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STUDY ON THE EFFECT OF FOREIGN INVESTMENT ON ANHUI'S INDUSTRIAL STRUCTURE OPTIMIZATION

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ABSTRACT

With the deepening implementation of the strategy of the rise of central China, the degree of opening up of Anhui Province has increased year by year. It is of great significance to study the impact of foreign direct investment in the optimization of industrial structure in Anhui Province and how to achieve efficient economic development during the 13th Five-Year Plan period. Using the method of empirical analysis, the time series data from 1997 to 2014 reflects the characteristics of the actual utilization of foreign direct investment and industrial restructuring in Anhui Province. There are significant differences in the contribution of the three industries to the added value of each industry. From the short-term effect, the actual use of foreign direct investment in the secondary industry contributes the most to its added value. From the long-term effect, the actual use of foreign direct investment in the second industry contributes the most to the current added value. Foreign direct investment has promoted the industrial structure of Anhui Province to a certain extent, but it has aggravated the imbalance of the industrial structure at the same time.

Contribution/Originality: The paper's primary contribution is finding that foreign direct investment has promoted the evolution of the industrial proportion of Anhui Province from the first industry dominance to the second industry dominance, and also promoted the upgrading of the industrial structure.

1. FOREWORD

As one of the six provinces in the central region, Anhui Province has been lagging behind the developed coastal provinces in the utilization level of FDI due to the lack of geographical advantages. However, Anhui Province has gradually accelerated the pace of opening up and actively attracted FDI in recent years. In 2016, the total amount of FDI in Anhui Province was 14.77 billion US dollars. Compared with 320 million US dollars in 2000, it has an average annual growth rate of 31.5%. In 2016, the actual utilization of FDI increased by 19.7%, compared with 12.34 billion US dollars in 2014. FDI plays an increasingly important role in the economic and social development of Anhui Province. During the 13th Five-Year Plan period, Anhui Province should consider the actual situation of its economic and social development according to the needs of industrial development under the background of national industry transfer. It should continue to improve the level of FDI utilization、formulate industrial policies suitable for the development of the province and guide FDI to flow to three industries reasonably.

Therefore, the study of the impact of FDI on the industrial development of Anhui Province has a certain reference value and practical significance for promoting the efficient economic development of Anhui Province.

Zhao (2016) found that foreign direct investment has become an important factor to promote the industrial structure upgrading in the open economy. The paper analyzed the current situation of foreign direct investment and industrial structure in Anhui. Zheng (2013) wrote that economy of Anhui maintained a good momentum of development , and optimized the industrial gradually. Luan (2018) analyzed that the impact of foreign trade on the optimization of China' s industrial structure is the first factor to promote economy. The effect of FDI on the optimization of industrial structure is the same. Huang and Zheng (2000) said foreign trade and FDI can promote the transition and upgrading of the area's industrial structure, which suggests that dynamic benefits can be achieved in such a process. Meng-Juan and Cheng-Wen (2016) concluded that in2000-2014,the FDI of Shanxi province electricity, gas and water production supply industry, transportation, manufacturing industry and postal services FDI play a strong role in promoting the industrial structure upgrading in the province. Fang (2003) analyzed the effect of foreign direct investment on the adjustment and the upgrading of industrial structure of Guangdong, and gave some suggestions about the problems we should attend on using FDI. Lu (2016) found out that FDI greatly pushed the upgrading of the industrial structure in such industries as manufacturing industry, industry of supplying electricity, gas and water, transportation industry and postal service during 2005- 2014.

At present, the domestic scholars' research on the impact of FDI on industrial structure optimization is mostly based on the national and regional level. There are few studies on the utilization of FDI and industrial structure development in Anhui Province, and there is no specific research on the three industries. This paper will go deep into each industry to study how FDI affects the industrial structure development in Anhui Province.

2. ANALYSIS OF THE USE OF FOREIGN DIRECT INVESTMENT AND INDUSTRIAL STRUCTURE IN ANHUI

2.1. Analysis of the Use of Foreign Direct Investment in Anhui Province

Since 2010, the annual growth rate of actual utilization of FDI in Anhui Province has been stable at a relatively high level, which is significantly higher than the national growth rate in the same period. During this period, the actual utilization of FDI in Anhui Province increased significantly in the whole country, reaching 10% of the total in 2014 and 2015, and the utilization level of FDI has been significantly improved.

