

Environmental Regulatory Policy and Economic Development in China: Purpose and Consequence

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Abstract: Based on the development history of environmental regulation in China and the corresponding economic situation, this paper discusses whether environmental regulation policies in northeast, southwest and central China are conducive to local economic development. The purpose of this paper is to derive appropriate environmental regulatory policies for regions with different economic conditions. The restoration of ecology and the goal of green production in Northeast China have prompted strict environmental protection policies. However, considering the relatively backward level of local economic development, environmental regulation policies should be relaxed appropriately to give way to economic development. However, Southwest China has a serious ecological destruction problem. The implementation of environmental policies can help Southwest China achieve technological innovation, scientific and technological development and economic growth. Therefore, relatively strict environmental regulation policies should be adopted. Central China has a relatively high level of economic development, but there are also problems such as low resource utilization rate. Therefore, strict environmental policies should be adopted accordingly to promote Central China to improve resource utilization rate, production efficiency and technological innovation, so as to promote economic growth.

Keywords: environmental regulation policy, economic development, ecological environment

1. Introduction

China's environmental regulatory policies have undergone tremendous changes in the past seven decades. From 1949 to 1977, with the process of industrialization, China's environmental regulation policy established the basic framework, and the government issued some basic policies related to environmental protection during this period, mainly emphasizing the problem of hygiene during production activities, and also adopted appropriate prevention and control measures for the heavily polluted production process. During this period, a complete legal system and normative charter were lacking. At this time, China's economy was in its infancy, with low economic aggregate and scientific level.

From 1978 to 1991, due to the reform and opening up, China's ownership relations were no longer a single public ownership, and the non-public economy was fully developed. In 1978, the first session of the Fifth National People's Congress of the People's Republic of China adopted Article 11 of the

General Program of the Constitution of the People's Republic of China, which clearly stipulates that "the state protects the environment and natural resources and prevents and controls pollution and other public hazards", marking that "environmental protection" has been formally included in the outline of the National Constitution [1]. Due to the insufficient understanding of environmental protection by most private enterprises and the lack of responsibility for ecological protection by private enterprises, and the management experience of enterprises in pollution discharge has indeed caused serious environmental damage problems. In 1983, the environmental protection conference held by the State Council established the environmental protection policy of "prevention first, prevention and control combined", and since then the issue of environmental protection has been truly taken seriously, and a relatively complete environmental protection system has been established. In 1989, the Environmental Protection Law of the People's Republic of China was formally promulgated. This law improved the relevant concepts of environmental protection and marked the beginning of the legalization of China's environmental protection cause, which was an important milestone in China's environmental protection cause [2]. Thanks to reform and opening up, China's economic growth rate has gradually increased and the economy is making steady progress.

From 1992 to 2001, China explicitly upgraded the issue of environmental protection to a national development issue, and the concept of sustainable development was put forward, emphasizing that pollution control and ecological protection are equally important, and legislation on environmental regulation has been continuously revised and improved. In 1992, the United Nations Conference on Environment and Development put forward the strategy of sustainable development around the theme of "environment and development". Subsequently, China has taken this strategy as a major strategy for China's modernization drive, and issued Ten Countermeasures on Environment and Development and other documents, aiming at integrating environmental protection into China's economic and social development planning and coordinating it [3].

From 2002 to 2011, with the gradual advancement of industrialization and urbanization, the total economic volume continued to increase, and heavy industry played a decisive role in it, consuming a lot of resources and causing huge environmental pollution and damage. In 2005, the Interim Regulations on the Promotion of Industrial Structure Adjustment showed the country's determination to protect and improve the environment, and to show the importance of environmental protection through economic adjustment of industrial structure [4]. The government realizes that environmental issues are closely related to people, theories such as 'scientific outlook on development' and 'harmonious development between man and nature' have been put forward, and the state regards the establishment of an environment-friendly society as one of the important strategies for medium- and long-term planning of national economic and social development.

