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Development Model of Rural Industrialization in China

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Abstract With the implementation of the policy of expanding domestic demand, farmers have become the main body of rural economy and rural industrialization. Development of rural industrialization promotes the development of rural economy in China, effectively transfers the surplus labor force in rural areas, continuously optimizes the rural economic structure, improves the living standard of farmers, and has made important contributions to the stability and development of economy and society in China. This paper introduces the connotation of rural industrialization, classifies it into three modes according to the farmer's investment and economic development, such as exogenous model of rural industrialization, endogenous model of rural industrialization and integrated model of rural industrialization. Though rural industrialization has obtained great achievements, there are still some problems restricting the development of rural economy in China. For instance, cognitive bias leads to the slow pace of rural industrialization; rural industry develops rapidly but its efficiency is low; intensive degree of economic growth is still very low; ability of independent innovation is weak; there are obvious contradiction between the constraints of resource and environment and the acceleration of industrialization; and development gap between regions has further widened. Therefore, policy suggestions are put forward. Firstly, continue to strengthen policy support. Secondly, take a new road of rural industrialization. Thirdly, strengthen the construction of human resources in rural areas. Fourthly, actively guide the investment behavior of farmers. And finally, support the specialty cooperative of farmers and the leading enterprises, which has certain reference significance to enhance agricultural benefit, farmers' income, rural development and modern agriculture.

Key words Rural industrialization; Development model; Policy suggestion; China

1 Research background and significance

During the 1930s, phenomenon of unemployment and refuge of peasants appears, as well as a large number of surplus rural labor force, due to the particular social and historical background. To solve this social problem, historians, sociologists and economists put forward a variety of ideas, such as the industry theory emphasizing on "concentration of cities", the road of rural industrialization and the revitalization of agriculture so that the farmers may return to the land. After the foundation of new China, rural industrialization has begun to develop in China, making tremendous contributions to the development of rural economy. Since the reform and opening up at the year 1978, the pace of industrialization in China has been further accelerated. With the sudden appearance of township and village enterprises in the 1980s, the seasonal migration of peasants in the 90s, and the advance of the "Three Agricultural Problems", many scholars have pointed out that China should take a new road of rural industrialization. In the year 2001, Li Changping published a book named *I Tell Prime Minister the Truth*, which pushed the discussion on the "Three Agricultural Problems" to a climax. And rural industrialization once again became a hot topic among scholars. Along with the promotion of the policies of expanding domestic demand and increasing rural market construction, peasant household has become the most important investment subject in rural economy, having huge impact on the development of rural economy.

On February 1, 2009, the CPC Central Committee and the State Council issued the *Opinions on Policies for Promoting the*

Steady Development of Agriculture and Increasing Farmers' Income. And the "Three Agricultural Problems" was relocked. Central Committee released the "First Document" of the "Three Agricultural Problems" for the sixth consecutive year, stressing the fundamental role of agriculture and rural areas. In the year 2004, the "First Document" regarded increasing farmers' income as the primary task of rural work. In 2005, the "First Document" pointed out further strengthening the rural work, and raising the overall agricultural production capacity. In 2006, the "First Document" advanced promoting the construction of new socialist countryside. In 2007, it proposed that the primary task of new socialist countryside construction is to develop modern agriculture. In 2008, it required the strengthening of agricultural infrastructure construction and further promoting the agricultural development and farmers' income. In the year 2009, the "First Document" put forward 28 measures in all in order to promote the steady development of agriculture and the increase of farmers' income, including further increasing investment in agriculture in rural areas, rising agricultural subsidies by a large amount, maintaining a reasonable prices of agricultural products, and enhancing the capacity of rural financial services. These measures all aim to expand domestic demand; and rural industrialization has become a fundamental way to expand domestic demand in China. However, during the process of industrialization in rural areas, farmers have to face the changes in economic environment during different stages. And there are inevitably significant differences among investment behaviors of farmers. Studying on the model, achievements and problems of rural industrialization can help to analyze the investment behavior of farmers, and has certain reference significance to solve the "Three Agricultural Problems", and to enhance agricultural benefit, farmers' income, rural develop-

Received: July 6, 2009 Accepted: July 26, 2009

Supported by the National Social Science Fund Projects (04XJY017).

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ment and modern agriculture.