By analyzing the data in Table 1, we can find that the distribution of FDI actually used in Anhui Province among different industries has the following characteristics:

Firstly, the actual use of foreign direct investment in the primary industry accounts for the lowest proportion, far behind the secondary and tertiary industries. After 2010, the proportion of primary industry using FDI has increased, and gradually stabilized at more than 2%. This shows that Anhui Province has increased its efforts to attract foreign investment in primary industry in recent years. The primary industry includes agriculture, forestry, animal husbandry and fishery industries. These industries require a large amount of investment, have a difficult short-term return and have a high investment risk. These factors have led to the low proportion of foreign direct investment into the primary industry.

Secondly, the secondary industry has always been in the leading position in attracting foreign direct investment. The actual utilization of FDI in the secondary industry has remained at about 70% for a long time. Although the proportion of the secondary industry declined considerably in 2014, it is still higher than 50%. In 2016, the proportion of the secondary industry increased to a certain extent.

Thirdly, the proportion of tertiary industry using FDI is relatively stable, but it has increased significantly in the past two years. In 2015 and 2016, the proportion of actual utilization of FDI in the tertiary industry increased significantly, mainly because the real estate industry began to prosper while the financial industry absorbed more FDI and foreign direct investment has begun to flow into the tertiary industry gradually.

Table-1. 1998-2016 distribution of foreign direct investment in three industries in Anhui.

Unit: ten thousand dollars%

Year	First industry		Second industry		Third industry		All
	Actual use of FDI	Proportion	Actual use of FDI	Proportion	Actual use of FDI	Proportion	Actual use of FDI
1998	253	0.58	27372	63.01	15818	36.41	43443
1999	386	1.20	26949	83.61	4895	15.19	32230
2000	223	0.62	34154	94.53	1755	4.86	36132
2001	124	0.39	22640	71.09	9083	28.52	31847
2002	246	0.73	26485	78.66	6941	20.61	33672
2003	432	1.15	27174	72.42	9917	26.43	37523
2004	687	1.76	28171	72.14	10193	26.10	39051
2005	1128	2.06	29851	54.60	23690	43.33	54669
2006	3389	4.92	45752	66.46	19704	28.62	68845
2007	2154	1.55	109595	78.65	27605	19.81	139354
2008	2317	0.77	217992	72.69	79583	26.54	299892
2009	3841	1.10	236033	67.63	109114	31.27	348988
2010	5309	1.37	290350	74.75	92757	23.88	388416
2011	4035	0.80	370462	73.88	126949	25.32	501446
2012	12675	1.91	486573	73.40	163639	24.69	662887
2013	17562	2.03	604018	69.92	242231	28.04	863811
2014	27495	2.57	738786	69.12	302491	28.30	1068772
2015	30535	2.47	635716	51.52	567727	46.01	1233978
2016	26216	1.92	801659	58.86	534070	39.21	1361945

Data source: the annual statistical yearbook of Anhui.

2.2. Analysis of Industrial Structure in Anhui Province

Table-2. 1998-2016 GDP value added ratio of three industries in Anhui and the whole country.

Unit: %.

Year	Anhui			Whole country		
	First industry	Second industry	Third industry	First industry	Second industry	Third industry
1998	31.37	35.31	33.32	17.90	47.10	35.00
1999	29.26	36.20	34.54	17.16	45.80	37.04
2000	27.53	35.92	36.55	16.06	45.36	38.57
2001	25.56	36.41	38.03	14.68	45.54	39.79
2002	23.43	38.65	37.92	13.98	44.79	41.22
2003	22.26	37.99	39.75	13.30	44.45	42.25
2004	19.10	39.13	41.76	12.35	45.62	42.03
2005	19.97	38.76	41.26	12.92	45.90	41.18
2006	18.06	41.98	39.96	11.64	47.02	41.33
2007	16.54	44.35	39.10	10.63	47.56	41.82
2008	16.30	45.80	37.90	10.28	46.86	42.86
2009	16.02	47.44	36.54	10.25	46.93	42.82
2010	14.86	48.75	36.39	9.79	45.88	44.33
2011	13.99	52.08	33.93	9.53	46.40	44.07
2012	13.17	54.31	32.52	9.43	46.40	44.16
2013	12.66	54.64	32.70	9.42	45.27	45.31
2014	11.79	54.03	34.18	9.30	44.01	46.70
2015	11.47	53.13	35.39	9.06	43.10	47.84
2016	11.16	49.75	39.09	8.88	40.93	50.19

Data Source: The annual statistical yearbook of Anhui and national statistical yearbook.

