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Study on Economic Carrying Capacity of Industries Transfer from the Coastal areas to the Central region in China based on Employment Change Forecast：the Comparative Analysis of the Three Coastal Provinces[¯]

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Abstract: Nowadays, industry transfer from the coastal areas to the central region and the west areas has become an essential measure for our national adjusting of industrial layout. Because the central region has a superior location advantage of undertaking east and opening west, it becomes key areas for undertaking industries. Therefore, whether the economic carrying capacity of the central region can adapt to this large-scale industrial transfer will be the key to seize the opportunity. According to the experience of international industrial transfer, large-scale industrial transfer is bound to bring about inevitably rapid increase in employment, so the article tries to use the three industrial employment data of the three central region provinces (Anhui, Jiangxi and Hunan) and the three coastal provinces (Guangdong, Jiangsu, Zhejiang) from 1978 to 2010, and then constructs the ARIMA model to forecast the employment of three industries from 2011 to 2015. Through comparatively analyzing prediction of employment changes of the central and the coastal provinces in the next few years, it will resolve some problems such as the economic carrying capacity of the central region undertaking the coastal industrial transfer, and three conclusions have been pointed out: 1) taking the coastal economic carrying capacity as a benchmark, the economic carrying capacity of the central region has not been saturated; 2)viewing the prediction of employment changes of the coastal and central region, the coastal industrial transfer has not formed in scale trend in the next few years; 3) from the terms of the changes of the future growth of the three industries, the undeveloped secondary industry is the bottleneck factor in restricting the improvement of economic carrying capacity for undertaking the coastal industrial transfer, and the low proportion of the third industry in the coastal areas is the viscosity factor in restricting the transfer of industries to the central region.

Key Words: the central region; industry transfer; economic carrying capability; ARIMA model

1 Introduction

In September 2006, the Ministry of Commerce of China started the project “Ten Thousands of Businesses West in” to guide coastal processing trade enterprises gradually to the central region and west land, and this project became an important national strategy. Later, in September 2010, the State Council promulgated the clause “Guidance on Guiding Coastal Industries to the Central and Western Regions.” By implementing this important measure, coastal industrial transfer likes wave of surging, forming the fourth international industrial transfer mainstream, and the central region with ideal location for east and west, is bound to become the bridgehead and hinterland for undertaking industrial transfer. Under the background of this full swing

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industrial transfer, whether the economic carrying capacity of the central region can adapt to this large-scale industrial transfer will be the key to seize the opportunity. Economic carrying capacity is from the concept of regional carrying capacity, and Han-ying Mao (2001) pointed that, under the condition of ensuring resources of rational exploitation and the ecological environment of virtuous cycle, regional carrying capacity referred to the capacity of resources and environment carrying the population, and carrying the corresponding economic and social total amount at different scales in a certain period of time. And it included a double meaning of "quantity" type (the absolute value concepts such as population, economic scale) and "ability" type (the relative value concepts such as developmental ability, supportive ability). On the base of this concept and in the premise of the current technology level, production conditions, and ensuring virtuous circle ecological environment, economic carrying capacity was the regional economic resources total amount that supported the survival and development of the population within this space, the embodiment of which was the number of the employment population absorbed by this region in a given period of economic activities (Zhi-wei Guo *etal.* 2008). Therefore, economic carrying capacity is the carrying capacity of jobs, this is to say no jobs no true carrying capacity. In view of this, this paper will choose the employment data as an evaluation of the economic carrying capacity, at the same time, economic carrying capacity is a dynamic and relative concept. So "the economic carrying capacity of the central region undertaking the coastal industrial transfer" is the concept of the economic carrying capacity of the central region relatively to the coastal areas, and it means that it is difficult to reflect the economic carrying capacity of the central region for undertaking the coastal industrial transfer only by measuring and calculating their own economic carrying capacity. Therefore, through the method of comparative analysis, this article will choose employment data of transferred-out (the three coastal provinces) and transferred-in (the central three provinces) to forecast the economic carrying capacity of the coastal areas and the central region, and it will reflect some problems such as economic carrying capacity of the central region for undertaking the coastal industrial transfer from the prediction of employment changes of the central and the coastal provinces. And the basic idea was as Hou-kai Wei (2003) pointed that industrial transfer was bound to bring about changes in employment, and for transferred-out districts, the roll-out of some kind of industry will reduce jobs in this industry and the number of the employment will decline, forcing the transferred-out districts to turn to another industry and bringing more jobs; on the contrary, for transferred-in districts, certain industrial transfer will increase employment opportunities in this industry, and increase the number of employment so that the proportion of the other industries are relatively lower. Actually, the previous industrial transfer will bring changes in regional employment, for example, the industry of western developed countries are gradually transferred to China in the 1980s, bringing a sharp increase of industry employment of the coastal areas, while contributing western countries to the shrinking manufacturing and the transition of a service economy. Thence, the actual performance of employment variation of this kind of industrial transfer in this coastal industrial transfer should be: most data and

