Research on the changes and influencing factors of Air pollution Policy in China

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Abstract. Since 1979, Chinese mainland has made great progress in air pollution control, and its policy control and effectiveness problems are gradually emerging. Through literature review, investigation and research, this paper introduces the air pollution policies of Chinese mainland in the past 40 years, analyzes three factors that affect the effect of the policies: "power structure", "strategic behavior" and "social capital", so as to provide a reference path and direction for deepening the research of air pollution policies.

1. Introduction
Air pollution refers to that after the relevant substances enter the atmosphere, due to the continuous increase of the proportion in the atmosphere, they become pollutants that can damage the biological health. These pollutants are transmitted through the air, which will cause great impact on human normal production and life. In the contemporary society, air pollution prevention and control is an important and complex public policy issue for all countries in the world. There is a direct or indirect intersection between air pollution control policies and social governance policies in various fields. This paper introduces the 40 years of air pollution policy changes since China's reform and opening up, and makes an in-depth analysis of the relevant factors affecting air pollution policy.

2. The changing course and characteristics of Chinese government's air pollution policy
Since 1979, the Chinese mainland has started the legislative process and started the substantial work of atmospheric environmental protection. By combing the air pollution policy and practice process of the country, we find that: the intensity of staged air pollution policy has a positive correlation with the quality of urban environmental pollution. On the whole, the development model of Chinese government's air pollution policy shows a gradual development characteristic

2.1. The changing course of Chinese government's air pollution policy
The prevention and control of air pollution in mainland China is usually led by the government to implement relevant policies and carry out atmospheric prevention and control work by coordinating the interests of all parties.

The first stage (1979-1991): A single type of air pollution prevention and control under the weak legal framework. In May 1979, China promulgated the first trial environmental protection bill. According to the Environmental Protection Act, if the enterprise's smoke and dust elimination,
equipment production, production process, etc. cannot meet national standards, it will be scaled down and required to control pollution within a limited time. Since then, relevant departments of the Chinese central government and local governments have successively formulated a series of policy measures in accordance with the Environmental Protection Act. Among these policy measures, mainly include environmental protection technology promotion policies, environmental governance standards, and pollutant waste discharge standards.

The second stage (1992-2002): Mixed air pollution prevention and control by introducing market mechanism. During this period, the air pollution in mainland China showed the characteristics of increased local pollution and regional pollution. In response to this new change, the government's concept of governance began to shift from "pollution first, governance later" to the direction of sustainable development. The change in governance philosophy has brought about positive changes in the Chinese government's air pollution prevention and control policies. In the field of air pollution policy, more emphasis is placed on supporting economic incentive measures and the establishment of a market-oriented atmospheric environment governance mechanism. At this stage, the Chinese government's air pollution prevention and control policy focuses on centralized governance, total volume control, concentration control, and overall process control, focusing on changing regional pollution control policies to ensure that political performance meets standards.

The third stage (2003-2010): Integrated air pollution prevention and control for regional joint governance. At this stage, the Chinese government's air pollution prevention and control policy has seen new trends. Its policy characteristics are mainly reflected in: it is divided into several governance areas across the provincial administrative area in the country, and the provincial local governments implement unified and coordinated atmospheric governance policies in the governance area. This policy governance model has subverted the fragmented governance model previously implemented by each local provincial government to supervise air pollution. In mainland China, the Beijing-Tianjin-Hebei, Yangtze River Delta, and Pearl River Delta regions first implemented the regional air pollution control joint prevention and control mechanism, showing a good scale control effect.

The fourth stage (2010 to now): Co-governance air pollution prevention and control under the framework of strong rule of law. At this stage, China's central government's air pollution policy measures are characterized by a large number, strong implementation, and the guidance of diverse social and market players to participate in governance. At the same time, the relevant air pollution policies of the Chinese government pay more attention to the improvement of legal procedures, which reflects the strong characteristics of the rule of law.

2.2. Characteristics of air pollution policy changes

Policy actors are constantly strengthening their exchanges and cooperation with each other. Thus, a new situation of government, enterprise and society co governance has been established. Not only restrict the development of polluting enterprises, but also the government and social personnel are actively participating. From the perspective of policy development history, the model of the Chinese government's air pollution policy is a tiered development model, which is mainly reflected in the diversification of policy subjects, the increasing standardization of policy tools, and the social behaviors are also becoming networked.

