The Evaluation of Changzhou City's "Prosperous, Wealthy, Beautiful, Highly-civilized" Development

Zhichen Li, Lan Luo

School of Business Administration, Hohai University, Changzhou Jiangsu, 213022, China

Abstract: Changzhou has taken a solid step in building a Prosperous, Wealthy, Beautiful, Highly-civilized journey, but there is still much room for improvement. From the four aspects of economy, people's livelihood, environmental protection and social development, this paper comprehensively evaluates and analyses the "Prosperous", "Wealthy", "Beautiful" and "Highly-civilized" development level of Changzhou from 2000 to 2016, and comprehensively studies the economic, social and ecological development trend of Changzhou since this century. At the same time, some feasible policy suggestions are put forward for the problems encountered in the development process of Changzhou city.

1. Introduction

During his visit to Jiangsu in 2015, General Secretary Xi Jinping pointed out that he hoped that Jiangsu Province would closely revolve around the glorious mission of taking the lead in building a well-off society in an all-round way and basically realizing modernization. We should strive to build a new Jiangsu with strong economy, rich people, beautiful environment and a high degree of social civilization. In 2016, Changzhou City took a solid step in the construction of "Prosperous, Wealth, and Magnificent, Highly-civilized". Its GDP exceeded 577.3 billion yuan, an increase of 8.5% over the previous year, and the per capita disposable income of residents reached 384,400 yuan, an increase of 7.9% over the previous year. However, the gap between Changzhou and Nanjing, Suzhou and other cities in southern Jiangsu is still large. The deep-seated problems such as constant downward economic pressure, little new growth points and serious overcapacity in some industries are still not fundamentally solved. Environmental problems such as haze and water pollution have not been significantly improved. The civilized quality of citizens and the degree of social civilization still needs to be improved. The existence of these problems requires us to study how to correctly evaluate the "Prosperous", "Wealthy", "Beautiful" and "Highly-civilized" of Changzhou to define the development stage of Changzhou and better realize the overall coupling and coordinated development of it.

2. Construction of Evaluation Index System

Combining the methods of literature induction and expert consultation, this paper follows the principles of data availability and comparability to construct an index system to measure "Prosperous", "Wealthy", "Beautiful" and "Highly-civilized". (See Table 1).

3. Research methods and models

3.1 Data Standardization Processing

In order to eliminate the impact of different data orders and dimensions, it is necessary to standardize data processing. If it is a benefit-oriented index, it should be standardized according to formula (1), and if it is a cost-oriented index, it should be treated according to formula (2). In the formula, x_{it} and x'_{it} are the values of specific indicators for evaluating "prosperous" before and after

standardization treatment. i and t are different feature indices and sample units are represented respectively.

$$x'_{it} = \frac{x_{it} - \min\{x_{it}\}}{\max\{x_{it}\} - \min\{x_{it}\}} \tag{1}$$

$$x'_{it} = \frac{\max\{x_{it}\} - x_{it}}{\max\{x_{it}\} - \min\{x_{it}\}} \tag{2}$$

Relevant indicators describing the characteristics of "wealthy", "Beautiful" and "highly-civilized" are equally available.

3.2 Coefficient of Variation Method and Weight Establishment

In this paper, the objective weighting method - coefficient of variation method is selected to determine the weight of each index. Taking the index of "prosperous" as an example, the coefficient of variation and weight of each index are calculated as follows:

$$V_i = \sigma_i / \overline{x_i} \tag{3}$$

$$W_i = V_i / \sum_{i=1}^{n} V_i \tag{4}$$

In the formula, σ_i is the standard deviation for Item i, $\overline{x_i}$ is the average value of index i, V_i is the coefficient of variation for index i. The formula for calculating the "prosperous" evaluation index of each statistical sample is as follows:

$$f(x_t) = \sum_{i=1}^{n} W_i \times x_i \tag{5}$$

4. Assessment of the Current Situation of Changzhou City's "Prosperous", "Wealthy", "Beautiful" and "Highly-civilized" Development

The socioeconomic data involved in this study are all from the Changzhou Statistical Yearbook of relevant years. By substituting the relevant data of Changzhou Statistical Yearbook from 2000 to 2016 into the above model, the evaluation indexes "Prosperous", "Wealthy", "Beautiful" and "Highly-civilized" in 17 years of Changzhou City are calculated (see Table 2).

