

The Collaborative Development and Environment Governance of Beijing, Tianjin and Hebei

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Abstract: Acting as the third pole of China's economic growth, Beijing-Tianjin-Hebei region is the most developed economy center in the north, meanwhile the biggest industrial cluster. It is the excellent geographical location around the Bohai gulf, solid industrial base, strong technology force that make Beijing-Tianjin-Hebei region being concerned by government for many years. This paper puts forward the corresponding measures to realize the aim to solve the problems.

Keywords: Collaborative Development; Environmental Protection

INTRODUCTION

The huge gap in economic development level among Beijing, Tianjin and Hebei is a big obstacle to build Beijing-Tianjin-Hebei regional industry chain, as the capital, the political center, economic center and technology center of China, Beijing is far higher in political and economic status than Tianjin and Hebei, meanwhile, there is also a huge gap in medical treatment, health care, pension, education and other public services as well as social security resources. This greatly led to the one-way flow of the high quality productive factors, resulting in Tianjin and Hebei's innovation ability is insufficient, thus its economic development lacks of innovation power, so that their development level becomes much more backward,

trapped into a vicious circle; As "The important economic town of the north", Tianjin enjoys a superior geographical position, locating in the Bohai rim and the national marine economy development pilot city, its development closely follows Beijing, however competes with Beijing to a certain extent in overlapping industries; Hebei's infrastructure is relatively backward, with fragile ecological environment, weak industry foundation, and Hebei's poor population accounts high nationwide. To solve the problem, the paper puts forward three ideas [1].

UNDERTAKE THE TRANSFER: DISTRIBUTE THE INDUSTRIAL CLUSTERS RATIONALLY

Table 1: Comparison of the additional value of three industries in Beijing-Tianjin-Hebei in 2015

additional value of three industries	Beijing (One hundred million Yuan)	Tianjin (One hundred million Yuan)	Hebei (One hundred million Yuan)
First industry	140.2(-9.6%)	210.51(+2.5%)	3439.4(+2.5%)
Second industry	4326.4(+3.3%)	7723.60(+9.2%)	14388(+4.7%)
Third industry	18302(+8.1%)	8604.0(+9.6%)	1197.7(+11%)

Source: Beijing-Tianjin-Hebei statistical bulletin

Docking Industrial structure orderly is the foundation of industry transfer, but regional industrial structure of Beijing-Tianjin-Hebei exists gradually inferior characteristics, regional industrial structure has a substantial gap. From table 1, we can be see the following three: First, the third industry in Beijing city accounted for the largest proportion, and the additional industrial value increased 8.1% compared to last year, followed by the second industry, while the first industry's additional value is only 14.02 billion, compared with 2014, dropped substantially, indicating that the first and second industry transferred from Beijing to Tianjin and Hebei, while the service industry

and high-tech industry are developing in Beijing; Second, it is worth noting that the qualitative changes of industrial structure in Tianjin, it is the first time that the proportion of third industry exceeds the second industry, the industrial structure is moving towards "third industry, second industry, first industry"; Finally, the progress of industrial development in Hebei is slow, second industry predominates economy in Hebei, and it also exist competition with second industry in Tianjin, but Hebei obtains no advantage in production level, the content of science and technology, the speed of development and other aspects, even the third industry is overall lagging behind. In summary, the industrial

structure of these three areas has a huge gap, Hebei behind a lot especially when compared with Beijing and Tianjin, industrial interdependence and the correlation between the upper and lower reaches is little, and that is a big problem hindering regional industry transfer.

In view of the above questions, the following four thoughts are proposed: First, industrial clusters acting as a valid path to regional economic development, is also a way to collaborative development of Beijing-Tianjin-Hebei and regional industrial restructuring. However, there are a lot of regional industrial clusters lacking competitiveness, vigor and vitality, even some certain areas increasingly in decline. How to enhance regional industrial clusters and to maintain sustainable competitive advantage become a problem of industrial clusters' rational distribution. Innovation is a key factor that must be formed between the regional innovation capability and industrial cluster a positive interaction, promoting rational distribution, regional sustainable development and optimal adjustment; In turn, enhancing the competitive advantage offers strong supports to the regional innovation. Both influence each other, promote each other, so that the overall enhancement of regional comprehensive strength relies on deepening cooperation with Beijing high-tech innovation capacity [2].