studies show, the coastal industrial transfer concentrates in the second industry, so the second industrial transfer will cause the second industrial employment decreased or growth rate lowed, forcing the coastal industry to change, upgrade and develop as the service economy, bringing three times increase in the employment or growth rate.While it is contrary for central undertaking areas. Therefore it can reflect problems such as trend, scale, and ability of the central region undertaking the coastal industrial transfer by predicting change tendency of the future total employment, second industry employment and the third industry employment number in the central region and the coastal areas.

As for the method of assessing the economic carrying capacity, researches mainly focus on two aspects of "ability" and "quantity", which more on "ability" type, relatively less on "quantity" type, and the reason is that economic carrying capacity is a dynamic concept and it is difficult to get the absolute value by the direct quantity method. Specifically speaking, firstly, the evaluation researches of "ability" type focus on designing evaluation index system, using comprehensive index evaluation methods such as principal component analysis, grey prediction, analytic hierarchy process to obtain the scores of ability. So far, there are some scholars have designed all kinds of evaluation index system to study on carrying capacity of industrial transfer. For example, Bao-wei Zhan (2006) studied on the building of carrying capacity by designing the evaluation index system of carrying capacity, and this index system was evaluated by expert scoring; Tao Ma(2008) built regional industry capacity of undertaking industrial transfer from six aspects of cost factors, market potential, investment policy environment, industrial supporting ability, technology research and developmental level, and he used the principal component analysis to give a comprehensive evaluation and comparison for various regional industry capacity of undertaking industrial transfer in the country; Fan Yang (2010) took comprehensive consideration of two aspects such as evaluating the transferred-in districts from the need of transferred-out side and choosing the industrial transfer that can been undertaken from the need of transferred-in side, and he selected industrial cost margin, average wage and so on these 16 indicators and used principal component analysis method to measure and evaluate industrial carrying capacity of the central and western regions, and also gave some corresponding policies and suggestions; You-jin Liu，Yan-fei Xiao (2011) used Hyter location-in model to build the economic competitiveness evaluation index system of the central region undertaking the coastal industrial transfer, pointing the provinces like Anhui and Hunan have strong competitiveness; An Yan (2012) studied on evaluation of comprehensive carrying capacity for undertaking industrial transfer in the northern areas of Anhui province, and constructed the index system including six aspects of fundamental carrying conditions, economic developmental level, industrial structure and level of development, the degree of openness and cooperation, technological innovation capability, market attractive capability, and he used grey relation prediction method to make an evaluation. Secondly, the "quantity" type is mainly to select time-series data, and use ARIMA model to predict economic carrying scale and carrying population, and it reflects the size of the economic carrying capacity by