From the data in Table 2, we can see that the three industrial structure evolution in Anhui province has the following characteristics:

Firstly, the industrial structure has been highly developed to a certain extent, and the proportion of primary industry GDP has been decreasing year by year. The ratio of the three industrial structures has changed from 31.37:35.31:33.32 to 11.16:49.75:39.09 in 2016. The proportion of the secondary and tertiary industries has increased significantly, which is in line with the direction of industrial restructuring.

Secondly, the proportion of tertiary industry has not increased significantly, and the overall industrial structure is still lagging behind the national level. The tertiary industry accounted for 33.32% in 1998 and 39.09% in 2016. The overall trend of change is relatively stable. By contrast, the proportion of the three industries in China has grown from 17.9:47.1:35 in 1997 to 8.88:40.93:50.19 in 2016. Since 2013, it has entered a higher level of "321" structure. Although the "321" structure appeared in Anhui Province from 2003 to 2005, the secondary industry regained its dominant position quickly and the proportion of the tertiary industry declined significantly. This is contrary to the general trend of change in China.

At present, the industrial structure of Anhui Province still belongs to the relatively backward "231" model. The proportion of the primary industry has been higher than that in China, while the proportion of the tertiary industry has been lower than that in China at the same period.

3. THE MECHANISM AND EMPIRICAL ANALYSIS OF THE IMPACT OF FDI ON INDUSTRIAL STRUCTURE

3.1. The Mechanism of FDI's Influence on the Optimization of Industrial Structure

Foreign direct investment can bring the host country with sufficient development funds, advanced production, management experience, frontier science and technology. It will promote the production efficiency of other enterprises of host country through the competition among enterprises in the market as well. In essence, FDI affects the resource allocation efficiency and production efficiency of the host country. FDI inflows into each industry will promote the increase of the GDP value added in the industry. The relative change of the three industrial value added is the main indicator to reflect the change of industrial structures. When the contribution of foreign direct investment to the GDP value added in the second industry or the third industry is higher than the first industry, the industrial structure has achieved a certain degree of significance.

Table-3. 1998-2016 actual GDP value added and actual utilization of foreign direct investment in three industries of Anhui province.

Unit: 100 million yuan, ten thousand dollars

Year	Actual GDP value added			Actual utilization of FDI		
	First industry	Second industry	Third industry	First industry	Second industry	Third industry
1998	290.67	99.69	106.08	253	27372	15818
1999	284.00	101.66	109.89	386	26949	4895
2000	277.38	99.45	113.51	223	34154	1755
2001	269.34	98.52	115.12	124	22640	9083
2002	269.11	107.84	116.47	246	26485	6941
2003	269.95	104.55	119.80	432	27174	9917
2004	252.15	106.56	128.08	687	28171	10193
2005	301.36	115.21	139.41	1128	29851	23690
2006	291.64	125.08	135.06	3389	45752	19704
2007	291.28	133.09	132.32	2154	109595	27605
2008	334.03	143.83	133.05	2317	217992	79583
2009	375.26	163.11	139.63	3841	236033	109114
2010	380.52	172.77	144.26	5309	290350	92757
2011	422.02	201.19	150.64	4035	370462	126949
2012	472.19	234.64	163.24	12675	486573	163639
2013	488.61	245.08	170.95	17562	604018	242231
2014	489.77	250.72	184.32	27495	738786	302491
2015	496.66	248.91	191.95	30535	635716	567727
2016	490.85	231.85	206.55	26216	801659	534070

Data Source: the annual statistical yearbook of Anhui and national statistical yearbook.

3.2. Empirical Analysis

This paper analyzes the current situation of Anhui's actual utilization of FDI and changes in its industrial structure. This section will make an empirical analysis of the relationship between these two. Through the empirical

analysis of the three industries, this paper will draw the conclusion that the actual use of FDI in the different industry has an impact on the GDP value-added of this industry.

