

## Relevance between Regional Industrial Economic Development and Higher Education Based on Industrial Development

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**Abstract:** Since the process of popularization of higher education in China, the layout of higher education has undergone qualitative changes at the same time as the expansion of scale. This paper analyzes the current situation of China's higher education layout and the relationship between higher education layout and regional economy and regional population. In order to study the relationship between regional economy and regional higher education in depth and in detail, and to clarify whether there is an inevitable law of influence between industrial development and related disciplines of higher education in the region, this paper uses literature analysis, hypothesis reasoning and other methods to select industrial economic development indicators and higher education development indicators for comparative analysis. By studying the impact of industrial restructuring on the development of higher education, this paper explores the relationship between specialty settings and regional economic development in Institutions of higher learning, analyses the problems existing in the process of higher education adapting to economic restructuring, and puts forward corresponding countermeasures.

### 1. Introduction

At the turn of the century, China's higher education has undergone tremendous and profound changes, and the layout structure of higher education has also undergone qualitative changes while expanding its scale. Higher education, as a subsystem of society, plays an important role in promoting social and economic development. The relationship between regional economy and higher education is evident in the interaction process of their development, which can be summarized as two aspects: on the one hand, regional economic development plays a decisive role in higher education, on the other hand, higher education also has a negative effect on economic development [1]. From the theory of classical economics, due to the high density concentration of a large number of homogeneous enterprises in a certain region, the degree of division of labor and cooperation among enterprises in the region is deepening, so that enterprises in the region can not only realize the efficiency formed by division of labor. Promote the intensive development of higher education, actively develop continuing education, improve the lifelong education system, and build a learning society, which will inject new vitality into the development of higher education [2]. The relationship between higher education and industrial structure is correctly formed. The understanding helps us to correctly handle the relationship between the two. Realizing the coordinated development of higher education and regional economy and promoting education equity is the premise of the current reform of the structure of higher education [3]. Industrial clusters are no longer a few regions. The special phenomenon has become an important model and development trend of China's regional economic development, and has played an extremely important role in promoting regional economic development.

According to systematics, it is believed that higher education plays a facilitating role in the development of the four major components of society, economy, politics and culture. If the higher education system does not play its role, especially The role of human resources in training [4]. As a major engineering education country, the current engineering education in China lacks engineering, practicality and innovation, which makes the supply of innovative engineering and scientific talents in China urgent. Moreover, in the face of rapid economic and social development, the contradiction between higher engineering education and industrial development has become increasingly

prominent. To examine and analyze the changes of higher education distribution in China, we should not stay at the superficial level of scale and quantity. We must dig deeply into the regional economic and regional demographic factors that affect the distribution structure of higher education in China [5]. In the process of theoretical analysis, the related disciplines of higher education mainly refer to those disciplines which are closely related to industrial economic activities and correspond to each other. Because some basic disciplines have strong extensive application and external output, and weak industrial relevance, they are not within the scope of research. Therefore, this paper attempts to quantify the impact factors of regional economic development on industrial cluster development and the impact factors of industrial cluster development on regional economic development, and analyze the correlation between the two.

## **2. The Promoting Role of Higher Education Development in the Optimization of Industrial Structure**

Education is a social activity that fosters people and promotes social development at the same time. Higher education is a social activity that carries out professional education after secondary education. Everything can not develop without the interaction of internal and external relations, and higher education is no exception [6]. With the adjustment and optimization of industrial structure, enterprises need to change their original technological level in terms of business strategy, management methods and technological means, which can not meet the needs of production. Education in essence belongs to the superstructure and is a part of the economic foundation at a certain level of social productivity. It can be said that the level of social productive forces determines the size and speed of education, and the scale and quality of education also determines the level of social productive forces. An analysis of the trend of regional total population and regional economic growth and decline shows that the total population of the region has gradually become a major factor affecting the number of colleges and universities in the region [7]. There is a one-to-one correspondence between the intrinsic links and proportional relationships between various industries within the region and the internal relations and proportional relationships between higher education disciplines. In other words, the dominant industries in the region correspond to the main disciplines of higher education, and the adjustment of the industrial structure also drives the changes in the discipline structure. From the perspective of industrial structure, the phenomenon of industrial clusters is actually an extension of the industrial chain, that is, the adjustment and upgrading of industrial structure.

If higher education institutions reach a certain scale, they will greatly improve their efficiency. The incomes of education of different scales are quite different. Different types of institutions have moderate scales, but there is no universal scale benefit. The process of industrial structure optimization is the industrial development and new technical tasks, and achieves a satisfactory learning effect. In addition, micro-classes, flip classes, etc. are designed into short and precise thematic teaching links, making full use of the students' fragmentation time. The deviation of regional higher education from the level of economic development is the result of the combination of multiple factors such as regional political factors, historical factors and cultural factors in China [8]. The development of colleges and universities can not be separated from the tripartite cooperation of human, financial and material. Under the current economic situation, how can the universities in the region ensure their own effective development while at the same time raising themselves to the level of recognition by all sectors of society? At present, higher vocational colleges adopt such training modes as school-enterprise cooperation and work-study combination to strengthen the construction of training bases inside and outside schools to improve students' practical ability. Continuously improve the curriculum system according to the work process selection, optimization and ordering of curriculum content. The level of industrial development is bound to be in line with the level of higher engineering education. That is, the level of development of new energy industry determines the demand for engineering talents, which in turn will drive the development scale and speed of Higher Engineering Education in the region.