numerical size. For example, on the aspect of economic carrying scale prediction, Zhi Xiao (2008), Peng Hua (2010) used ARIMA model or combination forecasting models (such as PSO-PLS)that build on the base of ARIMA model to forecast economic carrying scale of some provinces in China, especially Jun Yuan (2007) particularly tested the predicted effects between ARIMA model and other predictive models(such as SETAR model), and the result showed that two models are satisfying, and illustrated that ARIMA model to predict the economic carrying scale is feasible, and it had characteristics of simple, practical, high prediction accuracy for short-term forecast; on the aspect of economic carrying the prediction of optimum population, the most typical example was Zhi-wei Guo etal.(2008) who established ARIMA model of three industries' employment of Beijing in the period of 1978-2006, and who forecasted its economic carrying population in the period of 2007-2010, then he took economic carrying the quantity of the optimum population as a benchmark and got the result that Beijing's economic carrying had been in overload status before the year of 2010. Therefore, this article chooses the ARIMA model and selects three industries' employment data of the central region and coastal areas in the period of 1978-2010, then tries to use others' evaluated method to study on economic carrying employment population of the central region, at the same time takes the scale of economic carrying employment population in coastal areas as a benchmark to obtain the data of economic carrying employment population of the central region undertaking the coastal industrial transfer and reflects the problem of economic carrying capacity of the central region undertaking the coastal industrial transfer. Apparently, it has compared strong practical and theoretical significance for it can offer some suggestions to enhance economic carrying capacity of the central region and promote industrial transfer of the coastal areas. In order to facilitate comparative analysis, this paper firstly selects the third industry's employment data from three central provinces (Anhui, Jiangxi, and Hunan) which can undertake industrial transfers most easily because of their location advantage of nearing coastal provinces, and three typical coastal industrial transfer provinces (Guangdong, Jiangsu, Zhejiang). Then, ARIMA time series model is established to predict each province's employment data. Lastly, by analyzing both central and coastal provinces' employment population trends, the question of central region's economy carrying capacity is discussed.

2 ARIMA model selection and data sources

2.1 Model selection

ARIMA model called the autoregressive integrated moving average model, is a high-precision time series of short-term prediction method and its basic idea is: the sequence of data that is formed by prediction target following the lapse of time is regarded as a random sequence, using a mathematical model to approximately

describe this sequence, and for non-stationary time series, first, use a number of differential to make it stationary sequence, again express it as the moving average combination of the previous value of autoregressive and white noise. Through the analysis of the mathematical model, a more fundamental understanding of the structure and characteristics of the time series and the minimum variance sense optimal prediction can been reached. Expressed mathematically as follows:

$$y_t = \alpha_0 + \sum_{i=1}^{p} \alpha_i y_{t-i} + \sum_{i=0}^{q} \beta_i \varepsilon_{t-i}$$

If the lag order of the average part and the autoregressive part were p, q, then the model is called ARIMA (p, q). If q = 0, this process is called autoregressive process AR (p); if p = 0, this process is the moving average MA (q). In the ARIMA model, allowing the p, q are unlimited. Expressed using Lag operator as：

$\alpha(L)y_t = \beta(L)\varepsilon_t$, and $\alpha(L) = 1 - \sum_{j=1}^{p} \alpha_j L^j, \quad \beta(L) = 1 - \sum_{j=0}^{q} \beta_j L^j$

If the root of $\alpha(z) = 0$ is outside the unit circle, then the process is smooth; if the process is smooth, there is an equivalent $MA(\infty)$.

In the process of $y_t = \sum_{j=0}^{\infty} c_j \varepsilon_{t-j}, \quad c_0 = 1$; if the root of $\beta(z) = 0$ is outside the unit circle of $|z| = 1$ (usually called as a reversible condition), then there is an equivalent $AR(\infty)$ process of $y_t = \sum_{j=1}^{\infty} d_j y_{t-j} + \varepsilon_t$.

This shows that a stationary ARIMA process can approximate higher order MA process. If the process meets to the reversibility of this process, it can approximate a higher order AR process.

2.2 Variables and data sources

Take the first, second and third industry's employment of these three central region provinces and three coastal provinces in a period of 1978-2010 as our data. X refers to the employment sequence of the first industry, Y shows the second industry, and Z represents the third industry. In order to eliminate the volatility of the data, we taking its natural logarithm, respectively expressed as LX, LY, LZ. The original data in model is from the calendar Statistical Yearbook.

