



Research of Choosing and Developing the Leading Regional Service Industry

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Abstract

This paper initially constructed a theoretical analysis framework of choosing the leading service industry on the basis of results of the relevant domestic and foreign theories. The paper takes Chongqing as a case to determine its pillar service industry by the factor analysis method. From the factors of system safeguard, development orientation and platform building etc, we put forward countermeasures and proposals for cultivating the leading industry based on qualitative analysis on choosing pillar industry in Chongqing.

Key words: Factor analysis method; Evaluation index system; Pillar industry

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INTRODUCTION

For the accurate definition of service industry, there are various opinions in the academia. However, most definitions are derived from different organizations because of the statistics demand, and the service industry is defined as a series of specific activities. In this paper, according to the availability of statistical

data and the research demand, with reference to the international and domestic classification standard of industrial departments, we define the service industry as a gathering of various economic activity which include water conservancy, environment and public facilities management, social security and social welfare, technical services and geological activity, health, culture, sports and entertainment, computer service and software, lease and business service industry, scientific research, education, storage and transportation, postal service, information transmission, the financial industry and real estate industry and so on. However, no matter what definition we take, the development level and speed have become important symbols of economic and social modernization. This paper takes Chongqing as a survey region and tries to establish the leading industry choosing framework based on the reality of Chongqing service industry development, choosing leading industry of Chongqing which suits for the development of modern service industry, and putting forward feasible policy suggestions for the industry development.

1. THE STANDARD AND INDICATOR SYSTEM CONSTRUCTION FOR CHOOSING THE PILLAR SERVICE INDUSTRY

1.1 Choosing Standard of Pillar Industry

Since the reform and opening up domestic, scholars become more and more intend to research in choosing criterion about pillar industry. However, most choosing criteria are based on the standpoints from foreign economists, trying to complement it with Chinese national conditions. Among them, the relatively comprehensive one was "three benchmark theories" which put forward by Zhou Zhenhua. That is, the growth potential benchmark, flexible shortage substitution benchmark and bottleneck

effect benchmark. Guan Aiping proposed the “Six benchmark theory”, that is, sustainable development benchmark, market benchmark or demand benchmark, efficiency benchmark, technological progress benchmark, industrial linkage benchmark and competitive advantage benchmark. For the specific standard for choosing pillar industry, combined with actual industry development in Chongqing, we can describe roughly from the following five aspects: First, the capability of fully utilizing the natural resources, and the potential of its product market were great, market expansion ability can promote the continuous development of the regional economic. Second, relatively high economic benefits. Third, there is relatively strong industrial correlation. Fourth, there is benefit for placement of labor force. Fifth, there are more mature product technology than other industries, at the same time with strong ability to absorb new and high technology.

1.2 Construction of the Indicator System for Choosing Pillar Service Industry

According to the strategic planning of historical task to comprehensively build a well-off society, combined with the characteristics of the pillar industry and the specific situation of socioeconomic development, this paper build a indicator system of choosing pillar industry scientifically from the five aspects:

First, the size of the market, the broad market demand are the key factors deciding whether an industry development is stable and rapid, which include industrial

contribution rate of production value, flexible demand and income and increasing ratio. Second, the industrial correlation: pillar industry must has strong extension effect promoting the development upstream and downstream industries through the point to area spread of industrial chain. In this paper, we divide the industrial correlation into influence coefficient and sense degree coefficient. Third, industrial comparative advantage: tax from pillar industry is the main source of local fiscal revenue, and also is material guarantee of other industries. This paper divides the indicator of industrial comparative advantage into comparative productivity coefficient and comparative interest rate coefficient. Fourth, industrial technology development, which is important force to promote regional economic development. In this paper, its corresponding index is industrial technology development contribution. Lastly, social employment: during the development of the pillar industry, we can not only focus on the economic benefits of the one-sided pursuit, consideration should be given to social benefit. In this paper, we take comprehensive employment coefficient to indicate employment standards during choosing pillar industry.

