Theoretical and Empirical Research on the Influencing Factors of China's New Energy Industry Development

-- Take Anhui Province as an Example

Wenxuan Cao[1], Zejiong Zhou[2,*]

[1]School of International Trade and Economics, Anhui University of Finance and Economics, China

[2]School of Economics, Anhui University of Finance and Economics, China

*aczzj123456@163.com

Abstract

Traditional energy is in danger of being exhausted due to over exploitation, which will bring pollution to the environment and will be gradually replaced. The rise of new energy industry can promote the green transformation of industrial structure and improve the extensive economic model. In recent years, the construction of new energy industry in Anhui Province has achieved results in the construction of new energy vehicles, solar panels, wind power installation and smart grid platform, but there are still many unreasonable aspects in the new energy industry. This paper first analyzes the current situation of the development of new energy industry in Anhui Province, finds out the main factors of the development of new energy industry in Anhui Province; then, using multiple regression analysis method, explores the influence degree of each influencing factor on the development of new energy industry, and finds out the main influencing factors. Finally, it puts forward countermeasures and suggestions on how to promote the development of new energy industry.

Keywords

New Energy; Multiple Linear Regression; Industrial Development.

1. Introduction

In recent years, the role of energy utilization and research in the survival and development of human society has become more and more prominent. From the perspective of energy production and consumption structure, China has developed a diversified energy system, including coal, oil, natural gas and renewable energy, and coal is still the main body of energy production and consumption. According to the National Bureau of statistics, in 2019, raw coal production accounts for nearly 70% of the total energy production, up to 69.3%, and coal accounts for 57.7% of the total energy consumption, more than half of the total energy consumption. Compared with the production and consumption of new energy, the production of primary electric energy accounts for 18% of the total production, and the consumption of renewable energy accounts for 23.4% of the total consumption. The production and consumption of new energy is far less than that of coal. These data show that China's energy industry is still dominated by extensive and backward coal industry, but the reserves of traditional fossil energy such as coal will gradually decrease, and the demand for energy in industrialized and modernized countries is gradually expanding, so it is necessary to increase the production and consumption of new energy sources to overcome the dilemma of energy shortage.

The combustion of traditional fossil energy will produce harmful substances and a large number of greenhouse gases, which cause serious environmental problems. Excessive carbon emissions threaten the ecological balance of the earth. Under the test of the rapid reduction of earth resources and serious environmental pollution, more and more countries focus on the development of new energy industry. The report of the 19th National Congress of the Communist Party of China pointed out that it is necessary to insist on the harmonious coexistence of human and nature, establish and perfect the economic system of green and low carbon cycle development, and show that saving traditional energy and expanding clean energy are the inevitable choice for Building Civilized Ecology and alleviating environmental pressure. In short, to realize China's sustainable development strategy, the future development trend must be to make efforts on new energy, constantly explore and attach importance to the use of new energy.

Anhui is the most abundant area of coal resources in East China. Coal mining is mainly concentrated in Huainan and Huaibei cities. The coal development in Huaihe River and Huaihe River area has a long time and high intensity. Although coal is the largest energy industry in Anhui Province, it has gradually entered the aging period. Anhui Province has begun to implement the relevant policies of coal de capacity and increase the support for new energy industry. By expanding the research and development of new energy, reducing the demand for traditional energy and optimizing the energy structure, the development of new energy plays a crucial role in the de production of coal. However, there are many problems in the development of new energy industry in Anhui at this stage, such as the short development time leads to the uncertainty of investment, and the new energy is greatly affected by the terrain and environment We need to develop new energy according to local conditions, the energy conversion efficiency of new energy industry is subject to technology, and the technology at this stage is not perfect. In order to overcome this dilemma, this paper studies the problem: what influence factors exist in the development process of new energy industry in Anhui Province can promote the development of new energy industry. Next, through exploring these influencing factors, this paper puts forward relevant suggestions for the development of new energy industry in Anhui Province.

