

# The Research of Industrial Agglomeration in Transformation and Upgrading of County Economy in Jiangxi Province

Xingqi Wu, Yunping Chen, and Xiaoyong Huang

**Abstract**—Under the background of much starker choices-and graver consequences-in, county economy, as an important component unit of regional economic, takes part in transformation and upgrading of the region economy. Transformation and upgrading of county economy have a qualitative leap in Jiangxi province, but there are many problems in the transformation and upgrading. Firstly, the level of competition in our county is low, and the economic gap is big. Secondly, the investment in scientific research funds in our county is less and innovation ability is poor. Thirdly, the development of service industry is backward. Fourthly, counties in Jiangxi Province lack cooperative consciousness and cooperative skills. At last, the environmental issues are disturbing while the economic is developing, economic development on the environment cause greater pressure. To realize transformation and upgrading of the county economy, finding a breakthrough path becomes imperative. The planning of Industrial agglomeration promotes coordinated development between economic society and the eco-environment from an overall perspective. It breaks the barriers of administrative range, breaks through the boundary between the enterprise and the single industry. Industrial agglomeration provides a new angle of view for economic development. It is a good choice for transformation and upgrading of county economy. Therefore, the priority will be on the following work in Jiangxi's counties. Firstly, the one of best plan is to continue to construct industrial agglomeration areas so that enhance the competitiveness of the County Secondly, the government should build a platform for gathering science and technology resources and improve the quality of economic transformation and development. Thirdly, accelerating the development of services, particularly in Jiangxi Province has become inevitable choice. Fourthly, the government needs to continue to promote cooperation and common development in each industrial agglomeration area. The last but not least, the government needs to construct the ecological industrial agglomeration areas and realize the county economic Green Upgrade.

**Index Terms**—County economy, transformation, upgrading, industrial agglomeration.

## I. INTRODUCTION

At all levels of government in Jiangxi province put the transformation and upgrading of the county economy as the core of economic construction and development in recent years, in order to further implement the provincial party committee 16-character guideline. "Economy in Jiangxi

Province base in the county and the county economy is to speed up development", Qiangwei secretary pointed out that growing industry cluster is the central task of promoting County economic development and upgrading. How to optimize the industrial agglomeration and to achieve economic transformation and upgrading of the county? The problem is urgently to be solved.

## II. THE STATUS OF JIANGXI PROVINCE COUNTY ECONOMIC TRANSFORMATION AND UPGRADING

### A. The Pace of Transformation is Accelerating, County Development Has Been Activated

County Economy in 2002 was officially incorporated into the category of the construction of our country economy, Jiangxi Province reasonable adjustment of development strategy, the county economy as stimulating the development of the province's new engine. In 2002, 80 county (city) of Jiangxi Province created GDP total 1307.2 billion yuan, accounting for 53.3% of the province's total GDP, total fiscal revenue together 95.74 billion yuan; accounting for the province's total 40.8% [1]. From Fig. 1, GDP in Jiangxi Province has growth year by year; economic development has a good trend. After 10 years of development, in 2013 the 80 counties and cities of Jiangxi Province GDP more than 60% of the province, the total fiscal revenue accounted for more than half. Among the province's 94 industrial parks for about 60% innovation of small and medium enterprises concentrated in the county. In 2015,the government of Jiangxi province towards new steps about upgrading and development, well-off speed, green rise, take action, respectively from the industry, innovation, regional and development from four aspects such as do the upgrade, layout and planning the transition and upgrading strategy, fully activate the vitality of the county economy.

