

Evaluation on the Effect of Beijing-Tianjin-Hebei Coordinated Development Policy During the “12th Five-year Plan” Period*

Dan Wu

School of Economics and Management
North China University of Technology
Beijing, China 100144

Siqi Cao

School of Economics and Management
North China University of Technology
Beijing, China 100144

Chenhui Ji

Imperial College London
London, UK SW7 2AZ

Abstract—The coordinated development of Beijing-Tianjin-Hebei is of vital significance to the coordinated promotion of the strategic layout of the "Four-pronged Comprehensive Strategy" and the realization of the goals of "Two Centenary" and the Chinese dream of the great rejuvenation of Chinese nation. For this purpose, from three aspects of economy, society and ecology, this paper systematically sorts out the formulation of Beijing-Tianjin-Hebei coordinated development policy during the 12th Five-year Plan period, clarifies the promotion thinking of Beijing-Tianjin-Hebei coordinated development policy, and deeply analyses the promotion and implementation of Beijing-Tianjin-Hebei coordinated development policy. On this basis, from three aspects of economy, society and ecology, the evaluation index system of Beijing-Tianjin-Hebei coordinated development policy effect should be systematically designed, and the implementation effect of Beijing-Tianjin-Hebei coordinated development policy should be quantitatively evaluated. The research shows that the Beijing-Tianjin-Hebei coordinated development policy has made some achievements in economic, social and ecological aspects.

Keywords—Beijing-Tianjin-Hebei; coordinated development; policy; effect evaluation; index

I. INTRODUCTION

Since the founding of the People's Republic of China, the coordinated development of Beijing-Tianjin-Hebei has undergone a long period of evolution. In the ups and downs, the coordinated development of Beijing-Tianjin-Hebei has undergone five historical stages: the period of frequent adjustment of administrative divisions, the initial germination period of coordinated development, the period of alone struggle, the period of hesitated advancement, and the period

*Fund projects: National Natural Science Fund Youth Project (Approval No. 71603004); Beijing Social Science Fund Youth Project (Approval No. 17GLC064); North University of Technology Youth Top Talents Cultivation Project (Approval No. XN018035); Science and Technology Innovation Project of North University of Technology (Approval No. 18XN151).

of historical turn, and has presented their own characteristics of different historical stages [1]. From the beginning with Academician Wu Liangyong's research on urban-rural spatial development planning of the north of Beijing-Tianjin-Hebei (Greater Beijing area) in 2001, to Beijing-Tianjin-Hebei coordinated development was listed as one of the three major national development strategies in 2014, and to the Political Bureau of the Central Committee of the Communist Party of China held a meeting to examine and pass the Outline of Beijing-Tianjin-Hebei Coordinated Development Planning on April 30, 2015, which presents that substantive and breakthrough progress has been made in the Beijing-Tianjin-Hebei coordinated development. Promoting the coordinated development of Beijing-Tianjin-Hebei is a major national strategy with its core to relieve Beijing's non-capital functions in an orderly manner. Meanwhile, Breakthroughs have firstly been made in such key areas as transportation integration, ecological environmental protection and industrial upgrading and transfer in Beijing-Tianjin-Hebei region.

Scholars have conducted in-depth research on Beijing-Tianjin-Hebei coordinated development from top-level design, industrial transfer, ecological environmental protection, traffic construction, spatial layout and tourism cooperation and others. Among them, in terms of industrial transfer, scholars have proposed that the development priorities of the three places are different. Only when the development of the industries of the three places is complementary, differentiated and gradient can the advantages be complementary. Hebei should focus on transforming high energy-consuming industries into equipment manufacturing industries. Beijing should focus on developing high-end service industries, while Tianjin should focus on the development towards a low-carbon industrial chain. Only by defining the development direction of the industries of the three places and jointly building strategic emerging industrial clusters and industrial chains with international competitiveness can we realize the optimization and upgrading

