

The evolution, performance and revelation of industrial structure upgrade since the 90s in China

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Abstract

Since the 90s, Chinese industrial structure was upgrading with economic structure adjustment and government transition, found a way of industrial structure with Chinese characteristics. Of course, as a new economic exploration, upgrade of industrial structure in China needs to be improved from the following aspects: attach more importance to the low-end of the tertiary industry development, remodeling the producers' main responsibility, stimulate the establishment of the innovation system.

Keywords: evolution of industrial structure upgrade; performance; revelation

"Industrial structure upgrade" appeared officially in the 1990's in China about the expected target of the future trend of industrial development. But in retrospect, the concept of "upgrading of industrial structure" always run through every area and time, it just didn't get enough attention. Until early 1990s and mid, the goals of industrial structure adjustment turned to the upgrading of industrial structure. As everyone knows, adjust the structure has been propose for lots of time, but the process of Chinese industrial structure upgrade is struggling, the quantity and quality of industrial structure are marching slowly. So, this article focuses on the path and performance of Chinese industrial structure upgrade since the 90s, and also points out the future direction of Chinese industrial structure upgrade.

1The upgrade of industrial structure evolution process and context in China

In industrial development, agriculture occupies the dominant position before the founding , the light industry is chiefly and most distribution in coastal, heavy industry such as equipment manufacturing industry was little, coupled with the international situation was very unstable,our country should give priority to the development of heavy industry for catching up the economy, so China supported a large number of resources in the Soviet-supplied large projects, improved the technology and introduced the

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advanced equipment, saved the production cost, in order to reach the company internal structure upgrade. but because of the one-side understanding of production growth priority in practice, the steel quantity became the symbol of priority to develop heavy industry. on the one hand, it caused low benefits of enterprise, high consumption and high pollution, no update at all .then it caused a lot of shortage of consumer goods with people's difficult life. so China had to adjust the nation economy after the reform and opening-up , gave priority to the development of agriculture and light industry under the support of national policy, heavy industry turned to provide services for agriculture and light industry. all of these are the embodiment of industrial upgrading ideas. however, because of the insufficient understanding of the market economy system, industry structure leaded consumption structure in practice, consumer goods industry mainly developed, which caused sharpened contradiction of basic industries and infrastructure with processing industry in the late 80s ,our country had to adjust the national economy the third time , alleviated bottlenecks with more investment to the basic industries. early and mid 90s, the national economy basic coordinate all industry, “industrial structure upgrade” proposed officially, from then on, it boarded the stage of history.

2. The evolution of industrial structure upgrade performance

Chenery(1975) and other scholars' research of the developing countries after the second world war ,which extended the idea of "development is the success of the economic structure transformation". It still apply in China, the upgrade industrial structure is the most important factor for economic progress and economic development, industrial structure upgrading is of great significance. The following elaborate from gross domestic product (GDP), research and development capacity and energy consumption, etc.

(1)From1990 to 2014, Chinese gross domestic product (GDP) rose from 1.85307 trillion yuan to 63.6463 trillion yuan, the comprehensive national strength enhanced greatly. according to statistics, China has surpassed Japan as the world's second largest economy and the world's second industrial manufacturer² at present.

(2) R&D investment is increasing. the smooth realization of the upgrading of industrial structure calls for the government and enterprises effort together, especially the enterprises should be the main body of R&D. R&D spending increased from 34.87 billion in 1995 yuan to 1.3312 trillion yuan in 2014, as a share of GDP rose from 0.57% to 2.09% in 2014, shows that Chinese total R&D spending increases rapidly. among them, government's spending also increase gradually, from 25.82 billion yuan in 2000 to 250.06 billion yuan in 2013, companies' spending were increased from 33.67 billion yuan in 1999 to 2013 of 907.58 billion yuan, enterprise has become the main body of R&D. but from the point of research and development strength, most investment is giving to industry instrumentation manufacturing and office communication, electronic equipment manufacturing industry.

(3) the energy consumption is gradually reducing. the whole economy in our country is shift in the direction of the resource conservation. first of all, from the perspective of energy consumption, energy consumption meet negative growth for the first time in 1997 of -0.8% over the previous year, but the gross domestic product (GDP) still increased of 9.3% over the previous year. energy consumption in 2010 increased of 6% in 2009, the GDP growth of 10.4% over the previous year, energy consumption generally

