

Research on the Motivation Mechanism and Promotion Path of Resource-based City Industry Transformation and Upgrading

-- Taking Tongling City, China as an Example

Yifan Ding^{1,*}, Yunfei Ma¹, Pengyu Wu¹, Shilong Sun²

¹Anhui University of Finance and Economics, School of International Economics and Trade, Anhui Bengbu 233030, China

²East China Jiaotong University, School of Civil Engineering and Architecture, Jiangxi Nanchang, 330013, China

*dyf617520@163.com

Abstract

Resource-based cities originate from excessive development and dependence on resources. However, due to the limited resources, Resource-based cities will inevitably face development bottlenecks. Therefore, transformation and upgrading and seeking new development power is the only way for Resource-based cities. This article takes the Resource-based city --Tongling as an example. Based on the perspective of supply-side reform, it analyzes the obstacles encountered by Tongling in the transformation process and explores Tongling The city will develop new paths and new driving forces in the future, and put forward development proposals such as opening up the tertiary industry development model, attracting and cultivating innovative talents, opening up multiple industrial chains, improving people's livelihood issues, and creating new growth poles.

Keywords

Resource-based City; Tongling City; Transformation; New Path.

1. Introduction

Resource-based cities, as my country's important energy strategic guarantee base, are an important strategic support for the sustained and healthy development of my country's economy. Resource-based cities refer to cities that take the mining and processing of natural resources such as minerals and forests in the region as their leading industries. They have provided important means of production for the country for a long time, and have made great contributions to my country's economic development. However, as my country's Resource-based cities develop, utilize and over-rely on their own resources, the gradual depletion of natural resources has brought urban development into a bottleneck, and along with changes in market supply and demand and economic cycles, resource prices fluctuate sharply, causing most Resource-based cities have increasingly severe economic structure problems, single industries, and environmental pollution. The sustainable development of cities has been severely hampered, and transformation is urgent. In 2013, my country launched the (National Resource-based City Sustainable Development Plan (2013-2020))(hereinafter referred to as the "Plan"). The "Plan" identified 262 Resource-based cities for the first time and clarified the development direction and transformation of these cities. Task, and is expected to basically solve the problem of the transformation and development of Resource-based cities after 2020[1].Nowadays, a topic of widespread concern in China is how to fight the final battle at the decisive moment of the transformation of Resource-based cities, thoroughly solve the various social development drawbacks of Resource-based cities, and accelerate the adjustment of

industrial structure, so as to promote the successful transformation and upgrading of cities. Therefore, this article selects the key Resource-based city --Tongling, China, to investigate the problems encountered during its transformation, explore the dynamic mechanism of its transformation and upgrading, and analyze its new upgrade path has important practical significance.

The rest of the article is arranged as follows: The second part describes the main characteristics of the development of China's Resource-based cities; the third part selects the main research object of this article --Tongling City, and introduces the development status of Tongling City and the main problems encountered; the fourth part analyzes Tongling City In the future development of new paths and new impetus, and put forward relevant constructive opinions; the fifth part is a summary of this article.

2. Development Characteristics of Resource-based Cities in My Country

The problem of hindering the development of Resource-based cities in China has a long history. Since the 2013 "Plan" was put forward, there has been a nationwide upsurge in the transformation of Resource-based cities and seeking new development paths. China's Resource-based cities have the following characteristics:

(1) Product limitations

Resource-based cities use non-renewable resources as their main production targets. Although they can obtain huge development benefits based on their own advantages in the short term, due to the limited resources, urban development will eventually become a bottleneck, and Resource-based enterprises in the region will also move toward Die out.

(2) The endogenous motivation is not strong

China has a large number of Resource-based cities, a wide distribution, and an outstanding status in reality. At present, China's Resource-based cities have produced 52.9 billion tons of raw coal, 5.5 billion tons of crude oil, and 2 billion cubic meters of wood. However, there are still 70 million square meters of shanty towns in these cities that need to be renovated, about 140,000 hectares of subsided areas need to be treated, more than 600,000 unemployed miners, and more than 1.8 million people living under the urban subsistence allowances. Industrial development is still highly dependent on resources. Extractive industries account for more than 20% of secondary industries. Modern manufacturing and high-tech industries are in their infancy, with many historical problems and weak endogenous motivation.

