

Industrial Agglomeration and Regional Economic Growth

—Analysis of the Threshold Effect Based on Industrial Upgrading

Zhiying Li

Business College, Henan University, Kaifeng, China

Email: lizhiying666@126.com

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Abstract

Based on the data of 30 provinces (cities) in China (except Hong Kong, Macau, Taiwan, Tibet) from 2004 to 2017, using industrial upgrading as the threshold variable, the panel threshold effect model was used to analyze the relationship between industrial agglomeration and regional economic growth. The results show that industrial agglomeration can significantly promote regional economic growth. The impact of industrial agglomeration on economic growth has a threshold effect based on industrial upgrading. When industrial upgrading is within a higher threshold, the effect of industrial agglomeration on economic growth is more obvious. Aiming at the above conclusions, it is necessary to actively promote the upgrading of the industrial structure while promoting the industrial space agglomeration. Make industrial agglomeration and industrial upgrading better play the role of promoting economic growth.

Keywords

Industrial Agglomeration, Industrial Upgrading, Economic Growth

1. Introduction

Industrial agglomeration refers to a process in which the same type of industry is highly concentrated in a specific geographical area, and the capital and factors related to this type of industry continue to flow in the space and gradually converge. With the continuous enrichment of theories related to economic development, the view that industrial agglomeration has gradually become an important driving force for economic growth has been recognized. First of all, industrial agglomeration can promote the realization of division of labor and speciali-

zation. Because division of labor and specialization are important reasons for attracting industrial agglomeration, enterprises in the industrial zone will carry out a clear division of labor, so that the enterprises are closely linked to form an industrial chain, and then this correlation effect once again brings more resources together with the enterprise through the function of market resource allocation. The improvement of the degree of industrial agglomeration not only promotes division of labor and specialization, but also exacerbates competition among enterprises. It will further improve labor productivity, promote high-efficiency and high-quality economic development, transform the mode of economic growth, promote the structural transformation of regional economic development, and make the economy develop in a healthier direction. Secondly, industrial agglomeration can bring economies of scale and external effects to enterprises. Due to increased competition in the process of industrial agglomeration, companies have to increase the scale of production to improve their own competitiveness. Efficiency will also increase, which will bring greater benefits to the enterprise. In addition, the company considers external influences when choosing a development location. Enterprises are more inclined to choose areas with external economies for development in order to obtain the benefits that the areas can bring to them. In addition, the most important thing for industrial agglomeration is to be able to attract more people and labor. This will lead to the agglomeration of other related industries and increase the economic connections between economic entities within the market space. In addition, the industrial gathering causes knowledge and technology spillover, which promotes the level of technological innovation of enterprises in the industrial zone. Technological innovation is the driving force of economic growth, thus promoting the development of regional economy. At present, China's economic development period to some extent depends on improving the degree of industrial agglomeration to promote regional economic development. Therefore, in order to make economic better development, all provinces and cities in China are vigorously developing industrial agglomerations, and improved regional competitiveness through the scale effect of industrial agglomeration and higher productivity. Focus all kinds of high-quality resources in industrial agglomeration areas, focus on the development of advantageous enterprises, and attract more capital and labor and other production factors to better allow industrial agglomeration to play its role and promote regional economic development. Concentrate all kinds of high-quality resources in the industrial cluster area, focus on the development of advantageous enterprises, and attract more capital and labor and other production factors, so as to better let the industrial cluster play its role in promoting regional economic development. However, China's industrial structure is also constantly evolving. Will the transformation of the industrial structure change the impact of industrial agglomeration on economic growth? If so, what is the degree and direction of the impact? Therefore, based on the production function of Cobb Douglas, this paper studies the relationship between industrial agglomeration

meration and economic growth by adding factors such as industrial agglomeration to the basic research framework. And the panel threshold model is established to test whether there is threshold effect in the impact of industrial agglomeration on economic growth.

This article is based on the conjecture that there is a threshold effect based on industrial upgrading between industrial agglomeration and economic growth. First sort out the relevant literature, and then select an empirical model and data according to the research content. Test the stability of the variables and the significance of the threshold variables, and perform panel threshold regression on the data to test the threshold effect of industrial agglomeration and economic growth based on industrial upgrading. Finally, based on the research conclusions, it puts forward policy recommendations to improve the comprehensive competitiveness of industrial areas and promote regional economic growth.