The research on the influencing factors of new energy industry is divided into two research methods: theoretical research and empirical analysis. Some scholars have theoretically studied the influencing factors of new energy industry. Zhang Huaiwen (2016) [4] believes that there are two factors in the new energy industry, one is the internal cause of social and political factors, the other is the external cause of value chain and transportation cost factors. Pan Heping et al. (2018) [2] believe that the government should make full use of fiscal and tax means to support the long-term development of new energy industry. Cao Xiaolin (2018) [5] explored the influencing factors of new energy industry by analyzing industrial policies, financial markets, financing methods, core competitiveness, profitability, financing costs and other aspects. Bai Xuejie (2018) [10] believes that when formulating industrial policies, emerging industries will be interfered by moral hazard and adverse selection, resulting in policy failure. There are also some scholars through empirical analysis. Zhang Jijian et al. (2019) [6] established a vector autoregressive model by collecting the panel data of new energy listed enterprises, which showed that there was a positive correlation between the total business income of new energy enterprises and the capital investment and labor investment of science and technology. Cao Xuping (2019) [7] starting from China's new energy products, believes that the financial crisis and trade barriers have a significant negative impact on the export of new energy industry. Bai Fuchen et al. (2019) [8] the development of new energy industry needs to accelerate the innovation and development of technology, and accelerate the support of intellectual capital and R & D investment. Yuan Jian

et al. (2019) [9] believe that industrial policy mainly affects the new energy industry through the accumulation of human resources, and is a promoting role.

Many scholars study the influencing factors of the new energy industry, so as to find the difficulties of the development of the new energy industry and eliminate the obstacles of these difficulties. Most of the research on the influencing factors of the new energy industry is obtained through empirical analysis. However, the characteristics of new energy development in different regions of China are not the same, and there is less research on the development of new energy industry in a single region. Therefore, based on this perspective, this paper makes an empirical analysis on the influencing factors of Anhui new energy industry.

2. Analysis of the Current Situation of Anhui New Energy Industry

2.1. Development Trend of New Energy Industry in Anhui Province

As a strategic emerging industry determined by the state, new energy industry plays an important role in the green transformation of industrial structure, enhancing economic strength and scientific and technological innovation strength. Anhui also vigorously promotes the development of new energy industry. According to the change of output value of new energy industry in Anhui Province, the development trend of new energy industry in Anhui Province is speculated, as shown in Figure 1. According to the bar chart, it can be seen that the output value of the new energy industry has been in a rising state. According to the broken line chart, the year-on-year growth rate can be clearly displayed, and the fluctuation range is large in the early stage. The high growth rate and low growth rate alternate. In recent years, the development trend of the new energy industry is stable, but the growth rate is not high, ranging from 10% to 20%. In a word, the development of new energy industry in Anhui is not rapid, but it still has great potential and is still improving and developing.

2.2. Analysis of New Energy Industrial Structure in Anhui Province

Combined with Anhui's own resource advantages and industrial innovation ability, there are four competitive industries in Anhui's new energy development. According to the development situation, they are new energy automobile industry, solar energy industry, wind energy industry and biomass energy industry. This section analyzes the current situation of the new energy industrial structure in Anhui Province from the four industries, and analyzes the current situation of the new energy industrial structure from two aspects: the comparison of the installed capacity of various types of new energy power generation, the analysis of the industrial structure and the optimization and upgrading.

Comparison of installed capacity of various types of new energy power generation. The installed capacity of power generation refers to the power of generator, which is used to measure the power generation capacity. This paper compares the installed capacity of photovoltaic power generation, wind power generation and biomass power generation in Anhui in 2018 and 2019, because the main purpose of new energy vehicle industry is not power generation, so it does not participate in the comparison. The cumulative installed capacity of all kinds of new energy is photovoltaic power generation, wind power generation and biomass power generation, and the new installed capacity of photovoltaic power generation is also the largest. This comparison shows that the new energy power generation industry in Anhui is dominated by photovoltaic power generation.

The advantages and difficulties of new energy industry development. ① Solar energy industry. Anhui focuses on the development of solar panels, which belong to the middle and lower reaches of the solar energy industry and collect more funds and talents. Most of the enterprises are located in the middle and lower reaches of the industrial chain. Due to the lack of technology in the purification of silicon materials and the production of silicon wafers,

