

Monitoring the Progress of Urbanization

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Urbanization strategy is one of main strategies for Hebei Province to accelerate development. Since 2003, based on statistical survey of basic situations of urban social economy, in accordance with the requirements of Provincial Party Committee and Provincial Government, Statistics Bureau of Hebei Province carried out monitoring of progress of urbanization at the three levels of province, cities divided into districts and key towns, which played positive role in promoting implementation of urbanization strategy of Hebei Province.

I. The work of monitoring the progress of urbanization is established in accordance with requirements of government decision-making

Since the Sixteenth National Congress of the Communist Party of China, the Scientific Outlook on Development has become the important guiding principle for China's economic and social development, which takes development as its essence, putting people first as its core, comprehensive, balanced and sustainable development as its basic requirement, and overall consideration as its fundamental approach. Urbanization is the fundamental way to balance urban and rural development and resolve issues concerning agriculture, countryside and farmers, as well as essential requirements of building a moderately prosperous society and achieving sound and rapid development. Focusing on further releasing and developing productive forces as well as

enhancing overall strength and competitiveness, the Third Plenary Session of the 6th Hebei Provincial Party Committee of Communist Party of China established urbanization strategy as one of main strategies to accelerate development, which gave prominence to the urbanization in vivifying overall situation of economic and social development. Doing well monitoring of urbanization is the key issue for grasping the progress of urbanization correctly, improving policies for urbanization progress constantly, and promoting implementation of urbanization strategy effectively. Hebei Provincial Party Committee and Provincial Government attach great importance to and provide much support for statistical monitoring of urbanization progress, printed and issued a series of important documents and decisions in succession, and put forward urgent requirements for monitoring the progress of urbanization. They are mainly:

In 2003, the General Office of Provincial Government issued *Notice on Carrying out Statistical Monitoring of Urbanization Progress within the Province*, made the decision that both the Provincial Construction Department and Provincial Statistic Bureau would be responsible for carrying out statistical monitoring of urbanization progress within Hebei Province. The monitoring targets are the province, cities, counties (cities) and designated towns; the key of monitoring is the status of progress of urbanization at all levels within the province, mainly including economic development, urban construction, social development, residents' living and ecological environment; the monitoring stage is yearly, and put forward specific requirements for organization and implementation.

In 2004, Hebei Provincial Party Committee and Provincial Government made the *Decision on Implementing Urbanization Strategy*, set the goals and targets for progress of urbanization, and requested Provincial Construction Department and Provincial Statistic Bureau to do well the statistical monitoring of urbanization progress within the province and publish *Report to Urbanization Progress of Hebei Province* each year to provide

basis for making policies; set up a sound development evaluation system of provincial key towns; establish joint conference system for urbanization, and the Provincial Statistic Bureau is one of the member institutions. In the same year, Provincial Government printed and issued *Notice on Determining List of 50 Provincial Key Towns*, General Office of Provincial Government printed and issued *Notice on Publishing List of 100 Provincial Key Towns Cultivated By Cities Divided Into Districts*, requesting the Provincial Construction Department, together with relevant departments, to strengthen dynamic regulation and tracking monitoring of progress status of key towns.

As the statistical department of the government, it is the key functions and obligations for us to give full play to information resources, meet requirements of government decision-making, and serve the economic and social development. Since 2003, Statistics Bureau of Hebei Province and Provincial Construction Department carried out monitoring of progress of urbanization jointly. Based on thorough investigation and research as well as solicit opinions from all sides, monitoring of urbanization progress of the province and cities divided into districts was carried out first, and the monitoring fields were widened in 2007, incorporating key towns cultivated by the province into the monitoring scope.

In view of the facts that many departments are involved in the monitoring of progress of urbanization and the coordination task is heavy, we invent new working methods and established smooth working mechanism. The Provincial Statistics Bureau and Provincial Construction Department are responsible for organizing the implementation with cooperation of 24 relevant departments directly under the provincial government, and various cities divided into districts, counties (cities and districts), and designated towns apply it in accordance with uniform requirements of the province and combining with the local practical situations. Based on the *Statistical Report Form System of Basic Situations of Urban Social Economy* issued by National Bureau of Statistics of China, combining with requirements of

statistical monitoring of urbanization progress of Hebei Province, we made annual work program, amended and perfected statistical report form system, monitoring index system and methods, and carried out evaluation on monitoring of progress of urbanization.

