

Investigation and Thoughts about Industrial Structure Optimization and Competitiveness Enhancement

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Currently, our city is in the crucial industrial structure adjustment period, the face of complex, changing international and domestic economic environment. The current pressing issues of concern is how to implement the national macro-control policy, efforts to optimize the internal industrial structure and adjustment of product structure, change the mode of economic development. In this paper, the status of the industrial structure characteristics of the city and its competitive strengths and weaknesses, trends and influencing factors were analyzed for reference purposes only.

First, Status of industrial economy of our city

(A) Complete and Distributed Industry

Above the scale of industries involved thirty-six ones in the thirty-nine industrial categories. It focuses General Equipment Manufacturing, Transport Equipment, Pharmaceutical Manufacturing, Food Manufacturing and Manufacture of electrical machinery and Equipment from the value added of industry. Machinery, food, chemical, metallurgy, textile etc which the traditional industries were the pillar industries at the beginning of reform and opening up.

Driven by demand in the market, equipment manufacturing, food, medicine, chemical industry became the city's four leading industries, and gradually formed a line with city characteristics, to meet market demand more support, rotation driven pattern, in order to improve industrial risk resistance capacity, after years of development. They played a major supporting role in the development of the industrial economy. In 2008, the industrial added value of the four leading industries of 426.8 billion yuan, an increase of 15.7%, an increase one percentage point increase over the previous year, accounting for the proportion of above-scale industries reached 83.1%, the contribution of above-scale industries reached 89.9%.

(B) Heavy industry, Light industry beyond

In 2008, the scale industrial added value 513.5 billion yuan, of which 230.4 billion yuan from light industry, heavy industry completed 283.1 billion yuan in our city. Light and heavy industry accounted for 44.9:55.1, heavy industry, 10.2 percentage points higher than the light. Compared with last year, light industry up 18.5%, the proportion increased by 1.1 percentage points; heavy industry increased by 11.7%. Our city has always been supported by heavy industrial development, but after several years of optimization and adjustment and changes in market demand, the food and medicine has been dominated by rapid development of light industry, light, significant changes in the composition of heavy industry from in 2005 adjusted 34.8:65.2 to 44.9:55.1 in 2008, the proportion of light industry increased by 10.1 percentage points.

(C) Accelerate the development of high-tech and Improve brand competition

The development of high-tech industry trend was accelerated year by year. The added value of high-tech maintained double-digit growth for three years in 2005, 2006 and 2007 of our city. It produced the added value of 6.76 billion yuan, 12.7% more than last year, technological progress contribution rate of 49% and 3 percentage points more than last year, more than 2 percentage points increase at three consecutive years in 2008. Our city through the implementation of key high-tech industry upgrading works. The key focus areas to promote the technological innovation to the international level of the first million-and supercritical steam

turbines, super critical boilers and other automated equipment, the success of key technology and product development, the power station equipment, electrical and mechanical automation equipment for the representative of a group of high-tech equipment at home and abroad in the advanced ranks. There are 12 scientific and technological achievements in our city by the National Science and Technology Awards, the province accounted for 85.7% in the National Science and Technology Award Conference in 2008.

(D) The common development of various economic forms

With the continuous progress of state-owned enterprise restructuring, industrial economy has fundamentally changed the ownership structure. State-owned and state holding industrial strength has enhanced. There were two hundred state-owned and state holding industrial enterprises, they produced output value of 1136.1 billion yuan, increased 10.8% than last year in 2008. Gradual shrinking of collective industrial scale. In 2008, there were fifty-nine enterprises the collective industrial enterprises above designated size, they produced 24.1 billion yuan in output value, an increase of 45.2%. there were eighty-five above the scale of enterprises of stock industry developed steadily. Co., Ltd. which produced 112.3 billion yuan in output value. Foreign Funded Enterprises and industrial development with remarkable results. There were one hundred and thirty-three Foreign and Hong Kong, Macao-scale industrial enterprises above scale of enterprises, which produced 394.6 billion yuan in output value, an increase of 4.4%. Rapid development of private industry. The five hundred of ninety-two of private industrial enterprises above designated size which produced total industrial output value 183.2 billion yuan, an increase of 41.2%.