² <http://www.chinanews.com/cj/cj-gncj/news/2010/03-27/2193673.shtml>

tends to be narrow, the range and space of the rise in GDP is bigger and bigger, the energy consumption is reducing. second, from the point of energy production, despite negative growth in energy production from 1997 to 1998, the GDP growth of 9.3% and 7.8% respectively. from 2005 to 2007, the energy production elasticity coefficient gradually reduced, decreased from 0.95 to 0.55, down 0.4 points, GDP growth rapidly, and the growth percentage is higher and higher, increased from 10.4% to 11.9%, up 1.5%. but due to the impact of the international financial crisis, the GDP growth rate reduced from 2008 to 2013, energy production elasticity coefficient rose. finally, from the GDP, compared with 1990, GDP growth nearly four times in 2007, and the energy consumption rose only twice more, all of these show that energy which stimulate the economy growth gradually saved, get sustainable development. but from 1992 to 2012, we can't be optimistic the total energy production was always under consumption, especially in 2009, the shortage reached 320.29 million tons of standard coal, our country had appeared strain situation of energy supply. From 2009 to 2013, our country's energy consumption growth rose from energy consumption growth rate, energy consumption elasticity coefficient also gradually rose, GDP growth rate declined, It indicates a long road of the sustainable development in China.

3. The evolution of industrial structure upgrade

By reviewing the upgrading of industrial structure evolution course in China since the 90s, the changes economic aggregate, three industries and employment structure all had brilliant achievements, the urbanization process greatly promote, the cultural living standards improve, people's happiness index increased than before. but we also should see the reality: the urbanization rate is not high; contradictory to economic growth and economic development; energy consumption and growth echoes; contradiction of People's life satisfaction and economic developed; ecological deterioration and the number of economic development mode complement each other. the pattern of industrial structure upgrade already unsustainable under China's state of the problems we faced, our country need to try our best in the following ways in the future :

(1) Absorbing labor transfer or raising employment structure must pay attention to the low-end of the tertiary industry development. the low-end of the tertiary industry, which is small investment of the farmers transfer into the city, it creates conditions for the urbanization, increase the rate. the direct benefits is of such a large number of rural labor force into the city, they can get stable jobs and income, far higher than rural benefit, solve the key problems of urbanization of peasants, farmers' urbanization will be realize soon. after that, farmers will reduce, change to work for the tertiary industry, lead to upgrade of industrial structure. the model runs, of course, is the premise and basis of the development of the low-end of the tertiary industry, that also needs a lot of farmers to provide goods, consumption increase not only depends on the speed of economic development, but also depends on urbanization, the two are complementary to each other.

(2) Reshape producers' responsibility main body. the establishment of the socialist market economy system in China makes the concept of economic man is deeply rooted in the hearts of the people, everybody is the main body of market, the competition becomes the norm. due to the imperfect market, vicious price competition and producers' shortage of responsibility thoroughly through the Adam Smith's concept of rational economic man, benefit maximization is the ultimate goal. how many of other environmental pollution, energy consumption, the survival of future generations, have been forgotten. but it is a pity that

Chinese people don't realize. In 17th century, Smith not only put forward the concept of economic man, but also pointed out who is society. So, in the process of contemporary Chinese industrial structure upgrade, need to let the producer body recognize that they are both agent and social person, is the pursuit of personal interests and social progress of the same. Solving the ideological understanding is the first step. the second, we need to establish ecological compensation system. The enterprise should pay a heavy price for environment disruption, if necessary, close business with no regret, at the same time, improve the cost price of violation. Second, fulfill the Masses relevant Mechanism, using the Internet to solve problems which is losing cost savings and very safe. finally, in the process of remodeling producer responsibility main body , recognize enterprise's real face, because, we need the development of environmentally friendly, the predatory development model of the damage to our country has endanger the basic living space before .

(3) Stimulate the establishment of the innovation system. the most important reason of the difficulty for Chinese industrial structure upgrade is lies in the lack of enthusiasm, including government departments, resulting in the insufficient investment, the original production operation and extends continuously, over-production. but a small profit will stop stimulate business owners to improve products, research for improving the efficiency, they always choose to stick in the mud; instead, meager profit will drive business owners to seek industry of high profit as real estate. And if the excitation system is difficult to make business owners based on product development and technological innovation, the old patterns of our country will repeat performance. how to set up the stimulate innovation system? The author thinks, it should execute power and pressure double drive mode. in terms of power, take various measures such as tax allowances to encourage enterprises to carry out technology research and development innovation, extend the industrial chain, so as to change the image of international contract; in terms of pressure, whether the products of the enterprise sewage higher or lower than average, as long as blow down applying higher taxes, and how many of the cost of energy and resources, which is related to the perspective of the energy resources and other factors of production prices, increase the price of energy resources, force enterprises to improve technology, reduce the energy resources exploitation degree and the dependency. such a dual drive mode and the system innovation can effectively stimulate the enterprise innovation power, gradually change concept of the business owners, base a solid foundation for the transformation of the pattern of economic development.

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