depreciation; on the other hand, in order to

promote producers to improve product eco-design, take wastes back, recycle and reuse, EPR (Extended Producer Responsibility) would be considered and adopted and producer's legal obligation and responsibility confirmed. In addition, in the initial stage of building a circular society, enterprises would undertake a large number of work and main responsibility. Therefore, law system and policy would be designed well to promote function of enterprises' main body in building a circular society.

Thirdly, technology is a key factor in building a circular society. The important factor relating to transition from a traditional linear to circular economy is circular technology, the pattern of former one is "natural resources-products-wastes" and that of later "resource-products-recyclable resources". Only through application of a large amount of circular technologies, such as biomass utilization (Higano, [5]), dematerialization, reduction of resource, reusing and recycling of resources could be realized. Of course, that these applicable technologies are of feasibility economically here is assumed.

As for circular technology, lawmaking should be designed to encourage R&D, promote to protect innovative technology and to popularize and apply advanced technology. At the same time, corresponding laws and regulations should be imposed to restrain utilization of improper technology, reduce the amount of wastes and promote to recycle resources.

Thus it can be seen, establishing a self-contained law system is the basic and core part for building a circular society, it is of overall and basic for cultivating the foundation of general public, having a function of enterprise's main body and forming a technological innovation system. Therefore, during the process of building a circular society, integral and systematic law system is necessary. In the meantime, experience of foreign countries also indicates that they all begin building a circular society with law system.

3. Experience of foreign countries for establishing law system concerning circular society

Establishment of new model for social development needs strong guarantee of law. Among developed countries, both Germany and Japan started to try to promote building a circular society by take legal means at first.

Germany is the first country in the world carrying out lawmaking for circular economy. "Waste Disposal Act" (1972) were enacted while the "Eco-label" system of "Germany's Blue Angel" was implemented in 1977. "Closed Substance and Waste Management Act (Act for Promoting Closed Substance Cycle Waste Management and Ensuring Environmentally Compatible Waste Disposal)" was enacted in 1994. This law had extensive influence in the world and was revised in 1998. "Ordinance on the Avoidance and Recovery of Packaging Waste" was enacted in 1998; "Federal Soil Protection and Contaminated Sites Ordinance" was enacted in 1999; "Act on Granting Priority to Renewable Energy Sources" was enacted in 2000; "Ordinance on Landfills and Long-Term Storage Facilities and Amending the Ordinance on Environmentally Compatible Storage of Waste from Human Settlements and on Biological Waste-Treatment Facilities", "Ordinance on the Management of Waste Wood" were enacted in 2002; "Act Governing the Sale, Return and Environmentally Sound Disposal of Electrical and Electronic Equipment" was enacted in 2005. One of the characteristics of law system in the Germany is that power of judicature relating to environmental issues is independent in Germany (Hans and Narufumi [4]).

Further, Germany and other members of European Union have enacted several basic law systems concerning circular economy. The areas include avoiding wastes, circular registration, circular goal, circular procedure and demonstration, technical instructions and Guideline, legal obligation and responsibility, government support, market admittance, market running, economic stimulating policy and information etc.

"Fundamental Law for Establishing a Sound Material-Cycle Society" is the basic law concerning circular society in Japan. It was passed by Japanese Cabinet on April 14, 2000 and then ratified

Table 1. History of law system concerning circular society
(in Germany, Japan and China)

Year	Germany	Japan	China
1970		Waste Management and Public Cleansing Law (amended in 2006)	
1971		Environmental Agency was established.	
1972	Waste Disposal Act		
1977	Eco-label Blue Angel		
1979			Environmental Protection Law (for trial implementation; amended in 1989)
1982			Ordinance on the Conservation of Soil and Water (revised as Law on the Conservation of Soil and Water in 1991)
1984			State Environmental Protection Bureau was established. (upgraded as State Environmental Protection Administration (SEPA) in 1998)
1986	The 1986 Act on Avoidance and Disposal of Waste		Law for the Management of Soil (amended in 2004)
	Environment Ministry was established.		
1987		The Law for Development of Comprehensive Resort Areas (amended in 2004)	
1989		Soil Basic Law (amended in 1999)	
1991		Law for the Promotion of Effective Utilization of Resources (amended in 2002)	The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal was ratified.
1993		Environmental Basic Law (amended in 2006)	
1994	Closed Substance and Waste Management Act		
1995		Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging (amended in 2006)	
1996			Law on the Prevention and Control of Solid Waste (amended in 2004)
1998	Ordinance on the Avoidance and Recovery of Packaging Waste (amended in 2005)	Home Appliance Recycling Law (amended in 2003)	
1999	Federal Soil Protection and Contaminated Sites Ordinance	Law for Establishing Environment Ministry (amended in 2006)	Ordinance on the Hazardous Waste Manifest
	Act on Granting Priority to Renewable Energy Sources	Fundamental Law for Establishing a Sound Material-Cycle Society	