2 Connotation of rural industrialization

There are various opinions on the definition of rural industrialization in academic circle. Some scholars believe that rural industrialization is a historical process of the growth and development of rural non-agricultural industries with rural industry as the main body. Other scholars argue that rural industrialization generally refers to the corresponding evolution process of rural economy and society when big machine industry achieves a dominant position in the development process of national economy. Zheng Xinli, Zhou Xian *et al.* give a comprehensive definition of rural industrialization: in order to change the dual economic structure, to fully exert the efficiency of a large number of surplus rural labor resources, and to eliminate poverty of peasant and herdsman households as soon as possible, farmers have to rely on market, their own strength and small towns in rural areas to develop rural modern industry, so that labor forces engaged in secondary and tertiary industries may account for the vast majority of the total rural labor force, industrial output value may exceed agricultural output value, rural areas may basically realize urbanization, and material and cultural life in rural areas may basically catch up with that in city. Wang Yuling has her own incisive view on this issue, arguing that rural industrialization has the contents of two aspects, including the development of rural industrial enterprises and the agricultural industrialization^[1]. Shen Maoxiang *et al.* believe that rural industrialization includes five aspects of meanings, such as the establishment and development of rural industry, structure reformation of traditional agriculture and rural economy by industrial production methods and products, permeation process of modern industrial civilization into agricultural society (culture, education, health, sports, moral and other fields), fusion process of urban industry by the way of regional trade with development of rural industry as the guidance, and enhancing the level and speed of rural economy with the concept of national economic structural adjustment^[2]. And above all, the most widely accepted definition is the one put forward by Zheng Xinli, Zhou Xian *et al.* which is mentioned above. We believe that rural industrialization is a change process of a set of production functions (production function set), that is, a process to achieve a given expectation with the change of a series of significant explanatory variables, the emergence and disappearance of a variety of variables and the change of definition domain and numerical range of production function set.

3 Development model of rural industrialization

3.1 Exogenous model of rural industrialization Exogenous model of rural industrialization means that rural industrialization is a product of the expansion of urban industry into rural areas, but not the self-development of non-agricultural industries in rural areas. To some extent, this way of rural industrialization can be said to be "industry in rural areas". This model, a product of "post-industrial society", can be seen in devel-

oped countries due to the economic, social and political background and the international environment. Background and motivation of rural industrialization are basically the same though the start-up time, development speed and development level of rural industrialization in developed countries are different^[3].

3.2 Endogenous model of rural industrialization Endogenous model of rural industrialization means that development of rural industrialization is mainly promoted by setting up non-agricultural industries in rural areas, not by expanding urban industry. Endogenous model mainly appears in developing countries, which is determined by the economic background of developing countries. Economic capacity in these countries is hard to ensure the expansion of industrialization to rural areas due to the low level of urban industry and the relatively backward urban and rural infrastructure. Unlike the exogenous model which is a natural product of industrialization at a certain stage, endogenous model is a new exploration of rural economy under the new economic and social background, as well as a transcendence of labor division and cooperation in traditional society.

3.3 Integrated model of rural industrialization Integrated model of rural industrialization means that in some newly industrialized countries, there are more than two kinds of developmental models for rural industrialization. These newly industrialized countries have their own specific properties in economic and social development with both properties of developed countries and developing countries. Therefore, the model of rural industrialization has the characteristics of duality. On the one hand, urban industry is relatively well-developed, having the ability to spread to rural areas and to implement the exogenous type of rural industrialization. On the other hand, urban industry has not yet fully met the needs of the exogenous development model. What's more, proportion of the rural population is also relatively big; and rural economic development has to rely on in situ construction of non-agricultural industries, that is, endogenous type of rural industrialization. This model has strongly accelerated the pace of economic and social development in newly industrialized countries.