there are fewer upstream enterprises, resulting in the unbalanced development of the whole industrial chain. Therefore, the layout of the upper, middle and lower industrial chains should be improved. ② Wind power industry. Due to the lack of effective land resources and wind resources in the central and southern regions, Anhui adopts distributed generation, which does not require high wind speed and can effectively use the poor wind resources. Distributed wind power generation needs high innovation technology and short development time, while Anhui mainly relies on foreign equipment and has no relative standard framework. ③ Biomass energy industry. The biomass power generation in Anhui Province is mainly direct fired power generation. This way will lead to emissions from combustion, which will cause harm to the environment. Therefore, the treatment of biomass in decarbonization and desulfurization needs to be studied, the cost of R & D increases, and the technological innovation needs to be improved. ④ New energy vehicle industry. Anhui's new energy vehicles are very competitive in terms of quality and quantity in the whole country. In 2018, Anhui's new energy vehicle output was 158000 and sales volume was 157000, with growth rates of 30% and 40% respectively. Overcapacity is the main problem that the output value growth rate of new energy vehicle industry in Anhui Province has gradually declined in recent years. Therefore, it is necessary to improve the configuration and performance of new energy vehicles and stabilize the industrial development.

3. Theoretical Analysis of Influencing Factors of New Energy Industry Development in Anhui Province

3.1. Internal Factors Affecting New Energy Industry

Internal factors are the components of new energy enterprises, including human capital, technology and capital investment. The core element of internal factors is talent and technology, which directly affects the innovation and development stage of industry. As for human resources, talents should have advanced knowledge reserve and scientific research ability in new energy. Talents are the main body of industrial R & D departments, and technology can be improved by R &D system. Therefore, the quality of talents will directly affect the process of new energy technology research and development. Thereare generally two ways to research and development of technology, one is technology introduction, through the purchase of patents, the second is independent innovation, which requires the development of the enterprise's own R & D departments, and cooperation and exchange with scientific research institutes. Investment in capital is investment in labor and technology. The development of new energy technology needs a lot of funds to support, which is used for the purchase of equipment, the remuneration of scientific researchers and the cost of technological innovation. Capital investment comes from the investment of enterprises themselves or government funds. Capital investment is the main factor affecting the operation of new energy industry.

3.2. External Factors Affecting New Energy Industry

External factors are the environmental factors of new energy industry, including policy environment, market environment, industrial structure, economic foundation, resource efficiency and so on. The policy environment includes legal policy, financial policy, industrial policy, etc. through artificial restrictions and support, such as the implementation of preferential tax policies for the new energy industry, the incentive mechanism will be generated to expand the scale of the new energy industry. Market environment, energy supply and demand, energy price, and new energy industry belong to monopolistic competition market, all these factors will promote new energy industry through continuous development, reduce industrial R & D and operation costs, expand industrial scale, improve product

competitiveness, etc. Economic foundation, all industries are subject to the development of a country's economic level, and GDP is closely related to energy consumption. GDP is directly proportional to energy consumption. The higher the GDP is, the higher the energy consumption will be, which will stimulate the output of new energy industry. Resource efficiency, such as energy consumption per unit area of GDP, energy consumption per unit area of industrial added value, is used to measure the level of energy consumption and the situation of energy conservation and emission reduction. The development of new energy and renewable energy can increase the efficiency of energy use and reduce the consumption of traditional fossil energy. Industrial structure, the change of industrial structure will affect the new energy industrial structure, the proportion of China's first industry is gradually decreasing, the fluctuation of the second industry is relatively large, and the proportion of the third industry is gradually increasing. It is an indisputable fact that industry has a great influence on the energy industry. As a big industrial country, China consumes a lot of energy. The industrial structure of the secondary industry will directly affect the demand and supply of new energy.

4. Empirical Analysis of the Influencing Factors of Anhui New Energy Industry Development

4.1. Selection of Variables and Data Sources

(1) The index selection of variables. The variable being interpreted. The output value (y) of Anhui new energy industry is set as the explanatory variable. Explanatory variables. Economic basis: every industry cannot be separated from the development of an area's economic level, and the economic growth will drive the development of the whole industry, so it is closely related to the relationship between various industries. This paper chooses Anhui GDP (x1) as the explanatory variable. Industrial structure: the upgrading and optimization of industrial structure plays an important role in the development of industry. The change of industrial structure, to a certain extent, indicates the development prospect of the industry. This paper measures the industrial structure by the index of the proportion of secondary industry to GDP (x2). Technological innovation: as a strategic emerging industry with cross fields and departments, the most important thing is technological innovation. Advanced technology can lead to the prosperity of new energy industry. This paper selects fixed investment (x3) of Anhui science research and technology service industry as explanatory variable. Financial support: The development of new energy industry involves many links, and requires the government to support it. The specific safeguard measures include not only providing policies for energy conservation and emission reduction, but also requiring the government to invest a lot of funds for research. This paper selects the sum of the financial expenditure on science and technology and the financial expenditure on energy conservation and environmental protection as the indicator (x4) reflecting the financial expenditure of the new energy industry as the explanatory variable.

