The “Four Modernizations” Promotes Bidirectional Urban-Rural Integration to Realize the Upgrading of the Country Industrial Structure in the Northeast Region of China

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Abstract. Combined with actual situation in the northeast region of China, by analyzing the relationship between county industrial structure upgrading, four modernizations, and bidirectional urban-rural integration and influence mechanism of the "Four Modernizations" promoting county industrial structure upgrading, conclude that industrial structure upgrading and the construction of modern country industrial system in the China northeast region will be achieved through benign interaction and of urbanization and agricultural modernization and coordinated development between industrialization and urbanization.

Introduction
The target for the urban-rural integration is to narrow the urban-rural gap, thereby achieve collective richness, and eventually solve the highlighting issues of agriculture, countryside and farmers. Accelerating the economic development of counties is the key to realize the urban-rural integration. Unidirectional urban and rural integration puts emphasis on the major and medium urban development which is unfavorable to the upgrading of county industry structure and county sustainable development. Four Modernizations, namely, Industrialization, IT application, urbanization and agricultural modernization, is an efficient pattern for promoting bidirectional urban-rural integration. Quickening bidirectional urban-rural integration process through “Four Modernizations”, is able to effectively push the upgrading of country industry structure and perfect country modern industrial system.

County Industrial Structure Upgrading and Four modernizations, Bidirectional Urban -Rural Integration

Accelerating the Development of County Economy Is the Key to Realize Urban-Rural Integration
The key point for full realization of building a well-off society is to solve the issues of agriculture, rural areas, and farmers through integrated development of urban and rural areas, however, China’s attention to the integrated development of urban and rural areas is focused on unidirectional urban and rural integration, holding with a great emphasize on development in large cities. This urbanization process of "industry promotes agriculture, city leads countryside" can only make the rural areas surrounding the large and medium sized cities prosperous, but most of the rural areas, neither have resources, nor location advantages, unable to enjoy the benefits of it. These years China northeast region is still faced with the problems of increased production without the increased income and slow equipment manufacturing industry recovery. The key reasons for that are the backward county economic development and low level of agricultural industrialization. So we need to strengthen the support to county investment and improve the efficiency of the county economy, for that county economy will become the peripheral support system of the center city's development, and finally achieve the integrated development of urban and rural areas.
Promoting the Upgrading of County Industry Structure to Achieve the Sustainable Development of County Economy

It is one of China’s national conditions that county economy plays an irreplaceable role in the national economic development. County administrative area has accounted for about 94% of the nation’s total land area by the end of 2015, and has 73% of the total population and 60% of GDP. Without county economy development, steadily promoting people-centered urbanization and agricultural modernization may never achieve. The industrial structure upgrading is essentially an increase in productivity. With contents include: (1) to promote quality improvement of industrial structure through expansion of amount. (2) Industrial correlation with technical knowledge intensive as the main body takes the place of which most part is based on comparative advantage in labor to optimize factors input structure. (3) The degree of polymerization between the industries is improved, and the related coupling is more closely.

The "Four Modernizations" Synchronous Development and the Upgrading of County Industrial Structure

The “four modernizations” coordinated development refers to the synchronous propulsion and coordinated development between industrialization, IT application, urbanization and agricultural modernization. At present, weaker overall strength still exists in the county economy, and economic problems such as imbalance, deep-seated contradictions are still outstanding, especially low level of industrial structure and structure convergence. The “four modernizations” will improve production efficiency and upgrade the industrial structure from the expansion of demand, gather the advantages of resources and other aspects by deep integration of information technology and industrialization, and benign interaction between industrialization and urbanization, and coordination between urbanization and agriculture modernization.

Bidirectional Urban and Rural Integration and Implementation Patterns of "Four Modernizations"

Bidirectional urban and rural integration refers to the two-way flow of personnel, production factors and social resources for harmonizing urban and rural development and form well move mutual, gradually realize urban-rural integration[1]. The bidirectional urban-rural development can be advanced by “Four Modernizations” synchronous propulsion, thus we can apply the benefits of industrialization and information from the city to the rural economic activities so that greatly improve the production efficiency and finally realize county industry structure upgrading. By the chance of new urbanization, we can effectively absorb rural population transferred to non-agricultural industry to solve the problem of farmer's citizenship. By developing agricultural modernization, we can attract capital to the countryside, technology to the countryside, talent to the countryside and information to the countryside to effectively upgrade county industrial structure and establish county modern industrial system.

