



## The Industrial Coordination Mechanism Research Based on Regional Integration of Beijing-Tianjin-Hebei

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Received: September 20, 2018; Published: October 05, 2018

### Abstract

The development of the Beijing-Tianjin-Hebei regional integration has risen to national strategy. Because that industrial synergy is the foothold and power of the integration of the Beijing-Tianjin-Hebei region, the research on collaborative mechanism is very important. This article embarks from the Beijing-Tianjin-Hebei regional comparative analysis of the industry, find the breakthrough point of collaborative mechanisms, and then select the workable strategy of operation. Taking Shougang and BIAC, for example, this article tries to explore industry coordinated development path.

**Keywords:** Regional Integration; Metropolitan Circle; Industry Collaboration

Regional integration is the advanced stage of rural-urban integration, it is the product of the development to a certain stage of Rural-urban integration. And the key to achieve of the integration of the Beijing-Tianjin-Hebei region is industry coordinated development. Industry coordination mechanism is used in division of labour cooperation of various industries in Beijing, Tianjin and Hebei metropolis circle to achieve common development and win-win situation.

### The issue raised

Xi Jinping, the General Secretary, has specifically presented on February 26, 2014 at the coordinated development of Beijing-Tianjin-Hebei work symposium that realizing the coordinated development of Beijing-Tianjin-Hebei is a major national strategy. We should speed up out of a science ongoing collaborative development path. To realize the coordinated development of Beijing-Tianjin-Hebei strategy, we must solve the coordinated development of industry, therefore, the key or the foothold to realize the regional integration of the Beijing-Tianjin-Hebei is the coordination of industry. Only the realization of the coordinated development of Beijing-Tianjin-Hebei industry can ensure the sustainable and stable development in these regions.

### Comparison and analysis of various industries in Beijing, Tianjin and Hebei

Since 1982, the Beijing urban construction overall plan put forward the concept of "capital area" for the first time, it has been 32 years for putting forward of the idea "Economic integration of the Beijing-Tianjin-Hebei region", "Beijing-Tianjin-Hebei metropolis circle", and "Integration of the Beijing-Tianjin-Hebei region" upgraded today as a national strategy. During this process, it has undergone four main stages: firstly, the trade-oriented economic cooperation stages from 1982 to 1995, during which the main subject of regional cooperation is the exchanges of materials and technologies, which on the whole is at the spontaneous test stage. Its short-term characteristics are more obvious, and greatly affected by the chief executive officer personnel changes and other aspects. The second phase is from 1996 to 2003. The main characteristic is the project development of bilateral cooperation, the consciousness of the regional cooperation has begun to improve, the cooperation form is given priority to project development, the government-led investment projects are in the majority, cooperation are given priority to capital and other elements, with the lack of the exchanges and cooperation on public service, infrastructure, public policy and others. The third stage, from 2004 to 2010, the

consensus and framework agreement of regional cooperation has been formed initially by all parties, "Langfang consensus" and "Bohai rim regional cooperation framework agreement" are the symbol of the Beijing-Tianjin-Hebei region cooperation achievements. It has set up three joint conference system in regional planning, business development, tourism cooperation, transportation cooperation, health cooperation, industrial and commercial administrative cooperation and other areas. Regional cooperation has extended from transportation infrastructure, industry, finance and other economic fields to tourism culture, public security, public health, human resource and other public service sectors. Mechanism of cooperation has gradually become the mainstream.

Since 2011, the integration coordinated development of Beijing-Tianjin-Hebei has been into the regional strategic guidance phase of governance. The challenges of traffic congestion, environmental pollution and many other city diseases became increasingly severe. The consistent consensus from central to local and government to society, made the regional coordinated development became self-conscious from spontaneous rise, from driven by regional interests to national strategies, and the contents has become public services and public policy coordination from infrastructure cooperation and industrial cooperation, the focus has become multilateral cooperation and coordination mechanism construction and perfection from promotion bilateral (Table 1).