Second, the analysis of the competitiveness of industrial sectors of our city

Index of industrial advantage is a measure of a country or region or industry in the international and domestic product market, the most convincing indicator of the competitiveness. It is a quantitative description of the various industries within a country or region (product group) relative competitive performance. Index of industrial advantages can be determined by a country or region which industries more competitive. The process of industrial strength indices of three of the more important indicator of market share, respectively, location quotient (both sales ability), and sales profitability. Index of industrial advantages in that the greater the higher the degree of industrial advantages, contrary to weak industries.

According to the 2007 sub-provincial city of fifteen industrial strength index contrast can be seen, the agricultural food processing industry, food manufacturing, pharmaceutical manufacturing, general equipment manufacturing advantage index ranking higher in our city.

Pharmaceutical manufacturing dominance index of 9.9, in 15 sub-provincial cities in the primacy of the other fourteen cities, in addition to the advantages of Chengdu and Xi'an index were 3.2 and 1.6, the other advantage of index twelve cities in following one, so our strong comparative advantage in the pharmaceutical industry. In our city, the pharmaceutical industry market share of 2.43%, in fifteen sub-provincial cities in the first place, Shenyang, Chengdu, the pharmaceutical industry market share was 2.12% and 2.08%. This indicates that the pharmaceutical industry in our city in fifteen sub-provincial cities in the relative size of the largest, most competitive. In our city the pharmaceutical industry location quotient index was 6.2, far higher than the other fourteen sub-provincial cities, in general, when the index location quotient greater than 1, indicating that the industry has a comparative advantage, so the numbers point of view, the pharmaceutical industry has a very strong competitive edge. Sales profit rate of 9% in fifteen sub-provincial cities in the middle level, indicating that the pharmaceutical industry in our city a better level of efficiency, there is some room for growth.

Pharmaceutical manufacturing industry is the fastest growing in our city since the reform and opening up the industry, pharmaceutical industry reform and opening up by association, merger, restructuring and other means to form into a large enterprise groups, the better the basis of firm size, reform and opening up good opportunities for development given a good foundation for the development pharmaceutical industry and the

environment.

Harbin Pharmaceutical Group were overwhelmingly dominant in the development of pharmaceutical industry of our city. The group has achieved excellent results through the optimization of industrial structure and expand the scale of a single product to enhance the competitiveness of the brand over the years. Harbin Pharmaceutical Group brand impact and brand value reaching new heights. Since the group formed in 1989 to give full play the leading role the brand, formed in Harbin Pharmaceutical Group as a leader, Development Zone pharmaceutical medicine park and ride out the race to the park for the wing pattern of the development of new pharmaceutical industry, and led the Sunflower Pharmaceutical Co., Ltd. Heilongjiang, Harbin Shengtai Pharmaceutical Co., Ltd, Huayu Pharmaceutical Group Co., Ltd. Harbin represented by the pharmaceutical development of the private pharmaceutical companies.

Harbin Pharmaceutical Group now has two state validated enterprise technical centers, a national innovation-oriented enterprises, a national innovative pilot enterprises; five provincial-level technology center, the three provincial key laboratories, a strong research team to ensure Pharmaceutical manufacturing enterprises in our city pillar of scientific and technological innovation. In addition Veike biotechnology development company in Harbin Harbin Veterinary Research is owned enterprise, the production of animal epidemic prevention products in R & D has a strong advantage, in recent years, Harbin Veterinary Research in "SARS", in the Avian Influenza played a major role in blocking action .

Pharmaceutical industry is different from other industries, on the one hand the residents demand for various types of drugs has increased, partly because China is in perfect health care system of the rising channel, the state finance expansion to the pharmaceutical market provides a strong support.

Food manufacturing and agricultural food processing industry dominance index in fifteen sub-provincial cities were ranked third and fourth.