This paper will make detailed analysis on the main service industries in Chongqing reference to the benchmarks and indicators mentioned above, in order to make a reference for choosing pillar service industry among Chongqing service industries in the future, as shown in the Table 1 below:

Table 1
Construction of Indicator System for Choosing Pillar Industry

Benchmark level	Specific index	Index symbol	Explain
Industry market scale	Industrial output contribution value	X1	In a certain period, the proportion of one industry’s output accounts for the national GDP.
	Income elastic demand	X2	The ratio of demand increase rate to national income per capita under that other conditions remain unchanged according to the comparable price.
Industrial correlativeness degree	Sensitivity coefficient	X3	When the national economic sectors adding a unit, one industry’s demand sensitive due to it.
	Influence coefficient	X4	When the national department add a unit eventually use, the effect of production demand affected degree to National economic sectors due to it.
Industrial comparative advantage	Comparative productivity coefficient	X5	The ratio of total factor productivity of a certain industry to the total factor productivity of all industries.
	Comparative profit and tax rate coefficient	X6	The ratio of tax rate of a certain industry to the tax rate of all industries.
Industrial technology development	Contribution rate of industrial technology development	X7	Industrial technology development is the important power to promote the regional economic development.
Social employment	Comprehensive employment coefficient	X8	The development of the pillar industry can not only focus on the pursuit of economic efficiency, consideration should be given to social benefit.

2. CHOOSING OF PILLAR SERVICE INDUSTRY IN CHONGQING

In this paper, the relevant index and data in the evaluation indicator system during choosing the pillar industry are from “The Chongqing statistic yearbook” (2008-2010), and industrial department configuration is based on “The China input-output table” (2009). In this paper

we considered 14 industries; processing data after standardization are listed in Table 2. The factor analysis steps include: use SPSS15.0 for data standardization, calculate the correlation matrix eigenvalues and eigenvectors, select principle factor according to the factor contribution, construct factor scoring model and achieve the comprehensive ranking for all samples.

Table 2
Standard Value of Service Industry in Chongqing

Industry name	X1	X2	X3	X4	X5	X6	X7	X8
Financial industry	0.0677	2.6945	2.6907	0.0003	0.0022	1.7485	11782.2	0.0678
Retail establishments	0.0227	2.3924	4.8869	0.0306	0.0179	1.1488	9115.7	0.0226
Road transportation	0.0436	1.8375	4.9304	0.0219	0.0179	0.819	8172.6	0.0413
Education career	0.0557	1.7723	4.8069	0.0274	0.0316	1.0814	5798.1	0.0553
Real estate industry	0.0267	1.0843	5.3827	0.1037	0.0876	0.8936	1459.3	0.0265
IT services Industry	0.0595	1.8322	5.9582	0.0905	0.0490	1.6032	1690.4	0.0591
Catering industry	0.0062	0.7060	4.5098	0.2402	0.0720	0.4804	458.3	0.0061
Health industry	0.0466	1.2937	5.6761	0.1896	0.0789	1.4328	653.22	0.0464
Research industry	0.0303	1.1352	5.4012	0.2117	0.0843	1.3508	885.8	0.0385
Tourist industry	0.0426	0.9493	4.1656	0.3034	0.0653	1.4149	546.9	0.0427
Insurance industry	0.0406	0.8992	4.1814	0.2522	0.0779	0.5572	712.8	0.0404
Railway transportation	0.0371	1.1311	4.4746	0.2156	0.0809	0.7674	970.4	0.0379
Science and technology service industry	0.0177	0.7047	4.6638	0.3936	0.1086	0.7954	463.7	0.0177
Air transportation industry	0.0677	2.6945	3.4582	0.0003	0.0022	1.7485	8788.2	0.0679

2.1 Characteristic Value and Contribution Rate of R

At first, we collect corresponding numerical data of eight specific analysis indicators in the 14 service industries in Chongqing at 2009, and then construct the correlation coefficient matrix R and get the eigenvalue and eigenvector by using the mathematical method. In this paper the contribution rate of 3 principle factors' cumulative variance is 87.541%, which is greater than 80%. It can be concluded that the three principle factors reflect the most information of the original variables, which can be used to evaluate the comprehensive indicator, the reliability of evaluation is 87.541%.