Projects	Stage 1	Stage 2	Stage 3	Stage 4
Time period	1982 - 1995	1996 - 2003	2004 - 2010	2011
Cooperative subjects	Entity	Government	Government, Industry	Government, Enterprise, Social Organizations
Cooperative forms	Materials, Technology	Projects, Funds	Infrastructure Public Services	Diversified, All-Round
Cooperative features	Spontaneous, Tentative	Project Development and Investment	Cooperation Framework, Joint Committee	Government-Guidance' Market-Led

**Table 1:** Characteristics of Beijing-Tianjin-Hebei cooperation development stages.

**Comparison and analysis of the first industries in Beijing, Tianjin and Hebei**

For the first industry, Hebei represents a significant proportion, Beijing and Tianjin accounted for smaller proportion. So, solving problems in the first industry in Hebei, is the way to solve the problems in Beijing-Tianjin-Hebei, and the problems of agriculture, country and peasant (Table 2).

During 2009 - 2013, although the added value of the first industries in Beijing increased, but the proportion declined; The First industry in Tianjin was similar to Beijing's, only the added value of Hebei continued to increase, and its proportion remain unchanged. That is to say, the agriculture, rural areas and farmers problems still existed in Hebei. To solve the problem of peas-

Projects	2009	2010	2011	2012	2013	
Beijing	GDP value added	118.3	124.3	136.2	150.3	161.8
	Proportion	1%	0.9%	0.9%	0.8%	0.8%
Tianjin	GDP value added	131.01	149.48	159.09	171.54	188.45
	Proportion	1.7%	1.6%	1.4%	1.3%	1.3%
Hebei	GDP value added	2218.9	2562.8	2905.7	3186.7	3500.4
	Proportion	13.0%	12.7%	12.0%	12.0%	12.4%

**Table 2:** Comparison of the first industry in Beijing, Tianjin, and Hebei during 2009 - 2013.

(unit: one hundred million yuan).

Note: According to the data sorting by Beijing, Tianjin and Hebei statistical bulletin from 2009 to 2013.

ants, make people gradually employing from the first industry to the second and the third industry, can realize the orderly transfer among industries.

**Comparison and analysis of the second industries in Beijing, Tianjin and Hebei**

Among Beijing, Tianjin and Hebei, the latter two account for a large proportion of the second industry and have similar structures (Table 3).

During 2009 - 2013, although the added value of the second industry in Beijing continued to grow, but the proportion continued to decline; The added value of the second industry in Tianjin also continued to grow, but the proportion continued to decline; And the added value of Hebei increased most, but the proportion remain unchanged.

### Comparison and analysis of the third industries in Beijing, Tianjin and Hebei

Compared with the data of the third industry, development is not balanced in Beijing, Tianjin, and Hebei. (Table 4).

Projects		2009	2010	2011	2012	2013
Beijing	GDP value added	9004.5	10330.5	12119.8	13592.4	14986.5
	Proportion	75.8%	75%	75.7%	76.5%	76.9%
Tianjin	GDP value added	3259.25	4121.78	5153.88	6049.96	6905.03
	Proportion	43.5%	45.3%	46.1%	47.0%	48.1%
Hebei	GDP value added	5932.8	6928.6	8224.4	9387.3	10038.9
	Proportion	34.9%	34.3%	33.9%	35.3%	35.5%

**Table 4:** Comparison of the third industry in Beijing, Tianjin, and Hebei during 2009 - 2013.

(Unit: one hundred million yuan).

Note: According to the data sorting by Beijing, Tianjin and Hebei statistical bulletin from 2009 to 2013.

During 2009 - 2013, the absolute value and the proportion of Beijing-Tianjin-Hebei third industry continued to grow, it meant that the adjustment of the third industry continued to optimized in these three areas, but third industry in Beijing had the obvious advantages on both the quantity and the quality with the absolute first, and is close to the industrial structure of developed countries, while Tianjin and Hebei are further respectively by 30% and 40% from Beijing, and it is the typical industry characteristics of industrialization stage.

### The analysis of coordinated development of Beijing - Tianjin - Hebei industry

We can analyse the development of integration of Beijing-Tianjin-Hebei region based on the following four dimensions.

Central and local governments reach a consensus to coordinate development. Coordinated development means that different regions and areas of inner region carry out the cooperation of local government for win-win development. The role of government in the process of regional cooperation mainly is promoting the rational flow of elements' resources and correcting market failure in order to realize the regional coordinated development, and the role of the market is industry convergence and collaboration development in Beijing-Tianjin-Hebei region. Beijing-Tianjin-Hebei region has the special historical origin, economic and social development has the characteristics of gradient, complementation and symbiosis with the good foundation of regional cooperation.

