

## Relying on the Development Zones to Promote the Development of Hebei Coastal Areas

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**Abstract**—Base on the comprehensive review of the development progress of Hebei coastal development zones, by comparing the real-time data of Hebei coastal development zones (Qinhuangdao, Tangshan, Cangzhou) and Shandong coastal development zones (Yantai, Weihai), it turns out that there are some development bottlenecks in Hebei coastal development zones. For instance, there exists a low output, technology innovation environment and internationalization has to be improved. And then some thoughts and countermeasures to policy support, transportation advantage, technology innovation, combination of production, education and scientific research, open foreign policy and the protection of the environment are brought forward to break through the bottleneck.

**Keywords**—Hebei coastal development zones; Shandong coastal development zones; development bottlenecks; countermeasures

### I. INTRODUCTION

“Development Planning for Hebei Coastal areas” has projected a planning, and that is to build an industrial transfer transitional platform depending on Qinhuangdao economic and technological development zone, Cangzhou port-neighboring economic and technological development zone and Tangshan high-tech industrial development zone[1], Thus development zone has officially promoted the economic development of Hebei Coastal areas as leading regions. When finishing their growth period, Hebei Coastal areas have plunged into a stage of connotation improvement. At present, there are many constraints affecting their development. So, the key to the expeditious and rational development of development zone is how to break through the bottlenecks and to take it to the higher level.

### II. THE GENERAL SITUATION OF CHINA DEVELOPMENT ZONES

For a country or a region, development zone has become a key point and hot topic in advancing economic and social development. There is still an opposition of the concept of development zone abroad, but the cognition of development zone as the name for free trade zone, export processing zone, science park and integrated economic zone has been confirmed as a common view [2] On the basis of this common view, the research has obvious interdisciplinary features. In china, development zone mainly refers to economic and technological development zone. Domestic research findings are based on international reference, empirical analysis and summary of experience. The corresponding researches promote the theoretical studies and application practices. However, due to the limitations of new uniqueness and research approach, the research of development zone is still at the starting stage. The theoretical research of development model and innovation of analytical method need to deepen.

The development zone emerged after opening and reformation in our country. The development process of development zone is the the process of China's opening-up. In 1980, the State Council constructed four special economic zones in coastal cities, such as Shenzhen, Zhuhai, Shantou and Xiamen and gave them the special rights of finance, revenue, foreign currency, import and export, land and labor and a series of favorable policies. Since 1984, the State Council authorized 14 national economic and technological development zones successively. They aims to attract and utilize the foreign capitals, exploit the foreign trade exports and develop modern industry. Since then the economic and technological development zones in China have entered a brand-new development phase. With the rapid development of economic globalization, multiple forms of economic zones emerge in the world. The forms of development zones

in the mainland of China also innovate continually. So far, there are 132 national economic and technological development zones and 1232 economic and technological development zones at the provincial level or above.

### III. DEVELOPMENT PROCESS AND PRESENT SITUATION OF HEBEI COASTAL DEVELOPMENT ZONES

The development of Hebei development zones goes through four stages: The first is a stage of rapid development (1984-2003). It showed a mushroom growth in number. There were 178 development zones. At the same time, part of the problem was the excessive number, disordered distribution, agglomerate industries and unobvious resource sharing; The second is a stage of cleansing and rectification (2003-2006). For the phenomenon of appropriation of cultivated land and violation of farmers' profits in the name of economic and technological development zones, the State Council deploy all kinds of economic and technological development zones to work on the cleansing and rectification. Hebei province cut 130 provincial economic and technological development zones and only 48 were left; The third is a stage of stopped approval (2006-2009). The government stopped approving new economic and technological development zones. Hebei province still retained 48 economic and technological development zones; The fourth is a stage of approving new construction (2009-2011). The State Council restarted to approve national economic and technological development zones. The People's Government of Hebei Province newly approved 63 provincial economic and technological development zones[3].

Now Hebei province has 116 economic and technological development zones at the provincial level or above including 7 national economic and technological development zones, 83 provincial development zones, 25 provincial industrial parks and 1 new and high-tech development zone. The distribution of each city is that there are 17 economic and technological development zones in Xingtai, 15 in Langfang, 13 in Shijiazhuang, 11 in Tangshan, 10 in Baoding, 10 in Hengshui, 9 in Cangzhou, 8 in Zhangjiakou, 7 in Qinhuangdao and 2 in Chengde. In 2011, the province-wide economic and technological development zones at the provincial level or above generated 22.9% of gross regional production, 39.7% of industrial added value, 24.1% of fiscal revenue, 25.8% of fixed-asset investment, 42.4% of foreign capital, 56.7% of domestic capital and 51.9% of foreign trade export on less than 8% of area of land.