Second, Beijing "non-capital function" removing, CPPCC put forward another significant measure to promote the integration of Beijing-Tianjin process. Relying on Beijing's "four centers" positioning to deploy industry's strategic shift work. Change the originally large and all inclusive industry structure. And Beijing is faced with the increasingly serious problems such as haze, housing shortage, traffic congestion and other problems, they all need to be solved immediately. To relieving the capital function: First, there should be a clear plan about the relief program; Second, to establish the system actively, and to make the whole evacuation process with full legal protection; Third, the transfer of urban infrastructure should not be overlooked, following the improvement of overall construction levels in the city, it can effectively avoid gap and favor industry's docking rationally [2].

Third, to prevent the capital's industrial hollowing-out, when easing Beijing's non-capital function. There are a lot of high-quality corporate sectors removing out of the capital, it's likely to result in the capital region hollowing-out, which in the short term, will surely challenge the development of Beijing, and therefore through taxation and other fiscal policies, taking into account the interest when transferring industries from these two areas, the establishment of regional tax sharing mechanism and fully mobilize the initiative of participation in industrial transfer [3].

Fourth, Beijing will industrialize some technology. Forming a research and development center in Beijing, Hebei is the base of the industry, Beijing-Tianjin manage to achieve industrial upgrading by technical cooperation. Tianjin acts as an economic center in north China with strong industry foundation, so it should focus on the optimization and upgrading of capital industrial transfer; At the same time, actively extending industrial chain to Hebei. On the other hand Hebei continues to receive Beijing and Tianjin's industry chain extension, so it's bound to be improved in its technical level, sound infrastructure, mechanism and system and workforce flow. But all of these are based on strict ecological access threshold [3].

Promoting environmental governance, transforming the economic development mode, constructing the ecological civilization, is the most important basis and key tasks for the collaborative development of Beijing-Tianjin-Hebei. Focus from the following five aspects [4].

First, the air pollution control. Continue to implement the clean air action, the implementation of the "five, four, three" control measures, and gradually eliminate heavy pollution weather, significantly improve air quality. First, to strengthen the management of industrial pollution enterprises. Upgrade the clean facilities to iron and steel, petrochemical and other industries, in strict accordance with the relevant emission standards to control the emission of volatile organic compounds, nitrogen hydroxide, and harmful particles. Second, cut the use of coal. By the end of 2017 to reduce the total coal consumption 10 million tons, the city's coal consumption accounted for a proportion of total energy consumption decreased to less than 50%. Again, to strengthen the supervision of motor vehicle exhaust. Construction of the city's charging pile, charging stations, improves urban transport facilities, to encourage green travel. As of 2015, Tianjin eliminated nearly 290 thousand yellow cars; fuel quality has also been significantly improved. Finally, the control of dust pollution, strengthen the supervision and management of road cleaning dust pollution prevention and control, the central city and the key areas of urban road washing machine sweep coverage.

Second, protect the safety of urban water, to build water-saving cities. Correctly handle the relationship between water and people, the establishment of water-saving agriculture, water-saving industry, through economic, technical, administrative measures, improve product, business and industrial water use efficiency. (1) Waste water re-used. According to the relevant department estimates, Tianjin city in 2010 and 2015,

respectively, to reach the sewage discharge of 1.275 billion m³ and 1.316 billion m³, the potential of waste water re-used is very big. Tianjin economic and Technological Development Zone has been built sewage treatment plants, and so on, the full use of sewage treatment plant after purification of reclaimed water, to achieve recycling of water. (2) Seawater depth utilization. Learn from the successful experience of foreign countries, after treatment of seawater, seawater instead of fresh water is directly used as cooling water, for industrial production process, for living flushing miscellaneous water for municipal water, for engineering construction and for agricultural production and so on. (3) Sound inter basin water transfer system. To strengthen the effective management of Lean River to Tianjin, South to North Water Diversion project. At the same time, the establishment of emergency water system, the Tianjin project as emergency water, protection of water security [5].

Third, build an ecological security system. Continue to promote afforestation plan, the implementation of the Beijing Tianjin sandstorm source control, north shelter forest, coastal protection forest, national forest reserves and other national key projects. Adjust measures to local conditions, scientific selection of tree species, overall planning, and strive to create a "two ring three along the" ecological corridor. Reasonable collocation of ecological forest and economic forest, green development, sustainable economic and ecological construction into economic evaluation index. In four districts around the city, the new green park, to create a new bright spot with characteristics of green Leisure City. At the same time to promote the ecological restoration and conservation work in key areas. Plan to 2020, the city completed a total area of 1 million 700 thousand acres of attestations, the city's forest green rate of more than 28% [6].