2. Literature Review

Regarding the development of industrial agglomeration theory, Marshall, as a pioneer of neo-classical economics, believed that the reason for forming the “industrial zone” of industrial agglomeration was to obtain external economy. Because after the industry was concentrated together, it was conducive to the realization of knowledge spillovers, the formation of a specialized supplier team, and the sharing of labor and other factor markets, thereby improving efficiency. This view laid the foundation for future research. For the research on the relationship between industrial agglomeration and economic growth, most scholars believed that industrial agglomeration promotes regional economic development through the spillover of knowledge and technology, improving labor productivity, increasing employment opportunities, reducing costs and other reasons. Among them, Hoover believed that the reason why industrial agglomeration can promote economic growth was that the external economy generated by industrial agglomeration would attract more similar enterprises to join the industrial zone, thereby promoting the economic growth of the industrial zone [1]. Economic geography theory believed that industrial agglomeration promoted regional economic growth through the spillover effect of knowledge and technology [2]; Martin *et al.* also believed that the reason why industrial agglomeration promoted regional economic growth was that the industrial area with concentrated production activities was conducive to technological innovation of enterprises and realized technology spillover [3]. Geppert found that the regional economic growth rate above the average level depended on the concentration of important sectors, and verified the role of industrial agglomeration in promoting economic growth [4]. Lin Xiuli *et al.* studied the impact of different types of industrial agglomeration on economic growth in Guangdong and found that although industrial agglomeration had a positive effect on economic growth, different industrial agglomerations had different effects on economic growth [5]. Chen Lu *et al.* studied the relationship between industrial agglomeration and re-

gional economic growth in different periods, and found that with the financial crisis as the turning point, the impact of industrial agglomeration on the economic growth spillover effect of industrial zones changed from positive to negative, and they also found Industrial agglomeration not only promotes economic growth spillovers in industrial areas, but also significantly improves the spillover effects of economic growth in neighboring areas [6]. Lu Fei *et al.* found that industrial agglomeration caused wage premiums, and wage premiums increased labor productivity, thereby promoting economic growth [7]. However, some scholars had put forward different views. Brülhart believed that industrial agglomeration could promote economic growth when the level of economic development was below a critical value, and the effect was no longer significant when the critical value was exceeded [8]. Combes found that the impact of industrial agglomeration on economic growth was not significant and might even hinder its development [9]. From the above conclusions, we can see that the opinions on the impact of industrial agglomeration on economic growth are not consistent. This article re-examines the impact of industrial agglomeration on economic growth, and examines the effect of industrial agglomeration on economic growth from the perspective of industrial upgrading. That is, under the influence of the evolution of industrial structure, will the impact of industrial agglomeration on economic growth change? In order to study whether the relationship between industrial agglomeration and regional economic growth is affected by the evolution of industrial structure. This paper uses the panel threshold model and analyzes the impact of industrial agglomeration on regional economic growth with industry upgrading as the threshold variable.

3. Methodology

3.1. Empirical Model

In order to study the impact of industrial agglomeration on regional economic growth, based on the Cobb Douglas production function, this paper uses the relevant data from 30 provinces (municipalities) in China except Hong Kong, Macao, Taiwan and Tibet from 2004 to 2017 to construct a basic measurement model as follows:

$$\ln \text{avegdp}_{it} = \alpha_0 + \alpha_1 W_{it} + \alpha_2 X_{it} + \mu_{it}$$

The subscript “*i*” represents the province and “*t*” represents the time. $\ln \text{avegdp}$ represents the logarithm of the per capita GDP of each region. W represents the industrial agglomeration (indjj, secjj). X_{it} is the control variable, including the regional fixed capital investment (Infeinvest), patent applications number (Inpatent), labor input (lnhu), regional openness (explper), and government behavior (govper). μ_{it} represents a random error term.

Considering the threshold effect of industrial upgrading, using industrial upgrading as the threshold variable, it is studied whether the impact of industrial agglomeration on economic growth will change during the process of industrial

upgrading. This paper uses the panel threshold model proposed by Hansen (2000) to study the non-linear influence of industrial agglomeration on economic growth. Establish a threshold model with industrial upgrading as the threshold variable:

$$\ln \text{avegdp}_{it} = \alpha_0 + \alpha_1 W_{it} + \alpha_2 X_{it} + \varepsilon_{it}, Z_{it} \leq q$$

$$\ln \text{avegdp}_{it} = \alpha_0 + \alpha_1 W_{it} + \alpha_2 X_{it} + \varepsilon_{it}, Z_{it} > q$$

Among them, α_0 is the individual effect, α_1 is the estimated parameter of the core explanatory variable affected by the threshold variable, α_2 is the estimated parameter of the control variable, ε is the random error term, Z is the threshold variable, and q is the threshold value.