3. ARIMA model-based data processing

3.1 Stationarity test and model identification

By Eviews6.0, analysis the sequence number of each correlation and partial autocorrelation table of three industries employment of the central and coastal parts. And through analyzing, Autocorrelation and partial autocorrelation coefficients of first, second, third industrial employment sequence of the central provinces and three coastal provinces are soon fall on the random interval, explaining all sequences are stationary, so it is better to be predicted. The basis of provincial model selection is in Table 1.

Table 1 the three industries ARIMA model selection of the six provinces

Industry	Province	Model selection	Value of AIC	Value of SC	Coefficient of determination R2	Value of MAPE
First industry	Guangdong	（2,1,0）	9.191456	9.335438	0.464879	1.45
	Jiangsu	（1,1,2）	12.37947	12.66494	0.557145	2.45
	Zhejiang	（1,1,2）	9.752762	9.943077	0.619191	4.00
	Anhui	（0,1,2）	9.999192	10.14064	0.458884	1.33
	Jiangxi	（1,1,1）	9.299463	9.442200	0.602635	1.49
	Hunan	（0,1,2）	10.18768	10.32913	0.475308	0.27
Second Industry	Guangdong	（1,1,0）	11.44562	11.54078	0.255589	0.94
	Jiangsu	（3,1,2）	9.938806	10.22914	0.721653	1.01
	Zhejiang	（3,1,2）	11.00206	11.29239	0.358857	0.97
	Anhui	（1,1,0）	9.268935	9.364093	0.113488	1.65
	Jiangxi	（4,1,5）	9.493409	9.980959	0.560709	3.65
	Hunan	（1,1,1）	9.627020	9.769756	0.101095	0.65
Third industry	Guangdong	（1,1,3）	10.31153	10.54942	0.697908	2.71
	Jiangsu	（1,1,0）	8.603715	8.698872	0.300273	2.04
	Zhejiang	（1,1,1）	9.677441	9.820177	0.186930	1.73
	Anhui	（1,1,1）	9.313163	9.455899	0.598618	1.25
	Jiangxi	（0,2,3）	9.306044	9.496359	0.637373	2.14
	Hunan	（5,1,4）	11.28815	11.77901	0.300246	2.25

Note: the value of MAPE that means absolute percentage error, and its expression: MAPE= (∑| (At-Ft)/At|)/n t=1…n (At: actual value, Ft: predictive value). Generally believing, the value of MAPE below 10 means higher prediction accuracy. The three industries of each province predict that table MAPE values are less than 10, can be considered the difference between the actual and predicted values not large, and through the test the appropriateness of the model shows that the test prediction accuracy is also high, so it can been determined that these above models can be predicted.

3.2 Model results with parametric tests

In order to test the effect of the model prediction, it will leave 2008-2010 data as the reference object of the evaluation of forecast accuracy, adjust the sample period of model to the period of 1978-2007, and make use of eviews 6.0 software to build model and make prediction. Results show in Table 2.

Table 2 Test predictive value of employment of three industries in each province2008-2010

	Fist industry		Second industry		Third industry	
	Actual value	Predicted value	Actual value	Predicted value	Actual value	Predicted value
（Guangdong）2008	1599.3	1587.6	2163.4	2171.7	1790.9	1748.9
2009	1584.9	1587.3	2211.7	2235.2	1855.7	1836.2
2010	1531.7	1585.1	2266.6	2297.8	1954.0	1861.2
（Jiangsu）2008	1179.9	1157.3	1889.8	1916.6	1631.2	1646.3
2009	1120.2	1090.9	1942.6	1949.4	1663.7	1698.9
2010	1060.3	1030.1	1997.0	1971.7	1697.4	1750.1
（Zhejiang）2008	670.2	649.1	1660.0	1687.6	1156.3	1176.1
2009	658.0	610.9	1726.1	1745.6	1208.0	1223.6
2010	581.9	571.9	1810.4	1812.9	1243.8	1271.4
（Anhui）2008	1592.8	1582.4	968.7	946.6	1354.5	1335.1
2009	1566.1	1548.3	996.0	978.5	1425.9	1394.3
2010	1583.6	1548.6	1016.5	1007.0	1449.9	1451.4
（Jiangxi）2008	900.1	891.0	675.0	669.1	829.4	838.2
2009	892.6	880.6	710.1	681.3	842.5	861.8
2010	888.6	869.8	741.1	696.2	869.1	895.9
（Hunan）2008	1720.4	1708.9	875.8	872.9	1313.8	1339.3
2009	1693.1	1695.7	896.6	904.6	1345.6	1374.3
2010	1690.0	1689.7	915.4	908.6	1377.3	1414.1