(2) Data source. All data are from progress data of Anhui Bureau of statistics. Since the new energy industry is a strategic emerging industry and the development time of the emerging industry is not long, the year of the observation data sought is shorter, the year is from 2012 to 2018. Due to the short time years and unstable time series, in the establishment of the time series measurement model, the variable model needs sufficient data to ensure the economic value of the following results. For the sake of the result Rigorous and scientific, adopt quarterly data, expand the number of variable samples. All data are taken logarithm to eliminate the influence of the original time series data variance and enhance the comparability of the time series. The calculation and analysis are carried out by eviews7.0.

4.2. Descriptive Statistics and Correlation Analysis of Variables

(1) Descriptive statistics of variables. In order to describe and summarize the data characteristics of these variables, facilitate further analysis and descriptive statistics. The average value of LNY of new energy industry is 4.9986, and the median value is 5.0704. However, there is a certain gap between the maximum value of 5.7465 and the minimum value of 4.2753. Similarly, for other variables, there are some differences in the quarterly data over the years.

(2) Correlation analysis of variables. In order to determine whether there is correlation between the data and avoid multicollinearity, correlation test is carried out on the variables. The correlation coefficients of lnx1, LnX3, lnx4 and LNY are positive, which indicates that the GDP of Anhui Province, Anhui's fixed investment in science and technology and financial expenditure on science and technology, energy conservation and environmental protection can promote the output value of Anhui's new energy industry, while the proportion of the output value of Anhui's secondary industry in GDP has a negative correlation with the output value of Anhui's new energy industry, indicating that the larger the proportion of the output value of the secondary industry is, the smaller the output value of the new energy industry is. The t statistic of LNY and lnx1 is 0.8505, which is greater than 0.8, indicating that the correlation is significant.

4.3. Model Test

(1) Unit root test. In order to ensure the accuracy of the econometric model, avoid the phenomenon of pseudo regression as far as possible, and make the analysis of the model have practical significance, we need to determine the stationarity of the time series first. In this paper, the ADF test is used to test the unit root of each variable. Through the test, the original variables LNY, lnx1, lnx2, LnX3, lnx4 are not stable, because the ADF test value of the original variable is greater than the critical value of 5%, and the corresponding probability value is greater than 0.05. After the first-order difference, the variables LNY, lnx1, lnx2, LnX3, lnx4 pass the ADF test value, so these variables are first-order stable series.

(2) Cointegration test. According to ADF test, LNY, lnx1, lnx2, LnX3 and lnx4 are first-order single integration sequences. We need to check whether there is cointegration relationship between them to avoid the phenomenon of pseudo regression. Johansan test was carried out, and the trace statistics test results of each variable are shown in Table 1. It shows that only the original hypothesis without cointegration is used, the trace statistic is greater than the critical value of 5%, and the corresponding p value is 0, which means that the original hypothesis is rejected. It shows that there is only one cointegration relationship between these variables. The trace statistic test shows that these variables have a long-term cointegration relationship.

Table 1. Trace statistics test results of each variable

Original hypothesis	characteristic value	Trace statistics	Critical value α = 5%	p value
None*	0.8281	92.2611	69.8189	0
At most 1	0.5903	46.4728	47.8561	0.0670
At most 2	0.3669	23.2736	29.7971	0.2329
At most 3	0.3452	11.3886	15.4948	0.1887
At most 4	0.0145	0.3811	3.8415	0.5370

(3) Granger causality test. In order to test whether the lag value of various variables has the ability to predict the information of the explained variables, the Granger causality test is carried out. According to the test results, the probability value of F statistic of the original hypothesis that lnx1 is not the Granger cause of LNY is 0.0496, less than 0.05. That is to say, rejecting the above hypothesis indicates that lnx1 is the Granger cause of LNY, and the same test method proves that LNY is also the Granger cause of lnx1. The results show that there is a significant two-way causal relationship between the output value of new energy industry and GDP at the significance level of 5%. It can be explained that the development of new energy industry and economic base are mutually influenced. Because the economic growth will promote the energy demand of various industries, which will stimulate the development of new energy industry, and the development of new energy industry will provide more new energy products to other industries. If other industries get the power, the economy will grow. However, for lnx2, LnX3, LnX3 and lnx4, the probability values of Granger causality of LNY change in the short term are all greater than 0.05, indicating that the Granger causality is not significant.