II. Index System and Methods of Monitoring the Progress of Urbanization

Urbanization is the course of changes of people's production modes, living modes and values caused by productivity progress, as well as an important hallmark to measure economy, society, culture and technology of a country and a region, and social organization degree and management level as well. Therefore, urbanization is a comprehensive concept, and overall evaluation of urbanization progress is a complex systematic project, of which the cores are index system and methods of monitoring of progress of urbanization.

i. Guiding Ideology and Basic Principles

The guiding ideology of designing index system and methods of monitoring of progress of urbanization are: insist on people first and pursue comprehensive, balanced and sustainable development, with the correct and timely statistical data as basis, the economy, statistical theory and information technology as support, and apply scientific methods to build up systematic, dynamic and open monitoring index system.

The following five principles shall be followed, with each principle interacts and interdepends with each other, and thus form an organic unity.

First, Purpose. The aim of establishing monitoring index system of progress of urbanization is to promote implementation of urbanization strategy, realize sound and rapid development, and provide statistical service, therefore, monitoring system and index structure should be able to reflect the requirements of Scientific Outlook on Development, each index could reflect one focus of urbanization progress, and the overall indexes should form a

horizontal plane. When designing monitoring index system, we considered sufficiently the function of each index on researching issues and strengthened pertinence.

Second, Scientificity. It refers to that there are scientific basis of theory, technological support of methods, and feasibility and effectiveness in practice. Insisting on taking Scientific Outlook on Development as guidance, economic and statistical theories as basis, and computer model technology as the method, in order to carry out scientific analysis and judgment in accordance with monitoring index system, as well as provide scientific reference for effective implementation of urbanization strategy.

Third, Feasibility. Under the existing statistical resources conditions, and combined with research purpose and requirements for construction of index system, choosing the appropriate indexes is convenient for specific operation and analysis. Based on annual statistical report of basic situations of urban social economy issued by National Bureau of Statistics of China, and combined with local statistical report form as supplement, monitoring index system considered comprehensively several factors such as the representativeness of each index, data source and data quality.

Fourth, Dynamic characteristics. With development and innovation of economical theory and practice as well as new changes of institutional reform, macroeconomic regulation, and policies and measures, regulate and perfect monitoring index system in time and strengthen its adaptability to development by the viewpoint of development and open field of vision. The new Provincial Party Committee and Provincial Government implemented a series of important acts, with “Three Years’ Great Change” of urban appearance as the mark, the next step is that we will further regulate and upgrade monitoring index system in accordance with requirements of objectives of “Three Years’ Great Change.”

Fifth, Comparability. Correct judgment could only be made in accordance with comparable index system. Caliber and scope of

each index in monitoring index system must be consistent and have full comparability in terms of time and space. We use more relative number indexes like proportion, index and average number to strengthen comparability.

ii. Index System of Monitoring the Progress of Urbanization

Establish index system of monitoring the progress of urbanization at the three levels of the province, cities and key towns in accordance with above guiding ideology and basic principles.

First, index system of monitoring the progress of urbanization at the levels of province and city. The index system centers on reflecting basic connotation of comprehensive, balanced and sustainable development and embodying basic requirements of "harmonious development between economy and society", including the six first-class indexes of economic development, social development, residents' living, urban agglomeration, urban construction and ecological environment, 16 second-class indexes, and 34 third-class indexes, which are used to evaluate overall progress of urbanization, as well as change trend and degree of each factor.

Economic development: comprehensively reflecting development status of urban economy in monitoring year. Urbanization bases on economic development that takes significant increase of economic strength, constant optimization of industry structure, and prominent improvement of open degree as important hallmarks, which are also the essential requirements of constructing Hebei as a strong province in the coastal economic society and realizing sound and rapid development. Indexes of economic development include the three second-class indexes of economic strength, industry structure and open degree, which are used to monitor and evaluate sustained, rapid, balanced and sound development status of economy, as well as reflect overall consideration of relation between domestic development and opening to the outside world.

