Research on the Industrial Economy and Transformation Strategy of Liudong New Area

Jianhui Tang¹, Tongdi Qin¹* and Rui Chen²

¹Tongji University, 1239 Siping Road, Shanghai, P.R. China
²Tongji Science and Technology Building, 46 Guokang Road, Shanghai, P.R. China

*Corresponding author. Email: qintongdi@163.com

Abstract. Under the new economic situation, China's industrial structure was in a period of adjustment and transformation. This paper investigated the current status of the industrial economy and industrial structure of Liudong New Area, and derived the problems of traditional automobile industry transformation, emerging industry cultivation, and service industry optimization, which need to be resolved. Finally, the development strategies such as the extension of the automobile industry chain, driving related emerging industries, optimizing the ecological environments of funds-talents-technology were proposed, also adopting the "government-Research-Enterprise linkage" working model to promote the industrial transformation of the "trillion-city action plan".

Keywords: industrial economy, transformation strategy, Liuzhou new mode.

1. Introduction

In 2013, Xi Jinping first proposed that China's economy entered a new normal in the Central Economic Work Conference. Currently, China is in a critical period of economic structural adjustment transformation and upgrading[1]. At the beginning of 2018, the Communist Party of China Liuzhou Municipal Committee and the People's Government of the Liuzhou Municipal proposed an action plan to build a “trillion city”, which required Liuzhou to become a trillion industrial city leading Guangxi’s industrial development. Driven by the strategy of the trillion plan, how did Liudong New Area effectively realize industrial transformation?

In recent years, Guangxi University of Science and Technology had carried out investigations and studies on the transformation and upgrading of the Guangxi automobile industry through related industrial parks in Liuzhou and Guilin, and had proposed relevant suggestions such as cultivating or introducing high-tech talents for automobile manufacturing enterprises and increasing investment in scientific research [2]. In addition, Wu Defu and other scholars from Guangxi University proposed that technological innovation drove the transformation and upgrading of Guangxi’s industries [3-4], and Liu Xiang and Xiang Zhe proposed that the industry agglomeration of resource-based and non-resource-based should be used as the driving force to promote the industrial transformation and development of Guangxi Beibu Gulf. [5-7]. However, the research that has been carried out was scattered in the analysis of Guangxi's industrial transformation and failed to comprehensively analyze Liuzhou's industrial structure adjustment and transformation strategy. The purpose of this article was to
systematically sort out the existing industries in Liuzhou City, and comprehensive research and judgment on future industrial development trends, and finally determined systematic strategies and "Liuzhou New Model" working mechanism for the industrial transformation of Liudong New Area.

2. Investigation and analysis of Liuzhou's industrial economy

2.1. The economic development of Liuzhou was stable

According to Liuzhou's economic data for the first half of 2018, Liuzhou's economic development was stable in the first three quarters. The total output value of industries above designated size in Liuzhou was 355.33 billion yuan, and was up 4.4% year on year, also the growth rate was 0.6 percentage points higher than the first half. It showed that industrial production is generally stable, comparing with the growth rate of Liuzhou's GDP in the first three quarters of 2016-2018.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>Cumulative Growth Rate Year-on-Year of GDP (Unit: %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1st quarter</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>2nd quarter</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>3rd quarter</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>4th quarter</td>
<td>7.3</td>
</tr>
<tr>
<td>2017</td>
<td>1st quarter</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>2nd quarter</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>3rd quarter</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>4th quarter</td>
<td>7.1</td>
</tr>
<tr>
<td>2018</td>
<td>1st quarter</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td>2nd quarter</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>3rd quarter</td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>4th quarter</td>
<td>——</td>
</tr>
</tbody>
</table>

In the first three quarters, the three pillar industries of automobile, metallurgy and machinery completed a total industrial output value of 264.52 billion yuan, and was up 3.3% year on year, contributing 55.3% to the growth of the total output value of industrial enterprises above designated size, driving the city's total industrial output value above designated size to increase by 2.4%. Among them, the output value of the automobile industry decreased slightly, accounting for 47.6% of the total industrial output value of industrial enterprises above designated size. The production of vehicles was 1,644,000, which was decreased by 6.9% year on year. The machinery industry continued its strong recovery, accounting for 8.7% of the total industrial output value. The city's total industrial output value above designated size was up by 1.7%. Because the automobile manufacturing industry accounts for a large proportion of the total industrial output value, the decline would have a greater impact on the industrial output value of Liuzhou.
2.2. The industrial development momentum of Liudong new area was good
In 2017, the total industrial output value of Liudong New Area was 85.43 billion yuan (the city was 502.52 billion yuan), which was up 11.9% year on year (the city was up 7.5% year on year). In 2017, the Liudong New Area's strategic emerging industry output value was 11.825 billion yuan, which was up 15% year on year, and which was higher than the growth rate of industrial output value above designated size. In the first three quarters of 2018, the output value of industrial above designated size was 60.713 million yuan (the city was 355.33 billion yuan), which was up 13.22% year on year (the city was up 4.4% year on year).

Comparing the industrial output value data of Liudong New Area in 2017 and the first three quarters of 2018, besides the growth rate of strategic emerging industries and industrial output values above designated size in 2017, the results were as follows: firstly, the industrial development momentum of Liudong New Area was good, and the growth rate was significantly fast. Secondly, the new industry has begun to exert its strength and the growth rate was relatively fast.