3.2. Variable Selection

Due to the availability of data and the influence of extreme values of variables, data from 30 provinces (cities) except Hong Kong, Macau, Taiwan, and Tibet were selected. The dependent variable in this article is the per capita GDP of the region. This indicator was deflated by the GDP deflator to the actual regional GDP per capita based on 2004. And this indicator removes the population size factor and more truly reflects the level of regional economic development.

The independent variable is industrial agglomeration. This article uses the method of location entropy to calculate the industrial agglomeration indexes “indjj” and “secjj”, among them, $\text{indjj} = \frac{e_{it}/E_t}{y_{it}/Y_t}$, $\text{secjj} = \frac{s_{it}/S_t}{y_{it}/Y_t}$, e_{it} , y_{it} and s_{it} are

the industrial added value, regional GDP, and secondary industry added value of area “ i ” during “ t ” period; E_t , Y_t and S_t are national industrial added value, regional GDP, and added value of secondary industry during period “ t ”.

The threshold variable is industrial upgrading. Including industrial structure rationalization and advanced industrial structure. Industry upgrading is calculated based on the proportion of GDP in each industry. The industrial structure rationalization index $\text{idc} = i_1 + 2i_2 + 3i_3$, i_1 is the proportion of the output value of the primary industry to GDP, i_2 is the proportion of the output value of the secondary industry to GDP, i_3 is the proportion of the output value of the tertiary industry to GDP. The advanced industrial structure is the ratio of the tertiary industry to GDP to the ratio of the secondary industry to GDP, that is, $\text{idh} = i_3/i_2$.

Controlling variables include fixed capital investment, number of patent applications, labor input, regional openness and government behavior. Based on 2004, fixed capital investment is deflated by the fixed capital investment price index. Number of patent applications is the number of patent applications by region. It is an indicator of the level of regional technological development. Labor input is the proportion of regional labor to total population. Regional openness is the proportion of total imports and exports to GDP. Government behavior is expressed as the proportion of regional fiscal expenditure to GDP. The fixed capital investment, labor input, and patent applications are logarithmic. The da-

ta comes from the China Statistical Yearbook, the China Labour Statistical Yearbook, and the provincial statistical yearbooks.

Table 1 shows the descriptive statistics of the variables, showing the observations, averages, variances, minimums, and maximums of the variables.

4. Results

4.1. Stationarity Test

Because the panel data has the properties of cross-section data and time series data. In order to avoid the false regression, we need to perform the stability test on the selected panel data, using LLC, HADRI, and IPS. The test results are shown in **Table 2**. LLC test results showed that all variables except lnhu and idh passed the stationarity test at a significance level of 1%. The HADRI test results showed that all variables rejected the null hypothesis of variable instability at the 1% significance level and passed the stationary test. The IPS test results showed

Table 1. Descriptive statistics of variables.

variable	observations	average	std	min	max
lnavegdp	420	10.0572	0.6139	8.3464	11.4732
indjj	420	0.9414	0.1847	0.3256	1.2122
secjj	420	0.9677	0.1588	0.4447	1.1836
idc	420	2.3063	0.1288	2.0280	2.8013
idh	420	0.9780	0.5295	0.4941	4.2367
lnfeinvest	420	7.6330	0.7886	5.6670	9.1177
lnpatent1	420	9.7274	1.6301	4.8203	13.3500
lnhu	420	-0.5809	0.1163	-0.9695	-0.3257
explper	420	0.3227	0.4015	0.0170	1.8429
govper	420	0.2139	0.0945	0.0768	0.6269

Table 2. Stationarity test.

