

The Framework of Environmental Economic Policies in Transition Economy in China

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Abstract

The current environmental and economic policies are facing new challenges in the transition of market economy. Based on the analysis of the implementation and existing problems of current environmental economic policies, this paper proposes the framework of environmental economic policies for market economy in China, including price, tax, investment and credit, market-based incentives and environmental and economic accounting.

Keyword: Environmental policies; Economic instruments;
Market Economy

Environmental economic policies are a main component of environmental policies. The market economy countries, especially OECD member states⁽¹⁾, have actively stimulated the application of environmental economic instruments and achieved much successful experience since 1970. The UN Declaration of Environment and Development" passed in June 1992 in Rio also required each government to promote the complementary function of price, market, national finance and economic policies in the formulation of environmental policies and internalize the environmental costs into policy making process of production and consumption. Also, it was clearly pointed out by Chinese government that the government at each level should make full use of economic instruments and market incentives, to promote sustainable development and protect the environment, and make market price completely reflect the environmental cost of economic activity.⁽²⁾

China is presently building and perfecting its market economy and the fundamental role of market mechanism becomes more and more obvious. It becomes an urgent issue for China to speed up the establishment of its environmental economic policy system and apply more frequently the economic instruments in environmental protection.

Based on the analysis of the implementation of and existing problems with current economic instruments for environmental management, this paper proposes the framework of environmental economic policies in transition economy in China, including pricing, taxation, investment and credit, market-based incentives and integrated environment and economy accounting.

1. Existing Environmental Economic Policies in China

Nature of Existing Policies

The so-called environmental economic policies are those which use the economic instruments such as price, tax, credit, investment, micro-incentives and macro-economic adjustment based on the law of value to adjust or affect the pollution and abatement behavior of the person or party concerned. Such policies usually possess benefit driving factors.

The conventional environmental management policies in China were established on the direct administrative interference and command-and-control of the government, environmental economic instruments were only supplementary ones of direct regulative system (especially concentration-based discharge standards). The presently applied environmental economic policies themselves have not become an system and the contents of the policies are mainly the pollution levy system, reward and premium for comprehensive utilization as well as environmental protection investment channels, etc.

Pollution levy system has been applied in China for more than 16 years and become the most important and fundamental part of China's environmental management system and economic instruments. The existing pollution levy, which has been implemented across the country, covers the following five fields and 113 items for the discharge of waste water, waste gases, solid wastes, noises and low-level radioactive wastes. In 1995, the number of paid enterprises and total pollution charge amount to 368,200 and 3.713 billion yuan, respectively. Meanwhile, the charge level is 0.6% of national financial income.⁽³⁾ Actually, the main function of current pollution charge is to raise revenue for on-site clean-ups, and the charge rate is too low to provide enough incentive on pollution reduction. Since 1989, the ecological destruction compensation has been introduced in some provinces and cities, which is mainly in the form of product charge.⁽⁴⁾ The sulfur dioxide charge has been experimented in 2 provinces and 9 cities, where the acid rain pollution is very serious, and the uniform charge rate on SO₂ is 0.20 yuan per kilogram.

For economic incentive policies, the state has published that the tax rate of adjustment tax of investment for environmental protection projects is zero, while some incentives in production, sale, price, tax and profit reserve, etc. will be given for the integrated use products of wastes and environmental protection products. Six investment channels have been issued by the state in environmental protection, including "three simultaneousness" fund for newly built project, fund for replacement and innovation, municipal maintenance fund, ear-marked grant from pollution levy, enterprise-owned profit by waste utilization and bank credit. The state total investment for environmental protection in China reaches to 30.7 billion yuans in 1994, which is about 0.7% of GNP.⁽⁵⁾

Problems of Existing Policies

Though the incentive policies of presently implementing pollution levy system and integrated uses of wastes have played an active role in China's environmental protection, those systems and policies were formulated in the planning economic system or economic transition period. There are many problems including:

- With the gradual establishment of market economy in China, it is a question for existing economic policies to fit the market mechanism. Most contents of them should be adjusted or revised because the basis for them has been changed. for

example, the pay-back principle for the fund of pollution levy and loan remission themselves are not consistent with the 揚olluter Pays Principle(PPP)". Most fund channels for abating pollution have been weakened because the investment constrain of enterprise has partly changed, from a soft budget constrain to a hard one. For private and town-village enterprises, they are not directed and controlled by government departments and may obtain some investment fund from private capital market. In this case the amount of fund used for reducing pollution will be depend on the compliance of environmental regulations.