Since 2012, China's principle on environmental regulation is to adhere to ecological priority, put forward the theory of man and nature, and further issued many policies and regulations to promote the construction of ecological civilization. In 2014, the new Environmental Protection Law stipulated the basic principles and systems for ecological and environmental protection, which played a decisive role in stabilizing the ecological environment and had a far-reaching impact on environmental protection and sustainable development [2]. In 2022, China will unswervingly promote the realization of the goal of carbon dioxide peaking and carbon neutrality, and actively participate in international cooperation on climate change as always. At present, the Chinese economy has maintained a growth rate of around 6% and achieved sound economic development.

This paper summarizes the historical changes of China's environmental regulation policies, discusses the positive and negative impacts of environmental regulatory policies, and compares the differences and results of the implementation policies in different regions. The purpose of this paper is to derive appropriate environmental regulatory policies for regions with different economic conditions

The second part elaborates on the objectives and impacts of China's environmental policy, the third part provides specific case studies, and the fourth paragraph draws corresponding conclusions and enlightenments.

2. The Purpose and Impact of China's Environmental Policy

2.1. Purpose and Status Quo

Before 1950, China's carbon emissions did not change significantly, and the annual carbon emission value was close to zero. From 1950 to 2000, carbon emissions increased significantly, at a faster rate, reaching 3.64 billion tons in 2000. The average growth rate of carbon emissions from 1949 to 1978 was 15.33%, the average growth rate from 1978 to 2000 was 4.5%, and the average growth rate from 2000 to now is 5.57%. From 2000 to 2022, carbon emissions continued to increase, and the growth rate increased significantly compared with before.

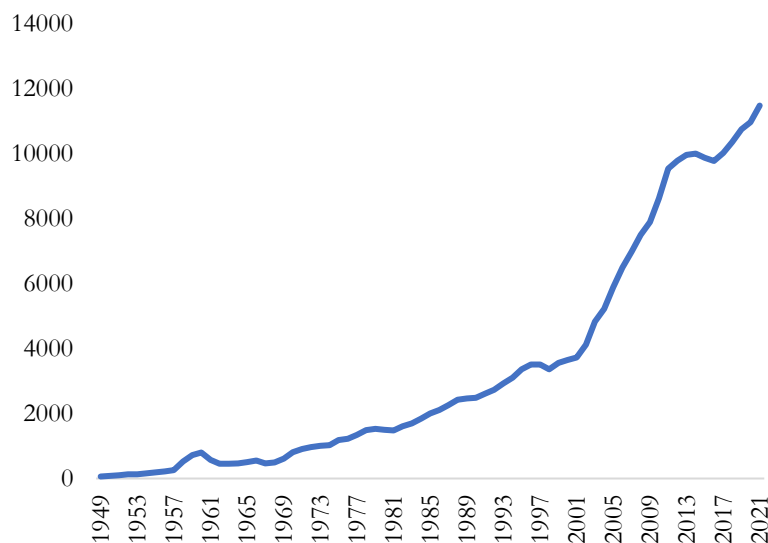


Figure 1: China's CO2 Emission by year.

Data source: Our World in Data [1]
Photo credit: Original

The goal of environmental control emphasizes that environmental control is necessary, but environmental control should not lead to economic non-development, and under the condition of appropriate economic benefit loss, it must be able to maintain sustainable economic and social development and achieve the win-win purpose of environmental improvement and stable development. In the past decade, while the total economic output has achieved an average annual average of 6.5%, pollutant emissions have continued to be greatly reduced, and the emission reduction of sulfur dioxide and nitrogen oxides has exceeded 84% and 58% respectively.

2.2. Negative impact

2.2.1. Increase the production cost of enterprise

Environmental regulation policies have certain intrinsic incentives for environmental technological innovation, and enterprises can reduce pollution emissions, strengthen environmental governance, and ultimately achieve a win-win situation between enterprise efficiency improvement and environmental protection.