(3) Conflict between the old and the new

Most of China's Resource-based cities have excessive development intensity, low level of comprehensive utilization of resources, serious damage to the ecological environment, low-level repeated construction of high-energy, high-pollution, and high-emission projects, lagging development of replacement industries, resource development, land acquisition and demolition, etc. There are many conflicts in the distribution of benefits, and the pressure to maintain stability is high. The unbalanced and uncoordinated contradiction between resource development, economic and social development, and ecological environment protection is prominent.

(4) Unbalanced industrial development

The industrial composition of Resource-based cities in my country is dominated by the secondary industry, which is even higher than the sum of the primary and tertiary industries. The proportion of the secondary industry in some Resource-based cities may even account for more than half of the GDP.

3. Overview of the Development of Tongling City

Tongling City is located in the south-central area of Anhui Province. It is a national forest city and an excellent tourist city in China. It is a typical Resource-based city "built by copper" in history. Among them, the reserves of natural resources such as copper and gold rank first in Anhui Province. But it is also a city "trapped by copper". Since the reform and opening up, the economic development of Tongling City has been in a relatively good state. With the establishment of the Tongling Yangtze River Highway Bridge, it has further promoted the exchanges between Jianghuai and Southern Anhui, and promoted the further development of Tongling City. However, due to large-scale extensive mining, the development of the city has fallen into a bottleneck, leading to a series of problems such as industry shrinkage in Tongling City, insufficient urban economic aggregate, greater resistance to urbanization development, and lower employee income levels than the national average. .

Since the 1980s, Tongling City has been exploring new methods and new impetus for the transformation of Resource-based cities. By adopting regional cooperation and other methods, it has established the "Wuma Copper" economic circle, the strategic cooperation of Tongchi, the Jianghuai urban agglomeration, and the Wanjiang urban belt. Such urban groups have driven the development of Tongling City itself, and its strong industrial foundation has also played a significant role in promoting development. In 2006, it was listed as the first batch of national circular economy pilot cities and sustainable development experimental areas. In 2009, it was listed as the second batch of national resource-exhausted cities and scientific and technological progress demonstration cities. In 2013, it became the first batch of national circular economy demonstration cities. And the national energy-saving emission reduction fiscal policy comprehensive demonstration city, the overall development of the city has been greatly improved, but Tongling City still faces the following transformation problems:

First, the depletion of resources is serious. Five of the seven large and medium-sized copper mines in Tongling City have been shut down. Since 2001, the annual output of copper ore in the city has been only about 5 million tons, which has fallen far behind. The amount of mining that year. Second, the imbalance of the industrial structure is still serious. In 2019, the secondary industry in Tongling accounted for 46.3%, and the industrial added value accounted for 39% of GDP. Industry is currently the main driving force for the development of Tongling. Third, the ability to innovate and the attractiveness of talents are low. The current environment for absorbing talents in Tongling City is relatively poor, the education resources in the city are also weak, the independent innovation ability of local enterprises is insufficient, and technical talents are in short supply. Choose first- and second-tier cities near Hefei, Nanjing, etc. for development [2]. Fourth, the infrastructure is backward. The urban framework of Tongling City is based on the model of "production before living". The division between industrial and living areas is not obvious, and road traffic conditions are average. Fifth, the sustainable development capability is low. At present, Tongling City has an area of nearly 130 square kilometers and an area of 460 square kilometers of soil erosion caused by geological disasters caused by mining damage. The relatively single production mode makes the economic development momentum single, plus The previous article mentioned that mineral resources are beginning to dry up, and the space for economic development is beginning to shrink.