The change of the distribution structure of higher education in China has taken shape at the

beginning of the establishment of higher education. The decisive factor is the degree and level of social and economic development in the region. In regions with certain industrial advantages in the whole country, the corresponding key institutions of related disciplines also occupy a larger proportion compared with the whole country, and have strong disciplinary development advantages. However, the advantages of various industry-related disciplines are slightly different. From the perspective of enterprises, through vertical integration, enterprises with lower costs can be selected in the industrial chain to replace other enterprises, so as to achieve the purpose of reducing transaction costs. Only in this way can we truly realize the contribution of digital resources to education. Second, the education organizer. Teachers must not only guide students to learn, but also organize and manage digital resources and students, and also join the education process in the implementation of education. Increase the number and types of higher education institutions, and build a formal structure with diverse forms, complementary advantages, and coordinated development. Although the level of development of higher education in different regions varies from region to region, the high-quality workers trained in higher education can flow between regions of a country. Therefore, the level of education has become an effective signal for employers to identify the ability of job seekers. Employers are also willing to pay high wages for those with higher education levels. This also provides income for people outside the market with different levels of educational investment, making these people educated. Make an appropriate decision on investment.

### **3. Relevance Analysis of Higher Education Distribution Structure and Regional Economic Development in China**

The structural adjustment of regional higher education focuses on the interaction of universities, governments and non-governmental organizations in the region. The optimization and upgrading of industrial structure also requires the government to rethink its role orientation. Through policy encouragement and financial competition, the government improves the efficiency and innovation ability of regional universities, thus promoting the development of regional economy, society and culture. With the optimization and upgrading of various industries, higher requirements have been put forward for the quality of their employees. It is not only necessary to carry out service and operation in accordance with standards and norms, but also need continuous innovation. It can bring forward new technological innovation and service concept for enterprises. From the perspective of industry status and development prospects, new energy enterprises have a particularly high demand for human resources. From technological breakthroughs to research and development of new energy products to industrial production. The number of ordinary colleges and universities in the region and the total population of the region and the average number of students per 100,000 population in the region are respectively scatter plots, which can reflect the relationship between them very intuitively. And carry out actual inspections in combination with colleges and universities in specific regions and regions. The selected industry categories cover three industries and are comprehensive; the selected specific regions are representative of each industry's advantageous regions. Through vertical integration, it can form a certain competitive advantage in production cost, raw material supply, product sales channels and prices, and improve the entry barriers of other enterprises through vertical integration, which can improve the sensitivity of enterprises to market information through vertical integration. Can enable enterprises to enter the high-tech industry.

In traditional teaching, the educator is the leader of the teaching process, knowledge is the core of the educational content, the teacher is in the authoritative position of knowledge transfer, and the students' knowledge is mainly from the teacher's teaching. The student's ability level is to a certain extent by the teacher level and cultivation. limits. On the whole, with the steady expansion of the scale of higher education, China's higher education investment has not been correspondingly improved, but there has been a phenomenon of varying degrees of higher quality of higher education, resulting in the need for regional higher education and economic development. There was a deviation. Professional construction and development is the process and result of the development of colleges and universities in accordance with the needs of the society. It must be

considered and resolved in the professional planning and setting of colleges and universities. Strengthen the teaching reform and renew the concept of education and teaching. Build strong specialty and form characteristic demonstration specialty. In order to optimize the role of Higher Engineering Education in promoting the development of new energy industry, scale and structural factors are essential. The shortage of engineering talents will lead to the insufficient supply of human resources in the new energy industry, and the irrational structure of engineering talents will lead to some problems in the supply of human resources in the new energy industry. The correlation between the number of regional colleges and universities and the total population of the region is greater than that between the number of regional colleges and universities and the average number of students per 100,000 population in the region.

The degree of technological innovation in industry mainly depends on the innovation theory of related disciplines and the introduction of high-level and high-quality scientific and technological talents, which is closely related to the scientific research level of related disciplines and the ability to transform their educational achievements. Under the same other conditions, because of the existence of specialized division of labor and cooperation, the expansion of industry scale will lead to the decrease of unit cost and the increase of scale income. Enterprises in this region have more production efficiency than those in other smaller regions. With economic growth, every province has a rigid demand for higher education, which can be understood as the basic scale of higher education necessary to meet economic growth. Teachers guide and organize student learning, they are inseparable from their mastery of Internet technology. In the Internet + environment, higher education places higher demands on teachers. Economically developed regions can easily obtain the talents needed for their own development from other regions by virtue of their advantageous position. The regional economic development will not be stagnant due to the limited capacity of high-level talents that can be provided by higher education in the region. In other words, in the development process, talents in the science and engineering majors and schools and related knowledge are required to keep pace with the times. All institutions should establish an information exchange platform and coordination mechanism, integrate educational resources, and give full play to the service advantages of various institutions to meet the needs of talents in various industries.

#### **4. Conclusions**

Since the process of popularization of higher education in China, it has achieved leap-forward development, and the gap in the level of higher education development between different regions has changed. The overall layout structure of higher education has been optimized and adjusted, and it has basically maintained a high adaptability to regional economic development. Universities and new energy companies have a common understanding of the professional theoretical knowledge of talents, while new energy companies pay more attention to the ability of talents to master humanities and social sciences. Universities and new energy companies also agree that method ability is more important than professional ability, and professional ability is more important than social ability. The structure ratio of disciplines in higher education and the development trend of various disciplines should be based on the industrial structure and development trend, so that education can serve the economy. If the regional economy wants to develop faster and better, the development of industrial clusters can play a great role in promoting the good development of industrial clusters, which is premised on the rapid development of regional economy. Especially in regions where the development level of regional higher education lags behind the level of economic development, we should increase investment to improve the scale level of regional higher education. Under the leadership of the government, education should give full play to the role of energy efficiency in economic development, adjust and optimize the industrial structure through technological innovation and technological development, and form an ideal development model of education-driven industry and industry-promoted education.

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