The food industry dominance index of 0.8, the two cities of Qingdao and Guangzhou advantage of the food industry indices were 1.8 and 1.3, slightly higher than the city.

In our city, the food industry market share of 1.4%, in 15 sub-provincial cities ranked fifth, up to 3.2% in Guangzhou. It shows that the food industry in our city in 15 sub-provincial cities in the relative size of the larger, stronger competition. The food industry location quotient index was 3.6, far higher than the other 14 sub-provincial cities, Chengdu ranked second with 1.9, so you can see our city's food industry has a very strong market competitiveness . Sales profit rate of 4% in fifteen sub-provincial cities in the middle and lower level, Guangzhou, Nanjing, up to 12% efficiency level of the food industry that the city is better, but added value is low.

Agro-food processing industry dominance index was 0.87. It was lower than the Changchun (5.4), Qingdao (1.5), Shenyang (1.1) in three cities, but in fifteen sub-provincial cities still have a comparative advantage. Since 2001, the advantage of agricultural food processing industry index has been on the rise, 2001 - 2006 index of agricultural food processing industry strengths were -0.08, -0.07, -0.01, 0.01, 0.97, 0.28. Agricultural food processing industry in the city market share of 1.05%, in 15 sub-provincial cities ranked sixth, up to 2.8% in Qingdao. Our city's agricultural food processing industry in the fifteen sub-provincial cities is relatively larger, stronger competition. The city's agricultural food processing industry location quotient index of 2.7, just below the Changchun (2.73) came second, far higher than the other thirteen sub-provincial cities, that the city's agricultural food processing industry has considerable strong market competitiveness.

The more obvious advantages of general equipment manufacturing industry, dominance index of 5.8, just below the Dalian (8.1). General equipment manufacturing industry is the city's leading industry equipment manufacturing industry, the largest proportion of the classes, since 2001, and the dominant index has been on the rise, including 2001, 2003 and 2005, respectively, the advantages of index - 0.08, 0.07, 4.5. In 2008, the added value of 70.7 billion yuan, accounting for 40.9% of the equipment manufacturing industry, 13.2%

more than last year. The general equipment manufacturing industry was 1.4% market share in fifteen sub-provincial cities ranked eighth, the general equipment manufacturing industry is relatively larger, stronger competition; and general equipment manufacturing industry in our city The location quotient index was 3.6, 3.2 second place in Dalian, far higher than the other thirteen sub-provincial city, the general equipment industry has a very strong competitive edge. Sales profit rate of 4% in fifteen sub-provincial level cities in the downstream.

General equipment manufacturing industry includes manufacturers of boilers and auxiliary equipment, steam turbines and auxiliary equipment manufacturing industry, mainly in the city of Harbin Electric Corporation has a subsidiary of Harbin Boiler Company Limited and Harbin Turbine Company Ltd, the two companies have historical basis and a strong research and development advantage.

In 1950s, after the founding of new China in the 20th century, "Three Major Power" of the building, was included in the national five-year plan the first among one hundred and fifty-six key projects, setting numerous first in China.

Three Major Power has been committed to scientific research since they founded. For example, Harbin Boiler Works designed and manufactured the first 75 tons / h boiler in Harbin which began the design and manufacture of power plant boiler of large capacity, high-parameter, and large-scale. Harbin Steam Turbine Plant produced China's first 25,000 kilowatts high-pressure condensing steam turbine, which ended up the history of China's incapacity of manufacturing large high-pressure steam turbine.

Since the reform, usage of advanced information distribution channels and strong investment in scientific research led to further research of general equipment manufacturing industry. One of the most representative by Harbin Boiler Plant is one million kilowatts supercritical lignite boiler which leading the domestic position.

By the comparison of the predominance index chart about the 15 sub-provincial cities in 2007, it is learned that the textile industry, the communication facilities, the computer and other electronics equipment are all in a bad situation in Harbin, which is yet compared with the predominance of the two other industries at that period. At the initial period of reform and opening up, such traditional industries as machinery, food, chemical, metallurgy, textile and so on were the absolute pillar industries in Harbin. Since 1990s, however, the communication facilities, the computer and other electronics equipment have been withdrawing the market in Harbin owing to the principle of survival of the fittest in the market economy and the promotion by market demand. Likewise the prosperous textile industry at the initial stage is also beset with the developing difficulties in the market.