3.2.1. Index Selection and Data Processing

This paper selects three industrial added value of Anhui province in the past 15 years and studies by the amount of FDI. Use GDP_1、GDP_2、GDP_3 to represent the added value of the primary industry, second industry and third industry respectively. Use FDI_1、FDI_2、FDI_3 to represent the total amount of foreign direct investment in primary industry, second industry and third industry respectively.

From the data in Table 3, we can find the data of actual GDP value added and actual utilization of foreign direct investment in three industries of Anhui province. We notice that the actual GDP value added increased with the growth of actual utilization of foreign direct investment.

At the same time, in order to overcome the non-linear trend of data and eliminate heteroscedasticity, the natural logarithm of the adjusted data is represented by $\ln GDP_1$、$\ln GDP_2$、$\ln GDP_3$、$\ln FDI_1$、$\ln FDI_2$、$\ln FDI_3$.

3.2.2. Model Building

A distribution lag model is established, in which we use logarithm of actual use of the FDI in three industries as the explanatory variable. The logarithm of the actual GDP value added of each industry is interpreted as the explanatory variable, and the structural equations are as follows:

$$\ln(GDP_{it}) = \beta_0 + \beta_1 \ln(FDI_{it}) + \beta_2 \ln(FDI_{i(t-1)}) + \beta_3 \ln(FDI_{i(t-2)}) + \beta_4 \ln(FDI_{i(t-3)}) + \cdots + \mu_{it} \quad (1)$$

Equation 1 is a regression equation about the effect of factors such as actual utilization of foreign capital on GDP of various industries.

Among Equation 1, $\ln(GDP_{it})$ indicates that the logarithm of real GDP of the i (i=1, 2, 3) industry in the t period of Anhui Province. $\ln(FDI_{it})$、$\ln(FDI_{i(t-1)})$、$\ln(FDI_{i(t-2)})$ and so on represent the logarithm of the actual utilization of foreign direct investment of i industry in phase t of Anhui and each lag stage. β_1、β_2、β_3、β_4 and so on represent an influence coefficient of logarithm of the actual GDP of each industry, which is caused by the logarithm of actual use of FDI in t, (t-1), (t-2), and t-3 periods. μ_{it} indicates that the random interference term of industry I in phase t, which is subject to normal distribution.

Assuming that the regression coefficient decreases with β_1's lag period i according to geometric progression:

$$\beta_i = \beta_1 \lambda^{i-1}, 0 < \lambda < 1, i = 1, 2, \cdots \quad (2)$$

Equation 2 is an equation representing the decay of regression coefficient β_i with β_1's lag period i

The KOYCK transformation is carried out in (1) to get the following formula:

$$\ln(GDP_{it}) = \beta_0(1-\lambda) + \beta_1 \ln(FDI_{it}) + \lambda \ln(GDP_{i(t-1)}) + e_{it} \qquad (3)$$

Equation 3 is an equation from the KOYCK transformation of Equation 1

Notice :

$$e_{it} = \mu_{it} - \lambda \mu_{i(t-1)} \qquad (4)$$

Make $\beta^* = \beta_0(1-\lambda)$, thus (3) can be rewritten to:

$$\ln(GDP_{it}) = \beta^* + \beta_1 \ln(FDI_{it}) + \lambda \ln(GDP_{1(t-1)}) + e_{it} \qquad (5)$$

Equation 5 is an equation rewritten from Equation 3

This formula shows β_2、β_3、β_4...not only are related to β_1, but also depend on the change of λ value. λ is the attenuation rate. Because λ is a positive value less than 1, it ensures that β_1 is always bigger than β_2、β_3、β_4 and so on. When the λ value is larger, the attenuation rate of β is slower. It shows that the lag period of explanatory variables has a greater impact on the changes of the explanatory variables β_1.

3.2.3. Analysis of Model Estimation Results

The data of three industries were regressed respectively by data analysis software Stata 11.

Table-4. Model Estimation Results

	First industry Coefficient/t-Statistic	Second industry Coefficient/t-Statistic	Third industry Coefficient/t-Statistic
lnfdi	0.0424**	0.0947***	0.0106
	(2.115)	(2.748)	(0.811)
l.lngdp	0.7292***	0.6424***	0.9641***
	(4.934)	(4.777)	(7.499)
_cons	1.2757*	0.7132**	0.1001
	(1.7626)	(2.3681)	(0.1987)
R-squared	0.9429	0.9800	0.9741
Adjusted R-squared	0.9353	0.9774	0.9707

Notes: ***、**、* indicated that the test of significance level has passed 1%, 5% and 10% respectively.