4.4. Establishment and Analysis of Regression Model

Through the previous test, we know that these data are first-order difference stationary, with co integration relationship. This paper needs to explore the relationship between the output value of new energy industry and the four variables. Therefore, OLS regression method can be used to establish the model, because the regression model needs to use stable data to avoid the occurrence of pseudo regression phenomenon. Differential data is used for regression. Differential data is for the stability of data, but the first-order difference of variables can explain the growth rate of variables.

The model obtained on the basis of regression analysis has no constraints, and the general formula of the model is:

$$Y = C + \sum \beta_i X_i + \mu \tag{1}$$

Among them (C is constant term, regression coefficient, μ is random error term)

In order to study the relationship between the factors influencing the output value of new energy industry in Anhui Province, the following models are established in this paper:

$$DLNY = C + \beta_1 DLNX1 + \beta_2 DLNX2 + \beta_3 DLNX3 + \beta_4 DLNX4 \tag{2}$$

The regression model is estimated by using the general least square method. The regression estimation results are shown in Table 2, and the following regression equations are obtained according to the table contents:

$$DLNY=0.1636+0.4112DLNX1+0.0397DLNX2+0.0844DLNX3-0.0276DLNX4 \tag{3}$$

The regression results of the above variables show that lnx1, lnx2, LnX3 and LNY have positive correlation, which are the GDP of Anhui Province, the proportion of secondary industry in GDP, the investment of science and technology, which have a certain promotion effect on the output value of new energy industry in Anhui. However, the financial expenditure has a restraining effect on Anhui new energy industry, but this is not consistent with the actual situation. Because the regression coefficients of dlnx1, dlnx2, dlnx3 and dlnx4 fail to pass the significance test, it indicates that there are serious problems of multiple

collinearity. Therefore, this paper establishes the model by stepwise regression, and the results of the stepwise regression coefficient are shown in Table 3.

Table 2. Results of multiple linear regression

Variable	Coefficient	Std.Error	T-Statistic	prob
C	0.1636	0.0286	0.1076	0.9153
DLNX1	0.4112	3.8185	-0.0371	0.9708
DLNX2	0.0397	3.7533	1.2184	0.2366
DLNX3	0.0844	0.0693	-0.3311	0.7438
DLNX4	-0.0276	0.0833	1.2975	0.2085

Table 3. Stepwise regression results

Variable	Coefficient	Std. Error	t-Statistic	prob
DLNX1	0.2422	0.1456	2.6636	0.0432
C	0.0374	0.0268	3.3948	0.0058
DLNX3	0.0845	0.0640	3.3205	0.0091

According to the results of stepwise regression coefficient, the stepwise regression equation is written as follows:

$$DLNY=0.2422DLNX1+0.0845DLNX3+0.0374 \tag{4}$$

(0.1456) (0.0640)

The resolvable coefficient of the model is 0.8562, and the adjustable resolvable coefficient is 0.8614, which are all greater than 0.8, indicating that the fitting degree of the equation is relatively good, and the P values of dlnx1 and dlnx2 are less than 0.05, which has passed the significance test. This shows that GDP and investment in science and technology have a significant impact on Anhui's new energy industry, that is, when the increase rate of GDP and fixed investment increases by 1%, the increase rate of output value of Anhui's new energy industry will increase by 0.2422 and 0.0845. The impact of industrial structure and fiscal expenditure on the development of new energy industry is not significant.

According to the stepwise regression equation, the investment in science and technology and the economic foundation have a significant impact on the development of new energy industry in Anhui Province. The main reason is that the new energy industry is a technology intensive industry, which is inseparable from technological innovation. The lack of technology will largely restrict the innovation of enterprise products and the expansion of scale, and the improvement of technology can also reduce the cost of new energy The uncertainty and risk of industrial development. It is one of the important factors for the development of new energy industry. Economic growth also plays a vital role in the development of new energy industry in Anhui Province. Economic growth will promote the development of more industries, and energy is the basis to support the development of various industries. Therefore, economic growth will also promote the production and consumption of energy,

thus promoting the transformation of energy structure, and more new energy will be developed and used.