The Influence Mechanism of the "Four Modernizations" Promoting the Upgrading of County Industrial Structure

New industrialization Is the Base of County Industrial Structure Upgrading

At present, our county economy is in a rapid process of industrialization. County industrialization is to use industrial ideas and technology to modify traditional agricultural development model, and with an all-round development of rural education, science, technology promotion, health, legal and social morality and other aspect, enhance the comprehensive quality of farmers and promote the county industrial structure upgrading and the new rural communities construction, and finally achieve the Peasants’ prosperity and modernization of life[2]. Advancing county new industrialization should emphasize resource conservation and environmental protection, balance the employment of urban and rural work force to promote peasant labor force non-agricultural and prolong the industrial link of farming in order that the rural economy could better adapt the open economy and actively enter the domestic and international market.
New Urbanization Is the Driving Force of County Industrial Structure Upgrading

The development of new urbanization not only gives rise to the consumption demand, advance the growth of investment, and promote the economical service-oriented tendency, but also gathers superior resources, cultivate entrepreneurs and new type of farmers to realize the peace and content life and work. However, China county urbanization is still in a lower level without high quality, and has not yet greatly promoted the upgrading of county industrial structure. The national urbanization level had already gone beyond 56.1% in 2015, but county urbanization rate is only 30%. The county urbanization rate still has room for improvement. According to the survey (Chunyun, Wang 2010), by 2020, the problem transferred non-agricultural employment will mainly rely on the county urbanization development to solve.

Agricultural Modernization Is the Foundation of County Industrial Structure Upgrading

Currently China’s industrial development had a weak foundation in agriculture. So, the modernization of agriculture should be highly concerned both in the view of guaranteeing nation grain safety, increasing the farmers’ income, and maintaining social stability. The agricultural industry still accounts for a larger share of GDP in most of medium developed and less developed county in China. There are about 600 in 2000 counties that the added value of agriculture is higher than that of industry in 2015, which at least suggests that these counties have low agriculture labor productivity and the second and the tertiary industry are not developed. International experience proves that if agricultural modernization cannot keep up with the pace of industrialization and urbanization, the latter development will be hampered, and thus affect the whole process of modernization. Weak foundation in agriculture is mainly reflected in the following aspects: (1) Low degree of deep processing of agricultural products. (2) Low branding rate of agricultural products. (3) Low degree of agricultural production centralization.

IT Application is the Booster of County Industrial Structure Upgrading

IT application promotes the upgrading and innovation of industry which requires the deep integration of information and industrialization. IT application can make the manufacturing process automated, integrated and smart and thus reduce the cost of industrial production as well as considerably enhance the productive efficiency and production quality. For the county economy, IT application enables the county to better play its advantages, avoid disadvantages and creates better opportunities for the upgrading of industrial structure. Through the Internet information technology, electronic commerce, intelligent logistics technology, the county can overcome the disadvantages in the distance, fully combine the low labor cost, advance information technology, production organization and process revolution, and links to domestic and international markets, to realize the upgrading of industrial structure.

Strategies for the “Four Modernizations” Promoting Bidirectional Integration Process of Urban and Rural Areas to Realize the Upgrading of the Country Industrial Structure

Strategies for Benign Interaction between Industrialization and Urbanization to Promote the Upgrading of the County Industrial Structure

Vigorously improve the efficiency of industrial clusters and construct scientific urban system. Due to the low level of China northeast region industrial agglomeration and industrialization, for a long time, the benefits of economies of scale and externalities cannot be fully obtained and the workers’ income level is difficult to increase. It is the common law of all countries that industrialization drives urbanization development in the construction of urbanization. The urbanization development is still dependent on the industry development for the period of time in the future. We should actively explore and undertake the new model of industrial transfer, and integrate into the regional industry chains and production networks, according to the characteristics of the existing population, and accelerate the development of small cities and towns with special characteristics through the development of industrial clusters, so as to improve the existing urban system and the modern industrial system.
Deepen and perfect the system of coordinated development of industrialization and urbanization. In the process of industrialization and urbanization, the industrialization will always lag behind the urbanization that drove by the market economy, until all the rural surplus labor force is completely transferred. Therefore, well-developed systems need to be formed to guarantee the urbanization. The industrial policy system includes industrial planning, promoting industrial structure upgrading and optimization with taxation and other leverages, encouraging the integration of scientific research innovation and industrial and so on. The urbanization development policy system includes the reform of the household registration system, the reform of the employment system, and the perfection of the social welfare safeguard system and so on. The government should perfect municipal infrastructures of small and medium-sized cities and towns and allocate public service resources to the medium and small cities and small towns and enhance the carrying capacity for industrial population, and effectively promote the coordinated interaction of industrialization and urbanization.