Because of the different industrial structures, the gradient development has formed. The gradient development means that the phase characters formed due to economic and social development gap in different regions. The character of gradient constitutes the endogenous impetus of regional cooperation. Each region can go along reasonable division of labour and technology transfer to achieve regional harmonious development based on the theory of gradient development. Beijing-Tianjin-Hebei regional development has the character of gradient obviously. In accordance with different countries' income group standards of the World Bank, Beijing and Tianjin has reached level of rich countries, while only Hebei province was in the middle-income level. In 2013, the proportion of the third industry has reached 76.9% in Beijing, while Tianjin and Hebei were 48.1% and 35.5%, there was a big gap on economic and social development. The character of gradient provided theoretical preconditions to Beijing-Tianjin-Hebei regional cooperation, and by promoting orderly industry transfer, can achieve mutual benefit and both wins.

On the basis of different resources, the complementary development has formed. The complementarity reflects the possibility to benefit from trade based on comparative advantage in various areas. According to the theory of comparative advantage, each region should focus on industries with comparative advantage, and reaping the benefits of both the parties through regional trade. The factors of Beijing-Tianjin-Hebei are different, the education, science and cultural resources are rich, Tianjin has advantages on

shipping, logistics and manufacturing, Hebei has cost advantages on labour force and land, and they could form a complementary effectively in order to enlarge the local advantages. Complementary created the conditions for borrowing development in different regions. The development of a single region tends to be limited on local resource at a certain stage, if the complementarity occurs in different regions, the constraints could be alleviated effectively, and provide the continuous motivation for regional development. Beijing and Tianjin have rich resources of science, culture and education, but they all face problems with many cities' disease such as excessive population, traffic jam and air pollution. Hebei province has a broad industry carrying space, but because of a shortage of resources development, the pressure from transformation and upgrading of industry is high. Regional cooperation can realize regional advantage complementary and promote regional sustainable development.

Common development has formed because of the integration. Symbiotic refers to the character of interdependence among all the areas within the region. The existence of the symbiotic is because the externality of regional public goods. Such as air pollution, water resources exploitation and utilization, water environment pollution and food safety have cross-domain flow characteristics, and they cannot solve within a single region, they can only put forward system solutions through regional synergy in the integration framework. At present, Beijing-Tianjin-Hebei facing common problems of serious air pollution and a serious shortage of water resources, so it urgently needs to strengthen regional cooperation and orderly promotes regional overall integrated development.

### The breakthrough of synergy mechanism and strategies' selections

We should build Tangshan and Caofeidian into the window of northeast Asia regional cooperation, Circum-Bohai-Sea new industrialization base and the important fulcrum of capital economic circle. Based on this, Tianjin, Tangshan, Qinhuangdao and Cangzhou formed Beijing-Tianjin-Hebei coastal economic belt. On July 31, 2014, Hebei province and Beijing signed jointly seven agreements of building Caofeidian synergy development demonstration area framework agreement.

### The geographical features and the park feature of Caofeidian

Caofeidian has available coastline of 69.5 kilometres never frozen, 36 meters deep, and it is the only channel without excavation of Circum-Bohai-Sea and can build natural harbour of more than 30 - large ship. Currently, Caofeidian has built 7 types of terminals

of ore, coal, liquid chemical, container, bulk cargo, fabrication and assembly and LNG. The port throughput capacity has reached 315 million tons, the growth has been the top of the world's ten biggest ports, by the end of 2015, it will have a capacity of 500 million tons. Caofeidian comprehensive free trade zone has started a formal operation in April 2014, second only to Shanghai free trade zone in the level and enjoys policies of Shanghai Yangshan Free Trade Port Area. Caofeidian has become the demonstration zone of Beijing-Tianjin-Hebei industry coordinated development and the maximum load of the outsourcing industry in the capital. Caofeidian plans to take 100 square kilometres of land building industrial parks with Beijing, and Beijing promised to invest \$20 billion for five years, because Caofeidian has the geographical advantages on facing the sea with deep groove, its back against the land with shallows and the land is broad with shored.