variable	LLC	HADRI	IPS
lnavegdp	-6.9526 (0.0000)	10.2918 (0.0000)	-1.7889 (0.0368)
indjj	-3.0607 (0.0011)	6.5449 (0.0000)	0.8996 (0.8158)
secjj	-3.8058 (0.0001)	8.9262 (0.0000)	1.2352 (0.8916)
idc	-4.5263 (0.0000)	4.4943 (0.0000)	-3.2159 (0.0007)
idh	-1.1706 (0.1209)	9.6575 (0.0000)	-1.5850 (0.5665)
lnfeinvest	-4.8755 (0.0000)	9.3013 (0.0000)	-2.0778 (0.0189)
lnpatent1	-2.6620 (0.0039)	7.1810 (0.0000)	-0.8995 (0.1842)
lnhu	-0.5650 (0.2860)	8.8897 (0.0000)	-1.5310 (0.0629)
explper	-4.2700 (0.0000)	9.9657 (0.0000)	-4.4346 (0.0000)
gpvper	-2.9478 (0.0016)	8.1805 (0.0000)	-0.0554 (0.4779)

that *idc* and *exp1per* passed the stationary test at a significance level of 1%, *lnavegdp* and *lnfeinvest* passed the stationary test at a significance level of 5%, *secjj*, *idh*, *lnpatent 1*, and *govper* failed the stationarity test. According to the results in **Table 2**, most variables are stable. Due to the difference in the results of the test methods, two of the three methods in this article are stable, the variable is considered stable. Although *idh* does not pass the stability test when using the LLC and IPS methods, the HADRI results indicate that *idh* is stable, so we assume it is stable to test whether it can affect the relationship between industrial agglomeration and economic growth as a threshold variable.

4.2. Significance Test and Threshold Estimation

Because there may be a non-linear relationship between industrial agglomeration and regional economic growth, that is, there may be a threshold effect, this article uses Bootstrap method to repeatedly sample the sample 300 times. The industrial structure upgrading index and advanced industrial structure are used as threshold variables to test the effect of industrial agglomeration on economic growth. The results are shown in **Table 3** and **Table 4**. According to the test results in **Table 3** and **Table 4**, it can be seen that the structure upgrade index passed the significance test of single threshold and double threshold. **Table 3** shows the threshold significance test results when the industrial structure rationalization index is a threshold variable. According to **Table 3**, when *indjj* is the independent variable, the single threshold significance test result has a P

Table 3. Significance test of industrial structure rationalization index threshold.

Independent variable	Threshold number	F statistics	P statistics	Crit10	Crit5	Crit1	Threshold value
Indjj	Single threshold	61.45	0.0033	32.0221	36.5009	47.0178	TH1 2.2880
	Double threshold	55.79	0.0000	25.7068	32.6969	41.4591	TH21 2.2630
							TH22 2.4059
secjj	Single threshold	58.61	0.0067	29.7521	35.5998	47.6283	TH1 2.2870
	Double threshold	60.41	0.0000	26.6037	31.2100	36.4853	TH21 2.2630
							TH22 2.4059

Table 4. Significance test of advanced industrial structure threshold.

Independent variable	Threshold number	F statistics	P statistics	Crit10	Crit5	Crit1	Threshold value
Indjj	Single threshold	81.14	0.0000	24.4414	30.6482	41.2714	TH1 0.9588
	Double threshold	26.92	0.0600	23.5821	29.2388	35.2395	TH21 0.9588
							TH22 0.6292
secjj	Single threshold	82.74	0.0000	24.7741	30.2807	42.1486	TH1 0.9588
	Double threshold	31.97	0.0133	20.1681	23.8757	34.2209	TH21 0.9764
							TH22 0.6292

value of 0.0033, which passed the threshold significance test at the 1% significance level. The double-threshold significance test results had a P value of 0 and passed the significance test at a 1% significance level. When *secjj* is an independent variable, the single threshold significance test has a P value of 0.0067, and passed the threshold significance test at a significance level of 10%. The double-threshold test result had a P value of 0 and passed the significance test at a 1% significance level. **Table 4** shows the threshold significance test results when the advanced industrial structure is threshold variables. According to **Table 4**, it can be seen that when *indjj* is the independent variable, the single threshold significance test result has a P value of 0 and passed the threshold significance test at the 1% significance level. The double-threshold significance test result had a P value of 0.06, which passed the significance test at a significance level of 10%. When *secjj* is an independent variable, the single threshold significance test has a P value of 0 and passes the threshold significance test at a significance level of 10%. The double threshold test result had a P value of 0.0133, which passed the significance test at a 5% significance level. According to the threshold significance test results, it can be seen that both the industrial structure upgrade index and the advanced industrial structure have passed the single threshold and double threshold significance tests. Therefore, the double threshold regression is performed on the models of the industrial structure upgrading index and the advanced industrial structure as threshold variables.