3.2.3.1. .Analysis of the Results of the First Industry Regression

According to the regression results in Table 4, the regression equation of the primary industry can be obtained as follows:

$$\ln(\hat{GDP}_{1t}) = 1.2757 + 0.0424 \ln(FDI_{1t}) + 0.7292 \ln(GDP_{1(t-1)})$$

The adjusted value of R^2 is 0.9353, indicating that the goodness of fit of the model is great. The regression coefficient of variables $\ln FDI_1$ passes the significance level 5% test. It shows that the second industry's actual use of FDI has little effect on the GDP value added of the first industry. At the same time, the regression coefficient of the GDP value added in the first industry has been tested by a significant level of 1%, with a λ value 0.7292.

It can be seen that $\hat{\beta}_2 = 0.0424 \times 0.7292 = 0.0309$

It can be concluded from (2)that $\hat{\beta}_0 = 4.7109$, $\quad \hat{\beta}_2 = 0.0424 \times 0.7292 = 0.0309$,

$\hat{\beta}_3 = 0.0424 \times (0.7292)^2 = 0.0225$, $\quad \hat{\beta}_4 = 0.0424 \times (0.7292)^3 = 0.0164$

After rewrite, regression equation of the primary industry can be adjusted as follows:

$$\ln(\hat{GDP}_{1t}) = 4.7109 + 0.0424\ln(FDI_{1t}) + 0.0309\ln(FDI_{1(t-1)}) + 0.0225\ln(FDI_{1(t-2)}) + 0.0164\ln(FDI_{1(t-3)}) + L$$

The regression equation shows that the actual use of foreign direct investment in the primary industry of Anhui province increased by 1% in the year i, the GDP of the third industry in Anhui will increase by 0.0424% in this year. GDP of the primary industry of Anhui province is increased by 0.0309% in the year of (i+1). In the year of (i+2), the GDP of the primary industry in Anhui was increased by 0.0309%, and the GDP of the primary industry in Anhui was still increased by 0.0225% in the year of (i+3). This long-term effect has weakened gradually.

3.2.3.2. Analysis of the Results of the Second Industry

According to the regression results in Table 4, the regression equation of the second industry can be obtained as follows:

$$\ln(\hat{GDP}_{2t}) = 0.7132 + 0.0947\ln(FDI_{2t}) + 0.6424\ln(GDP_{2(t-1)})$$

The adjusted value of R^2 is 0.9774, indicating that the goodness of fit of the model is great. The regression coefficient of variables $\ln FDI_2$ pass the significance level 1% test. It shows that the second industry's actual use of FDI has big effect on the GDP value added of the second industry in 99% confidence level. At the same time, the regression coefficient of the GDP value added in the second industry has been tested by a significant level of 1%, with a λ value 0.6424.

Similarly, the regression equation of the second industry can be adjusted as follows:

$$\ln(\hat{GDP}_{2t}) = 1.9944 + 0.0947\ln(FDI_{2t}) + 0.0608\ln(FDI_{2(t-1)}) + 0.0391\ln(FDI_{2(t-2)}) + 0.0251\ln(FDI_{2(t-3)}) + L$$

The regression equation shows that the actual use of foreign direct investment in the second industry of Anhui province increased every 1% in the year i, the GDP of the second industry in Anhui will increase by 0.0947% in this year. GDP of the second industry of Anhui province is increased by 0.0608% in the year of (i+1). In the year of (i+2), the GDP of the second industry in Anhui was increased by 0.0391%, and the GDP of the second industry in Anhui was still increased by 0.0251% in the year of (i+3)…. This long-term effect has gradually weakened.