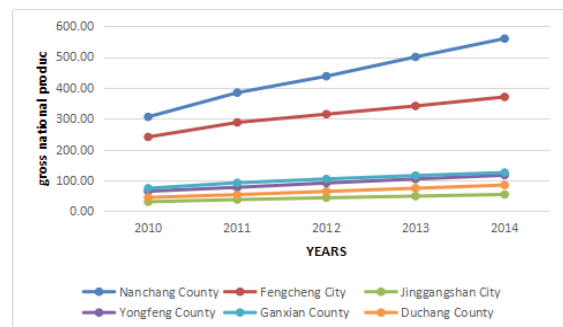


Fig. 1. The GDP total of part of the county in Jiangxi province in 2014 (unit: million yuan).

Manuscript received January 29, 2016; revised May 15, 2016.

Xingqi Wu and Yunping Chen are with the Finance Academy, Jiangxi Normal University, Nanchang City, China (e-mail: 1193400487@qq.com, 191317758@qq.com).

### B. The Effect of Industrial Cluster Highlight, the Path to County Development Gradually Optimize

Jiangxi Province, adhere to the "industrial agglomeration, resource intensive, function integration" principle and strive to build a base of industrial clusters, in 2014 Jiangxi Province, focus on the scheduling of 60 industrial clusters realize main business income of \$82 billion yuan, grow 20% compared to the same period, in 2015 main business income and strive to exceed 1.1 trillion yuan, the number of industrial clusters of more than 100 million yuan increased to 45 [2]. The Nankang District in 2014, the number of furniture enterprises are totally 6229, the number of scale enterprises reached 72, accounted for 53% of the number of the region's industrial enterprises above designated size, the furniture industries driven by employment of more than 30 million people, the direct tax amounted to 2.3 billion yuan. The effect of county industrial cluster gradually highlight, leading the county's economic transformation and upgrading of Jiangxi province.

### C. The Emerging Industries Darling, the Power of the Transformation and Upgrading Is Increasing

Provincial Party committee, the provincial government scientific adjustment planning of emerging industries and actively implement, in < the planning of ten strategic emerging industry development in Jiangxi Province (2013-2017) > clear focus on the cultivation of energy saving and environmental protection, new energy, new materials, such as the ten major industries. In 2015 across the province in new photovoltaic, semiconductor lighting, biotechnology and new medicine two billion yuan of strategic emerging industries, only from January to February in emerging industries industrial added value of 158.18 billion yuan, accounting for the proportion of the province's 16.3%, an increase 7%. In 2015 in Xinfeng County, Ningdu County two industrial parks constitute the two electronic industries corridor, built a number of Provincial strategic emerging industries, supporting base; high security, focus on the cultivation and the development of LED optoelectronic industry, actively build and provincial optoelectronic industry base construction. Gaoan City outraces the first quarter of 2015, realize the output value has reached 2 billion yuan; products are exported to overseas, to become a leader in the world of smart home lighting.

### D. The Characteristic of the Park Is Being Built, "One Park and More Areas" Pattern Gradually Laid

Since Orchard Park Based on the existing platform to introduce clear is the pillar of the county economic development characteristics and advantages of industry, support enterprises in the park. Jiangxi Province is making every effort to create a number of strategic positioning, radiation driven strong characteristics of the park. In order to enhance the industrial park project carrying capacity expansion project, Jiang Xi Province to encourage the County Industrial Park in the old liberated areas, increase and Development District, and gradually formed a "Garden District" development mode, make it become a driving force for the county economy transformation and upgrading of the train head. Ji'an, Suichuan County efforts to create and develop new mode, the implementation of the "industrial

county" development strategy, from the previous north to outshine others, to now Based on North, East construction focus, West coordination and cooperation of the three districts and, the park from the "thriving" evolution into "three pillars" of the situation. By the end of May in 2014, the park completed the main business income of 40.49 billion yuan, 10.3 billion yuan of industrial added value, 2.35 billion yuan of tax, contributed more than 4820 people to create more employment opportunities [3].