4 Current achievements and problems of rural industrialization

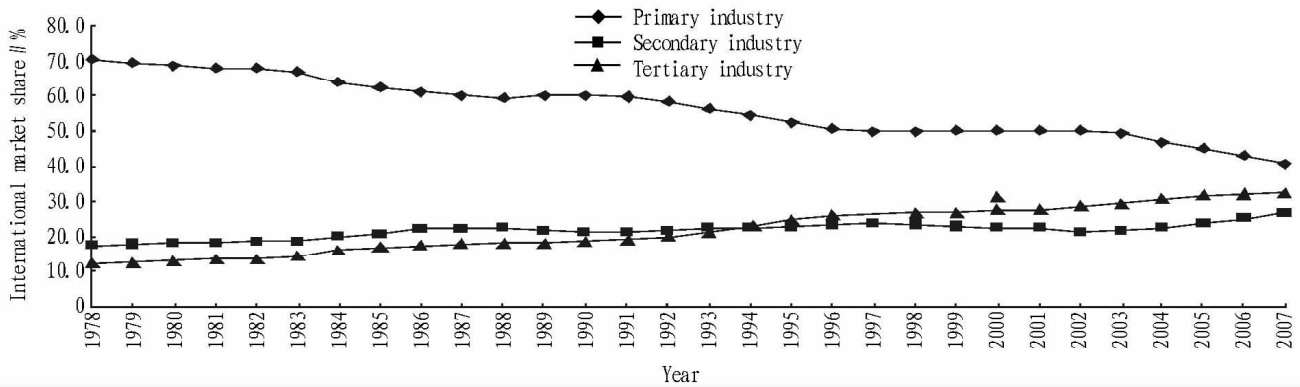
4.1 Major achievements in the development of rural industrialization in China

4.1.1 Promote the development of rural economy. Development of rural industrialization has broken through the bottleneck of rural economic growth, and has entered a new chapter of rural economic development. Taking contribution of township enterprises as an example, Gan Shiming, a director of the Township Enterprises Bureau of the Ministry of Agriculture, introduces that from the year 1978 to 2007, township enterprises invested a total of 401.2 billion yuan in supporting agriculture, subsidizing agriculture and constructing agriculture, which significantly improved the conditions for agricultural production. Development of township enterprises has also broken the pattern of dual economy in China, so as to find a path of industrial-

ization with Chinese characteristics, and to exploit a road of urbanization with Chinese characteristics.

4.1.2 Effectively transfer the rural surplus labor force. According to internationally accepted standards, the sign of the end of early industrialization is that the proportion of agricultural labor force does not exceed 55%, and proportion of agricultural labor force is less than 30% at the end of middle industrializa-

tion^[4]. Fig.1 illustrates that since the reform and opening up, development of rural industrialization has gradually changed the agriculture-based single economic structure in rural areas, has broken through the urban-rural dual structure, and has formed a new development pattern of agriculture, industry and commerce.

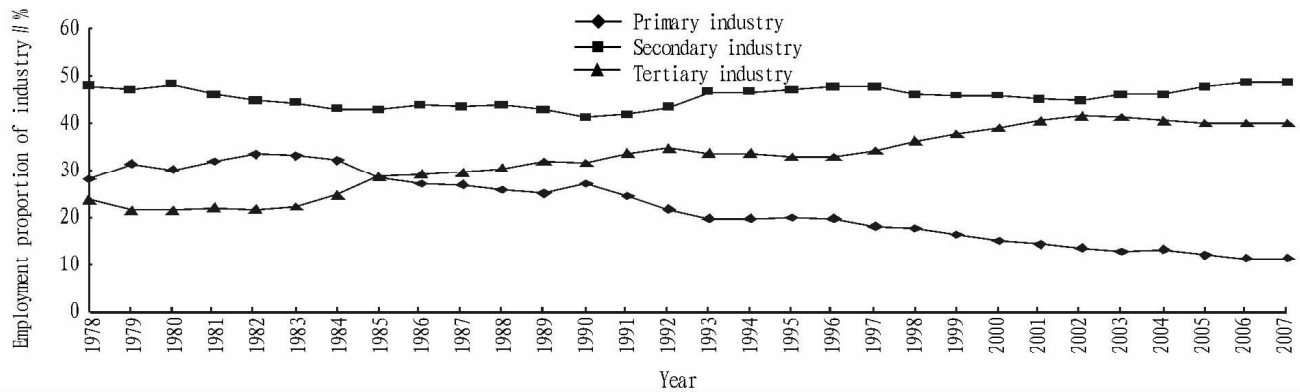


Note: Date come from the *China Statistical Abstract* 2008.

Fig.1 Change of the employment structure in China from 1978 to 2007

4.1.3 Continuously optimize the economic structure. When analyzing the development stage of a country or a region by industrial structure, we usually take the output value of primary industry within 10% (15% in Asian countries) and tertiary industry output value over 40% as the reference index. Fig. 2 il-

lustrates the change of industrial structure in China. It can be concluded that with the gradually acceleration of the process of industrialization, economic-industrial structure is optimized in China, which accords with the development needs of economy and society.