3.2.3.3. Analysis of the Results of the Third Industry

According to the regression results in Table 4, the regression equation of the third industry can be obtained as follows:

$$\ln(\hat{GDP}_{3t}) = 0.1001 + 0.0106\ln(FDI_{3t}) + 0.9641\ln(GDP_{3(t-1)})$$

The adjusted value of R^2 is 0.9707, indicating that the goodness of fit of the model is great. The regression coefficient of variables $\ln FDI_3$ did not pass the significance level test. It shows that the third industry's actual use

of FDI has little effect on the GDP value added of the third industry. At the same time, the regression coefficient of the GDP value added in the third industry has been tested by a significant level of 1%, with a λ value 0.9641. Similarly, the regression equation of the third industry can be adjusted as follows:

$$\ln(\hat{GDP}_{3t}) = 2.7883 + 0.0106\ln(FDI_{2t}) + 0.0102\ln(FDI_{2(t-1)}) + 0.0099\ln(FDI_{2(t-2)}) + 0.0095\ln(FDI_{2(t-3)}) + L$$

The regression equation shows that the actual use of foreign direct investment in the third industry of Anhui province increased by 1% in the year i, the GDP of the third industry in Anhui will increase by 0.0106% in this year. GDP of the third industry of Anhui province is increased by 0.0102% in the year of (i+1). In the year of (i+2), the GDP of the third industry in Anhui was increased by 0.0099%, and the GDP of the third industry in Anhui was still increased by 0.0095% in the year of (i+3) … .long-term effect has gradually weakened.

4. CONCLUSIONS

4.1. Main Conclusions

The actual contribution of FDI to the added value of real GDP of the three industries is different. From the short-term impact, the actual use of FDI in the secondary industry contributes the most to its GDP added value, and the impact is the most significant; the actual use of FDI in the primary industry contributes less to its GDP added value than that in the secondary industry, but the impact is significant; the actual use of FDI in the tertiary industry has no significant impact on its GDP added value, and the contribution is the lowest. From the long-term impact, the actual use of FDI in the second industry has the greatest contribution to the current GDP added value, but the decay rate of this long-term impact is also the fastest.

The contribution of FDI to GDP added value of the first industry is less than that of the second industry, and the decay rate of long-term impact is slower than that of the second industry. The impact of tertiary industry FDI on the real GDP added value of the current period declines the slowest, but its contribution is the lowest. Generally speaking, foreign direct investment has promoted the evolution of the industrial proportion of Anhui Province from the first industry dominance to the second industry dominance, and also promoted the upgrading of the industrial structure. However, FDI does not play a significant role in promoting the added value of the tertiary industry, aggravating the imbalance of industrial development and causing the situation that the proportion of the secondary industry is too high at the same time.

4.2. Policy Suggestions

4.2.1. Continue To Increase Investment and Expand the Scale of Actual Utilization of FDI

At present, the annual growth rate of actual utilization of foreign direct investment in Anhui Province is significantly higher than the national level, and the growth momentum is good. But at the same time, there is still a gap between Anhui and the adjacent coastal provinces.

During the 13th Five-Year Plan period, Anhui Province should enhance its attractiveness to foreign direct investment by optimizing the investment environment actively, strengthening infrastructure construction, giving preferential policies for foreign direct investment and improving relevant laws and regulations. It should also make full use of the advantages of being the city of national science and education to train high-tech talents and attract them.

4.2.2. Combined With its Own Industrial Situation, Guide FDI Flow to the Three Industries Reasonably

Because the labor production efficiency of the first industry in Anhui is low, we should focus on introducing high quality foreign direct investment to accelerate the optimization and upgrading of the first industry, introduce advanced production methods.

The actual use of foreign direct investment in the second industry of Anhui province is mainly concentrated in the manufacturing industry based on labor-intensive enterprises. It should increase the investment to the heavy industry and other technology intensive industries gradually. At the same time, we should guide the FDI flow into new energy, equipment manufacturing and other high-tech industries and enhance the investment in the high-end links in the processing industry actively (Zhang, 2003).

Restrict the growth of investment in low-end and low value-added industries, and optimize the internal structure of the second industry. The development of the third industry in Anhui is relatively backward. We should guide the rational distribution of FDI within the third industry, while expanding the third industry's actual utilization of the FDI scale.

4.2.3. Promote the Construction of Technological Innovation System and Make Use of the Technology Spillover Effect of FDI

Innovation is an inexhaustible source of vitality for the development of a country and an economy. Anhui Province should fully promote the localization and innovation of foreign advanced technology, create an atmosphere of encouraging and rewarding innovation, Fang (2012) make good use of the advantages of the national science and education city, and strengthen the cooperative innovation mechanism between enterprises and universities, so as to enhance the overall scientific research and innovation strength of Anhui Province (Yu-Xia, 2011).

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