Urban agglomeration: comprehensively reflecting agglomeration

level and status of balanced development of urban population and industries in monitoring year. Population agglomeration and industry agglomeration are the important hallmarks of the progress of urbanization, as well as premise and condition of the progress of urbanization; development is the basis of balance that is also the guarantee of development. Balanced interaction and common improvement between industry agglomeration and population agglomeration is the important way to realize the transition from economic development to balanced development between economy and society. Indexes of urban agglomeration consist of the three second-class indexes of population agglomeration, industry agglomeration, and harmony degree.

Urban construction: comprehensively reflecting urban construction level and overall carrying capacity in monitoring year. Both enlargement of urban size and improvement of urban living service facilities are the direct reflection of improvement of urbanization level and powerful measures to increase urban carrying capacity and accelerate urbanization. Indexes of urban construction consist of the two second-class indexes of infrastructure and technical facilities, which are used to measure the level of urban construction and facility guarantee.

Ecological environment: comprehensively reflecting status of urban ecological environment in monitoring year. Environmental constraints have become the prominent contradiction of development of economy, society and human. The ecological environment determines the capacity of urban sustainable development, which is in relation to urban progress and raise and fall. Indexes of ecological environment consist of the two second-class indexes of environmental quality and environmental control, which are used to measure ecological environmental control and status of quality improvement.

Residents' living: comprehensively reflecting the improvement status of urban residents' living standards and living quality in monitoring year. Improving people's living standards is the outcome of economic and social development. It is nothing but to

improve residents' living quality and standards actually and let majority of the people share the results of economic and social development are the true overall development, which could meet requirements of putting people first and scientific development. Indexes of residents' living consist of the three second-class indexes of income, consumption patterns and residential quality.

Social development: comprehensively reflecting status of development of urban social undertakings in monitoring year. Social development is the aim of economic development, takes the economic development as premise and basis, and provides the economic development with strong spiritual drive, intellectual support and necessary condition. Indexes of social development consist of the three second-class indexes of social stability, scientific and technological education, and culture and health service, which are used to monitor and evaluate status of social undertakings development and improvement of public security mechanism, as well as promote the balanced development between society and economy.

Second, the evaluation index system of statistical monitoring of urbanization progress of key towns cultivated by the province. Based on thorough investigation and research as well as widely soliciting opinions, the evaluation index system of statistical monitoring of urbanization progress of key towns cultivated by the province was made. The system includes the four first-class indexes of economic development, social development, agglomeration and living, construction and environment, nine second-class indexes, and twenty third-class indexes, fundamentally covering the main aspects of overall level of urbanization progress at town level.

iii. Evaluation Methods and Evaluation Models of Monitoring

Evaluation of monitoring the progress of urbanization applies the linear overall evaluation methods, of which the basic steps are as follows:

First, empowerment of index system. Adopt Delphi Method to

empower each index properly in accordance with function of each index in evaluation system of monitoring the progress of urbanization, amount of information contained, and sensitivity and independence of index.

Second, dimensionless treatment. First, obtain the reciprocal of reverse index to convert it to the direct index. Then, adopt relativization method for the data acquired within the province to eliminate influence of dimension. We would take the actual value (x_{i-1}) of each index in prior period as the benchmark of comparison to compare the actual value (x_i) with the corresponding benchmark value. Standardization method would be adopted for data from cities and key towns to eliminate influence of dimension.

Third, build up static and dynamic index integrated models. Adopt Analytic Hierarchy Process combining with direct synthesis method to build up static and dynamic index integrated models and compute static and dynamic composite index, that is, use the weighted average method to carry out weighted composite for index score step by step to form first and second-class index development index and composite development index. Conducting overall comparison and evaluation for the progress of urbanization within the province in accordance with indexes, and rank each city and key town.

Index integrated model: $Y = \sum Q_i x_i / \sum Q_i$

Where: Y represents composite evaluation index, Q_i represents the weight of the i index, and the x_i represents the dimensionless score of i index.