and coordinated development of industrial structure [3] [4] [5]. In term of ecological environment protection, scholars have made it clear that the ecological problems in Beijing-Tianjin-Hebei have gradually become salient. The economy of Beijing and Tianjin has been developed to a greater extent, but the ecological space is limited. As a result, economic growth is still based on the massive consumption of natural resources, which limits the further development of the economy of the three places to a certain extent. Beijing-Tianjin-Hebei region is a natural ecological integrity and the ecological environment problems are trans-regional and mobile, which determines that the ecological governance should be based on the cooperation of local governments. It is necessary to establish a cooperation mechanism between governments and a government-oriented system of compensation for ecological governance interests and financial transfer payments [6] [7]. In addition, in terms of public services, scholars support that the resources of the three places are unbalanced and unequal. In order to promote the coordinated development of Beijing-Tianjin-Hebei, efforts should be made to innovate the public service system, gradually narrow the gap between regions, focus on to remove bottleneck constraints in the household registration system, college entrance examination system and social security system, and promote the balanced and integrated development of public service [8] [9].

The "12th Five-year Plan" is a critical period for the coordinated development of Beijing-Tianjin-Hebei from concept to entity and concrete action, and a series of policies have been enacted to promote the Beijing-Tianjin-Hebei coordinated development of economy, society and ecology.

For this purpose, it is necessary to systematically sort out the policies implemented during this period. From the three aspects of economy, society and ecology, and the evaluation index system of Beijing-Tianjin-Hebei coordinated development policy effect should be systematically designed and the implementation effect of Beijing-Tianjin-Hebei coordinated development policy should be quantitatively evaluated in order to check the policy effect of Beijing-Tianjin-Hebei coordinated development.

II. SORTING OF BEIJING-TIANJIN-HEBEI COORDINATED DEVELOPMENT POLICY

Relieving non-capital functions and accelerating industrial transfer docking is conducive to thoroughly implementing the strategic positioning of the capital city, accelerating the construction of a "high-grade precision and advanced" economic structure, and effectively promoting the coordinated development of Beijing-Tianjin-Hebei. Scientific and technological innovation is the strategic support for improving social productivity and comprehensive national strength, the forces of the Beijing-Tianjin-Hebei coordinated development is laid in technological innovation, and coordinated innovation has an important influence on promoting the circulation of industrial factors and industry transformation and upgrading in Beijing-Tianjin-Hebei region. To this end, the relevant departments have enacted a series of policies (see "Table I") to promote the relief of non-capital function, industrial transfer and upgrading, scientific and technological innovation, and promote economic integration of Beijing-Tianjin-Hebei.

TABLE I. FORMULATION OF BEIJING-TIANJIN-HEBEI COORDINATED DEVELOPMENT POLICY

Date	Signatory	Document	Theme
July 31, 2014	Beijing and Hebei	Agreement on Jointly Accelerating the Process of Market Integration Framework Agreement on Joint Development of Caofeidian Demonstration Zone Agreement on the Joint Construction of the Airport Economic Cooperation Zone of Beijing New Airport Cooperation Agreement on Joint Promotion between Zhongguancun and Hebei Science and Technology Park	Non-Capital function undertaking, industrial transfer docking
August 6, 2014	Beijing and Tianjin	Implementing the Key Work Agreement on the Implementation of the Major National Strategy for the Coordinated Development of Beijing-Tianjin-Hebei	Comprehensiveness
July 16, 2015	Beijing-Tianjin-Hebei	Beijing-Tianjin-Hebei Development Zone Innovation and Development Alliance Framework Agreement	Industrial transfer docking
September 10, 2015	Beijing	Work Plan for the Construction of the Beijing-Tianjin-Hebei Coordinated Innovation Community (2015-2017)	Coordinated Innovation
April 26, 2011	Beijing-Tianjin-Hebei	Beijing-Tianjin-Hebei Regional Talent Cooperation Framework Agreement	Talent mobility
August 24, 2014	Tianjin and Hebei	Framework Agreement on Promoting the Education Coordinated Development Cooperation	Educational coordination
August 28, 2014	Beijing-Tianjin-Hebei	Strategic Framework Agreement on the Coordinated Development of Cultural Fields in Beijing-Tianjin-Hebei region	Cultural coordination
August 17, 2015	Beijing-Tianjin-Hebei	"Beijing-Tianjin-Hebei Adjacent County (City, District) Health Emergency Response Cooperation Agreement	Health emergency response integration
December 8, 2015	National Development and Reform Commission	Beijing-Tianjin-Hebei coordinated Development Transportation Integration Plan	Traffic integration