The three industries of each province prediction in table2 shows that MAPE values are less than 10, can be considered the difference between the actual and predicted values is not large, and through the test the appropriateness of the model shows that the test prediction accuracy is also high, so we can determine the above models can be predicted.

3.3 forecast results

Using the model to predict the employment of three industries in three central provinces and the three coastal provinces 2011-2015, results are shown in Table 3.

Table 3 Test predictive value of employment of three industries in each province2011-2015

	Total Employment		First industry		Second industry		Third industry	
	Hunan	Guangdong	Hunan	Guangdong	Hunan	Guangdong	Hunan	Guangdong

2011	4016.6	5805.1	1667.4	1489.5	934.3	2324.2	1414.9	1991.4
2012	4067.7	5884.7	1658.7	1473.9	953.3	2383.2	1455.7	2027.6
2013	4119.4	5924.8	1651.5	1476.0	972.3	2442.9	1495.6	2005.9
2014	4175.9	6034.2	1644.2	1480.9	991.2	2502.9	1540.5	2050.4
2015	4231.5	6147.8	1637.0	1480.4	1010.2	2563.1	1584.3	2104.3
	Anhui	Jiangsu	Anhui	Jiangsu	Anhui	Jiangsu	Anhui	Jiangsu
2011	4121.2	4749.2	1592.7	993.2	1040.9	2016.9	1487.6	1739.1
2012	4193.3	4740.9	1599.3	918.9	1066.8	2037.6	1527.2	1784.4
2013	4262.6	4722.6	1600.9	843.0	1093.3	2048.5	1568.4	1831.1
2014	4333.3	4710.5	1602.6	766.4	1119.9	2065.6	1610.8	1878.5
2015	4405.3	4700.2	1604.3	689.9	1146.7	2084.1	1654.3	1926.2
	Jiangxi	Zhejiang	Jiangxi	Zhejiang	Jiangxi	Zhejiang	Jiangxi	Zhejiang
2011	2530.2	3679.8	879.6	513.3	756.4	1877.0	894.2	1289.5
2012	2544.3	3717.9	870.2	458.1	750.3	1925.2	923.8	1334.6
2013	2586.9	3761.2	860.2	402.8	774.5	1979.1	952.2	1379.3
2014	2616.5	3809.2	850.0	347.5	785.6	2038.2	980.9	1423.5
2015	2646.9	3848.8	839.5	292.1	797.3	2089.4	1010.1	1467.3

3.4 Evaluation on the scale of potential economic carrying population of the central region undertaking the coastal industrial transfer from the comparative perspective

Based on the employment population carrying scale of the coastal provinces, and then minus the employment population carrying scale of the central provinces, we can roughly get the potential employment population carrying scale of the three central provinces undertaking the coastal industrial transfer, just as the table 4 shows.

Table 4 the annual growth rate of employment of each provinces in the period of 2010-2015

	Hunan	Guangdong	Anhui	Jiangsu	Jiangxi	Zhejiang
Annual growth rate of total employment（%）	2.67	4.14	2.99	0.91	1.92	3.1
Annual growth rate of first industry （%）	-1.43	0.66	-2.47	-4.06	-0.62	-6.81
Annual growth rate of second industry（%）	3.3	4.8	4.95	0.93	3.3	3.62
Annual growth rate of third industry （%）	6.44	5.95	7.37	3.44	1.61	6.21

4. Conclusions and Suggestions

From the data of the above analysis, the following conclusions can be drawn.