From March 2003, marked by Tongdao highway construction, to 2014, Caofeidian accumulated investment for more than 3000 hundred million yuan during this 12 year, Caofeidian has built 7 industrial parks of port logistics, steel and power, chemical industry, equipment manufacturing, comprehensive bonded, new industry and high and new technology. And it constantly accelerated industry agglomeration at the same time, forming four leading industries of large port, large steel, big chemical industry and large equipment. Hundred years ago, Sun Yat-sen proposed a conception of building a northern large port here as the same as New York in "constructs the plan", and it has become true. The Sand Island which is only 4 square kilometres has forming a new industrialization base of nearly 220 square kilometres by reclaiming land from the sea. The entire Caofeidian district with a total area of 1943 square kilometres has become the coastal city with the most competitive advantages and development potential in Beijing-Tianjin-Hebei, and it has the double area of Hong Kong, and three times the area of Singapore, and has successfully been into the national five-year plan, and became the National economic and technical development zone approved by the State Council. At present, it has the following remarkable characters.

The accumulation of heavy chemical industries. Since Shougang Corporation entered into Caofeidian, the construction of the port groups in ore port, oil port and harbour coal port promoted greatly. The port group is just like a powerful magnetic field: 15 million tons of fine steel, 10 million tons of oil refining, 1 million tons of ethylene, 15 million crude oil reserves, 4 million kw thermal power, 300000 tons of seawater desalination every day, the super shipbuilding and LNG, etc. These heavy chemical industries get together forming a complete set in Caofeidian.

Industrial chain is formed among enterprises. Circular economy is the foundation on Caofeidian, the correlation chain here between upstream and downstream industry is very high, when investing promotions, they would check if the enterprise on the chain or not. Within Jingtang Shougang Group, the exhaust gas formed under 100 degrees low temperature by steel production is used for heat for desalination. The sinking brine after desalination is used for the salt industry and soda industry of Tangshan Sanyou Group. The waste residue produced by steelmaking is used for materials to manufacturers of Jidong cement company and Huixinjade company. The by-products of coal tar can be transported in the acquisitive carbon project for further processing.

On July 17, 2014, sinopec Beijing Yanshan branch Caofeidian thousands ton oil refining project won the national environmental protection approval, and it is expected to be completed by the end of this year. The lightspot of this project is the high refined oil production standard, and is higher than the euro V standard, and is the highest standard in the same industry in China. In addition, this project develops circularly with other industries, using the hydrogen extracted of coke oven gas by Shougang Jingtang steelworks Company, carbon dioxide produced is used for oil field recovery operation. These circulation chains among enterprises is just the miniature of "middle circulation" built by Caofeidian. There is also a circulation system between enterprise and society, such as the afterheat and steam are incorporated into the centralized recovery of official website, united distributing and be used as heating and bath, and can be used for circulating water, supplementary water, urban landscaping and scenic environment, etc.

Caofeidian has the same kind of development mode with Binhai New Area, they all rely on the port which is suitable for medium-to-large project with large inflows and outflows. No matter the industrial development, or the port hinterland, or the economic conditions, they both have formed the obvious competitive relationships. Only 38 miles apart, there is still as well as competition between these two new districts. Both jointly contribute to the coordinated development of Beijing-Tianjin-Hebei region, and also compete against each other with the resource depends on each other and the similar industrial structure. Port is the focus of the competition, the difference is that Caofeidian a natural deep-water harbour, but Binhai New Area is an artificial port that needs to spend hundreds of millions to clearing silt every year. The same is Caofeidian port is located in the Tianjin upstream channel, the channel is almost coincided with each other.

### The Binhai New Area, new target, new starting and new direction

Tianjin Binhai New Area owns new target and new starting point, and its industry supporting is more complete, and the industry environment is good, and the policy of processing manufacturing and equipment manufacturing industry has more comparative advantages over Beijing and Hebei, the support to innovative high-tech enterprises is increasing, and it becomes a new direction in the field of science and technology innovation.

Binhai New Area has speed up the transformation of scientific achievements and the industrialization, relying on capital research resources, and has built the results show trading platform, The Chinese academy of sciences institute of industrial biotechnology, A new generation of information technology research institute at Peking University and other high level of scientific research achievement transformation platforms of the national 863 program. In 2013, Binhai New Area has 863 projects in total, and 106 of it have transformed, 52 projects of Chinese academy of sciences have been completed, reaching 18 industry-university-institute cooperation projects. Six projects have won the state science and technology award for the year of 2013, completing the technical contract registration for 7.572 billion yuan.

Introducing scientific and technological achievements transformation from Beijing scientific research institutes is one of the important measures of the science and technology development coordination of Binhai New Area and Beijing. Relying on the capital resources of science and technology is mainly manifested in, on the one hand, some achievements and technologies of Beijing research institutes and universities could be industrial; On the other hand, putting forward by the new enterprise, then the scientific research institutes come to solve problems to establish long-term production-study-research cooperation further.