4. Analysis of the Transformation Path of Tongling City

One of the main reasons for the hindrance of the development of Resource-based cities comes from the overcapacity, insufficient effective supply, and sharp increase in costs in industries such as energy and raw materials. In 2015, my country began to vigorously implement supply-side reforms in various industries, and is committed to adjusting the industrial structure, eliminating excess capacity, and increasing The production rate of all factors maximizes the

efficiency of resource allocation. In 2020, the two sessions further mentioned "how to refine the supply-side reform", which undoubtedly provides a new path for the transformation and upgrading of Resource-based cities. Therefore, the following will be based on the perspective of supply-side reform, and explore the power mechanism and improvement path for Resource-based cities to transform and upgrade through the development trend of supply-side reform.

(1) Reasonably use local advantages to open up a development model for the tertiary industry
As the copper capital with a long history in China, Tongling is also the first city in the south of the Yangtze River that was liberated by the Chinese People's Liberation Army by crossing the river. It has 4A-level scenic spots such as Tianjing Lake and Fushan, and has 543.8 square kilometers of natural wetland. It is the world's first city to use semi-natural water conditions. The base for the conservation of the baiji dolphin, one of the national key protected animals, is also located here. Therefore, Tongling City has good tourism resources, and Tongling City has always focused on industrial tourism and did not pay much attention to cultural tourism. However, with the continuous improvement of the high-speed rail and highway network, it has brought great cultural tourism to Tongling City. opportunity. For example, in terms of red tourism, Tongling City can use the Battle of Crossing the River as a starting point to create multiple red tourism routes combined with local tourism resources such as the site of the Anti-Japanese War and the Red Park; Tongling City can also combine its own bronze culture with the Tongcheng School in the north of the Yangtze River. Create an exotic high-end tourist route[3].

(2) Promote the development of other industries, attract and cultivate innovative talents

With the development of Internet technologies such as blockchain and cloud computing, the importance of the information industry has become more and more important. Tongling City should accelerate the development of the information industry, actively promote the industrialization of new technologies, and accelerate the transformation of the information industry with irrational industrial structure. In addition, Tongling City can imitate the industrial information parks in Lu'an and Bengbu, build entrepreneurial bases such as the Tongling Pioneer Park of the University of Science and Technology of China, and create a relatively loose and free market environment, provide financial support for new information industries, and ease their research and development. For the financing constraints in the investment process, relevant policies can be introduced when appropriate to encourage and support them to carry out innovative activities and help them implement the innovation strategy.

Talents are also one of the important factors of urban development. We must be aware of the mutual promotion of talents and local development. Only when the local infrastructure meets the demand can a large number of talents be considered for staying, and local development cannot do without these talents. s help[4].The local government should vigorously cultivate regional innovative talents. While increasing its own advantages, it should also introduce relevant policies to attract talents to stay and settle in, enhance the demographic dividend, and curb the loss of talents. In addition, it is necessary to further improve the household registration system, guide the migration of urban and rural people, and provide a good working and employment environment for the migrant population.

(3) Improve the efficiency of natural resource extraction and open up multi-industry chain sales

Although the over-exploitation of copper has brought more serious damage to Tongling City, copper resources are still a relatively scarce resource at the moment, which is still one of the important development advantages of Tongling City that cannot be replaced. Therefore, it is particularly important to improve mining technology in the next mining process. Tongling can introduce advanced mining technology and gradually eliminate companies with outdated production capacity or help them to transform and upgrade, providing space for companies with more mining advantages. This will further improve the overall mining efficiency of the industry, increase mining efficiency, and truly transform resource advantages into capital

advantages. In addition, Tongling City should also actively develop multiple industrial chains based on natural resources such as copper, not only be satisfied with primary products, but also create multiple types of products, increase the added value of products, and create more benefits for the industry.

Tongling can also closely follow the five development concepts of "innovation, coordination, green, openness, and sharing" to develop a circular and environmentally friendly green economy. Strengthen the input cost of sewage and waste gas treatment, increase the construction of urban green space, and put the problem of environmental pollution control at an important position in the task of urban construction. Strictly control the source of pollution, improve the pollution prevention mechanism, improve the supervision and management system of ecological civilization, and introduce new environmental protection mechanisms such as carbon credits to create a green and livable city.