(1) Taking the coastal economic carrying population scale as a benchmark, there is some considerable improvement room for the economic carrying capacity of the central region. From the table 4, it can be seen that there is a big gap in total employment population between the central region and the coastal areas, but the gap is decreasing. For instance, the three central provinces have 36.116 million employment population less than the three coastal provinces in 2012, in 2015 34.131 million less. So it can be drawn that the central region has a considerable improvement room comparing with the coastal economic carrying capacity, and the central region will become one of the fastest employment growth areas. The difference is more significant when deep into the three industries. In practical terms, when compared with the coastal areas, employment carrying population of the first industry is in the overloading state, and this illustrates there are more rural surplus labor of the central regions can be transferred when compared with the coastal "Shortage", so the central region have a large labor-intensive industrial carrying advantage; the second industry is in extreme saturation, and it explains that the second industry of the central regions is relatively weak, restricting enhancing economic carrying capacity, but it has a considerable developmental room; the third industry is also in saturation, but the gap is far less than employment carrying population of the second industry. The central region has a resource advantage over the coastal areas, so if economic carrying capacity of the central region can be promoted, it will have the full industrial development space to undertake coastal transfer industry. In the table 3, there is a significant difference among inter-provinces from the angel of the total employment carrying population scale of the central region and the coastal areas. Compared with Guangdong province, the three central provinces employment carrying scale is small, showing there is a wide gap between the three central provinces and Guangdong, and in the next few years, this gap will increase; compared with Jiangsu province, the total employment population of Anhui province and Hunan province will be over it, but Jiangxi province still has a large gap; the employment carrying scale of the three central provinces still has a gap compared with Zhejiang province, but the gap is less than Guangdong province and it shows decreasing trend in the next few years. So it can be seen that Anhui province and Hunan province are the important provinces for the future employment growth of the three central provinces; Guangdong province is the fastest province for future employment growth in the three coastal provinces, but future employment growth of Jiangsu province and Zhejiang province will slow down. All of this predicts that Anhui province and Hunan province will be important transferred-in provinces, but Zhejiang and Jiangsu are important transferred-out provinces. In a word, the central region still has enough industrial space for undertaking coastal industrial transfer, and the coastal employment population will increase fast in the next few years, so the central government and the regional government should make positive policies to guide the coastal industry to transfer in the central region.

(2) From the employment change tendency of the coastal areas and the central region, the coastal industrial transfer trend has not formed a large enough scale yet.

From the point of the reason of industrial transfer, the coastal industrial transfer is attributed to its nearly saturated state of economic carrying capability in the second industry. Its second industry's carrying capability is at the edge of overloading. Therefore, this kind of industrial transfer is bound to bring the second industry's reducing in coastal region and its increasing in central region. However, from the actual and predicted employment data, as it is shown in the table 4, the difference of the second industry's employment population between coastal areas and central regions will still be larger and larger, which means that the inflection point in coastal industrial transfer has not formed yet, the scale is still not large enough. From the provincial comparisons, viewing the table 5, the growth scale and annual growth rate of employment of the central region and the coastal areas, the increment and annual growth rate of employment population of the first industry in the three central provinces are larger than the coastal provinces, illustrating the first industry's employment proportion of coastal provinces is a relatively low, and industrial structure is superior to the central provinces; the second industry's employment population in the coastal provinces are higher than in the central provinces, specially the Jiangsu province whose total employment population are less than Anhui and Hunan provinces is typical, and whose the second industry's employment population is far higher than Anhui province and Hunan province, illustrating the employment of the coastal provinces that focuses on the second industry in the current stage, and in the following years, the number of coastal second industry's employment growth will be greater than the central provinces, so the coastal industrial transfer will focus on the second industry, which means the scale of the coastal industrial transfer has not been formed yet. But from the annual growth rate, Anhui province is far higher than Jiangsu province, which shows that Anhui province mainly undertakes industry so far, and the coastal industrial transfer of the Yangtze River Delta region has begun to take effective results, while the annual growth rate of Guangdong Province's second industry's employment population is still the highest, and this data of its neighbor provinces'(Hunan and Jiangxi Province) is low, which means that coastal industrial transfer of the Pearl River Delta region is not ideal. This conclusion is consistent with field investigation. As for the third industry, the increment of employment of the coastal province is same with the central province, but the annul growth rate of the central provinces is even over the coastal provinces such as Guangdong province, and Jiangsu province, illustrating the proportion of the third industry in the coastal areas is low, and the speed of growth is relatively slow.