Date	Signatory	Document	Theme
September 17, 2013	Ministry of Ecological Environment	Implementation Rules for the Implementation of the Air Pollution Prevention and Control Action Plan in Beijing-Tianjin-Hebei and Surrounding Areas	Air pollution prevention and control
July 31, 2014	Beijing and Hebei	To Joint Accelerate the Agreement on Ecological Environment Construction in Zhangjiakou and Chengde Area	Water resources protection
August 6, 2014	Beijing and Tianjin	Agreement on Further Strengthening Environmental Protection Cooperation	Atmospheric and water pollution prevention and control
November 2015	Beijing-Tianjin-Hebei	Cooperation Framework Agreement on Beijing-Tianjin-Hebei Regional Environmental Protection First Break	Atmospheric, water, soil pollution prevention and control

Education is not only an important talent support for the strategy of rejuvenating the country through science and education, but also an important support for realizing the strategic positioning of the four centers of the capital city. The coordinated development of Beijing-Tianjin-Hebei is inseparable from the coordinated development of education. Establishing long-term, stable and efficient health emergency response cooperation in Beijing-Tianjin-Hebei region is conducive to improving the capacity of health emergency response in Beijing-Tianjin-Hebei region and promoting the process of medical and health integration in Beijing-Tianjin-Hebei region. The equalization of public services that is a fabulous driver behind the coordinated development of Beijing-Tianjin-Hebei regions is conducive to promoting the mutual circulation of high-quality resource factors such as education, medical treatment and transportation among Beijing-Tianjin-Hebei region, maintaining social order and keeping social stability. Therefore, Beijing-Tianjin-Hebei region has issued a series of policies (see “Table I”) to promote the integration of public services. In addition, in order to intensify the prevention and control of air, water and soil pollution in Beijing-Tianjin-Hebei region and improve the environmental quality, Beijing-Tianjin-Hebei region issued a series of policies (see “Table I”) to protect and construct the ecological environment.

III. PROMOTION AND IMPLEMENTATION OF BEIJING-TIANJIN-HEBEI COORDINATED DEVELOPMENT POLICY

On the basis of the formulation of Beijing-Tianjin-Hebei coordinated development policy, during the 12th Five-year Plan period, the relevant departments specified the promotion thinking of Beijing-Tianjin-Hebei coordinated development policy, and guaranteed the further implementation of Beijing-Tianjin-Hebei coordinated development policy in the economic, social and ecological fields (see “Fig. 1” and “Table II”).

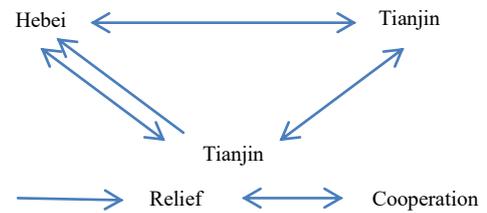


Fig. 1. Promotion thinking of Beijing-Tianjin-Hebei coordinated development policy.

TABLE II. PROMOTION AND IMPLEMENTATION OF THE COORDINATED ECONOMIC, SOCIAL AND ECOLOGICAL DEVELOPMENT POLICY IN BEIJING-TIANJIN-HEBEI