First, the diversity of participants in the air pollution policy. In the initial stage of formulating air pollution prevention and control policies in mainland China, the main target of supervision was industrial pollution. With the development of the economy, other social subjects are also actively participating in the monitoring and prevention policies of pollution behavior. The scope of the policy is also expanding, mainly to improve urban air quality, thereby protecting the entire atmospheric environment from pollution. In addition to polluting enterprises, the government and environmental protection organizations and even individuals in the society must actively participate in this activity. Secondly, the standardization of air pollution policy tools. Air pollution control policies are mainly implemented through three forms: pollution order value, market supervision, and voluntary participation in related policies. Nowadays, the tools used by the Chinese government's air pollution policy are more
diverse, not limited to just a few forms, and the complex policy tool system established by it can effectively unify the government, enterprises and society.

Thirdly, the social actions implemented by the air pollution policy are networked. In mainland China, the process of formulating and implementing air pollution policies has many levels of government departments, including the Central Development and Reform Commission, Ministry of Finance, and Transportation Bureau, as well as local environmental protection departments. Regardless of the relationship between the inside and outside of the system, this policy is indispensable to the public. With the expansion of the policy, there are more and more social workers involved, including many outside the system. Government and enterprise are no longer one-to-one linear relationship, but become many-to-many network relationship. This further shows that for the environmental governance system, China has changed from traditional administrative dominance to a model of social cooperation and common governance.

3. Factors affecting the effect of the Chinese government's air pollution policy

3.1. Power structure factors

The effect of policy is influenced by the power structure of different subjects. Power structure refers to the distribution of power among government departments in the policy network. In this policy, the distribution of power structure is mainly based on the organizational structure of environmental protection administration. The environmental protection department of the government has absolute power, which is closely related to the policy capacity. In the organizational structure of China's environmental protection administration, what directly affects the implementation of the policy is the division of powers. Therefore, the environmental protection function of other departments of the government disperses the power of the environmental protection department. The unclear authority and the unclear power boundary between different departments lead to the environmental protection department's backwardness, and the government departments shirk their responsibilities to reduce unnecessary troubles and reduce the policy effect.

From the vertical perspective, the power relationship between the central and local governments is not equal, the former has absolute high power. But in reality, the central and local governments have their own interests. To some extent, this difference in interests weakens the effect of the central local cooperative governance.

3.2. Strategic behavioral factors

Strategic behavior is a kind of behavior that takes the government network and producer network as the main body to seek benefits and avoid harm, and the purpose is to gain more benefits. This kind of behavior leads to policy change, adjustment and even abandonment. In the process of policy implementation, producer networks are often not only regulated by the government, but also constrained by the society, which leads to adverse psychology. This kind of counter reaction is manifested in taking action to change the policy. Therefore, in the process of policy-making, we need to consider the relationship between different subjects, and actively predict the different policy results it may bring through the current situation.

In the network of air pollution prevention and control policies, local governments and enterprises have become the main players in the competition. Local governments and enterprises play the roles of regulators and regulated respectively. In addition, the central government will supervise the local government, and enterprises will also put forward different requirements for its relevant aspects. Therefore, they form the rules of interest competition in the interaction. This shows that in the process of the development of air pollution prevention and control policies, there are also two kinds of relations between local governments and enterprises. First, they have a competitive relationship in interests, on the other hand, they will interact under the constraints of rules and regulations. Under the influence of these two kinds of relations, the prevention and control policies related to them have been produced.
3.3. Social capital factors

Air pollution prevention and control policy belongs to the content of environmental regulation policy, and also belongs to a part of social regulation. The government needs to effectively intervene in economic and social life, and the public should actively participate in similar public welfare undertakings. In this case, the government and the public have become the main body of the regulation. The goal is to protect the social public interests from being infringed. The target is the enterprises that discharge pollutants and the main body of the market. So in the process of policy implementation, we need to consider the ideas of the public and their related behaviors. In a word, the change and adjustment of public policy is the government's response to the demand and feedback of public behavior. At present, the increasing environmental awareness and social capital of the Chinese public promote the transparency and responsiveness of air pollution prevention and control policies, but there are still problems such as insufficient public participation and abnormal ways to express environmental protection demands.

4. Conclusion

Since 1979, there has been a positive correlation between the intensity of China's periodic air pollution policy and the quality of urban environmental pollution. Generally speaking, the development mode of China's air pollution policy shows a step-by-step development feature. The main factors influencing China's air pollution policy include power structure, strategic behavior and social capital. According to the relevant influencing factors of China's air pollution policy, the policy direction and research methods will be optimized continuously, which will be able to better excavate and discover the relevant laws of China's air pollution control.

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