From the production side, emission reduction policies limit corporate emissions and increase energy input costs. Because environmental regulations require companies to invest in pollution prevention or pay pollution taxes, resulting in increased production costs, this will not only lead to a decrease in productivity, but also a decrease in output, higher prices and lower profit margins.

2.2.2. Limit energy use

The short-term rapid growth of the manufacturing industry in 2021 made the power supply unable to keep up with the increase in electricity demand, and the increase in the gap between supply and demand led to the government's decision to cut electricity, according to the National Bureau of Statistics, the growth rate of social electricity consumption in 2021 was about 13.8% [5]. Some provinces have shifted the pressure of electricity consumption to people's lives and production because they have not reached the goal of 'dual control of energy consumption' set by the central government, which is also the main reason for power cuts. Due to China's manufacturing and industrial production greatly dependent on the supply of electricity, production stagnation and production reduction, will lead to the price of related industrial products rise, supply exceeds demand, the subsequent need to use industrial products production will be affected, production costs increase. The price of industrial products rises, and the stability of the industrial chain and industrial chain will continue to be affected.

From the perspective of residents, power cuts will affect people's normal lives and even threaten their lives. In the summer of 2022, Sichuan has a wide range of power cuts, many elderly people suffer from heat stroke and coma, and many elevators in the mall have stopped running, which has caused great impact and hindrance to the normal life of residents in the hot weather.

2.3. Positive influence

2.3.1. Environmental regulation policy enables enterprises to improve production efficiency

The increase in environmental regulation has enabled enterprises to carry out technological innovation in order to meet the requirements of regulation, so that technological innovation has led to the improvement of production efficiency.

Although in the short term, environmental regulation policies will increase the production costs of enterprises, but appropriate environmental regulatory policies will help enterprises to focus more on energy conservation and emission reduction, pay attention to clean production in production, force enterprises to develop green technology, carry out technological innovation and green transformation production, thereby reducing the cost caused by environmental regulatory policies [6]. Technological innovation will also affect production, production efficiency increases, total output will rise, promote enterprises to achieve high-quality economic development and energy conservation and emission reduction dual goals.

2.3.2. Environmental regulation policy enables the effective allocation of resources

Environmental regulation policies can improve the efficiency of resource allocation of land and labor, solve the problem of dividing excessive and insufficient resource input, and play a certain role in curbing the extensive production mode with high input and low output.

The trading of emission rights can realize the flow and allocation of resources in rich areas and scarce areas through market means, because the original distribution of resources is uneven and reasonable, resulting in misallocation or waste of environmental resources, and does not play its due economic value. Policies such as emission rights allow resources to be reallocated through the market, reducing the ineffective use of environmental resources.

3. Case analysis

3.1. Northeast China

There is a serious problem in the northeast – the loss of labor force. The aging problem in the northeast region is relatively serious, and the labor loss is also serious [7]. The economic development of the northeast is a more serious issue, and if environmental regulations continue to be strengthened under such circumstances, it will undoubtedly further exacerbate the situation. Then, for the development of the northeast region, there should be a trade-off between the environment and economic growth. Due to the long-term extensive economic growth path in the northeast, environmental pollution has become increasingly serious and natural resources have been depleted. The contradiction between economic development and ecological and environmental problems has become increasingly prominent, which has seriously restricted the further development of the economy in Northeast China. In 2015, the central government decided to revitalize the northeast economy, realize a comprehensive production transformation, change the mode of economic development and structural reform, and focus the development of the northeast on building a livable home with a national economic support belt and an ecological barrier in the north. Actively promote green manufacturing, clean production, abandon the development of heavy pollution and heavy industry, and strictly control energy consumption and emissions [8]. In this context, the Northeast actively promotes green production, continuously carries out energy-saving and emission-reduction transformation in key industries, promotes the use of clean energy, gradually eliminates backward industries with high energy consumption, high emissions and overcapacity, and continuously improves the environmental regulation system.