Hebei coastal areas including the three areas under the administration of Qinhuangdao, Tangshan and Cangzhou. In 2011, the population of the three cities reached about 17.55 million and accounted for about 24% of the provincial population. The gross value of production was 7600 billion and accounted for 38% of the province's GDP. That is to say that Hebei coastal areas generated 38% of gross regional production on 24% of the provincial population. They are areas with the best growth prospects in Hebei province. There are 27 development zones at the provincial level or

above in Hebei coastal areas. It reaches 23.3% of the number of development zones at the provincial level or above.

After nearly 30 years of development, the economic structure, industrial agglomeration effect, technological innovation ability and comprehensive strength of Hebei coastal development zones are further enhanced, the aspect of comprehensive, balanced and sustainable economic and social development is in the leading place in the province. Henceforth development zones will further emancipate their minds, renew the ideas, concentrate the energy, breakthrough the key points, step up the pace of opening development, promote the better development of the regional economics and society and exert the leading and exemplary role of economic development zones in constructing "powerful province and harmonious Hebei".

### IV. THE DEVELOPMENT MODEL OF HEBEI COASTAL DEVELOPMENT ZONES

Hebei coastal development zones was built up and developed on the basis of absorbing the experience of China's own special economic zones and economic development zones, foreign industrial zones, export processing zone and trading free ports. It is an important content of implementing the opening strategy of our province. This particular history endues development zones with particular mission. The development model of Hebei coastal development zones depends on the government's fiscal preferential policy, high dependence on international markets, labor-intensive industrial structure and perfect infrastructure.

The development zone has gained enormous achievements in introducing and utilizing foreign capitals, introducing foreign advanced technology and managerial experience and driving regional economic development. The construction of development zones steps up the strength of opening-up, enhances the attractiveness of foreign merchant, promotes the development of regional economy and contributes to the reform and opening-up in our province. Entering the 12th Five-Year Programme period, Hebei coastal development zones are at a new starting point. Facing the unsustainable mode of economic growth, we are facing with the historic opportunities and challenges. At present, Hebei coastal development zones have mostly completed the extensive startup phases and are entering the intensive overall enhancing phases. In the new development journey, Hebei coastal development zones are widely facing the bottlenecks of the reduced policy strength, international capital transfer, shortage of land resource, deficient driving force of technological innovation, growth of human resources cost, rising pressure of environmental protection, hysteric social undertaking and undefined development orientation. Hebei coastal development zones are at a strategy transition stage. Whether the transform can be achieved concerns the existence and development of development zones. At present, it is difficult for Hebei coastal development to continue to use traditional development model in a new development stage.

## V. THE DEVELOPMENT BOTTLENECKS OF HEBEI COASTAL DEVELOPMENT ZONES

The research selected 10 first-level indexes, including comprehensive economic strength, infrastructure facilities, human resource, operating cost, social and environmental protection, the environment of technological innovation, development and efficiency, industrial structure, economy radiates strength and degree of internationalization. It also selected 28 second-level indexes, including gross regional production, fiscal revenue, growth rate of GDP, production value of high technology enterprises, total volume of imports and exports and so on. Then the research comes to the conclusions by comparing and analyzing the relevant data of Hebei coastal development zones and Shandong coastal development zones in 2011.

### A. Lower Economic Aggregate

The economic aggregate of Hebei coastal development zones is generally low. Qinhuangdao economic and technological development zone (simply “Qinhuangdao development zones” for short), Yantai economic and technological development zone (simply “Yantai development zones” for short) were built in 1984. Tangshan high-tech industrial development zone (simply “Tangshan high-tech zones” for short) and Weihai economic and technological development zone (simply “Weihai development zone” for short) were built in 1992. Cangzhou port-neighboring economic and technological development zone (simply “Cangzhou development zones” for short) was built in 2010. In 2011, the GDP mean value of 131 national economic and technological development zones is 31.57 billion. The average value of fiscal revenue is 6.56 billion. The GDP of Qinhuangdao development zone, Cangzhou development zone and Tangshan high-tech zone respectively are 20.831 billion, 11.507 billion and 9.01 billion. They are just 66%, 36% and 28% of the national average. The fiscal revenue of Qinhuangdao development zone, Cangzhou development zone and Tangshan high-tech zone are 3.197 billion, 3.701 billion and 2.311 billion. They are just 49%, 56% and 35% of national average. In 2011, the GDP and fiscal revenue of Yantai development zone respectively are 98.502 billion and 16.7 billion and the GDP and fiscal revenue of Weihai development are 16.078 billion and 4.723 billion. From the view of the gross regional production, the total output value of Qinhuangdao equals one-fifth of Yantai's. The total output value of Cangzhou just equals one-tenth of Yantai's. From the view of fiscal revenue, Qinhuangdao development zone and Cangzhou development zone all equal one-fifth of Yantai development zone. And the GDP and fiscal revenue of Tangshan high-tech zone just equal to one-tenth of Yantai development zone and one-second of Weihai development zone. By the data above, Hebei coastal development zones have widespread problems with low economic aggregate and small size and are difficult to form industrial scales. The fiscal revenue of Hebei coastal development zones is low. And the authority public service capacity is limited.