Note: Date come from the *China Statistical Abstract* 2008.

Fig.2 Change of the industrial structure in China from 1978 to 2007

4.1.4 Improve the living standards of rural residents. Rural industrialization promotes the development of rural economy, optimizes the economic structure in rural areas, and helps to solve the problem of rural surplus rural labor force. At the same time, improvement of urbanization level is always accompanied by the promotion of industrialization and the enhancement of people's living standards. Per capita net income of rural households rises from 133.6 yuan in the year 1978 to 4 132.3 yuan in 2007, and the Engel's Coefficient decreases from 67.7% in the year 1987 to 43.1% in the year 2007.

4.2 Major problems in the process of rural industrialization in China

4.2.1 Cognitive bias leads to the slow pace of rural industrialization. After the foundation of new China, tremendous changes in basic condition of China have taken place. However, long af-

ter the foundation of new China, in-depth and systematic study is still rare due to the policy and strategy adjustment caused by national condition. And we are still accustomed to the traditional point of view, which leads to few major developments of rural economy in China for decades of years.

4.2.2 Rural industry develops rapidly but its efficiency is low. Steel-making campaign in the 50s and 60s, as well as the township enterprises in every village after the reform and opening up, has accelerated the development of rural industrialization in China, but its efficiency is extremely low. Due to the lack of long-term consideration, problem in homogeneous industry in urban and rural areas becomes very serious; and it is difficult to centralize the resources advantages to form scale benefit.

4.2.3 Intensive degree of economic growth is still very low. Analysis result shows that intensive degree of economy in Chi-

na is approximately equal to that of the average level in other countries over the same development stage. GDP energy consumption per ten thousand yuan in China reduces from 2.24 tons standard coal in the year 1995 to 1.44 tons in the year 2004, a decrease of 35.7%. Average industrial value added per capita in designated size industry rises from 18 500 yuan in the year 1995 to 89 900 yuan in the year 2004, increasing by 3.86 times. Even so, intensive degree of economic growth in China still lags far behind that in developed countries.

4.2.4 Ability of independent innovation is weak. In recent years, capacity of independent innovation is improved in China. But there is still great dependence on foreign advanced technology. For instance, self-sufficiency rate of key technology is very low in China with the dependence on foreign technology of more than 50%, while the dependence degree of developed countries is below 30% and those of the United States and Japan are about 5%. In the equipment investment in China, proportion of capital for imported equipment in the total equipment investment is above 60%. Annual invention patents accounts for less than 3% of the world's total number, which is far from the developed countries, such as the United States and Japan, and the newly industrialized countries, such as Korea^[5].

4.2.5 There are obvious contradictions between the constraints of resource and environment and the acceleration of industrialization. Development of rural industrialization is rapid in China; but the experiences for synchronization control of resources environment are still in great demand with a greater impact on ecological environment in rural areas. Problems mainly exist in three aspects. Firstly, the low utilization efficiency of resources has resulted in substantial waste of resources. Secondly, industrial "waste" has caused serious environmental pollution. Thirdly, arbitrary development of industrialization has destroyed the ecological balance in rural areas.

4.2.6 Development gap between regions has further widened. Differences in institutional innovation, infrastructure construction, natural and economic condition of different areas, as well as the policy inclination in different areas, will inevitably result in the imbalance of regional economic development during the sustained growth of national economy. For a long time, development pattern of regional economy in China is manifested mainly in the uneven economic development between the mid-west mainland and the eastern coastal area. With the development of industrialization, proportion of less-developed regions in midwest China in national economy is decreasing; while the gap between regions is gradually broadening^[6].

5 Conclusion and policy suggestion

Development of rural industrialization in China has obtained outstanding achievement, which promotes the development of rural economy in China, effectively transfers the surplus labor force in rural areas, continuously optimizes the rural economic structure, improves the living standard of farmers, and has made important contributions to the stability and development of economy and society in China. However, there are also some problems during the development of rural industrialization,

which restricts the development of rural industrialization in China. Therefore, policy suggestions on the development of rural industrialization and the investment behavior of farmers at present are put forward.

5.1 Continuing to strengthen policy support National macro policy determines the investment risk and burden of farmers, which inducts the investment direction and scale of farmers to a large extent and has enormous impact on the investment behavior of farmers. Development of rural industrialization has changed the traditional social patterns greatly; but investment awareness of the farmers has not changed completely. This requires the support of national macro policy, so that the enthusiasm of farmers can be mobilized.