### The priority

The first step of integration of Beijing-Tianjin-Hebei region is to play a forerunner and leading role by government in traffic road network construction and environmental governance. These two works are the compulsory for the government. Only the government do well these two-basic works, the market mechanism will play a role, and the invisible hand will be seen, and the abortion and logistics will flow easily. If the government wants as well as the fiscal inputs, it can be done immediately. Especially the ease and interoperability of urban rail transit need to strengthen while reducing logistics cost, improving the convenience for people in

cities. On the condition of the limited government financial input and poor management efficiency, we could take the PPP mode solving the problem of insufficient funds and improving the operational efficiency of public infrastructure, making the public and the basic projects play the enthusiasm of private and government's investment, improving its sustainable operation function.

It followed by industrial connection, migration and enterprise cooperation. State-owned enterprises are the easiest to communicate and transfer in the three regions, because the state-owned enterprises are dominated by the government, and can be arranged by executive order, so it will first choose some representative enterprises to lead. For example, the new zoo wholesale market and red gate costume city in Langfang are successful docking Beijing red gate costume city and the zoo wholesale market, and have invested successfully in less than a month, and the future investment value is expected to increase greatly, this is such a good success, and also providing a certain field experience of docking external migration industry between Beijing and Hebei. The first phase of investment of new zoo wholesale market and red gate costume city in Langfang has been successfully completed, more than 80% of the investment and more than 90% are the power merchants of the zoo wholesale market and red gate costume city with a lot of retail companies, and it has become the first real completing docking project. In September 2014, it has attracted investment from the market, and reserving 20% of investment opportunities for the market. At the same time, the Clothing City is planned officially to open on New Year's Day, 2015. Hebei Gaobeidian XinFaDe agro industrial logistics park has become the vanguard of the army in the field of agricultural products with its unique geographical location, modern operation mode of things management and the perfect channel industrial chain advantages. The completion of Gaobeidian will greatly ease the pressure on Beijing, becoming the benchmark for the industrial innovation transfer of Beijing-Tianjin-Hebei integration. The completion of this project will not only reduce 45 percent of agricultural logistics vehicles to Beijing effectively relieving traffic pressure in southern Beijing but can also ease the working population of nearly 200,000. Gaobeidian agro-industry logistics trade port is Hebei Province's key project of butting Beijing industrial transfer, and it is a modern agro-industrial logistics projects with its own advantages on development and is also a strategic layout of Beijing Xinfadi "Liter external expansion". The relocation of the tertiary industry in Beijing not only increased increments for Langfang and Gaobeidian, but also promoted the development of related industries, and promoted the adjustment and transition of industrial structure.

Finally, the private capital could free to deploy by their market wishes. now some Beijing big online trading platforms have set up storage base in Hebei and Tianjin, the logistics network has been more closely between three regions.

Perhaps such the medical treatment and education as public service industries are the least likely to transfer. Now what we could do is to set up branches or offices to play the radiation and spread role of science and education industries. For example, the establishment of Chengde High School Affiliated to Beijing Normal University makes full use of resources on teaching, research, training, etc of Beijing Normal University, enhancing the basic education level in Chengde Gaoxin Area, and improving educational support services function in Chengde South Metro. This is not only injecting advanced educational concepts, quality education and teaching resources from Beijing Normal University to Chengde Beijing Normal University affiliated schools, playing a leading role to the quality of basic education in Chengde, but also could explore the Chengde mode of basic education reform and innovation in the background of education reform coming into the deep-water area and the crucial area. Beijing Tiantan Hospital and the Hospital of Hebei Yanda has cooperated to build the Tiantan-Yanda brain Centre with signing at November 18, 2014, forming the "Yanda mode" of sharing resources, building alliances and sustainable development.

#### **The relocation of Shougang mode: the benchmark of industry migration and integration**

Shougang in Beijing is facing 3 problems of pollution, lack of water and no iron ore, so it must migrate outside the "sea" to achieve water and relatively low cost of iron ore, and can reduce industrial waste emissions through technological innovation, so it is an inevitable and right choice to transfer to Caofeidian. In 2003, Shougang moved to Caofeidian, and it has been 11 years so far. Not only releasing the 8.56 square kilometers of main land for Beijing, making the old steel changing into cultural and creative industries area, integrated office area, waterfront ecological recreation area and the city's comprehensive service area with higher added value, becoming a new landmark of Jingxi. The reduced taxes caused by the relocation of Shougang, attracting more business because of improvement of the environment, getting a higher economic, social and environmental benefits.