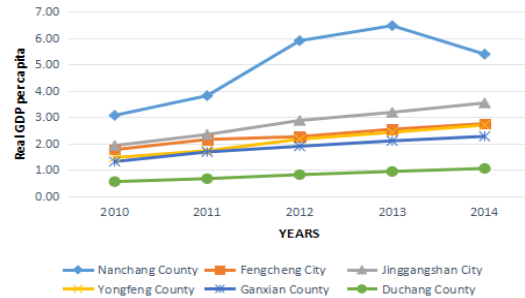


Fig. 2. The per capital GDP of part of the county in Jiangxi province in 2014 (unit: million yuan).

## III. PROBLEMS IN THE PROCESS OF COUNTY ECONOMIC TRANSFORMATION AND UPGRADING IN JIANGXI PROVINCE

### A. Level of Competition is Low, Economic Gap is Big

On April 29, 2015, in the report of the development of China county economy showed that only Fengcheng City, Nanchang County, Guixi City in Jiangxi Province into the top hundred counties, and ranked in 41, 78, 97 respectively among one hundred counties. [4] The Yangtze River Delta swept the top 10, Jiangsu province won the top three prizes. What's more, Jiangsu province and Zhejiang province together accounted for nearly half of the total. Compared with other provinces and cities have an absolute number of advantages. Those facts reflect that lack of competitiveness in counties and cities in Jiangxi province. There is a big gap about economic development between Jiangxi province and others.

In addition, there is a big gap about economic development between different counties in Jiangxi province. The average capital GDP in Nanchang County in Jiangxi province is about 49260 yuan in recent five years. The average capital GDP in Duchang County is less than one-sixth of Nanchang County, only 8020 yuan.

### B. There Is Less Investment for the Scientific Research, and Innovation Ability Is Poor

The subject of the county economic development in our province is small and medium-sized enterprises. But there have been problems in small and medium-sized enterprises. Firstly, research system and mechanism is imperfect. Secondly, the kind of creative thinking might be outside in small and medium-sized enterprises. Thirdly, creative talents high technical ability talents are lack and lack of outstanding talents. For example, the textile industry is extensive in Nanchang county, but they has not own brand and simply rely on copying foreign products, the system and some other problems in textile enterprises are seriously restrict its survival, development and competitive ability.

In recent 10 years, the research expenditures increased

from 2.85 billion yuan to 2.85 billion yuan in Jiangxi province. However, the research expenditures is low compared with other provinces in central, as shown in chart. In 2014, there were 15 of Science and technology projects in Zhangshu City in Jiangxi Province, of which only three state-level projects; Zhangshu City had 498 patent applications and the amount of patent authorization is just 240. In contrast, Jiangyin City has a total of 119 engineering and technology research center in Jiangsu Province, and the number of patent applications were 15790 in 2014. The fact shows that Counties Economy in Jiangxi Province is insufficient in technological innovation.

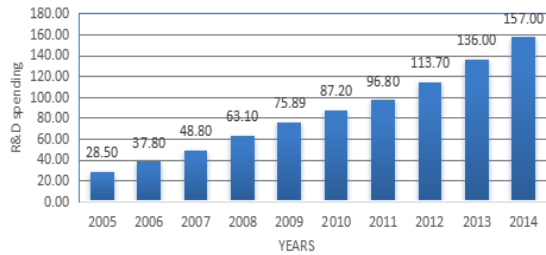


Fig. 3. The research expenditures in Jiangxi province in 2005-2014 (unit: 100 million yuan).

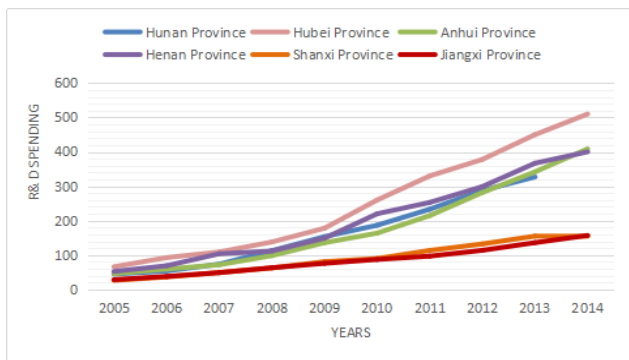


Fig. 4. The comparison of research expenditures in some provinces in 2005-2014 (unit: 100 million yuan).