4.3. Threshold Model Estimation Results

First of all, the basic analysis of the regression model is the effect of industrial agglomeration on economic growth when there is no threshold effect. The model is hausman tested. The P value is 0. The null hypothesis of random effects is rejected. Therefore, a fixed effect model is selected for regression. According to the threshold test results, we also need to perform double threshold regression on the model. The regression results are shown in **Table 5**. According to the fixed effect regression results in **Table 5**, it can be seen that both the industrial location entropy and the secondary industry location entropy can promote regional economic growth. This shows that industrial agglomeration can significantly promote economic growth in the region. The high concentration of enterprises with similar economic activities in the same space causes the phenomenon of industrial agglomeration, which promotes the concentration of economic activities in industrial zones, which provides favorable conditions for the formation of large-scale production and services. In this way, it is easier for the enterprises in the industrial zone to form external economies of scale, improve labor productivity, and enhance corporate competitiveness. In addition, industrial agglomeration can better integrate resources, reduce many unnecessary costs caused by long distances between industries, and thereby promote regional economic development.

Judging from the regression results of the threshold model, as the threshold of

Table 5. Fixed effect and regression results of threshold model.

Threshold variable	Fixed effect		Double threshold regression			
			idc	idc	idh	idh
VARIABLES	lnavegdp	lnavegdp	lnavegdp	lnavegdp	lnavegdp	lnavegdp
indjj	0.202*** (0.0625)					
secjj		0.269*** (0.0745)				
lnfeinvest	1.528*** (0.112)	1.542*** (0.111)	1.602*** (0.0989)	1.631*** (0.0980)	1.651*** (0.100)	1.700*** (0.0991)
lnhu	0.473*** (0.0980)	0.464*** (0.0976)	0.479*** (0.0869)	0.462*** (0.0864)	0.571*** (0.0880)	0.534*** (0.0867)
lnpatent1	0.251*** (0.0120)	0.248*** (0.0121)	0.204*** (0.0115)	0.198*** (0.0116)	0.207*** (0.0115)	0.199*** (0.0116)
explper	0.00326 (0.0406)	-0.0141 (0.0416)	0.0378 (0.0383)	0.00757 (0.0387)	0.0226 (0.0365)	-0.0281 (0.0371)
govper	0.126 (0.184)	0.0966 (0.182)	0.247 (0.161)	0.188 (0.159)	0.149 (0.164)	0.0642 (0.161)
0b._cat#c.indjj			0.245*** (0.0551)		0.387*** (0.0584)	
1._cat#c.indjj			0.363*** (0.0567)		0.465*** (0.0618)	
2._cat#c.indjj			0.514*** (0.0628)		0.599*** (0.0676)	
0b._cat#c.secjj				0.338*** (0.0657)		0.526*** (0.0699)
1._cat#c.secjj				0.452*** (0.0671)		0.611*** (0.0739)
2._cat#c.secjj				0.606*** (0.0731)		0.746*** (0.0796)
Constant	-3.995*** (0.774)	-4.129*** (0.769)	-4.253*** (0.681)	-4.503*** (0.675)	-4.724*** (0.691)	-5.158*** (0.684)
Observations	420	420	420	420	420	420
R-squared	0.951	0.951	0.963	0.963	0.962	0.962
Number of id	30	30	30	30	30	30

industrial upgrading increases, the role of industrial agglomeration in promoting regional economic growth is also increasing. When the industrial structure rationalization index is used as the threshold variable, the threshold value is less than 2.2630, between 2.2630 and 2.4059, and greater than 2.4059, the estimate of