Third, Factors Influencing Adjustment of Industrial Structure

It is an important research project for the cities today to develop economy to adjust the industry production structure. With the objective of promoting the development in economy and society and improving people's material well-being and cultural life, the sound production structure is bound to be constructed. Then we first have to make it clear that what production structure is well-organized and what factors can play the effective roles in the production structure.

The signs for the sound production structure are given as follows:

1. making rational use of resources.
2. coordinated development among the industrial sectors.
3. Supplying the required products and services by the society.
4. Providing enough job opportunities for the labors.
5. promoting the advanced industrial technology widely.
6. obtaining the most economical profits and etc.

It can be seen from what is described above that the whole points in developing new-type industrialization are all involved in the core of adjustment in production structure. Thus, the process of adjusting the production structure is actually the concrete embodiment of applying the scientific outlook on development in the industrial and economical development.

The main factors relevant closely to the adjustment of industrial structure are: 1. the change of demand structure; 2. the change of supply and demand structure; 3. the change of international trade and investment;

4. the development of scientific technology; 5. the change of institutional factors. Based on the institutional factors, the industrial structure can be divided into government regulations and market regulations. To reach a conclusion, the process of optimizing the industrial structure adjustment mustn't be just spontaneous or conscious, but the combination process of spontaneity consciousness. Meanwhile the distribution of resources by market regulations is much more effective than the one by planned adjustment. It can be also thought that there isn't a unified standard and model for the sound industrial structure in the different regions, times, resource environments and economic foundations. Moreover, it should be known clearly that the adjustment of industrial structure, which should be in accordance with the present foundation of industrial economy, has to experience a gradually and slowly evolving and improving process and eventually achieves the goal of utilizing resource properly and attempting to obtained the greatest social and economic benefits.

Fourth, speed up our city's industrial structure adjustment measures and suggestions

As the economically underdeveloped areas, the overall growth in economic strength is still very much rely on industry to boost the economy, especially as the city's northeast old industrial base, reviving the industrial economy more far-reaching significance. Therefore, to achieve rapid economic development, promoting new industrialization process, to achieve industrial upgrading, the successful implementation of the three binary strategy, the city must be targeted to accelerate the pace of the adjustment of industrial structure.

With the planned shift to a market economy, the advantages of the traditional industries of industrial city also experienced a reform and opening up of investment, the state-owned enterprise restructuring, mergers and acquisitions, joint-stock reform and a series of changes in industrial structure to gradually adapt to the market economy Development needs, equipment manufacturing, food industry, pharmaceutical industry, chemical industry has developed into the city's four leading industrial industries. It also has a number of highly competitive enterprise groups and brand-name products. First, the city's industrial restructuring should focus on existing leading industry, give full play to the advantage of leading industry, focusing on the development of leading industries have obvious advantages, the status of outstanding potential projects that can enhance the technological content of superior products to enhance product market Competitiveness, actively participate in international competition, further enlarge and strengthen the leading industries, and industrial upgrading.

Our city of cultivated land, agricultural population, food production, large livestock population, total standing stock and many other agricultural and sideline the forefront of industry resources indicators rank in the country fifteen sub-provincial cities. Since 2009, the food industry to achieve large-scale industrial added value accounted for the first time exceeded the proportion of the equipment manufacturing industry, by the four leading industries of the second up to the first. Should be said that the city in the development of green food, and agricultural products has a broad development space and excellent development environment, and has made remarkable achievements, but by 2008 output value of nine billion food industry companies to see, there are three foreign-funded enterprises account for foreign brands, five are foreign brands or State Farms. Therefore, the city should focus on the development of a number of local well-known brands of food enterprises, development of green food, agricultural and sideline industry, deep processing projects, both the use of existing resources, but also an important surplus rural labor force, enhance the city's overall economic strength.