- The existing environmental economic policies have not fully reflected the real value of environmental resources. For example, pollution levy is greatly lower than the treatment cost and damage cost caused by polluter, which has remained the same for many years despite rapid economic growth and high inflation, and therefore, induces most enterprises to prefer to pay pollution charge rather than reduce pollution. Meanwhile the combined environmental resource distribution of market competition and government macro-adjustment have not been applied. The prices for most environment-related resources are lower than their full costs, which causes a great waste and a lot of pollution.
- The existing environmental economic policies lack systematicness and an environmental economic policy system which is beneficial for the implementation of sustainable development has not been established. Attention has always been limited to the interior part of environmental management system in the formulation of policies and instruments and little consideration has been paid to the transition of macro-adjustment function of government and integration of other sector policies, such as economic structure adjustment plan, energy development strategy, fiscal and taxation, agriculture and transportation policies. Every department or agency concerned with water resource management likes to broaden sources of income and levy on water users, as a result charges on wastewater by certain enterprise in some cities are up to 11 items and the collected revenue goes to 6 government departments.⁽⁶⁾ It is clear that some of them are overlapped and inconsistent and that this charge system is not effective from the standpoint of society. In this case it will be more effective to compose them into an integrated charge and to appoint a department as the collector.
- The existing economic policies or instruments themselves need re-construction or reform, especially pollution levy system. The existing pollution levy system is, from the strict traditional point of view, a system of non-compliance fine. There are many urgent problems such as charge scheme formulation, collection of pollution levy and the management and uses of fund need to be solved.

2. The Framework of Environmental Economic Policy System

The author thinks that it is needed to speed up the establishment of an environmental economic policies in compliance with the market mechanism in the reform process of moving towards market economy. In general, this system should cover the main policies including price, tax, investment credit, micro-incentives and comprehensive environmental accounting, etc. The framework can be illustrated in Figure 1.

