

# Research on the Path of University Science and Technology Innovation Serving Regional Economic Development

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## ABSTRACT

Competition between regions is increasingly dependent on innovation and the application of innovative technologies. All regions are actively improving the competitiveness of regional science and technology to change the way of regional economic growth, improve the quality of provincial economic development, and ensure the sustainability of the regional economy. Development of. Based on the analysis of the relationship between university science and technology innovation and regional economic development, this paper reveals the impact of university science and technology innovation on regional economic development from factors such as talent training, capital investment, and achievement transformation, and then proposes from the aspects of universities, governments, and enterprises. Path selection of university science and technology innovation to serve the regional economic development path.

**Keywords:** *regional economic development, technological innovation in universities, path*

## 1. INTRODUCTION

Scientific and technological innovation is the strategic support for improving social productivity and overall national strength, and is currently the commanding height occupied by countries all over the world. Accelerating the construction of an innovative country is inseparable from the support and guidance of scientific and technological innovation. As a system with rich intelligence, knowledge, and information resources, colleges and universities are the backbone of the regional scientific and technological innovation system and an important position for the domestic innovation-driven development strategy. [3] They are unique in encouraging the development of regional scientific and technological innovation and the sustained and healthy economic growth. Responsibility.

## 2. ANALYSIS OF THE UTILITY OF UNIVERSITY SCIENCE AND TECHNOLOGY INNOVATION IN SERVING REGIONAL ECONOMIC DEVELOPMENT

Institutions of higher learning are the source of power and contribution to promote scientific and technological progress and innovation, and promote

economic progress. They play a significant and even huge direct role in national and regional economic development.

### ***2.1. The definition of technological innovations in universities and regional economic development***

Technological innovation in colleges and universities means that colleges and universities use their own rich human, material, financial, and advanced knowledge and information advantages, construct relatively complete mechanisms and improve the relevant institutional environment, and adopt a combination of teaching and scientific research to cultivate high-quality talents, disseminate and communicate. The process of diffusing new technologies, thereby promoting the production of new products and the application of new technologies. In this process, colleges and universities help enterprises to transform scientific and technological innovations into actual productivity through the diffusion and exchange of knowledge, thereby promoting the rapid and healthy development of the economy and society. Regional economic development refers to a leap in social and economic equality based on the overall economic growth of a region. Including changes in the production structure, changes in living standards, changes in social income distribution, changes in basic

living facilities, changes in education levels and civic quality, and changes in the ecological environment, thus reflecting the efficient level of a region.

## ***2.2. The interactive relationship between university technological innovation and regional economic development***

On the one hand, regional economic development plays a key role in scientific and technological innovation of universities. The exact path is as follows: the development of regional economy promotes the increase in market demand and the increase in product profits. As the main body chasing profits, enterprises will naturally produce more attractive and competitive products based on market orientation, will inevitably increase investment in technological innovation. With the changes in consumer demand, there are higher requirements for new processes and technologies of products. Under this circumstance, technological change and product upgrading are imperative, which also promotes further technological innovation in universities. Coupled with manufacturers' desire for innovative technologies, some companies lack independent research and development capabilities, so companies will invest in R&D to promote technological progress and the output of patented results. On the other hand, technological innovation in colleges and universities also has a counterproductive effect on regional economic development. Technological innovation in universities can improve the production efficiency of enterprises. In the system of university innovation to promote enterprise development, innovative talents play the role of media for knowledge dissemination and technical exchange, and are the principal participants in enterprise production and operation activities. Colleges and universities can provide enterprises with high-level, high-quality, high-capacity technical workers, R&D personnel, managers and other talents with innovative ability and innovative spirit, so that they can play their roles in the development and construction of enterprises. [1] The value and role of applications have become the mainstay of enterprise development and improve enterprise production efficiency.