*C. The Development of Tertiary Industry Is Slow, the Homogenization of the Industrial Chain Is Serious*

In 2014, the annual GDP of Jiangxi Province about 15708.6 billion yuan, among them, the value-added of primary industry is 1683.70 billion yuan, the value-added of second industry is 8388.30 billion yuan, the added value of the service industry is 5636.6 billion yuan; tertiary industry contribute to the rate of economic growth is only 29.2%. From the nationwide angle, the value-added of tertiary industry already account for 48 per cent of GDP. The value-added of tertiary industry in Nanchang County just account for 35.6 per cent of GDP, the value-added of tertiary industry Fengcheng City just account for 30.4 per cent of GDP. The tertiary industry development level far less than the Jiangyin city and the national average level, the proportion of tertiary industry in Jiangxi province is still low (see Fig. 5). The tertiary industry is difficult to support the county economy development. Secondly, the county service industry in Jiangxi province is concentrated in the traditional industries such as transportation, warehousing and retail. Information, tourism, management consulting and other modern services are less. Homogenization of the traditional service industry is serious; the economic driving force is limited.

	The value-added of primary industry	The value-added of second industry	The value-added of tertiary industry	Industrial Structure
Nanchang county	83.60	276.20	199.60	14.9: 49.4: 35.7
Fengcheng city	57.74	200.11	112.63	15.6: 54.0: 30.4
Changsha county	71.30	782.20	247.10	6.5: 71.1: 22.4
Jiangyin city	54.40	1520.90	1178.70	2.0: 55.2: 42.8
Jiangxi province	1683.70	8388.30	5636.60	10.7: 53.4: 35.9
China	58332.00	271392.00	306739.00	9.2: 42.6: 48.2

Fig. 5. Three industrial structure in some areas in 2014 (unit: Billion yuan %).

*D. Lack the Sense of Cooperation, Imperfect Linkage Mechanism*

On the one hand, Jiangxi province is located in the inland, the thought tends to be conservative, and people lack cooperative consciousness. Some counties in Jiangxi province had to develop the photovoltaic industry and copper metal processing industry, but the lack of cooperation among the counties, the industry structure tends to be identical, extension of inter-county industrial chain cannot be achieved. On the other hand, affected by the division of administrative intervals, the county territory economy development pattern is relatively independent, mainly reflected in the lack of cooperation with central city. The radiation effect of the central city is difficult to penetrate into the county. Backward counties cannot make full use of the central city of technology, market information and other quality elements.

*E. A Symbiotic Relationship Is Weak, Ecological Benefit Is Not High*

Under the background of "mass entrepreneurship and innovation", the economy of counties in Jiangxi has made great strides forward. In 2014, the urbanization rate of Jiangxi province reached 50.2%, 80 counties (cities, districts) of fiscal revenue exceeds 600 million yuan, of which, Fengcheng and Xihu district fiscal revenue over 5 billion yuan, Nanchang County amounted to 8 billion 700 million yuan. [5] However, Ecological benefit is not satisfactory. Emissions of industrial pollutants in the province are accounted for a large proportion in 2014. The industrial waste water discharge and sulphur dioxide emissions were 6.49 billion tons and 520 thousand tons respectively, amounted to 31.1% and 96.8% of total emissions respectively.