Northeast China should continuously improve its environmental regulation system, and use a variety of environmental regulatory tools, such as pollution discharge fees, resource taxes, carbon emissions trading, policies and regulations, etc., to maximize the positive role of each regulatory means to better promote the development of green economy in Northeast China. According to the regional development situation, the northeast region should adjust environmental policies in a timely manner, stimulate the vitality of talents, stimulate economic growth, further optimize the industrial structure, achieve green production, and maximize the positive role of environmental regulation in northeast China on economic growth and reduce the negative role.

3.2. Southwest China

The large-scale development of the western region has promoted the industrialization and urbanization of the western region, but the extensive development mode formed for a long time has led to excessive consumption of resources and continuous deterioration of the ecosystem, and the southwestern region is facing severe ecological and environmental challenges [9].

The overall development level of the southwest region is relatively backward, it belongs to the underdeveloped region, and the ecological environment is extremely fragile. For a long time, the rapid economic development of the southwest region has been at the cost of consuming natural resources and destroying the ecological environment. Therefore, the appropriateness and rationality of environmental regulation is extremely important, not only to protect the ecological environment, but also to promote the economic development of the western region. The optimization and upgrading of industrial structure and scientific and technological progress are the paths of economic growth in southwest China, and environmental regulation policies can promote the technological progress of enterprises and the development of green industries. The overall level of environmental regulation in the four southwestern provinces is on the rise, and stronger environmental regulation can promote innovation output and increase economic growth. Therefore, in order to promote the further economic

growth of the southwest region, we should further improve the environmental regulation system, ensure the implementation of the system, improve the system, carry out environmental governance according to local conditions, and achieve a win-win situation of environmental protection and economic development.

3.3. Central China

Central China occupies an important economic position in China with its rich culture, rich resources and convenient transportation. Among the seven major regions, Central China's economic strength ranks second, second only to East China. The problems in central China are mainly reflected in the relative backwardness of production technology, mainly due to the lack of educational resources and large population, while large cities such as Wuhan have greater economic radiation capacity, which has produced great attraction to human resources [10]. In the process of urbanization, there are problems such as resource squeeze, low energy utilization efficiency, imbalance of energy structure, and insufficient supervision of pollutant emissions, which restrict the local development level. Therefore, environmental regulation needs to be strengthened, economic development methods should be improved, low-carbon intensive development methods should be established, land should be scientifically distributed, pollutant emissions should be reduced, and energy efficiency should be improved. In terms of resource utilization, we should establish an ecological civilization system, restore damaged ecosystems, strengthen the clarity of resource property rights, and strengthen the construction of resource management.

4. Conclusion

China's environmental regulation policies have been continuously revised and improved, and the current policy is 'peaceful coexistence between man and nature' and 'green water and green mountains are gold and silver mountains', which shows that the intensity of environmental regulation policies is constantly increasing, and people's awareness of environmental protection is constantly deepening. With more and more detailed and stringent environmental regulatory policies, this article aims to discuss the positive and negative effects of environmental regulatory policies, and explore the environmental regulatory policies applicable in different regions. Positive effects include environmental regulatory policies that have increased production efficiency, promoted scientific and technological progress, and rationalized allocation of resources, while negative effects include raising production costs and limiting energy use.

On the premise of maintaining the same total carbon emission requirements in China, regions with fast economic development can assume more responsibilities for environmental protection and implement stricter environmental regulation measures, such as increasing fines on enterprises that fail to meet emission standards.

In places where economic development is slow, the relationship between environment and economy needs to be reassessed and slightly stricter environmental regulation standards should be established while ensuring rapid economic development. For the government, it is necessary to continuously improve environmental regulation policies and provide corresponding subsidies, such as innovation subsidies and environmental protection subsidies. Regarding specific environmental regulation policy recommendations, the northeast region should focus on economic development, appropriately reduce the intensity of environmental regulation policies, and give a certain space for economic development, while the southwest region and central China should strengthen environmental regulation to restore the ecology and indirectly promote the development of science and technology and economic progress.

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