Economy	Beijing-Tianjin ↔ Relief	Beijing-Hebei ↔ Cooperation	Tianjin-Hebei ↔ Cooperation	Beijing-Tianjin-Hebei ↔ Cooperation
	1. Withdrawal and clearance of low-end markets	1. Joint construction of science and technology cooperation demonstration zone 2. Beijing invests in Hebei projects	1. Joint construction of industrial demonstration zone Tianjin invests in Hebei projects	1. Joint construction of innovation alliance
Society	Beijing-Tianjin ↔ Cooperation	Beijing-Hebei ↔ Cooperation	Tianjin-Hebei ↔ Cooperation	Beijing-Tianjin-Hebei ↔ Cooperation
	1. Dispatch cadres who take a temporary post	1. Joint construction of medical cooperation	1. Joint construction of Hebei University of Technology	1. Sharing of educational resources among the three regions 2. Joint construction of Beijing-Tianjin-Hebei transportation network 3. Cooperation of medical institutions among three places
Ecology	Beijing-Hebei ↔ Cooperation	Tianjin-Hebei ↔ Cooperation		Beijing-Tianjin-Hebei ↔ Cooperation
	Beijing invests in atmospheric controlling of Hebei	Tianjin invests in atmospheric controlling of Hebei		1. Joint construction of ecological protection mechanism 2. Total energy reduction

Firstly, in terms of economy, industrial transfer and upgrading and coordinated innovation have continued to gain momentum, and the relief of non-capital functions is being carried out in an orderly manner. First of all, Beijing and Tianjin city and Hebei province have achieved fabulous results in industrial transfer and upgrading and coordinated innovation. Tianjin has sped up the construction of key cooperation platforms such as Tianjin Binhai-Zhongguancun Science and Technology Park, Beijing-Tianjin Industry New Town of Wuqing, Beijing-Tianjin Cooperation Demonstration Zone of Future Science and Technology City, Baodi Beijing-Tianjin Zhongguancun Science and Technology City as well as Tianjin-Hebei (She County) Circular Economy Industry Demonstration Zone. In 2015, "Beijing-Tianjin-Hebei Iron and Steel Industrial Technology Innovation Alliance for Energy Conservation and Emission Reduction" has landed in six demonstration projects of energy conservation and emission reduction in Tianjin-Hebei region, with a total investment of 670 million yuan. Secondly, good progress has been made in the relief of non-capital functions. On the one hand, increments have been strictly controlled. In 2015, the proportion of newly added industries banned by Beijing have increased from 32% to 55% in the classification of all industries in the national economy, and the proportion of industries banned in the six districts have increased from 42% to 79%. On the other hand, the stock has been relieved. In the first three quarters of 2015, Beijing has withdrawn and merged, and upgraded and cleared up 90 low-end markets, with an operating area of about 440,000 square meters and 12,000 stalls being withdrawn. The first batch of more than 300 commercial tenants in the Xinfadi wholesale market has signed up to settle in Gaobeidian, Hebei. At the end of 2015, more than 670 garment manufacturers in Beijing Dahongmen have signed up to settle in Yongqing, Hebei, and three of which have been completed and put into production. As of the end of October 2015, Beijing has shut down and dropped out 315 general manufacturing and polluting enterprises and completed the annual elimination tasks of 300 polluting enterprises ahead of schedule with a total of 995 polluting enterprises been eliminated. In addition, the Beijing city sub-center has accelerated the planning and construction to promote the transfer of Beijing administrative institutions and central city population to Tongzhou in an orderly manner.

Secondly, in terms of society, new breakthroughs have been made in the joint development and sharing of public services in the city of Beijing and Tianjin, and Hebei province. First of all, Beijing City and Hebei Province have started the work of dispatching cadres who take a temporary post, with focusing on key departments, key regions and professional and technical personnel cooperation and exchanges. Beijing has further promoted the coordinated development of education in Beijing-Tianjin-Hebei, strengthened the coordination and connection with Tianjin and Hebei in the layout of educational resources demand planning, and established a consultation mechanism for the interaction of educational development planning. The coordinated development among universities in Beijing-Tianjin-Hebei has been accelerated and deepened in an all-round way. There are 18 educational coordinated innovative centers in Hebei Province, which absorbs 18 universities and 26 research institutes in Beijing-Tianjin-Hebei