industrial location entropy shifted from 0.245 to 0.363 to 0.514, and the secondary industry location entropy also changed from 0.338 to 0.452 and finally reached 0.606. When the advanced industrial structure as the threshold variable, the estimated coefficient of industrial location entropy on regional economic growth is 0.387 when the threshold is less than 0.6292, and the estimated coefficient becomes 0.465 when the threshold is between 0.6292 and 0.9588, and when the threshold is greater than 0.9588, the estimated coefficient increased to 0.599. The secondary industry location entropy's estimated coefficient of regional economic growth also changed the same, from 0.526 to 0.611 and then 0.746. According to the results of the above double threshold regression, it can be seen that when the thresholds of the industrial structure rationalization index and the advanced industrial structure index become greater, the positive impact of the industrial location entropy and the secondary industry location entropy on regional economic growth will increase significantly. This shows that during the process of industrial upgrading, the impact of industrial agglomeration on regional economic growth has gradually increased. Due to the continuous evolution of the industrial structure, the industrial structure has changed to a more reasonable direction. The enterprises included in each industry will be affected at the same time. And if the company has no development potential, it is very likely to be eliminated. Then, the remaining companies in various industries are companies with development potential and bright prospects, including industrial and secondary industries. These high-quality enterprises will also gather together to form an industrial zone and share the labor market because they want to obtain economies of scale and external economies, so that human capital can adapt to the stage of industrial development and develop the greatest role of human capital. The economic individuals in the industrial zone can clearly define the division of labor and realize specialization, reducing unnecessary cost investment. Also due to the high concentration of space between enterprises, transportation costs caused by long distances are avoided. More importantly, industrial agglomeration can form a spillover of knowledge and technology. Through competition, it can significantly promote the technological innovation of enterprises and enhance the overall competitiveness of the industrial zone. In this way, more production factors can be concentrated in the industrial zone to give it an efficiency advantage, thereby promoting the significant growth of the regional economy. Among the controlled variables, investment in fixed assets, investment in human capital, and the number of patent applications all have significant positive effects on regional economic growth, which is consistent with the economic growth theory. Among the controlled variables, fixed capital investment, patent applications number and labor input all have significant positive effects on regional economic growth, which is consistent with the economic growth theory. Regional openness and government behavior have no significant impact on regional economic growth. Probably because China's economic development no longer depends on imports, exports and government behavior, but

rather a relatively free market competition plays a major role.

5. Conclusions and Prospect

Based on data from 30 provinces (cities) in China (excluding Hong Kong, Macau, Taiwan) from 2004 to 2017, this paper uses a panel threshold model to analyze the impact of industrial agglomeration on regional economic growth and draws the following conclusions: industrial agglomeration can significantly promote regional economic development. Using industrial upgrading as a threshold variable to study the threshold effect of industrial agglomeration on economic growth, when industrial upgrading is within different thresholds, the role of industrial agglomeration in promoting regional economic growth is different. When industrial upgrading is within a larger threshold, the role of industrial agglomeration in promoting regional economic growth will be greater. It shows that when the industry is upgraded to a certain degree, industrial agglomeration becomes more important for economic growth.

The shortcomings of this paper are mainly the measurement of industrial agglomeration and industrial upgrading indicators. This article only examines the impact of industrial agglomeration and secondary industry agglomeration on regional economic growth and their threshold effects. The industrial upgrading index selects the industrial structure upgrading index and advanced industrial structure. There are other methods for measuring industrial upgrading. In future research, we can study the impact of other industrial agglomerations on regional economic growth, and test whether there are threshold effects for industrial upgrading measured by other methods.

Based on the above conclusions, the following policy recommendations are put forward: first, in the process of promoting economic growth, industrial agglomeration is an important driving force that cannot be ignored. It is necessary to vigorously build the industrial agglomeration area, give the industrial enterprises in the agglomeration area more policy preferences, build high-standard infrastructure, and attract more advanced industrial enterprises to enter the industrial agglomeration area. Reasonably plan the layout of the cluster area to form a complete industrial chain and reduce unnecessary costs. The management system shall be formulated according to the actual operating conditions to adapt to the specific development of the industrial agglomeration area. In addition, the characteristic industries in the agglomeration area can be developed in a targeted manner. Only with the characteristics can the comprehensive competitiveness of the agglomeration area be improved, and make the industrial agglomeration effect better play its role and advantages. Second, the formation of industrial agglomeration requires not only the free development of the market, but also the regulatory role of the government. It is necessary to actively launch relevant policies and improve the investment environment to attract more capital and labor to the industrial area. At the same time, increase investment in scientific and technological research and development to promote the improve-

ment of the level of scientific and technological innovation in the industrial agglomeration area. Capital and labor input and technological innovation are important driving forces for regional economic growth. Connect them with industrial agglomeration effects, and strive to transform the factor-driven economic growth mode into a total factor productivity-driven economic growth mode, make the regional economic development be full of vitality and competitiveness. Third, while encouraging industrial agglomeration, industrial upgrading is also crucial. In the process of the evolution of the industrial structure to a more reasonable level, the requirements for enterprises will also increase, those with lower competitiveness will be eliminated, and high-quality enterprises will continue to flourish. The agglomeration effect brought by agglomeration of enterprises will more obviously promote regional economic development.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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