### B. The Urgent Need of Improving the Technological Innovation Environment

The technological innovation environment of Hebei coastal development zones is not optimistic. By comparing Hebei coastal development zones with Shandong coastal development zones from the production value of high technology enterprises, the production value of high technology enterprises as a proportion of total industrial output value, the number of patents, the number of patent licensing and other four second level indexes, it is found that the technological innovative abilities of Hebei coastal development zones are relatively backward. For instance, in the core index of the production value of high technology enterprises, the production value of Qinhuangdao development zone just was just 2.717 billion in 2011 and Tangshan high-tech zones was 4.412 billion. During the same period, the production value of Yantai was 28.447 billion and Weihai was 9.492 billion. The high-tech output values of Qinhuangdao development zones and Tangshan high-tech zones respectively are 10% and 15% of Yantai development zone. This shows that Hebei coastal development zones must spend great efforts in introducing high-tech enterprises, increase the proportion of the production value of high technology enterprises in the total industrial output value and effectively improve the technological innovation environment of development zones.

### C. The Urgent of Promoting the Degree of Internationalization

The total amount of imports and exports and the paid-in foreign capital reflect the degree of internationalization. From the point of view of two second-level indexes, Hebei coastal development zones are lagging behind Shandong coastal development zones and are far below the average of countrywide development zones. For Qinhuangdao, the city with greatest comprehensive strength in Hebei coastal development zones, its paid-in foreign capital just reached 174 million and the total amount of imports and exports just reached 3.06 billion in 2011. During the same period, the two indexes of 132 national development zones averaged 327 million and 5.03 billion. The paid-in foreign capital of Qinhuangdao development zone just equaled 50% of the national average. And the total amount of imports and exports just equaled 60% of national average. By contrast, the two indexes of Yantai development zone reached 730 million and 32.773 billion. The two indexes of Weihai development zone reached 103 million and 4.53 billion. This proves that the indexes of Hebei coastal development zones are lagging far behind Shandong coastal development zones. Hebei coastal development zones should take an active measure, widely attract foreign investment, study and implement preferential policies, encourage and promote the development of import and export trade and enhance the degree of internationalization.

## VI. THE COUNTERMEASURES TO DEVELOP HEBEI COASTAL DEVELOPMENT ZONES BE LARGER AND STRONGER

### A. *Grabbing strategic Opportunities to Make Progress*

In November 2011, the State Council authorized the implement of “Development Planning for Hebei Coastal areas”. This marked Hebei coastal areas represented by Qinhuangdao, Tangshan and Cangzhou have been considered as a national strategy. The People’s Government of Hebei Province have made relevant policies to preferentially support the development of coastal areas. Hebei coastal development zones should judge the hour and size up the situation, grab the opportunities to make progress, uphold the national and provincial preferential policies, take the lead in breaking through and promote the sound and fast development of development zones.