region. Secondly, Beijing Jishuitan hospital and Chongli county hospital have signed an intentional cooperative agreement that Chongli county hospital has become the counterpart support hospital of Jishuitan hospital, which has been integrated into Jishuitan Orthopaedics Department Medical Association and promoted the comprehensive cooperation of medical and health resources between Beijing and Zhangjiachou. Through trusteeship and cooperation, the service ability and management level of the medical institutions in suburban counties has been upgraded. There are 249 second level of above medical institutions and 377 cooperative projects that establish cooperative relations between Hebei and Beijing-Tianjin. Then, at the end of 2015, the Beijing-Tianjin-Hebei all-purposed card will be interconnected and operated on a trial basis. Residents can take buses in six cities, namely, the city of Beijing and Tianjin, Shijiazhuang, Baoding, Cangzhou and Handan in Hebei Province, which make residents, can really swipe their cards in different places. Beijing-Tianjin-Hebei region will form "four vertical, four horizontal and one ring" road grid network and create "Beijing-Tianjin-Hebei on track". Beijing-Tianjin-Hebei region is expected to open all "end breaking road" of state expressway in 2017.

Thirdly, in terms of ecology, Beijing, Tianjin and Hebei have made significant progress in the fields of atmospheric management and environmental construction. The Beijing-Tianjin-Hebei region has signed a series of ecological protection cooperation agreements around ecological co-construction and sharing, and has continued to promote the joint prevention and control of air pollution and the construction of ecological transition zones. Hebei has attached great importance to the construction of ecological environment and promoted the ecological restoration of mountains, rivers, forests, lakes and seas. As the Beijing-Tianjin-Hebei water conservation function zone, Zhang Jiakou and Chengde has continued to strictly implement water resources protection and water source protection policies, and continued to do a good job in afforestation and solidly promoted major ecological projects such as sand source control.

IV. EVALUATION OF THE POLICY EFFECTS OF BEIJING-TIANJIN-HEBEI COORDINATED DEVELOPMENT

A. Evaluation Methods

Combining the formulation, promotion and implementation of the Beijing-Tianjin-Hebei coordinated development policy, the evaluation index system of the policy effect in the Beijing-Tianjin-Hebei coordinated development is systematically designed from the three aspects of economy, society and ecology, the effect of the policy implementation in the Beijing-Tianjin-Hebei coordinated development is quantitatively assessed to test the effectiveness of the policy of coordinated development of Beijing-Tianjin-Hebei (see "Table III").

TABLE III. EVALUATION INDEX SYSTEM OF BEIJING-TIANJIN-HEBEI COORDINATED DEVELOPMENT EFFECT

Evaluation Dimensions	Primary Index	Secondary Index	Type	Unit
Economy	Industrial development	Added value of the tertiary industry	+	(100 million yuan)
	Economic level	Household consumption level	+	(yuan)
		Per capita GDP	+	(Yuan / person)
		Fixed-asset investment	+	(100 million yuan)
	Scientific technological innovation and	Number of patent application authorization	+	(item)
Technical market turnover		+	(100 million yuan)	
Society	Employment	Registered urban unemployment rate	-	%
	Education	Local financial education expenditure	+	(100 million yuan)
	Medical treatment	Number of medical institutions	+	Unit
	Care for elderly	Number of urban workers participating in endowment insurance	+	(10,000 people)
Ecology	Investment in environmental protection	Local fiscal environmental protection expenditure	+	(100 million yuan)
		Domestic garbage removal	-	(10,000 tons)
	Environmental governance	Chemical oxygen demand emissions	-	(10,000 tons)
		Sulfur dioxide emissions	-	(Ton)

According to “Table III”, the weighted sum method of equal weights is used to determine the results of the Beijing-Tianjin-Hebei coordinated development policy effect evaluation. The specific formula is shown in formula (1) - formula (3).

$$q_{ij} = \begin{cases} \frac{a_{ij}}{MAX(a_{ij})} & \text{Indicators with positive effects} \\ \frac{MIN(a_{ij})}{a_{ij}} & \text{Indicators with negative effects} \end{cases} \quad (1)$$

$$\bar{X}_k = \frac{1}{n} \sum_i^n q_{ij} \quad (2)$$

$$\bar{X} = \frac{1}{n} \sum_k^n x_k \quad (3)$$

In the formula, there is no comparability between indicators because of different dimensions or representative meanings, so standardization is required. a_{ij} represents the i_{th} second level index of economic, social and ecological dimensions in the j year, and q_{ij} represents the standardized

index value. K represents three indicator types, \bar{X}_k represents the weighted values of equal weight for the standardized indicators of social, economic or ecological dimensions in year j . \bar{X} represents the weighted values of equal weight of economic, social, ecological, and overall in the j_{th} year.