IV. THE INDUSTRIAL CLUSTER'S PATH OF COUNTY ECONOMIC TRANSFORMATION AND UPGRADING IN JIANGXI PROVINCE

*A. Construct Industrial Agglomeration Areas, Enhance the Competitiveness of the County*

Firstly, it is suggested that improving the construction land management in the county area. According to the County Industrial Development Planning, the government should give priority to ensuring the county industrial agglomeration area of land for construction purposes and considering newly

increased construction land index. Secondly, the functional factors of agglomeration area should be improved. The government could provide basic facilities such as traffic, education, entertainment to change the simple industrial production function. To fill the blank of the industry chain and to improve industry chain functional elements in the agglomeration district, it's necessary to invest in projects. Thirdly, according to the different characteristics of industrial concentration area, the government has different policy to promote the development of the counties in balance, for example, different degree of tax breaks and financial support policy act. At last, to perfect laws, enhance execution of the law, and intensify the degree of government's supervision;

*B. Build a Platform for Gathering Science and Technology Resources, Improve the Quality of Economic Transformation and Development*

Firstly, it's necessary that encourage enterprises and universities, research institutes to cooperate to achieve resource sharing, especially the medium and small high-tech enterprises. Because the medium and small high-tech enterprises play a strategic role in boosting county's technologies and creativity and are the enterprise groups with the greatest innovation and growth potential. Then a market-oriented research and development center of science and technology should be jointly established. The center provides the information on cutting edge of science and technology and results at home and abroad. Secondly, a financial service platform should be set up. Enterprises can effectively access funding from financial institutions for scientific and technological innovation by platform. Additionally, government should pay lots of attention to the development of high-tech enterprises in industry agglomeration areas, not only offer them a variety of good policy about tax, but also increase the financial support to them. Thirdly, county government should continuously strengthen the manufacture-learning-research cooperation to drive the rational flow of human resources. Universities and research institutes have advantages about human resources that can provide personal protection for technology development in industry agglomeration area. Local Institutions of higher leaning should spare no effort to support the development of local economy and society with talents and intelligence. At last, coordination agency and management institutions should be established so that enterprises strengthen the communication between each other and achieve information sharing. Introduced laws ensure the platform's effective operation in the industrial concentration area in Jiangxi province. The platform's long-term goal is to keep watch risk, strengthens administration, standard order, defends fairness, improves beneficial result, and promotes development via gathering science and technology resources

*C. Promote the Development of Tertiary Industry Agglomeration, Optimize the Structure of the County Economy*

First of all, the agglomeration of productive services has a strong capacity that supports the development of the other industry. Therefore, promote logistics, business marketing, consulting and financial services is necessary. Strengthen and

expand strategic new industries such as creative industries and design industries. For example, pay special attention to the modern centralizing area like the Ganzhou red culture creative industries. Government need to promote further opening in such service sectors as logistics, finance, business, medical services and education, and accelerate the development of the service industry, thereby promoting the development of service industry agglomeration. Secondly, the consume service enterprises that should be clustered and enlarged in county, for example, the construction of tourism industrial park. The development of tourism industry in Jiangxi Province is richly endowed with natural resources, humanistic and distributive conditions. The county government introduced policies to develop rural tourism agglomeration district, especially rural tourism industry, and thus change the urban-rural dual structure. It is an important prerequisite for the tourism industry in counties to have a correct direction. Finally, relying on the third batch of provincial modern service industry agglomeration area, the speed of well-known trademark and famous trademark determination in this agglomeration area need to be accelerated and promote the service industry agglomeration area's brand. The construction of the culture system of tourism brand in service industry agglomeration is the trend of tourism development and really important.

*D. Promote Cooperation and Common Development between Each Industrial Agglomeration Area, Accomplish Common Economic Transition*

On the one hand, there is no doubt to deepen "introducing" strategies. Jiangxi province government revitalizes the county economy by preferential policy of attracting business and investment. Attract the similar enterprise agglomeration, and thus strengthen and optimize the industry agglomeration area. At the same time, attract upstream and downstream enterprises form a cluster edge, establish a diversified agglomeration area, and thus realize the extension of industry chain. On the other hand, we must adhere to the "going out". The local government should flee from of the framework of the county administrative region and take the initiative to integrate into the central city. By absorbing the central cities' production factors, the county competitive strength would be promoted. At the same time, each county combined with their own advantages and implement differentiation strategy, to form a rational division of labor and orderly competition, and with the cooperation and synergy of a characteristic industrial agglomeration area. By both "bringing in" and "going out", counties in Jiangxi should actively participate in economic and technological cooperation and competition and open wider to the outside world. And, industrial agglomeration areas will be greatly improved having learnt from the advanced technology and rich experience and gradually mature to immature steering.