Development of new industrialization, the adjustment of industrial structure is the promotion of a core of scientific and technological achievements, information can not do without science and technology, energy-saving technological progress can not be separated, to achieve good economic returns also need science and technology. To achieve the promotion of scientific and technological achievements, we must first strengthen scientific and technological innovation system with enterprises as the main speed up the establishment, market-oriented, a combination of research and technological innovation system. Second, we

must increase investment in science and technology development and technology professionals. Full use of the city major universities, research institutes and technological strength, scientific and technological achievements, supporting a number of automation equipment such as Harbin Boshi automation equipment company that has the top of the world of scientific and technological level of enterprises, and gradually improve the city's high-tech industry overall strength.

Market adjustment mechanism to adjust the industrial structure play a major role, the role of government guidance and policy mechanisms should not be ignored. In terms of industrial distribution industry should be as soon as possible, "South Heavy, North Light, East Chemical West Tech Central Prosperous" the industrial layout; in capital investment, and actively seek the state transformation of old industrial bases in our city's financial support, the establishment of multi-channel Financing mechanisms, in particular, to attract private capital to explore new model of industrial investment; in government services, should take advantage of national policies to revitalize the old industrial bases, strengthen investment, foreign capital, land, finance, banking and other functional departments of service. In short, the maximum for enterprise development to provide all facilities, the combined effect of play policy, and create a favorable environment for economic development.

What can not be neglected at the same time is the government's guidance role and policy system when the market regulation system acts as an essential role in the adjustment of industrial structure. In terms of industrial distribution, the geographical layout should obey the rules : "heavy industry in the south, light industry in the north, chemical industry in the east, high-technology industry in the west and revitalization industry in the middle" as soon as possible. The adjustment and reconstruction in old industrial bases in Harbin should positively strive for the financial support from the nation and various of financing mechanisms have to be founded , especially the new model of taking in the civil capital investment industry ought to be discussed in terms of investment. With respect to the governmental services, the national policies of vitalizing the economy in old industrial bases in Harbin are expected to be made full use of. Furthermore, the consciousness of services in the respective functional departments such as investment, investment attraction, land, finance and banking also must be strengthened. In conclusion, all the conveniences are supposed to be put forward at a maximum and the synthesis effects of policies are still required to be worked well for the growth of the enterprises in order to create a better economic environment.

Abstract:

When economic development shifting its emphasis from growth rate to quality of process, it is important to implement the national macro-control policies, transform of economic growth, and to improve the internal industrial structure and adjustment of product structure.

Advantage and disadvantage industries of the city are quantitatively decided on the status of the development of industrial economy and industrial structure characteristics, the usage of industry comparative advantages index data of fifteen sub-provincial cities nationwide industry, and the industrial sectors of the market share, location quotient (both sales capacity) and sales revenue profit rate respectively. Based on the assessment decision, more targeted development proposal of the city will be proposed which focuses on industrial restructuring and combines specific circumstances of the economy.

Introduction of Author

I graduated from Harbin Institute of Technology, receiving a bachelor's degree in electrical engineering and business administration (MBA) degree. After graduation, I worked in Shanghai Power Supply Bureau, Heilongjiang Provincial Economic Commission, Economic Research Centre of Heilongjiang Province, Harbin City Planning Commission, Harbin Economic Commission, Harbin Government Laboratory, *Harbin Administration of Work Safety*.

As experienced going and working in the countryside or mountain areas and working as a farmer in

countryside power business, I understand social experience of country and factory well. This experience also trained me to work with a thrift and hard-working attitude.

I went through many number of economic management departments of the government of provincial and municipal levels. I accumulated a certain amount of knowledge and experience in both macroeconomic and microeconomic. I served in the main leadership of some departments, with the corresponding organization, coordination, integration and the ability to guide the work. Over the years because I have work experience in Harbin, I have learned some industrial economy of the situation in Harbin and has a deep understanding of and research on the overall situation of the industrial economy. I am more familiar with business conditions and technical structure, characteristics and competitive industries. This paper is to explore the result of practice for many years.