Dynamic model is used to conduct dynamic monitoring and longitudinal comparison for the progress of urbanization within the province. The dynamic development index reflects the status of overall progress of urbanization within the province. For example, the index of the local area in the prior period is 100, being greater than 100 means being higher than the level of the

prior period, while being lower than 100 means being lower than the level of the prior period, and being equal to 100 means holding the line with the level of the prior period. The index reflects amplitude of improvement of progress.

Static model is used to conduct static monitoring and transverse comparison for the progress of urbanization of cities divided into districts and key towns cultivated by the province. The static development index of cities divided into districts and key towns reflect overall progress level of urbanization of cities divided into districts and key towns cultivated by the province respectively, as well as the gaps, advantages and disadvantages comparing with average level of progress of cities divided into districts and key towns cultivated by the province. Take average level of progress of cities divided into districts and key towns cultivated by the province as the zero reference, so being greater than zero means being higher than the average level, and being lower than zero means being lower than the average level.

III. Positive Results Achieved by Monitoring the Progress of Urbanization

Since 2003, applying urbanization progress monitoring index system and evaluation methods, Statistics Bureau of Hebei Province, together with construction department, carries out annual monitoring for the province, cities and key towns each year; holds press conference for statistical monitoring of urbanization progress together with Information Office of Provincial Government to publish monitoring results to the society; formally publishes *Report to Urbanization Progress of Hebei Province* each year and has achieved good effects.

First, provide excellent consulting service for the scientific decision-making of Provincial Party Committee and Provincial Government. Liu Baoquan, once the vice governor of the province, showed full confirmation to the monitoring of the progress of urbanization, he pointed out that: “in order to reflect status of the progress of urbanization within the province and provide the implementation of urbanization strategy with basis,

the Provincial Construction Department and Provincial Statistics Bureau carried out the statistical monitoring and survey for the progress of urbanization within the province and established the annual report system of the progress of urbanization. Seeing from the operation status, the system has significant reference value to our decision-making, which should be continued and improved constantly to play far more important role. Various cities should attach much attention to make the most of results of the report (refers to the *Report to Urbanization Progress of Hebei Province*), do well the analysis and research, learn from each other, and make up for each other's deficiencies to further improve level of management of urban planning and construction as well as further accelerate urbanization.” Report to monitor the progress of urbanization has become the requisite material for urbanization work conference of the province. The *Report to Urbanization Progress of Hebei Province* has become the reference book of all levels and all departments with high practicability. The established statistical survey database of urbanization provided the decision-making department with data consulting in time.

Second, provide consulting advices for relevant departments to make plans and policies. Extending the application fields of monitoring results of urbanization progress, participating in making important planning and policies such as “11th Five-Year Plan” urbanization progress planning, *Urban System Planning in Hebei Province*, and *Several Opinions on Accelerating Urbanization Process*, and the advices have been adopted. The urbanization rate was listed as the index of development planning. Centering on a series of important acts such as Three Years’ Great Change, the conducted special study on progress of urbanization was widely reputed, relevant departments referred when drawing up leader’s speech, and called up to consult relevant contents.

Third, the monitoring index system in accordance with requirements of Scientific Outlook on Development has played correct guiding role. Since carrying out monitoring, the weak links in progress of urbanization have been further strengthened, and urbanization achieves new success constantly toward the goal

of sound and rapid development. From 2003 to 2005, overall level of urbanization progress within the province has been increased by 37.6%, the economy and society developed harmoniously, people's living standards have been improved significantly, urban development environment has been improved gradually, the sustainable development capacity has been increased, urban agglomeration and carrying capacity have been improved, and the regional support function has been further enhanced.

Fourth, monitoring the progress of urbanization has brought new vigor into urbanization of various cities in the province, raised high concerns of leaders of party and government in various places on urbanization, and requested various departments to research and resolve prominent contradiction and issues of development. Partial cities also carried out evaluation on monitoring the progress of urbanization, which promoted urbanization work at all levels objectively and accelerated urbanization progress of the province.

Practices have proved that monitoring the progress of urbanization played important advising role in serving scientific decision-making of local party committee and government, became the important grip for accelerating implementation of urbanization strategy, and played an important role in improving urban system planning, improving regulation of urban construction, promoting balanced development between urban and rural areas, and guiding construction of small cities.