Table 5 the growth scale and annual growth rate of employment of the central region and the coastal areas in the period of 2010-2015 Unit: 10000, %

province	Total		The first industry		The second industry		The third industry	
	Increment	Annual growth rate	Increment	Annual growth rate	Increment	Annual growth rate	Increment	Annual growth rate

Auhui	355.3	1.70	20.7	0.26	130.2	2.44	204.4	2.67
Jiangxi	148.1	1.16	-49.1	-1.13	56.2	1.48	141	3.05
Hunan	248.8	1.22	-53	-0.63	94.8	1.99	207	2.84
Guangdong	395.5	1.34	-51.3	-0.67	296.5	2.49	150.3	1.5
Jiangsu	-54.5	-0.23	-370.4	-8.23	87.1	0.86	228.8	2.56
Zhejiang	212.7	1.14	-289.8	-12.36	279	2.91	223.5	3.36

(3) From the future growth changes of these three industries, the undeveloped secondary industry is the bottleneck factor in restricting the improvement of economic carrying capacity of industry transfer from the coastal areas to the central region, and the low proportion of the tertiary industry in the coastal areas is the viscosity factor in restricting industry transferring to the central region. Giving an eye on the prediction of the future employment changes and taking the year of 2013 as an example, the proportion of second industry's employment is 24.8% in Anhui Province, 22.1% in Hunan Province, 28.8% in Jiangxi Province, but 39.1% in Guangdong Province, 33.8% in Jiangsu Province, 47.2% in Zhejiang Province. It can be seen that the proportion of second industry in central provinces is much lower than that in coastal provinces, showing their second industry's developing ability can't match with that in coastal areas and the undeveloped secondary industry is the bottleneck factor in restricting the improvement of economic carrying capacity of industry transfer from the coastal areas to the central region, to some degree which constraints coastal manufacturing's transfer to central regions. This conclusion is consistent with our field research. Many coastal transferred enterprises say that the ability of industry development and supporting in central region is not very well, which means the second industry's economic carrying capacity of the central region is weak. Therefore, making great efforts to develop advanced manufacturing of the central region and improve the economic carrying capacity to undertake the second industry is gravitational factors to stimulate the transfer of coastal industries to the central region. At the same time, different conclusions can be drawn by viewing the proportion and annual growth rate of the third industry. Taking the year of 2013 as an example, the proportion of third industry's employment population is 37.7% in Anhui Province, 38.3% in Hunan Province, 37.6% in Jiangxi Province, 35.9% in Guangdong Province, 44.3% in Jiangsu Province, 36.7% in Zhejiang Province. Meanwhile, the annual growth rate of third industry in central region (Anhui and Hunan Province) is higher than that in coastal provinces. From the above data, we can get the conclusion that the proportion of third industry in central region is almost similar to coastal region. This conclusion shows that in coastal region, the second industry is still the main body, and the third industry's development is relatively lagging behind, which brings economic transmission and upgrading difficulties. Therefore, coastal region have to retain those manufacturing without cost and competition advantages, in order to avoid deindustrialization, which blocks large-scale industry transfer. So strengthening the coastal service industry and upgrading, enhancing the economic effect of the third industry, are thrust factors to procure the transfer of coastal industries to the central region.

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