B. Evaluation Result

The indicator data of 2010-2015 selected from the National Bureau of Statistics was processed, the evaluation value of the policy effects of coordinated development in Beijing-Tianjin-Hebei was obtained, as shown in “Table IV”.

TABLE IV. EVALUATION VALUE OF THE POLICY EFFECTS OF COORDINATED DEVELOPMENT OF BEIJING-TIANJIN-HEBEI

	\bar{X}	2010	2011	2012	2013	2014	2015
Beijing	Economy	0.574	0.646	0.734	0.830	0.899	1.000
	Society	0.759	0.800	0.873	0.927	0.939	0.964
	Ecology	0.655	0.579	0.612	0.660	0.770	0.892
	Overall	0.663	0.675	0.740	0.806	0.869	0.952
Tianjin	Economy	0.463	0.556	0.655	0.755	0.853	1.000
	Society	0.762	0.804	0.861	0.921	0.980	0.995
	Ecology	0.731	0.649	0.675	0.737	0.799	0.908
	Overall	0.652	0.670	0.731	0.804	0.877	0.968
Hebei	Economy	0.545	0.648	0.777	0.819	0.862	1.000
	Society	0.747	0.805	0.885	0.891	0.920	0.988
	Ecology	0.808	0.618	0.648	0.702	0.753	0.863
	Overall	0.700	0.690	0.770	0.804	0.845	0.950

1) *Evaluation of the policy effects of economic coordinated development in Beijing-Tianjin-Hebei:* Taking 2010 as the base year, it can be seen that the economic policies in the Beijing-Tianjin-Hebei region were generally in an increasing good trend during the "12th Five-year Plan" period. The economic policies in the Beijing-Tianjin-Hebei region had achieved better results in the later period than in the former period, and the effects of policy implemented in

the later period were higher. In 2015, the economic policy in the Beijing-Tianjin-Hebei region had achieved the best results, which was the result of the continuous advancement and implementation of economic policies during the "12th Five-year Plan period". In general, there was no obvious gap in the effect of economic policies in the later period in the Beijing-Tianjin-Hebei region, but Tianjin's economic policy improved rapidly, followed by Beijing and Hebei (see "Fig. 2").

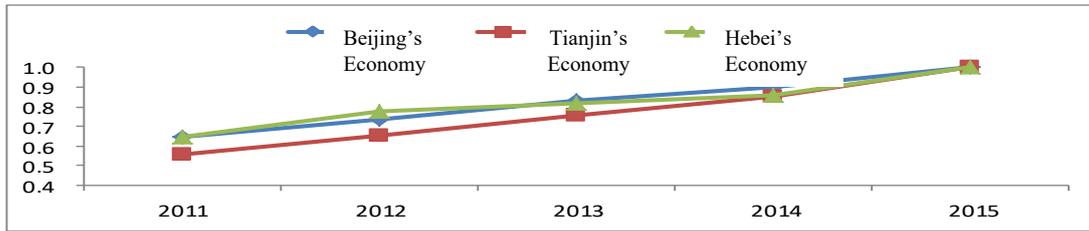


Fig. 2. The policy effects of economic coordinated development in Beijing-Tianjin-Hebei.

2) *Evaluation of the policy effects of social coordinated development in Beijing-Tianjin-Hebei:* Taking 2010 as the base year, it can be seen that the social policy effect in the Beijing-Tianjin-Hebei region during the "12th Five-year Plan" period was generally on the rise. In 2015, the social policy in the Beijing-Tianjin-Hebei region was the best. It can be seen from the trend of the changing curve that the effect of

Beijing's social policy had been relatively flat, and the effects of Tianjin and Hebei policies had changed relatively strongly, and there had been a clear gap in policy effect among the three places in 2013-2015. In general, Tianjin's social policy had achieved better results, followed by Beijing and Hebei (see "Fig. 3").