5.2 Taking a new road of rural industrialization Dual economic structure has not changed in China. There lacks the organic linkages and coordination between rural and urban industries with great differences between the developmental levels of rural and urban economy. According to the problems in industrialization and the basic national conditions at present, China should take a new road of rural industrialization, utilize informatization and industrialization to promote industrialization, and promote agricultural modernization by rural industrialization. During this process, we should strengthen the publicity of rural industrialization, offer opportunities and support to farmers, and create a new investment road for farmers^[7].

5.3 Strengthening the construction of human resources in rural areas Development of rural industrialization requires new farmers with high quality in order to enhance their market competitiveness. The advantages of human resources in rural areas need to be exerted when cultivating new farmers. Increasing the input in human resources and improving the quality of rural labor forces have provided a strong intellectual and personnel support for new countryside construction. The "First Document" by the Central Committee in the year 2007 clearly suggests to train new farmers and to create a talent team for the construction of modern agriculture. Firstly, cultivate the management body for modern agriculture; and try to train the majority of farmers into modern agricultural operators with certain management capabilities, strong market awareness, and high production skills. Secondly, strengthen the training of job transfer and rights protection of farmers; further improve the system guarantee for migrant workers based on the requirements of equal employment and unified urban and rural areas. Thirdly, accelerate the development of social undertakings in rural areas; enhance the input in rural cultural undertakings; continue to improve education conditions in rural areas; and promote the balanced development of compulsory education. Fourthly, enhance the ability of rural public service workers; establish training systems for rural grass-roots cadres, rural teachers, rural doctors, family-planning workers, grassroots agricultural extension agents, and other service workers; strengthen incumbency training and improve service ability^[8].

5.4 Actively guiding the investment behavior of farmers Affected by many factors, investment behavior of farmers is not rea-

sonable at present in China. Farmers do not understand the rural industrialization due to their limitation of information acceptant, which inevitably requires that government should actively guide the investment behavior of farmers when developing rural industrialization. Government should do more demonstration works, improve the investment enthusiasm of farmers, send scientific and technical personnel to help the skills of farmers, provide advisory services for investment decision-making, reduce the investment risk of farmers, implement standardized investment and legitimate investment, strengthen rural infrastructure construction, and provide hardware support to farmers.

5.5 Supporting the specialty cooperative of farmers and the leading enterprises According to the development experiences in recent years, specialty cooperative of farmers and the leading enterprises have strong function in leading and optimizing the investment behavior of farmers. We should accelerate the development of specialty cooperative of farmers, carry out demonstrative construction, promote the management of rural industrialization, and encourage the development of agro-processing so that farmers can share the increment income from processing and circulation. Meanwhile, the central and local governments should increase the scale of special funds for rural industrialization, support the leading enterprises in technology research and development, base construction and quality testing, encourage leading enterprises to participate in the construction of guarantee system under financial support, and adopt effective measures to help leading enterprises to solve the problem in getting loans.

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农村工业化发展模式研究

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摘要 随着国家扩大内需政策的执行,农户已成为农村经济与农村工业化的主体。中国农村工业化发展不仅促进了中国农村经济的发展,有效地转移了农村剩余劳动力,而且使得农村经济结构持续优化,农民生活水平逐步提高,这对中国经济社会的稳定和发展具有重要的贡献作用。笔者介绍了农村工业化的内涵,根据农户投资与经济发展历程的不同,将农村工业化发展模式分为外生型农村工业化发展模式、内生型农村工业化发展模式、综合型农村工业化发展模式3种。尽管农村工业化取得了辉煌的成果,但也出现了一些问题制约着中国农村经济的发展,主要表现在:①认识上的偏差造成农村工业化进程缓慢;②农村工业发展速度快但效益低下;③经济增长的集约化程度还很低;④自主创新能力薄弱;⑤资源环境约束与工业化加速推进的矛盾突出;⑥地区间的发展差距进一步拉大。因此,提出了政府必须从以下几个方面着手的政策建议:首先,继续加强政策性支持;第二,走新型农村工业化道路;第三,加强农村人力资源建设;第四,积极引导农户投资行为;第五,扶持农民专业合作社和龙头企业,对实现农业增效、农民增收、农村发展和发展现代农业都具有一定的借鉴意义。

关键词 农村工业化;发展模式;政策建议