The relocation and innovation of Shougang is the rebirth. In the dock of 250,000-ton ore level, the coal and iron ore shipped from Australia, Brazil and South Korea are transported to the belt chain by continuous bucket unloaders or grabs, and then transported to

the Shougang steel company through this belt chain. The production of finished steel by simply moving out of the 200 meters can be directly transported to Shanghai and other places, greatly reducing transportation costs. In the construction of Shougang Jingtang steel plant, about 76 million yuan is used for environmental investments accounting for 11.2% of all Phase Shougang investment, and it is the highest domestic level. It is about 170 yuan per ton of steel in environmental protection, far exceeding the same industry standard. May 2014, Shougang Jingtang company turned loss to profit, becoming the model of Beijing-Tianjin industrial transfer. Shougang Jingtang company has more than 8,500 employees, in addition to membership of workers in Beijing, there are nearly 4000 jobs to absorb the Hebei local employees and create nearly 12,000 related jobs of productive service industries, laid foundation for the development of Tangshan.

"Shougang relocation model" will become the benchmark of the second industrial relocation in Caofeidian, Caofeidian now has the focus on actively undertaking the shift of Beijing high-end industrial manufacturing link and general manufacturing link, and actively led Beijing's processing and manufacturing to transfer to Caofeidian, and guide equipment manufacturing, aviation, high speed rail components and other elements gather in Caofeidian, forming the high-end equipment manufacturing industry cluster in Caofeidian.

### Strategies of the coordinated development

There may be the following strategies in Beijing-Tianjin-Hebei industry coordinated development process.

Beijing-Tianjin-Hebei should take misplace development, industrial division, regional industrial gradient transfer. Beijing, Tianjin and Hebei should adhere to the dislocation development, joint development and promote each other to achieve orderly development according to their respective advantages. Beijing makes full use of the tertiary industry, especially the advantages of science and technology and the education industry, spreading to Tianjin and Hebei, and play its strong radiation effects. For example, playing a role of Zhongguancun National Innovation Centre, setting up sub-Park in Tianjin and Hebei; Make use of Beijing Research Institute, universities, hospitals and other advantages, setting up branches or cooperating agencies in Tianjin and Hebei. Make use of the high-end and service-oriented advantages of Beijing CBD, promoting the transformation and upgrading of CBD, enhancing the grade of the participation in the international division and economic globalization, improving international competitiveness,

innovation and sustainable development ability. The Formation of the new strategic position of Beijing-Tianjin-Hebei: the north pole of Chinese economic growth, the world-class metropolitan area, Chinese create and manufacture high-end industries regions, leading region for the world's innovation and development.

The cities in Beijing-Tianjin-Hebei must locate first to find the focus industries on development, the key is to test whether they have such abilities, for example, baoding could develop its PV industry, Beijing could develop high-tech industrial park in Zhongguancun. Cangzhou creates Huanghua "Motor City", Beijing Automotive Group has increased the intensity docking with Huanghua after 400,000 vehicles of BAIC project went into operation and planning a "vehicle manufacturing + 3 + 3" long-term industrial plan. Huanghua automobile industry chain will have vehicle manufacturing, parts production, automobile import and export and logistics, waste dismantling, re-manufacturing, automotive high-speed test site and general aviation manufacturing.

The gradient development in the industry chain. Among the integration of Beijing-Tianjin-Hebei, Hebei is relatively backward, and its position is awkward rather. For example, the positioning in Hebei Province is relatively the same without any focus, it should focus on selection on the integration process, showing emphasis in accordance with its own. So, the integration could not be the excuse for non-environmentally friendly economic of local blind development, and it cannot become an excuse for expanding the real estate market, and it cannot become an excuse for local blind expanding industrial parks.