(4) Reasonably adopt new development methods to create new growth poles

In 2017, the Lion Head District of Tongling City was approved by the state as a high-tech development zone, which enabled Tongling City to obtain more technical support and embark on the road of industry-city integration. In 2015, Zongyang County was included in Tongling City, resulting in an increase of 1 million people in Tongling City, which brought more room for development to Tongling City. For example, Zongyang County did not form a large-scale industrial cluster, and its industrial development model was relatively large. Single, this provides a new development path for Tongling City, which can appropriately transfer the industrial clusters to the Jiangbei region, promote the development of industrial clusters, transfer heavy industries to sparsely populated urban areas or outside the urban areas, and change the urban layout. Lay a good foundation for urban transformation.

(5) Balance the development speed of the east and west areas and improve the overall strength of the city

The current development of the east and west of Tongling City is relatively uneven, and the development status of the east is far better than that of the west. Tongling City can refer to the "Wuzhen Model", the west learns from the east's development experience, and discards the wrong measures in the east's development process. The government should also increase investment and support in the west of Tongling City, upgrade the infrastructure construction in the west of Tongling City, and reduce the size of the east and the west. The development gap provides a stable economic foundation for the transformation and upgrading of Tongling City.

(6) Pay attention to people's livelihood issues and vigorously improve urban infrastructure

The issue of people's livelihood is the top priority of a city's development, an important foundation for economic development, and an important prerequisite for the successful transformation of a Resource-based city. As one of the Resource-based cities, Tongling City should increase the social security system, improve the level of medical security, and alleviate or even solve the major livelihood problems of the people, which are expensive and expensive. Increase education investment, upgrade urban educational resources, provide good education guarantee for urban students, and establish social worker skill training institutions to enable employees to adapt to the development needs of industrial restructuring and reduce unemployment.

5. Concluding Remarks

Tongling is the earliest copper industrial base established in New China, an important level of the economic sector of Anhui's urban agglomerations along the Yangtze River, and also a vital platform for Anhui's interaction with the Yangtze River Delta. Along with the further development of supply-side reforms, it is also a major strategic opportunity for Tongling City. Improving the supply side, seeking new impetus, and creating a new growth pole is the only

way for Tongling to develop better and faster. However, there are still some problems in the process of implementing the transformation, such as the need for a large amount of capital investment and the introduction of cutting-edge technology during the transformation period, which are unavoidable difficulties during the economic transformation period. Therefore, while recognizing the significance of economic transformation, we cannot ignore the difficulties and obstacles encountered in the process of transformation. Fully subjective initiative, good at learning from other Resource-based cities' successful transformation experience, and focusing on solving outstanding problems in economic transformation, only in this way can we overcome the bottleneck of our own development, provide new momentum for regional economic development, and successfully transform and upgrade.

Acknowledgments

2020 Provincial College Student Innovation and Entrepreneurship Training Project: "Research on the Driving Mechanism and Promotion Path of Resource-based City Industry Transformation and Upgrading-Taking Tongling City as an Example". (Project Number: S2020 10378090).

References

- [1] Yang Hongrui. Research on the transformation and upgrading of the industrial structure of Resource-based cities from the perspective of ecological civilization --Comment on "Resources and Environment Constraints and Regional Industrial Structure Upgrading" [J]. Business Economics Research, 2021(04): 193.
- [2] Dou Ruiyin, Zhang Shengling, Liu Xuemin. Research on the Coupling and Coordination Development of the "Three-Biosystem" of Resource-based Cities in China[J]. Statistics and Decision, 2021, 37(02): 98-102.
- [3] Zhang Chuan, Wang Jian, Lu Lianhong, Xia Jie, Yang Zhanhong, Luo Hong. Thoughts on the energy transition of Resource-based cities --Taking Taiyuan as an example[J]. Journal of Environmental Engineering Technology, 2021, 11(01): 181-186.
- [4] Cui Lei, Lei Xunping. Research on the transformation and development of Resource-based cities under the promotion of urban energy level: Taking Tongling as an example[J]. Journal of Hubei Normal University (Philosophy and Social Sciences Edition), 2020, 40(06): 80-85.