5. Conclusions and Suggestions

Through the theoretical and empirical research on the influencing factors, combined with the current situation of the development of new energy industry in Anhui Province, the most important two factors affecting the development of new energy industry in Anhui Province are the input of science and technology and the basis of economy. Although Anhui Province is relatively late in the development of new energy and relatively small in scale, it still has advantages in some new energy fields. The development of new energy industry can alleviate the energy and environment problems. The following is some suggestions for Anhui new energy development.

First, we should increase the investment in science and technology. Technological innovation is the core force to promote the foothold and growth of emerging industries. The new energy industry highly relies on advanced equipment and professional R & D personnel. According to the known photovoltaic industry's energy conversion efficiency of nearly 20% and wind power industry of 40% - 50%, the cost of developing new energy industry is high. With a large amount of scientific and technological investment, the maturity of technology can be improved, so as to improve the maturity of technology High conversion efficiency, reduce actual cost. There are many aspects to increase the investment in science and technology. The first is to train talents. Because the input of talents can normally operate the research and development system, and it is the ability of independent R & D in the new energy industry. The training of talents is not only in professional knowledge, but also in the practical operation and maintenance of new energy industry. The second aspect is to establish a new energy product research and development platform, and to increase the research on new energy through the professional talents training to create new energy research institutions and key laboratories. The third aspect is to establish a new energy industry base, which is to deepen scientific and technological research and development into every link of the industry, improve the efficiency of energy utilization, improve the new energy industry chain and promote the development of the whole industry.

Second, speed up the transformation of the mode of economic development. In the early stage of industrialization, economic development is very dependent on energy consumption. China is experiencing this period of high energy consumption, which is a period that every developing country with rapid development must go through. Granger causality test shows that there is a causal relationship between economic development and the development of new energy industry. What China should do now is to transform the mode of economic development, reduce the dependence of economy on traditional fossil energy, vigorously develop new energy, diversify the supply of energy, and encourage new energy enterprises to expand their development. Let the new energy industry flourish in this fertile land. The state's economic regulation will create a good development environment for new energy enterprises. At present, the new energy industry is still in the initial stage of development. High R & D cost and high investment risk are common problems in emerging industries. A good economic development environment is essential for the development of new energy industry, which can expand the development of new energy and optimize the energy structure To improve energy efficiency. And these emerging industries also continue to enhance the role of science and technology in economic growth, accelerate the transformation of economic structure, and make the economy develop in an effective and sustainable direction.

References

[1] Xi Jinping. Victory in building a moderately prosperous society and winning the great victory of socialism with Chinese characteristics in the new era. Report on the nineteenth National Congress of the Communist Party of China. Beijing: China People's publishing house, 2017.

[2] Pan Heping, Chu Xiaobang. Research on Competitiveness Evaluation of new energy industry in Anhui Province -- Based on AHP + improved fuzzy comprehensive evaluation method. Journal of Tangshan University,Vol.32 (2019)No.6,p. 80-87.

[3] Yin Chao. Empirical research on the impact of China's new energy industry on economic growth. Hebei University, 2014.

[4] Zhang Huaiwen. Dynamic mechanism and evolution path analysis of new energy industry cluster under the background of low carbon economy. Industrial technology economy, Vol.35 (2016) No.9, p.155-160.

[5] Cao Xiaolin. Influencing factors and Countermeasures of new energy industry project financing efficiency. Business accounting, (2018)No.24,p. 80-82.

[6] Zhang Jijian, Yin Xing, Guan Chenglong, et al. Financial situation and technological innovation of strategic emerging industries: a case study of new energy industry. Journal of Nanjing University of Technology (SOCIAL SCIENCE EDITION), Vol.18 (2019)No.5,p.102-110.

[7] Cao Xuping, Zhu Fuxing, Wang Ren. Dynamic changes of export technology structure of new energy industry. China Science and Technology Forum, (2019)No.7,p.76-83.

[8] Bai Fuchen, Zhao Nan. Technological development motivation of new energy industry development. Science and technology management research, Vol.38 (2018)No.22,p.185-192.

[9] Yuan Jian, an Yuxing. An Empirical Study on the impact of industrial policies on the growth of China's new energy enterprises. Learning and exploration, (2019)No.6,p.151-155.

[10] Bai Xuejie, Meng Hui. Emerging industries, lack of policy support and incentive constraints: a case study of new energy vehicle industry. Economist, (2018)No.1,p.50-60.