Table 1. Continued

Year	Germany	Japan	China
2000		Law Concerning the Promotion of Recycling Food Cyclical Resources (amended in 2003) Law Concerning Recycling of Materials from Construction Work (amended in 2004) Law on Promoting Green Purchasing (amended in 2003)	
2001			Law on the Prevention and Control of Desertification
2002	Ordinance on Landfills and Long-Term Storage Facilities and Amending the Ordinance on Environmentally Compatible Storage of Waste from Human Settlements and on Biological Waste-Treatment Facilities Ordinance on the Management of Waste Wood	Law Concerning Recycling Measures of End-of-life Vehicles (amended in 2006)	Law of the People's Republic of China on the Promotion of Clean Production
2005	Act Governing the Sale, Return and Environmentally Sound Disposal of Electrical and Electronic Equipment		Act on Alternative Energy Sources
2006			China's Directive on Restriction of Hazardous Substances (RoHS) China's Directive on Waste Electrical and Electronic Equipment (WEEE)

Source: Ministry of the Environment Government of Japan [6]; Schnurer [7], et al.

by Congress, and entered into force in January, 2001. Its structure includes general provisions, fundamental plan and policies for establishing a sound material-cycle society, totally 3 chapters 32 articles. The concept of material-cycle society, measures by state and local government, responsibility, fundamental plan for establishing a sound material-cycle society etc. were given. This law plays an important role to establish and unify law system relating to building a circular society.

Further, there are other several important laws in Japan's 3R (Reduction, Reusing and Recycling) law system, such as "Law for the Promotion of Sorted Collection and Recycling of Containers and Packaging (Container and Packaging Recycling Law)" enacted in 1995, "Law for the Recycling of Specified Kinds of Home Appliances (Home Appliance Recycling Law)" enacted in 1998, "Law for Promotion of Recycling and Related Activities for the Treatment of Cyclical Food Resources (Food Waste Recycling Law)" enacted in 2000. In addition to the above laws, Japan still promulgates and revises other laws successively, such as "Waste Management and Public Cleansing Law" amended in 2006, "Law for the Promotion of Effective Utilization of Resources" enacted in 2002, "Law concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Law on Promoting Green Purchasing)" put into force in 2001. These laws form a perfect system of resource recovery, reusing and recycling, and have a good implementing effect for building a circular society in Japan.

Therefore (see Table 1), since the seventies of last century developed countries have began to promote developing circular economy and building a circular society by take legal means. But the

initial motivation is to solve the acute problem of energy shortage and heavy environmental pressure resulting from industrial development. The advantages of these countries in the process of establishing law system relating to building a circular society include strong economic power and good foundation of public (such as green movement, ideological trends for environmental protection).

Lawmaking practice concerning building a circular society in other countries is useful to China. China is a developing country, and its social and economic development is in a key crossroad. Therefore, in order to establish law system relating to building a circular society in China, the historical background and social economic terms in other countries should be fully analyzed; their advanced experiences and methods studied.

4. Consideration on establishing national laws to build a circular society in China

Circular society in China must be promoted and realized through lawmaking. Because before the new mode of production and social development have not been totally established yet, public are affected by traditional idea for production and model for social development, and their idea and behavioral manner should be changed to a great extent by law's mandatory obligation.

4.1 Gradual lawmaking

As it is a systemic program to establish law system relating to building a circular society in China, lawmaking should advance gradually in proper sequence at different stages and on different levels. The law system can be divided into three administrative levels. The first level means basic law concerning circular society, such as China "Constitution" and "Environment Protection and Resources Conservation Law", Japan "Fundamental Law for Establishing a Sound Material-Cycle Society". On this level, in order to establish, guide and integrate the law system concerning circular society in China, "Environment Protection and Resources Conservation Law" should be revised and China "Fundamental Law for Building a Circular Society" would be enacted. The second level means comprehensive law concerning circular society, such as "Waste Disposal Act", "Law for the Promotion of Effective Utilization of Resources", etc. The third level means to draw up some specialized lawmaking from the viewpoint of microscopic scale in accordance with basic law and comprehensive law.

Lawmaking at three levels would be made by different ways. It does not mean that lawmaking would be done according to the sequence neither from basic law, comprehensive law to specialized lawmaking, nor from specialized lawmaking from the specific field, comprehensive law to basic law. Therefore, lawmaking at three levels would be carried out made at the same time.