Table 2 Evaluation index

Years	Prosperous	Wealthy	Beautiful	Highly-civilized
2000	0.021	0.000	0.187	0.142
2001	0.032	0.018	0.151	0.184
2002	0.054	0.043	0.216	0.188
2003	0.090	0.075	0.366	0.190
2004	0.103	0.117	0.510	0.197
2005	0.129	0.163	0.496	0.159
2006	0.191	0.220	0.629	0.187
2007	0.275	0.277	0.737	0.332
2008	0.370	0.340	0.782	0.348
2009	0.420	0.407	0.707	0.371
2010	0.559	0.484	0.702	0.425
2011	0.665	0.570	0.854	0.486
2012	0.745	0.657	0.867	0.637
2013	0.814	0.759	0.902	0.660
2014	0.897	0.811	0.913	0.767
2015	0.937	0.894	0.932	0.870
2016	0.985	1.000	0.947	0.910

4.1 Prosperous

From 2000 to 2005, Changzhou's economy grew slowly. At this stage, the gross output value of industrial enterprises above Changzhou's scale increased by a small margin, while the traditional industrial industries accounted for a large proportion and developed rapidly, but the promotion and development of high-tech industries were limited. Since the Tenth Five-Year Plan, the largest increase in the proportion of manufacturing industry in Changzhou is the traditional ferrous metal smelting and processing industry, which contributes more than 16% of the economic growth of industries above the city's scale[1]. Due to the low value-added rate of traditional industrial economy, the growth of output value mainly depends on the expansion of industrial scale, which leads to its limited contribution to economic growth. From 2006 to 2007, Changzhou's economy showed a rapid growth trend. During this period, the share of high-tech industry in Changzhou has further increased, especially the rapid growth of the equipment manufacturing industry. The output of the new growth point of the industrial economy has exceeded expectations, making the quality of economic operation better than in previous years[2]. From 2008 to 2009, the economic growth rate declined significantly. Especially since the second half of 2008, due to the impact of the international financial crisis, the use of foreign capital in Changzhou has been severely tested, and economic growth has slowed down significantly. From 2010 to 2015, Changzhou's economy showed a relatively sTable and rapid growth trend. Generally speaking, Changzhou's supply-side reform has become increasingly effective and has gradually entered a new normal state of economic development.

4.2 Wealthy

Since the Tenth Five-Year Plan, especially after the global financial crisis broke out in 2008, the Changzhou Municipal Committee and Municipal Government have intensified efforts to implement and implement the national policy of stimulating consumption and stimulating domestic demand in an all-round way, which has greatly improved people's livelihood and promoted the development of consumer goods market [3]. At the same time, the income level of urban and rural residents has increased steadily and maintained a good momentum of growth, but the growth rate of rural residents' income is slightly faster than that of urban residents. However, between 2000 and 2016, the annual per capita disposable income of urban and rural residents increased by 10.51% and 11.11% respectively, which is much lower than the average annual growth rate of 13.1% of the per capita GDP of Changzhou City in the same period, resulting in the relative weakening of the purchasing power of the residents and the relative insufficiency of consumer demand, which is not conducive to the rapid growth of the economy driven by consumption growth. At the same time, the income gap between urban and rural residents in Changzhou has a trend of further expansion. As the income gap between urban and rural residents in Changzhou continues to widen, it will further reduce the trend of consumption and consumption growth of the whole society. Thereby affecting the sTable economic growth.

4.3 Beautiful

From 2000 to 2016, the overall environmental improvement in Changzhou showed an upward trend. At the beginning of this century, with the rapid development of township enterprises in Changzhou, especially the expanding scale of industrial industries such as equipment manufacturing industry, large quantities of industrial wastewater, waste gas and solid waste are discharged, and the environmental supervision and protection awareness of relevant departments is not strong, which has caused serious damage to the local ecological environment. During 2008-2010, due to the obvious warming of the real estate market in Changzhou and the good expectations of real estate consumption, many real estate developers in and outside Changzhou have to open up new housing sources to meet the market demand. But the construction site has also further increased the discharge of solid waste in the urban area, making the comprehensive utilization rate of industrial solid waste in Changzhou city drop sharply from 98.55% in 2008 to 94.9% in 2010, which has brought serious harm to the environment. On the whole, Changzhou's better economic foundation enables it to have relatively sufficient financial investment in environmental protection and improvement of people's living

environment. Therefore, the overall situation of Changzhou's environment is showing a better and better improvement trend.