*E. Construct Ecological Industrial Cluster, Build Strong County of Green Economy*

Firstly, local government should fully utilize the natural resources to build modern ecological agriculture agglomeration area, and focus on sustainable development. Constructing leisure fishing and picking district, what is the

benefit to extend the ecological agriculture industry chain Surrounding the specialty agricultural products and agricultural chain, farmers Professional Cooperatives should be established to support the modern ecological agriculture agglomeration area [6]. Secondly, develop ecological industry especially construction Eco-Industrial Park, which base on green food-processing industry, energy-saving industry. Annual comprehensive assessment of ecological industrial park construction should be published to provide incentives for Ecological Demonstration Zone. Government need elect the circular economy demonstration enterprise at regular intervals in the industrial park and provide some incentives .Thirdly, as the important concourse for ecotourism to be accomplished, ecotourism district are the destinations for ecotourism. New town and old town create a common ecological service industry demonstration area. With red culture, folk culture, ecological culture as the background, the old city are constructed as the new pattern of eco-tourism; To carry out the center construction projects such as trade group, the new city is to become a eco city zone that marked by Modern Commerce. Economic and technological cooperation and ecological environment are closely linked and should support each other.

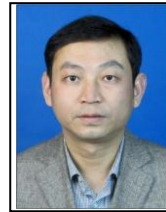
#### REFERENCES

- [1] China County Economic Network, "Interpretation of the County Economy in Jiangxi," August 2008.
- [2] China Economic Net, "Industrial cluster has been developed in Jiangxi to promote the upgrading of the park and explore the reform of major departments," July 2014.
- [3] People's network, "The development road of Industrial Park in Suichuan county," June 2014.
- [4] County Economy Network, "China county economic development report in 2015," 2015.
- [5] People's network, "Government Work Report of Jiangxi Province in 2015," February 2015.
- [6] Central Plains Economic Net, "The development of agricultural industry agglomeration," October 2012.



**Xingqi Wu** was born in 1992. She is a postgraduate from the Finance Academy, Jiangxi Normal University, China. She received a bachelor's degree in accounting in 2014. She is mainly engaged in regional economic research. She is now studying in Jiangxi Normal University for master's degree.

Miss Wu won the silver award in Internet business competition.



**Yunping Chen** was born in 1971. He is the dean of School of Finance, Jiangxi Normal University. Prof. Chen is mainly engaged in industrial development and regional innovation, economic of the symbiosis relationship research.

Prof. Chen had published over 30 papers and 2 monographs and sponsored one item of National Natural Science Foundation of China. For example, he punished Exploratory analysis on the influence factors of Regional Green Competitiveness on Macroeconomic Research in 2012.

Prof. Chen won the outstanding achievements of Social Sciences in Jiangxi Province and the outstanding achievements of the University of Jiangxi.



**Xiaoyong Huang** was born in 1977. Prof. Huang is mainly engaged in economics of the symbiosis relationship, green-economics, regional economic research.

He is Professor in School of Finance, Jiangxi Normal University. He had published over 30 papers, which were 13 pieces of CSSCI income, more than 10 papers in the national core journals, and 4 papers in proceedings of the international symposium. Prof. Huang won the third prize in Sixth World Cup Challenge Cup Design Competition and Jiangxi excellent award guidance teacher in The tenth "Challenge Cup" Jiangxi province university student extracurricular academic science and technology work competition.