4.2 Lawmaking's implementation feasibility

Lawmaking should be suited to China's conditions, and implementation feasibility should be focused on. Lawmaking is one prerequisite to implement law. That whether one law could be effective or not depends that the law is suited to China's conditions and can solve the practical problem of China. Therefore, lawmaking can't imitate the foreign law blindly, and there are many cases resulting damage due to improper lawmaking in China. Since there are different geographical conditions, environment, resources, population and culture etc. in various countries of the world, law system of each country would have a characteristics in accordance with its demand. Because China is a developing big country with quit a lot regional difference, various natural conditions and complicated environmental issues, a realistic and pragmatic approach should be adopted for lawmaking concerning circular society, and a complete law system concerning circular society should be established steadily. Further, lawmaking can not be too abstract and general to understand, implementation and feasibility should be focused on. Such effects that the law just has policy demonstration, being short of legal meaning should be avoided.

Especially, as a principle, judicature should be separated from administration properly, and it is important to make local government, not the central or provincial government, concern circular society, which is different with federal system in Germany.

4.3 The level of lawmaking concerning circular society

It should be considered as a national strategy to establish law system concerning circular society, can't only depend on several relevant stakeholders. At present, inconsistency among various kinds of laws and ordinances is due to that various offices and ministries do not coordinate well and they just consider their own interests in the process of lawmaking concerning circular society in China.

4.4 Interests of disadvantaged groups in the lawmaking

Interests of disadvantaged groups should be considered and protected as their spokesmen usually not exist in the process of building a circular society. Law should be a tool to adjust the relation between rights and obligations among various interests groups. During the process of lawmaking, interests among various interests groups should be balanced fully, law can't become a tool for advantaged groups to obtain their improper interests. Fair and justice may be realized through protecting the interests of some disadvantaged groups.

5. Policy suggestions on establishing national laws to build a circular society

5.1 From top to bottom for lawmaking

The primary problem on establishing law system relating to circular society in China is that the lawmaking should be designed strategically from top to bottom in the viewpoint of planning. At present, lawmaking just begins while a question was found to adjust; one separate law may be drawn up when timing becomes proper. As for lawmaking concerning circular society, the lawmaking in Japan also begins from specific law to "Fundamental Law for Establishing a Sound Material-Cycle Society". Because Japan has not realized the necessity of comprehensive law on promotion of building a circular society until in recent years, the lawmaking principle from specific law to comprehensive law was adopted. And focusing on matters of coordination in China, basic law or principle of basic law should be enacted at first to promote circular society.

5.2 Regulating scope of lawmaking

Rights, obligations and responsibility in the lawmaking process should be declared clearly. At present, lawmaking concerning circular society in China lacks regulation of concrete rights, obligations and responsibility, lacks implementation feasibility. Therefore, during the process of establishing law system concerning circular society, implementation feasibility must be considered, obligation and responsibility should be emphasized. Regulating scope of lawmaking includes policymaker, producer, designer, seller, user, handler, etc. The two points in the following should be considered especially.

Firstly, the obligation for government to build a circular society should be declared clearly. As for the role of government in building a circular society, obligation should be focused on "establishing interests' mechanism". In addition to this, it is also a key point for government to establish the system of public information.

Secondly, extended producer's responsibility (EPR) should be adopted. EPR means to hold producers responsible for their products after sale so that they ultimately bear the costs and burdens associated with such things as product disposal. Supposedly, this will create an incentive for producers to pay closer attention to the product's design and manufacture at the outset to limit their costs down the road. The regulatory framework of EPR intends to address environmental impacts generated at all points in a product's life cycle. The idea behind EPR is to use a range of policy

instruments, including taxation, “right-to-know” warnings and regulatory requirements, to minimize a product’s environmental effects by changing its design, the materials used to make it and how it is used.

5.3 System of scientific and technological in the lawmaking

Lawmaking concerning system of scientific and technological support and demonstration should be promoted. Building a circular society needs strong support of various advanced science and technology, such as cleaner production technology, information technology, energy comprehensive utilization technology, recovery and recycling technology, resource reusing (Higano [5]) and substitution technology, environmental monitoring technology etc. Therefore, advanced technology should be protected by patent and rewarded by lawmaking concerning circular society, and investment for R&D should be promoted. Technological innovation of the whole society should be promoted through demonstration of typical enterprises.

5.4 Market mechanism

Market mechanism for resource effective allocation in building a circular society should be made full use of. In order to make full use of an “invisible hand” of market mechanism, system of market access, incentive system for circular economy, incentive system for green consumption, system of imposing environmental tax, system of emission permit transactions etc. should be established.

5.5 Public participation

System of public participation should be established. Public participation is dispensable to promote the establishment of law system concerning circular society. On the one hand, in the process of establishing law system concerning circular society, people’s suggestion should be considered and wisdom of humanity optimum utilized, and enthusiasm and creativity for people to participate in developing a circular society should be encouraged. On the other hand, education system concerning circular society for public should be established, and it should be promoted for people to be aware of environment and 3R (Reduction, Reusing and Recycling) consciousness and adopt green lifestyle and consumption pattern consciously. Further, public’s supervision in developing a circular society should made full use of.

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