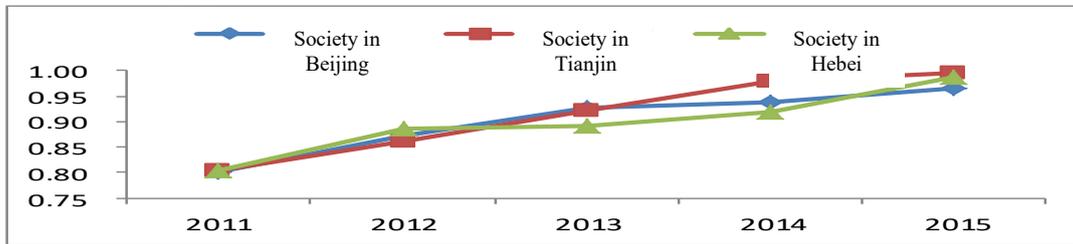


Fig. 3. The policy effects of ecological coordinated development of Beijing-Tianjin-Hebei.

3) *Evaluation of the policy effects of ecological coordinated development of Beijing-Tianjin-Hebei:* Taking 2010 as the base year, it can be seen that the ecological policy in Beijing-Tianjin-Hebei region during the "12th Five-year Plan" period was generally in a state of continuous improvement. It can be seen from the trend of the changing curve that the ecological policy in Beijing-Tianjin-Hebei

region had achieved the best results in 2015, and the effect of the three-region policy had improved rapidly. In general, there was a certain gap in the effect of the ecological policies in the Beijing-Tianjin-Hebei region. The ecological policies in Tianjin and Hebei had achieved better results, followed by Beijing (see "Fig. 4").

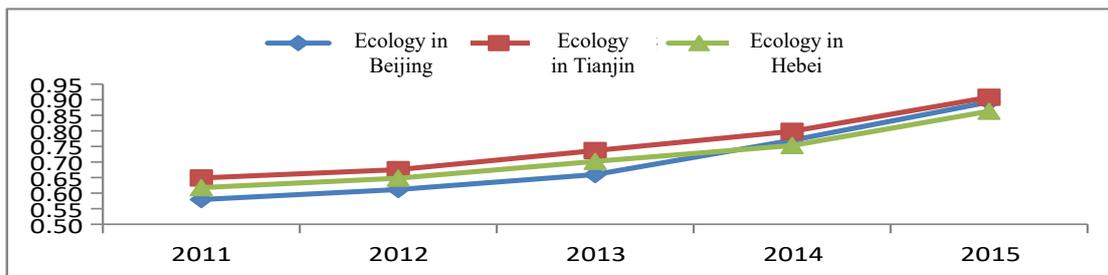


Fig. 4. The policy effects of social coordinated development of Beijing-Tianjin-Hebei.

4) Evaluation of the policy effects of coordinated development of Beijing-Tianjin-Hebei: Taking 2010 as the base year, it can be seen that the Beijing-Tianjin-Hebei region comprehensive effects was on the rise because it had achieved better results in economic, social and ecological policies during the "12th Five-year Plan" period. In general, there was

no obvious gap in the comprehensive effects of policies in the Beijing-Tianjin-Hebei region. The policies implemented during the "12th Five-year Plan" period in Beijing, Tianjin, and Hebei had achieved better comprehensive effects (see "Fig.5").

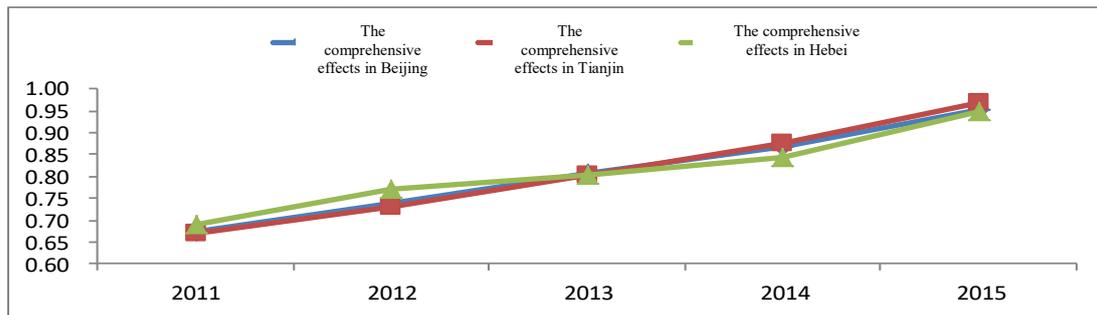


Fig. 5. The policy effects of coordinated development of Beijing-Tianjin-Hebei.