3. Results analysis of industrial development

3.1. The automotive industry was dominant, and new industries are gaining momentum
The main results were as follows. First, the automotive industry was unique. In 2017, the annual automobile output value of Liudong New Area was 54.367 billion yuan, contributing 63.66% to the large-scale industries. In the first half of 2018, automobile production increased strongly, and output value still accounted for the most. In the first half of 2018, the output value of regulated auto parts companies was 8.255 billion yuan, which was up 25.92% year on year, and the linkage development effect was outstanding. Third, the rapid of growth and the room for growth were huge. In 2017, the output value of strategic emerging industries in Liudong New Area completed 11.825 billion yuan, which was up 15% year on year and the growth rate outperformed the total industrial output value. Strategic emerging industries dominated by the automotive industry, including new energy vehicles, which had shown good momentum of development, and related projects such as batteries, industrial robots, intelligent transportation, and new-generation information technology had gradually entered the park. However, in general, the proportion of new industries in the total industrial output value was 13.8%, and there was still huge room to improve.

3.2. The growth rate of the productive service industry was strong, and the living support needs were to be improved
The main results were as follows. First, the growth rate of the productive services industry was strong. Among them, with the support of projects such as Guantang Logistics Port in the Liudong New Area,
Liudong Logistics Center of Liuzhou National Highway Transportation Hub, and commercial vehicle railway shipping bases, a "highway-railway-water" multimodal transport logistics system was initially established. Projects such as Liuzhou Garden Expo Park were completed, to accelerate the promotion of the tourism industry. The facilities such as Liuzhou International Convention and Exhibition Center were perfected to develop the new district exhibition economy. Second, the supporting services for the living service industry were relatively weak, and there was much room for improvement. In the first half of 2018, the total retail sales of social consumer goods in the Liudong New Area reached 4.05 billion yuan, which was up 10.6% year on year. The retail industry's limited enterprise income reached 6.732 billion yuan, which was up 21.35% year on year. It could be seen that the growth of the living service industry was fast and was to be new engine of new district economy. However, in general, there was still inadequacy in basic supporting facilities such as housing, business, and schools. They did not form a good living atmosphere, which had less attractive to talents, and there was still much room for improvement.

Figure 2. Statistics of the total industrial output value and the tertiary industry in the Liudong New Area in the first half of 2018.

4. Industrial development strategy and working mechanism of Liudong new area

4.1. Industrial development strategy

Based on the above analysis results, this paper proposed three major strategies of Liudong New Area as follows: "Strengthen Advantage", "Increase Types", and "Optimize Support".

Strengthen advantage, that is, strengthening leading industries. Focus on the transformation and upgrading of the traditional automobile industry, and move to new energy and intelligent development. First, introduce and nurture parts and components companies actively, and increase the local ratio of parts and components. Second, focus on the development of "Industry-University-Research", and improve the core technology of new energy vehicles. Third, enhance and extend the industrial chain comprehensively, to improve the aftermarket service system of the automobile industry, and build a high-end service industry market.

Increase types, that is, increasing the types of strategic emerging industries. Taking the new industries related to automobiles and surrounding areas as the starting point, build an ecological manufacturing industry cluster. Sort out the upstream and downstream industry chains of the automotive industry development, and determine the three strategic emerging industry directions for future development: new materials, high-end equipment manufacturing, electronic information.

Optimize support, that is, improving the service supporting of Liudong New Area, creating an environment with excellent software and hardware for talent introduction and enterprise introduction. The first is to use the "automobile aftermarket + auto culture and innovation" to jointly create the image of "Liuzhou · International Auto City", to promote the international popularity of the park, which is to improve services in all aspects of the auto industry, and to attract trade exchanges at home and abroad. The second is an innovation incubation platform. Create a business incubation base in the Liudong New Area, also encourage innovation and entrepreneurship, and create a good environment for the growth of
small and micro enterprises and double-enterprise enterprises. The third is to make effort to build smart cities and industrial tourism areas to attract funds and talents.

4.2. Working mechanism of liuzhou new model
According to research, Liudong New Area had implemented a "government-enterprise linkage" working mechanism, which was also the "Liuzhou model" for the development of new energy vehicles, that is, the government provided policies and public resource support, and companies provided products and technical support to create a good new ecosystem jointly. However, one of the important constraints to the industrial development of Liudong New Area was lack of high-tech and high-tech talents. This article proposed a new Model of "government-Research- Enterprise", which was based on the existing "Liuzhou Model" working mechanism, adding "Science and technology innovation" factors, forming the "Liudong new model", that is, the government provided policies and public resource support, besides, scientific research institutions provided scientific and technological innovation and product research and development, and enterprises provided technology transformation and product demonstration.

5. Summary
In this paper, by investigating the industrial economy of Liuzhou and Liudong New Area, we proposed to strengthen the automotive leading industries in Liudong New Area innovatively, and to cultivate new strategic emerging industries, and to improve new ways of production and living services, besides, to summarize the Liuzhou new model suitable for promotion, which would build Liudong New Area into a national-level highland of automobile industry development and a demonstration base for
transformation and upgrading, and a new high-end equipment manufacturing industry zone with a deep integration of industrialization and informatization.

In addition, Liudong New Area, as one of the core areas of Liuzhou's "one main, three new" area, should consider the coordinated development of industries in the "one main, three new" area. The development of the Northern ecology New Area and the Liujiang New Area will be different, seizing the advantages of the Liudong New Area, making bigger and stronger, and highlighting the key points. It will also cooperate with the other two new districts to complement each other and promote Liuzhou's economic development to achieve the goal of a trillion city.

References