Forth, strengthen the protection of clean energy. Optimizing the energy structure, constructing the environmental protection and sustainable energy system. Built in Ximeng- Nanjing, West Inner Mongolia - South Tianjin 2 million-volt AC UHV transmission channel and Tianjin Nantes high voltage substation. By 2017, the city power ratio of not less than 1/3. New energy should be implemented on the basis of national energy industry development policy, multi pronged approach to construct and perfect the Tianjin new energy industry support policy system, in the field of new energy of the core and common technical increase support for efforts to improve new energy independent innovation level.

Fifth, promote the development of recycling low carbon green. Actively carry out the existing Industrial

Park recycling low carbon transformation, the introduction of a number of green ecological projects, demonstration leading industrial park in transition and development. Formulate relevant policies to support the recycling of the park and improve the recycling system. Vigorously promote the production of low carbon. Encourage low-carbon design, and actively carry out low carbon technology innovation and application, in the production process, strict control of carbon emissions, in the product link, the implementation of low-carbon product certification system and other ways to explore new modes of enterprise carbon management. Vigorously develop the green industry, the full development of green energy-saving environmental protection, ecological agriculture [7], Eco-tourism and other industries; focus on fostering and development of new energy and renewable resources, new energy vehicles and other emerging industries of strategic importance; elimination of high energy consumption, high pollution, process backward products, companies and 20 industry; the development of modern service industry, the formation of a new pattern of Industrial Park industrial system.

SET UP A PLATFORM: IMPROVE THE COMPENSATION MECHANISM OF POLLUTION CONTROL

Beijing-Tianjin-Hebei has deficiency in the protection of the ecological environment, especially in the ecological compensation of the specific policies and implementation guidelines also need to be improved. In the ecological aspects, the victim's rights and interests cannot be fair distribution, and seriously distort the relationship between the protection of ecological and interest distribution. Therefore, we must establish a long-term, reasonable and effective ecological compensation mechanism, as well as to adjust the distribution of interests to protect the ecological environment, and ultimately promote the harmonious development of human and nature. The establishment of ecological compensation mechanism, mainly involves the following three aspects: who benefits from the ecology, how to measure the intensity of compensation and how to get the compensation path [8].

The definition of the main subject with interests: the ecological problems are due to the ecological environment publications, equipped with externality but not with the competitive and exclusive, which leads to the existence of difficulties when we define the main subject with interests. First, we should use Co's theorem to eliminate the externality of ecological environment. We see the ecological environment resources as ecological environment resource assets, gradually put it into asset manage effectively. After defining the ecological property rights, we can confirm stakeholders, according to the actual situation of

ecological events, the beneficiaries as compensation, damaged one acts as the compensated party. Measure of compensation intensity: for the economic value and ecological service value of ecological resources, and ecological service value are often difficult to estimate, so we use shadow engineering method to confirm the ecological service value when confirm the compensation cost. Determination of compensation path: we should use the market mechanism, economic means, administration to make appropriate, timely and effective compensation. We can consider from the following several aspects:

First, the ecological compensation tax and charges. We take the enterprise and individuals that use the ecological resources as the object of taxation, impose ecological compensation tax in accordance with the degree of utilization of natural resources or the extent of pollution damage to the environment resources. However, it is not suitable for some public ecological products, public ecological services project to use the measures involved above, the government should adopt a convenient and flexible charging methods, as a necessary complement to the adjustment of economic activities. According to the experience of environmental protection in developed countries, the establishment of ecological compensation tax and ecological compensation system, can effectively improve the "tragedy of the commons" of ecological resources, strengthen the management and protection of ecological resources.

Second, the transfer payment system of central finance department. The state should make clear regulations on the relevant matters of government transfer payment in the form of law, so as to be authoritative and operational. Transfer payment mainly pointing to the ecological environment area, these areas tend to have rich ecological resources and economic development of backward and other characteristics, we can balance the regional fiscal capacity by standardizing the fiscal transfer payment system, so we can provide funds to these areas for ecological restoration.

Third, complete the system of fiscal subsidy. Using fiscal policy to adjust industrial structure and allocation of resources to the type of ecological protection.

Fourth, setting up green banks. It can combine financial capital and environmental protection. Green bank's main responsibility is to provide policy-based lending and interest subsidies for national and local large-scale ecological projects, provide low-interest loans for companies and scholars studied about ecological environmental protection. Through

government guaranteed, financing for construction projects of ecological environment uses capital market.it explores new ways and areas of financial reform.