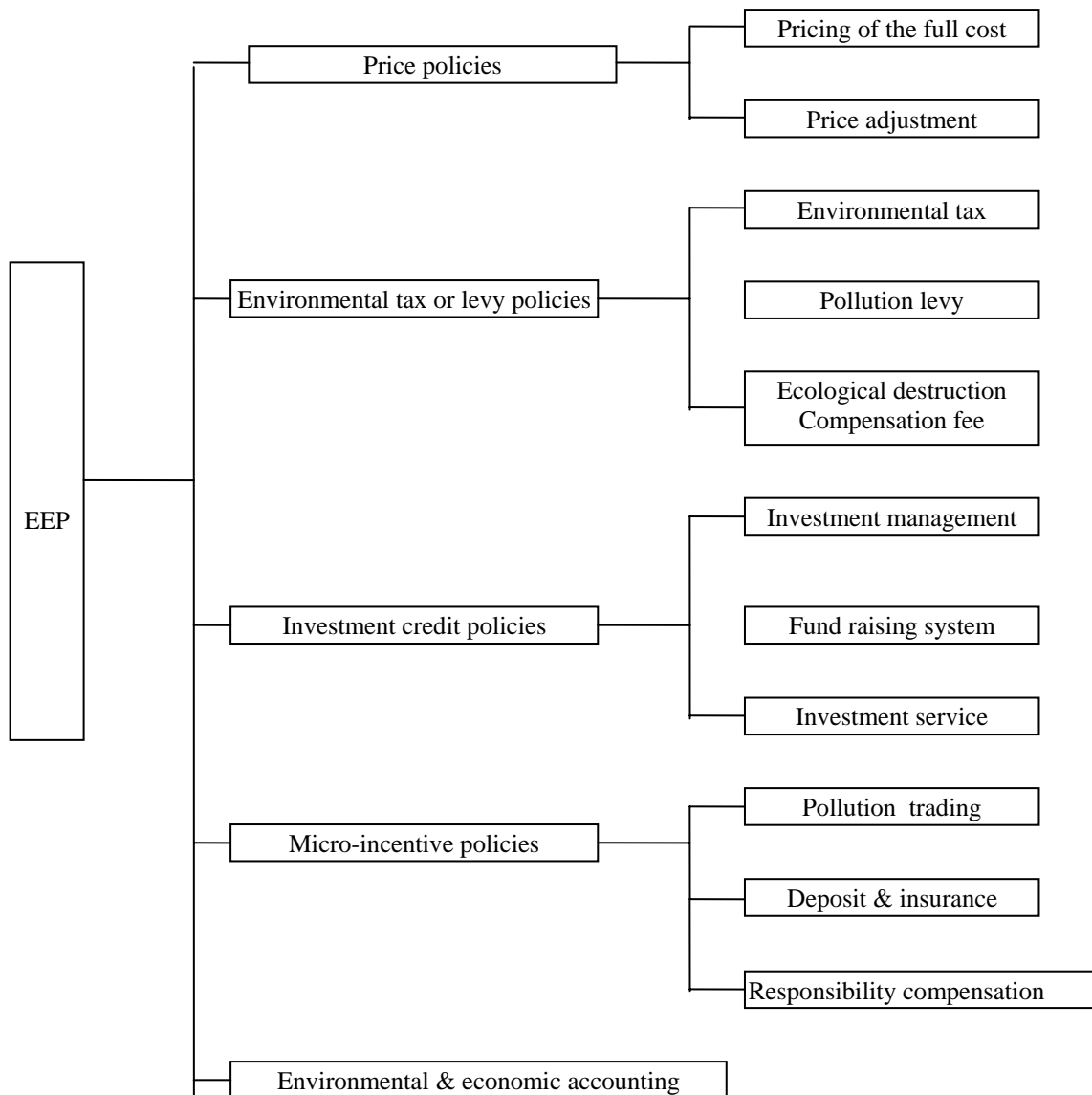


Fig. 1. Recommended framework of environmental economic policies (EEP)

Pricing Policies for Environmental Resources and Energy

Presently, the prices of China's majority of products are determined by the demand and supply of market. There are, however, some serious abnormal phenomena for price system which especially appears to be lower prices of raw materials and lower prices and even no charges of environmental resources. Some environmental resources and energy should be gradually put into market directly and determined by the law of value and the relationship of demand and supply in the future. Therefore, market prices will reflect the environmental cost precisely and a sustainable environmental resource and energy system can be achieved finally. The main policies can be applied include:

- Determine the product prices based on the full costs. Add extra charge or tax to those products not friendly to environment to make those products correctly reflect the environmental costs in the economic re-production processes;
- Open the planning coal market and abolish the present “Double Channel System” of coal price gradually to make it equal to the international market price under possible conditions;
- Apply different price policies according to the difference of area and environmental quality, encourage water saving and increase energy efficiency and urban consumption of coal gas as well as crick and good coal;
- Abolish ration system of fertilizers and pesticides as well as the subsidies for imported fertilizers and pesticides, encourage farmers to use the fertilizers and pesticides of high efficiency, low residue and no toxicity while open gradually the price market of agricultural products;
- Adopt economic price to replace those market or directive prices lower than long-term marginal cost when the state or companies are making investment planning for the exploitation of resources and energy;
- Compare the replacement effects of price adjustment and fully apply other incentive instruments (e.g., tax or charge for use) to eliminate adverse economic and distribution impacts on consumers (e.g., good urban coal consumers) because of inflation.

Environmental Charge and Taxation Policies

Environmental charge/tax means the charges or taxes on the pollution or exploitation activity extent caused by all institutions and personnel exploiting and using environmental resources. The purpose of this is to strengthen exploiters or users to save environmental resources, reduce pollutant discharge and protect environment. Because there is no hard budget constrains for companies in planning economy, environmental tax or levy can only be effectively applied to internalize the external diseconomy of pollution under market economy.

It is the critical moment for the reform of financial and tax system. Environmental management sectors should study and establish an environmental tax or levy system suitable for the Chinese characteristics supported by financial and tax sectors. This system should cover the following contents:

- Perfect existing pollution levy system, e.g., increase charge rate, apply multi-pollutants added and total pollutant amount charge, fully implement charge on SO₂ emission over the country and charge domestic solid waste and waste water, etc.;
- Study and set up environmental tax (e.g., environmental tax of fuel), gradually integrate resource complementary charges collected by some resource management sectors into environmental tax. As the first step some easily identified products, such as CFCs, hallon and lead gasoline may be taxed;
- Study and fully implement ecological destruction compensation. The major charge basis is the ecological destruction degree caused in the exploitation process of natural resources. The extent of the charges covers coal, oil, land, tourism, water, forests, grasslands, medical plants and electricity, etc.. This charge scheme should be integrated with current resource taxes;

- Establish and impose different taxes or favorite policies to support and promote the development of environmental protection industry. In the long-term, it is suggested that the tax rate on environmental protection industry be reduced gradually. In the short run some established friendly-environment taxes, e.g., exemption of incorporate tax on waste-reused or recycled products, should be implemented fully;
- Provide some tax incentives for waste products or cleaner products and waver all or part of the tax in a period of time. Reduction or incentive of tax should also be granted to those income from nature reserve management or diversified economy.