### B. *Taking Advantage of Transportation to Undertake Industrial Transfer*

As mentioned in the “Development Planning for Hebei Coastal areas”, “Accelerate the construction of Tianjin-Qinhuangdao passenger dedicated line and form the fast railway passage of Qinhuangdao-Tangshan-Tianjin-Cangzhou. Accelerate the amendment to project the intercity rail networks in circum-Bohai Beijing-Tianjin-Hebei area and promote to form a ‘one-hour traffic circle’ between Beijing-Tianjin and Qinhuangdao-Tangshan-Cangzhou<sup>[1]</sup>”. With the opening of the Beijing Guangzhou High Speed Railway and the upcoming of Tianjin-Qinhuangdao passenger dedicated line, Hebei province will have the most densely high speed railway lines nationwide. The advantage of urban transport hub along the line of high speed railway will be further emerging. The flows between of the cities along the railway as Qinhuangdao, Tangshan and Cangzhou and the core cities as Beijing and Tianjin will be more smoothly in the aspects of personnel, supplies, fund and information. Coastal development zones should make good use of this advantage, strengthen the integration with Beijing-Tianjin area in the aspect of industry development, infrastructure and the construction of integrative market system, innovate the regional cooperation mechanism, set up a sound policy system, build a transitional platform, promote the industrial transfer of Beijing-Tianjin area, push forward the integrative development with Beijing-Tianjin area and make Hebei coastal development zones as the best place for Beijing-Tianjin area to expand developing spaces.

### C. *Improving the Mechanisms for Independent Innovation and Technological Innovation Environment*

The technological innovative capabilities of Hebei coastal development zones are generally low. According to statistics, in 2011, just 13% of the total industrial output value was the production value of high technology enterprises. During the same period, Yantai development zone reached 29%. Therefore, Hebei coastal development zones should intensify the efforts to introduce and cultivate the high-tech industries, implement the enterprise-led

combination of production, teaching and research; encourage enterprises to develop venture capital, create further conditions and attract known research units to set up affiliated agencies; enhance the implementation of independent innovation policies, improve the policy system of independent innovation; promote scientific and technological progress and innovation, promote the efficient disposition and integration of science and technology resources and enhance the ability of independent innovation in enterprises.

### D. *Strengthening the Cooperation Between Universities and Enterprises and Deepening the Combination of Production, Education and Scientific Research*

With Qinhuangdao development zone, for example, there are Yanshan University, Northeastern University at Qinhuangdao and other major universities around the development zone. There were also many universities and colleges in Tangshan and Cangzhou. Therefore, coastal development zones should strengthen the cooperation with higher teaching institutions and research institutes, make good use of the advantage of higher teaching institutions and research institutes in science and technology, human resource and experimental equipment, push the process of the integration of production, education and scientific research, cooperate to tackle technical problems and establish a number of cooperative demonstration bases of the integration of production, education and scientific research.

### E. *Building out a Platform for Opening-up and Enhancing the Degree of Internationalization*

As mentioned explicitly in the “Development Planning for Hebei Coastal areas”, “It is necessary to fully utilize existing development zones to strengthen the cooperation with Japan and Korea in the aspect of energy conservation and environment protection, high-end equipment manufacturing, new energy and other new strategic emerging industries and set up a base in cooperation with Japan and Korea in Caofeidian new area [1]”, “It is supported to play a leading and exploratory role in the aspect of technical cooperation research, exchanges and training of talents, international port logistics, port customs clearance and trade and investment facilitation and explore and establish an open economic system in accordance with international rules and custom [1]”. The coastline of Hebei coastal areas is 487 kilometers and the sea area of it is about 7000 square kilometers. Hebei coastal areas have three major ports of Qinhuangdao, Tangshan and Huanghua and are the important sea ports and windows or bridges for opening-up in north and northwestern China. Hence, it is important to use this natural advantage, implement the win-win strategy of opening-up, build out a platform for opening-up, expand the breadth and depth of opening-up in all directions and establish an open economic system in accordance with the development of coastal development zones.

*F. Preserving the Ecological Environment and Making a Livable Development Zone*

Economic development must not be achieved at the cost of environment or residents' health. Hebei coastal development zones need to deal well with the relation between construction and environmental protection, increases investment and improve the ability of self-controlling. The development of economy should take into full account the carrying capacity of resources and environment, insist the principle of "both paying attention to protection and exploitation", develop the circular economy vigorously, save and intensively utilize resources, focus on promoting the ecological construction, raise the environmental admission standards and support the ecosystem safety. In addition, it is necessary to accelerate the change of economic growth mode, optimize and upgrade the industrial structure, pursue new industrial base on the basis of resource conservation, intensive production and friendly environment and attract the investor eye with the beautiful and livable development zones environment.

VII. CONCLUSION

The implement of "Development Planning for Hebei Coastal areas" will provide a good opportunity for breaking through the development bottlenecks. The 12th Five-Year Plan period is an important period of strategic opportunities

to achieve the development by leaps and bounds. It is necessary to seize the opportunity, implement the "Development Planning for Hebei Coastal areas", break through the development bottlenecks, enforce the radiation and driving force and promote the sound and fast development of Hebei coastal areas relying on the development zones.

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