Strive to develop the county town economy and accelerate the process of the county economy industrialization. That the integration development of industry and town requires developed county industrial economy which will attract more surplus rural labors to county districts and realize the local transfer by developing county towns industry and producer services, thus the rural surplus labors will have stable jobs after transferring to the county city, so as to achieve the real urbanization. The concrete countermeasures are as follows: Firstly, increase national and provincial and municipal government’s efforts in support of town industrial development. Necessary road traffic, communications, water, electricity, heating and other all kinds of public infrastructure for industrial development of small cities and towns should be provided, meanwhile, and we need to combine with the location, transportation, resources advantages to develop leading industries and pillar industries with comparative advantages and market potential according to local conditions. Secondly, promote small town industrial agglomeration and develop circular economy in accordance with the principle of function oriented. The county should actively form industrial clusters and construct industrial parks by the use of small towns and land, labor and other low cost advantages. The government should increase financial input and strength and science and technology support for the county-level industry to develop circulation economy, and establish mechanisms of compensation for ecological environment loss and benefit compensation. Thirdly, strengthen the science and technology innovation to enhance the technology innovation ability for small towns’ industry science development and stimulate the internal power of technological innovation to realize the upgrading of industrial structure in small towns.

Promote the Upgrading of the County Industrial Structure through the Coordinated Development of Urbanization and Agricultural Modernization

Improve the regional urban structural system and focus on the development of small towns. It should be a core principle for future urbanization that accelerates the development of small and medium-sized cities that refer to county-level cities and characteristic towns with the direction of improvement both in quantity and quality. One-way urban-rural integration can lead to excessive development of large and medium-sized cities, which give rise to the reduction of the production efficiency, also suck vast resources of small cities and towns, consequently result in relatively slow development of small towns, while small towns have comprehensive function of connecting to the city upward, radiating village downward, and promoting overall progress of regional economy and society, thereby it is particularly important to develop small towns around major cities. We should accelerate the development of small towns, relying on geographical and resource advantages construct conditional suburb towns, key towns and towns with characteristics, and finally form new modern small towns system coordinated with development of regional central city and the surrounding countryside.

Perfect the county modern agricultural industry system and strengthen its interaction with large and medium cities. The development of modern agricultural economy is inseparable from the consumption of urban residents, so it needs to have a particularly close connection to large - and
medium-sized cities, and gradually promote the continuous development of the modern agricultural economy by the demonstration and driving effect generated by large and medium cities and perfect modern agricultural industrial system in county economy. The modern agricultural economy mainly develops green agriculture or ecological agriculture, so China northeast region should strive to occupy an important position in the green and ecological agriculture at home and abroad and in the construction of modern agriculture industry system, relative agricultural production organizations need to form a strategic cooperation with some relatively mature food deep processing enterprises in the process of agricultural products deep processing, so as to promote the industrialization of agriculture development to higher levels.

*Promote urban infrastructure and public resources extending to the countryside.* In comparison, the urban infrastructure and public resources are far better than that in the rural areas so, they should be gradually extended to rural area for promoting equal urban and rural elements exchange and public resources equilibrium configuration in the process of coordinating urbanization with agricultural modernization to promote the integrated development of bidirectional urban and rural areas, and thus will assure better progress in agricultural modernization in rural areas[3]. The development of agricultural modernization needs the agriculture industrialization, and what agriculture industrialization needs? It is the standard of industrialization, which not only includes the aspect of corporate governance, but also includes some public resources and infrastructures, and by the extension of urban infrastructure to the countryside, then the industrialization of agriculture become more feasible.

**References**