V. CONCLUSION

Through assessing the implementation effect and sorting out of the policy of promoting the coordinated development of economy, society and ecology in Beijing-Tianjin-Hebei during the 12th Five-year Plan period, it is concluded that there is no obvious gap in the effect of economic policy in Beijing, Tianjin and Hebei in the later period, but the effect of economic policy in Tianjin has been upgraded at a faster pace, followed by Beijing and Hebei, and the effect of social policy in Tianjin are relatively better, followed by Beijing and Hebei; there is a certain gap in the effect of ecological policy in Beijing-Tianjin-Hebei region and Tianjin and Hebei are better than Beijing; there is no obvious gap in the comprehensive effect of policy in Beijing-Tianjin-Hebei region, and the policies implemented in Beijing, Tianjin and Hebei during the "12th Five-year Plan" period have achieved better overall results. The coordinated development policy of economy, society and ecology has achieved some results during the 12th Five-year Plan period and promoted the pace of integration of Beijing, Tianjin and Hebei. The "12th Five-year Plan" period is an important period in which Beijing-Tianjin-Hebei coordinated development gradually rises to top-level design and becomes one of the three major national development strategies. However, the implementation of the policy is still in the preliminary exploratory stage, the scope needs to be expanded and the power of implementation needs to be strengthened. The "13th Five-year Plan" is a critical period for the coordinated development of Beijing-Tianjin-Hebei to a higher level. The process of integration is just around the corner.

REFERENCES

[1] Wei Lihua. The Historical Context and Phase Characteristics of the Coordinated Development of Beijing-Tianjin-Hebei since the Founding of the People's Republic of China[J]. Journal of Shenzhen University(Humanities and Social Sciences), 2016, 33(06): 143-150. (in Chinese)

[2] Zhang Gui, Liang Ying, Guo Tingting. Current Status and Prospects of Coordinated Development of Beijing-Tianjin-Hebei [J]. Urban and Environmental Research, 2015(01): 76-88. (in Chinese)

[3] Chen Yan, Wu Yiqing. Thoughts on the Optimization and Adjustment of Beijing-Tianjin-Hebei Industry [J]. Journal of Hebei University of Economics and Business (Comprehensive Edition), 2014, 14(04): 84-87. (in Chinese)

[4] Zang Xueying, Yu Mingyan. Docking and Cooperation of Strategic Emerging Industries of Beijing-Tianjin-Hebei [J]. China Development Review, 2010(08): 30-32. (in Chinese)

[5] Zhu Erjuan. Industrial Upgrading and Integration in the Integration of Beijing-Tianjin-Hebei [J]. Economic Geography, 2009, 29(06): 881-886. (in Chinese)

[6] Cheng Shumin, Gao Yang, Huang Jiao, Yang Zhuoxiang. Comparative Analysis of Ecological Footprint of Beijing-Tianjin-Hebei and Jiangsu-Zhejiang-Huzhou Economic Circle [J]. Resources and Environment of the Yangtze River Basin, 2012, 21(04): 433-441. (in Chinese)

[7] Cui Jing. Local Government Cooperation in Ecological Governance: Observation from the Beijing-Tianjin-Hebei Metropolitan Area [J]. Reform, 2013(09): 138-144. (in Chinese)

[8] Zhao Hong. Governance of Beijing Metropolitan Disease and Beijing-Tianjin-Hebei Coordinated Development[J]. Economics and Management, 2014, 28(03): 5-9. (in Chinese)

[9] ZhaoHong. The Core and Key Issues of Coordinated Development of Beijing-Tianjin-Hebei[J]. China Circulation Economy, 2014, 28(12): 20-24. (in Chinese)