Implementing the circular economy strategy and reaching the Beijing-Tianjin-Hebei industry orderly docking. The largest difference in this three regions' industrial docking is Beijing unwell to give up high-end industries as a transferor while Tianjin and Hebei seem unlikely to undertake the low-end industries as recipients. Undertaking Beijing and Tianjin industry does not pollute the environment! This is what Beijing and Tianjin insist and the sustainable development road. If the traditional industries could re-use the waste as a resource and reduce pollution by technological innovation, transformation and upgrading, it can realize recycling and green economy. For example, the by-product: heat of China Resources Power can be supplied to the surrounding businesses and residents, and the afterheat can be used as desalination of sea water; Likewise, the waste heat of Shougang can be used as desalination as well, the concentrated salt by desalination can be supplied

to Sanyou chemical. Caofeidian desalination project will become an important water source in Beijing, and soon, one million tons Bohai Sea water after desalination will be supplied to Beijing every day. "Huixinjade" is the first local listed enterprise in Caofeidian, it can extract potassium chloride and powdered iron from the metallurgical dust of iron and steel enterprises and other waste dust, getting good benefits in almost "zero cost" of waste.

Implementing technological innovation-driven national development strategies and exploring scientific and technological innovation and development in Beijing-Tianjin-Hebei integration process, because innovation is the self-generated power and necessary requirement of Chinese economic self-development. In the past 30 years, the development of Chinese economic is indeed rely on a large number of elements' input and demographic dividend, but with the economic development, the factor inputted, the profit decreased, and the demographic dividend disappeared, and new technologies, new products, new industries, new models had more potential for development than our inputted factors. From this perspective, the industrial coordinated development in Beijing-Tianjin-Hebei must be sustainable, and has long-term vitality of development, and must get rid of excess of factor inputs and polluting emission to realize the new roads of innovation-driven development. Followed by the implementation of the innovation-driven strategies, it helped to solve some problems of the three commons, such as severe overcapacity, especially the traditional industries in Hebei such as steel, cement and glass industries.

The new developments and new power of Zhongguancun have given birth to a large number of science and technology enterprises, and it will be the birthplace of one to two strategic industries. The industrial coordinated development of Beijing-Tianjin-Hebei region is a new era of Zhongguancun. Firstly, international development has the same step with the coordinated development of Beijing-Tianjin-Hebei region, on the one hand, introducing the latest international technology, the most advanced and cutting-edge innovation team, making these advanced international technology and innovative team, culture and innovative elements get better and faster development in Zhongguancun to demonstrate the innovation function of the capital, this effect of spill over and radiation must contribute to industry consolidation and integration in the coordinated development of Beijing-Tianjin-Hebei region. Secondly, Zhongguancun should do more to industrial nurture and guide services. In fact, the research and development, sales, management and control of many science and technology industries are in Beijing, and even a large number of manufacturing industries are

also in Beijing. From the joint development point of view, Zhongguancun must be in Beijing, but if there are a well-developed transportation facility, integrated industrial structure, the integration of research and development and sales, and urban-rural interaction in Beijing-Tianjin-Hebei regions, it may be like the Pearl River Delta and Yangtze River Delta, obtaining greater achievements in industrial cooperation and technology synergies. Thirdly, the interaction between park's construction, operation and industrial organization. There are 16 parks in Zhongguancun, and building Zhongguancun Science Park in Tianjin, these are exemplary role. Similarly, Zhongguancun Science Park is settled up in Shijiazhuang, Tangshan, Cangzhou, Qinhuangdao and other places [1,2].

## Conclusion

The integration of Beijing-Tianjin-Hebei, under the guidance of Beijing-Tianjin-Hebei regional planning, through the Beijing-Tianjin-Hebei industrial development policy guidance made by the government, it can play the role of market mechanisms, and reasonable allocate the industrial division of the network cities to form the orderly industrial chain. Second, the fully ground resources (garbage, waste materials, etc.) are necessary, relying on new technologies and new process to make use of producer services and achieve circular economy (according to estimates: 85% of air pollution is industrial pollution, 15% is other pollution), reducing exhaust emissions and trash discharge. Finally, reconstructing the structure of the first, second and third industries in Beijing-Tianjin-Hebei regions, achieve sustainable development of Beijing-Tianjin-Hebei regions to achieve balanced development of Chinese north and south economy.

## Bibliography

1. Decai Xu and Shaoqing Tang. "Beijing new trend in the urban-rural integration research". *Ecological Economy* (2013): 92-95.
2. Shaoqing Tang. "Sustainable promoting the coordinated development of Beijing-Tianjin-Hebei". (2014): 55-57.

**Volume 2 Issue 11 November 2018**

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