Environmental Investment and Credit Policies

Environmental protection is activities of social benefits, so it needs government support in financial budget, investment channel and credit market. Government sectors should speed up the establishment of a stable investment credit system to enhance the input of more funds into environmental protection. The following practical measures should be taken:

- Establish National Environmental Protection Fund or State Environmental Protection Investment Company under suitable conditions and set up national environmental protection loan fund in state policy banks (e.g., development banks). State also can issue middle or long term bond to collect money for big environmental protection and ecological engineering. State should also provide incentive policies in loan rate, return conditions and depreciation.
- Fully implement payment principle for environmental investment. Based on the demonstration of Shenyang Municipal Environmental Protection Investment Company, fully distribute payable uses of environmental protection investment including government financial allocation, pollution discharge levy and resource complementary levy, etc. Local environmental protection investment companies may collect fund through various channels like middle term bond, stock or foreign money, etc.
- Raise money through various channels to increase environmental protection input. The first, implement payable uses of environmental resources gradually, increase pollution levy level and charge environmental tax; the second, companies actually become investors and beneficiary under government supervision, while relax restrictions on the conditions of investment credit, so companies can obtain more fund to invest for pollution control in new construction or technology innovation projects; the third, government will increase the investment on basic engineering and facilities, social benefit projects (including socialized environmental projects);
- Increase investment benefits by market mechanism, e.g., put environmental protection industry into market as soon as possible and introduce bidding system for environmental protection projects. Under possible conditions, enhance and promote enterprised operation and management for some environmental infrastructures, e.g., public sewage plant and waste landfill;

Market-based Environmentally Incentive Policies

After the establishment of macro and middle level environmental economic policies, relevant micro-environmental economic incentive instruments must be set up

to fully reflect the PPP. Besides the pollution levy and environmental tax policies mentioned above, the following environmental economic incentive instruments can also be addressed in China.

- Pollution discharge permit trading system: State should summarize the demonstration experience of some areas (such as in Shanghai and Shenyang) and publish policies and regulations concerning the trading of pollution discharge permits. This system should be distributed to nationwide under possible conditions. This system needs to be coordinated with existing pollution levy, deadline treatment and concentrated control, etc.;
- Deposit-refund system: Deposit should be charged for the implementation of “three Simultaneity” Projects, deposit should also be charged for the collection and treatment of hazardous products or packing products. Deposit should be designed to be high enough to producers and consumers to be friendly-environmentally;
- Environmental insurance system: Environmental insurance system should be established under possible conditions to solve the compensation and economic responsibility for pollution treatment caused by non-error pollution accidents.

Integrated Accounting System for Environment and Economy

Accounting of environment and natural resources has very important meaning for determining actual national property, fully and objectively evaluating social economic development state and future development potential and correctly coordinating the relationship between long-term development and short-term increase, between economic development and resource and environmental protection. This system is still in the process of study worldwide. China will adopt the following measures to set up this system:

- Establish environment and natural resource accounting principles and methodology system, strengthen information exchange on environment and economy accounting between Chinese experts and international institutions concerned ;
- Perfect and reform existing national economic accounting system, consider environmental and natural debt in the current accounting system;
- Select suitable sectors and areas to conduct demonstration of environmental and economic integrated accounting system;
- Include environmental resource accounting and environmental pollution damage as well as ecological destruction into national economic accounting system;
- Establish an independent industry sector accounting system based on environmental and natural resource regeneration in the future.

3. Conclusions and Recommendations

- The existing environmental economic policies can not effectively meet the needs of market economy. It is the critical moment to set up market economy in China. Chinese government should make use of this opportunity in transition economy to formulate and implement relevant environmental economic policies in compliance with market economy.

- The majority of China's environmental laws and regulations as well as management systems have been established under planning economy or transition period. Under new condition, environmental legislation, management system and system reconstruction or renovation for market economy should be speeded up to provide quarantine and necessary conditions for the implementation of environmental economic policies.
- Due to big difference of economic development, market development and environmental management among different regions, state should permit local governments to formulate and implement new environmental policies, summarize and disseminate experience according to the local characteristics.
- It should be conducted to formulate price policies, environmental tax policies and incentive policies for investment and credit as soon as possible. The local fund raised through environmental tax or pollution levy should be included in local tax and resources taxes should be shared by central and local government.
- The sectors concerned with environmental economic policies are complicated. The pre-assessment and assessment for the policies under formulation or implementation should be carried out, so that adjustment and perfection can be made promptly.

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