Fift, encouraging "Hematopoiesis" compensation instead of "transfusion" compensation. Encouraging trade remedies mode that helping the region damaged attract investment and reduce the fiscal burden leded by government. The project can distribute the risk and debt to the public and introduce advanced technology, equipment and management experience that improving the level of skill and management, promoting the economic and employment and avoiding of the risk of moral hazard, thereby forming hematopoiesis. Scientific ecological compensation mechanism is an important part of the construction of ecological civilization, having a strong practical significance for justice. By building ecological compensation mechanism, the preservers, destroyers, beneficiaries and victims are able to learn their rights and obligations, improving property owners' awareness of self-protection and the enthusiasm of protecting eco-environment.

COOPERATION AND GOVERNANCE: JOINTLY SAFEGUARD THE BASELINE OF ECO-ENVIRONMENT.

Beijing, Tianjin and Hebei are closely associated in economic and Eco-environment. For water, air, air handling, water pollution, air pollution and land pollution have spread across these regions. To solve these problems, each region has been able to control it to protect ecological health alone. For the features of pollution, Beijing, Tianjin and Hebei should change the traditional "regionalism" mode, and establish Beijing-Tianjin-Hebei regional mechanism to solve the problems of environmental pollution. To establish Beijing-Tianjin-Hebei regional mechanism effectively, we should use the scientific developmental concept to guide the work, adhere the idea of green low-carbon, stick to the purpose of protecting the ecological environment, improving people's living standards and boosting the economic development [5]. We should focus on comprehensive management of dust storms, water pollution and air pollutant to restore the Beijing-Tianjin-Hebei regional environment, maintain ecological balance, achieve the "blue sky, clean water, lush land" dream by the means of repairing regime, improving laws, strengthen government supervision and use market techniques.

Establishing the integrated regulatory agency is the key to Beijing-Tianjin-Hebei regional mechanism protecting environment. The State Council, Ministry of Environmental Protection and provincial governments constitute leading group together, coordinating with local environmental protection department, to carry out

the Beijing-Tianjin-Hebei regional environmental protection work. There are some notes paid more attention:

1) setting up ecological community. Formerly, Beijing, Tianjin and Hebei province pursue their own Pareto efficiency, falling into the Prisoner's Dilemma easily. But now, leading group will break out the limit and establish the integrated regulatory agency. It requires that it is necessary to make a decision from a global point of view to achieve the whole regional Prisoner's Dilemma.

2) Establishing a regional regime. For the features, liquidity and complexity of regional pollution, an effective regional regime plays an indispensable role. Subject to the law of the region, Beijing-Tianjin-Hebei should establish local regulations as a supplement to govern environmental administration. At same time, once a law is put into force, it must be observed and strictly enforced and violators must be punished [6].

3) Keeping the baseline and adjust measures to local conditions. To achieve the collaborative development, we must keep the base line of environment that "to be better" of ecological quality. Abandoning the "one size fits all" approach, depending on the specific situation of each region, different regions have different key issues, so leading group should adjust measures to local conditions to match with local target in term of different levels of economic development. Beijing establish the most stringent ecological requirements because of advanced and stick to the purpose of achieving the goal of ecological modernization, pay more attention on the development of Eco-economy, build assessment about economic development and environmental protection, develop the most stringent economic development and ecological management plans(as the capital). Tianjin, Baoding, Lang fang should set goals based on sustainable economic and social development, take measures correspond to local condition. Other areas in Hebei province stick to the purpose of realizing "double change" and continue to be the biological conservation area of Beijing-Tianjin-Hebei region. The goal of these places in the economic development and the protection of protected areas is to make great progress. On the basis of protecting the baseline, the development levels of them are various.

4) Introducing multiple subjects to participate in governance. Setting up social supervision mechanism to cooperate with government work and making full use of market mechanisms to achieve the optimal allocation of resources. Based on the difference of levels of economic development, ecological resources distribution and industrial structure [7], we should use

the advantage of trade to clarify ecological property rights such as making use of carbon trading market and cross-regional emission to realize Pareto-efficient. By introduction of multiple subjects, making a united front to change our life style and transform the development pattern, and carry out the relevant policy.

CONCLUSION

In a word, Beijing-Tianjin-Hebei region collaborative development is one of the hot issues which have been greatly discussed, and when we are reaching on development model of integration of Beijing-Tianjin-Hebei, we must give priority to environmental governance [9]. Up to now, the concentration of PM2.5 in Beijing, Tianjin and Hebei was decreased by 15%, 27% and 28% respectively compared with that in 2012. Beijing, Tianjin and Hebei is a community of the ecological environment and economy, therefore we must try our best to respect natural environment and to choose the optimum capacity of the region to determine the spatial development pattern to build a common destiny.

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