2.2 Calculation and Sorting of Comprehensive Score

In order to get a comprehensive indicator which can reflect development level of the 14 service industries in Chongqing, we use the contribution rate of weight of three principle factors to calculate the comprehensive score of the development level of the 14 service industries in 2009. As we can see from the table 3, the higher score means the higher comprehensive development degree. The score greater than 0 means that the service level is above average, otherwise, the service level is below average.

Table 3
Scores and Ranks for the 14 Service Industries in Chongqing

Industry name	Score	Rank	Industry name	Score	Rank
Financial industry	95.26	1	Health industry	46.71	8
Retail establishments	87.51	2	Research industry	37.45	9
Road transportation	76.36	3	Tourist industry	36.12	10
Education career	64.12	4	Insurance industry	33.77	11
Real estate industry	55.29	5	Railway transportation	30.30	12
IT services Industry	50.11	6	Science and technology service industry	29.71	13
Catering industry	48.99	7	Air transportation industry	28.04	14

3. CHOOSING OF PILLAR SERVICE INDUSTRY IN CHONGQING

We calculate the comprehensive score and ranking of services industries in Chongqing, then choose pillar industry according to the ranking, for example, industries of financial, retail establishments, road transportation, education career and real estate lie in the top five of the comprehensive indicator. In principle, we should choose these five industries as pillar service industry. But in view of the particularity of the service industry, we should give full consideration to the different characteristics of the choosing. First, general theory divided service industry into productive service and public service. Second, public service should ensure its orderly development. Therefore, when we take profit regional service industry as development guidance, public services should be taken as key industries in government plans. So, the ranking of Chongqing service industry could be adjusted as follows: financial industry, retail establishments industry, education career industry, road transportation industry, and real estate industry. The five secondary important industries are IT services Industry, catering industry, health industry, research industry and tourist industry respectively. Under the background of industrial integration and innovation, we integrated all the 14 industries mentioned above. Therefore, we suggest the pillar service industries which Chongqing should be focus are: the modern financial industry, modern business trade service industry which mainly focus on wholesale and retail trade services, modern logistics industry which primarily focus on road transport and water transport, modern science and technology information service industry which mainly focus on information transmission, software and professional technology and science industry, modern tourism which is constituted by metropolitan tourism and leisure sightseeing tourism.

4. SUGGESTIONS AND COUNTERMEASURES FOR IMPROVING SERVICE INDUSTRY IN CHONGQIN

In view of basic situations of Chongqing's industry development, to support the development idea and layout in Chongqing based on the proposed train of thought for industry development, this paper puts forward the following countermeasures: First of all, release the development guidance catalogue for the regional modern service industries, and instruct the rapid and healthy development in related regional industries according to the selection of the pillar industries and the industry layout, and form the modern service industry cluster as soon as possible. Second, speed up the industrialization process as industry is an important aspect which is indispensable to support the development of modern service industry, therefore, we must strengthen regional industrial layout and rapid development. Third, speed up the urbanization process, promote the acceleration of urban construction, create a good city environment and city roads, energy, municipal administration, public information infrastructure, improve the level of people's income, all the above mentioned activities will create demand support and guarantee for the development of regional modern service industries. Fourth, speed up the opening of the service areas, at the same time, actively introduce funds and projects, draw lessons from outside the excellent experience, introduce advanced technology services, standards, and operation and management mode of well-known enterprises, to promote the formation of the service industry with comparative advantages. Fifth, enhance the construction of talent projects. Due to the lack of high-end talents for the development of modern service industry, we have to strengthen and improve the talent introduction mechanism while vigorously mining

school talent in specific area, and to cultivate local talent, and pay special attention to the in-service education and again-obtain-employment education. Sixth, establish the leading enterprises in all service industries and give strong support in policy. We should cultivate a number of large scale and competitive backbone enterprises which can drive the service industry's management to step forward to be large scale, brand and network among the key pillar industries.

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