4.4 Highly-civilized

With the continuous development of the national economy, the importance of the degree of social civilization of residents has become increasingly prominent. According to the analysis of the data, the number of visitors to Changzhou Museum and the total collection of Changzhou Museum increased rapidly from 2000 to 2016, reflecting the continuous improvement of public service level and equalization in Changzhou. The proportion of Changzhou's cultural, educational and health expenditure in the city's general public budget expenditure stabilized at a high level of 25% during this period, which intuitively reflects the importance Changzhou government attaches to the city's cultural, educational and health undertakings. Generally speaking, the degree of social civilization is consistent with the level of urban residents'living affluence. While the level of Changzhou residents' living affluence is constantly improving, the overall level of social civilization is also increasing.

5. Conclusion

Based on the data of the Statistical Yearbook of Changzhou City from 2000 to 2016, this paper evaluates the development level of Changzhou's strong, prosperous, beautiful and high level and its coordinated development status by using the method of coefficient of variation, and comprehensively studies the development trend of Changzhou's economy, society and ecology since this century. The study finds that the comprehensive development level of "Prosperous", "Wealthy", "Beautiful" and "Highly-civilized" in Changzhou City is consistent with the commonly used development assessment indicators such as regional gross domestic product, but it is not the same. In terms of economy, Changzhou's economy has developed steadily, the effect of supply-side reform has become increasingly prominent, and it has gradually entered the new normal state of economic development. However, in the process of economic development, Changzhou is more vulnerable to the impact of fluctuations in the international financial market, and its ability to withstand risks is poor; On the issue of people's livelihood, the prosperity of Changzhou residents showed a steady growth trend from 2000 to 2016, and the per capita income and expenditure of urban and rural residents were significantly improved. However, with the development of economy, the absolute income gap between urban and rural residents is expanding, which will further reduce the trend of consumption and consumption growth of the whole society, and then affect the sTable economic growth. These differences closely related to people's living standards must be highly valued; From the point of view of environmental protection, environmental deterioration has occurred in Changzhou in a part of the time, but its better economic foundation enables it to have relatively sufficient financial investment in environmental protection, so the overall environmental situation of Changzhou is showing a better and better improvement trend; The degree of social civilization in Changzhou is basically consistent with its economic development. By comparing Changzhou with other cities in Jiangsu Province, although the level of economic development in Changzhou is relatively high, the evaluation index of social civilization in Changzhou is slightly lower than that in Zhenjiang, Xuzhou and other places at the same time[4], so the development of social civilization in Changzhou is slightly behind the economic development. Based on this, some suggestions are put forward, such as strengthening industrial transformation and upgrading, adhering to low-carbon development, speeding up the upgrading of import and export trade structure, improving the ability to resist international financial risks, optimizing the income distribution structure of urban and rural residents, enhancing the overall consumption tendency of society, and adhering to the concept of ecological priority and green development, with a view to further improving the construction level of Changzhou City.

References

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Table 1. Evaluation Index System

First level index	Second level index
Prosperous	Per capita GDP
	The proportion of tertiary industry in regional GDP
	Completion of fixed assets investment in the whole society
	Budgetary Revenue of General Public Finance
	Total Import and Export Amount of Foreign Trade
	Gross Industrial Output above Scale
Wealthy	Per capita disposable income of urban permanent residents
	Per Capita Consumption Expenditure of urban permanent residents
	Per capita disposable income of rural permanent residents
	Per Capita Consumption Expenditure of rural permanent residents
	Average Wages of Employees in Urban Non-Private Units in the City
	Year-end balance of local and foreign currency deposits in financial institutions
Beautiful	Green coverage area
	Per capita park green area
	The proportion of days with air pollution index less than 100 in the whole year
	Harmless disposal capacity of garbage
	Comprehensive Utilization Rate of Industrial Solid Waste
	Total COD Discharge from Industrial Wastewater
Highly-civilized	Patent Authorization Quantity of the Whole Society
	Number of students in general institutions of higher learning
	Number of Museum Visitors
	Total Library Collection
	The proportion of education, culture and entertainment expenditure to total consumption expenditure of residents in the city
	Number of Domestic Notarized Documents