## **3. INFLUENCING FACTORS OF UNIVERSITY SCIENCE AND TECHNOLOGY INNOVATION IN SERVING REGIONAL ECONOMY**

### ***3.1. Talent training factors***

People are the foundation of all social activities, and talents are the key to progress. The technological innovation of colleges and universities require a large

number of talents, and colleges and universities are the foremost positions for cultivating talents. Therefore, cultivation and quality of talents are important factors influencing the development of regional economic development. Colleges and universities have the most high-end and most stable scientific research team, output tens of thousands of high-quality scientific research results every year, and then provide strong technical and theoretical support for the regional economy through the technology transfer method that combines production, education and research, thereby providing strong technical and theoretical support for the regional economy. Have a subtle, far-reaching and lasting impact. The undergraduate program focuses on cultivating students' basic research ability. At the graduate level, it pays greater attention to students' applied research ability. If these two types of talents are grouped together, it will inject vitality into technological innovation and regional economic development. Therefore, it is very important for the development of the regional economy to continuously train batch after batch of recent scientific and technological talents who dare to explore, take the lead, and boldly propose new ideas and new ideas.

### ***3.2. Capital investment factors***

The advancement of capital investment is indispensable for the advancement of scientific and technological innovation in colleges and universities, and its capital is mainly science and technology funds and human capital. The amount of investment in science and technology also reflects the emphasis on science and technology, and also reflects its development potential. [4] Scientific and technological innovation are the foundation of regional economic development. The investment in human capital is mainly to cultivate new scientific and technological talents, thereby improving the quantity and quality of academic papers and scientific publications. Colleges and universities plan science and technology research plans through the received human capital and science and technology funds, and then enter the knowledge re-engineering and production led by high-intellectuals, and finally realize the combination of production, education and research through cooperation with enterprises, and apply scientific research results to On the production line, direct productivity is formed to promote social and economic development, and social and economic development in turn provides social resource guarantee and support for scientific and technological innovation in colleges and universities. As a result, a gear of scientific and technological innovation in colleges and universities and regional economic development is slowly turning and continues pushing and being pushed, let this benign gear turn faster and faster, endlessly.

### **3.3. Achievement transformation factors**

The transformation of scientific research achievements in universities is the final link of scientific and technological innovation in colleges and universities to serve the regional economic development, so the conversion rate of scientific research achievements is very important to the development of regional economy. Technological innovation is a work of accumulation, development and application of long-term knowledge. It is a process of processing, producing, and recreating knowledge to produce new ideas and transform them into innovative products, new technologies and new services. Therefore, the core of scientific and technological innovation is knowledge processing. Only by constantly generating new knowledge can be regional scientific and technological innovation proceed normally and steadily. Scientific research activities are the primary way to religious knowledge, and colleges and universities, as the main positions for knowledge re-engineering, produce a large number of scientific and technological achievements, such as papers, patents, and works through a large number of basic research, applied basic research, and experimental development. Wait. These scientific research results have likewise become an important source of regional scientific and technological innovation. The transformation of scientific research results takes the form of commercialization and industrialization, [5] and the development of the regional economy is its ultimate goal. Therefore, only scientific research results are truly applied to products and enter the shared market to fulfill its mission.

## **4. THE PATH SELECTION STRATEGY OF UNIVERSITY SCIENCE AND TECHNOLOGY INNOVATION TO SERVE REGIONAL ECONOMIC DEVELOPMENT**

### **4.1. Colleges and universities**

One is the creation of an open and inclusive academic atmosphere. A good innovation environment can stimulate the innovation enthusiasm of the innovation subject, and play the inventive potential of the innovation subject, which is a key factor to enhance the innovation ability. Colleges and universities should vigorously publicize the importance and urgency of strengthening scientific and technological innovation, stimulate the enthusiasm of scientific and technological workers, encourage high-quality and high-quality talents to contribute their light and passion to scientific and technological innovation and technological development, and create respect for science and advocacy An academic atmosphere of

science, innovation and tolerance; [2] the second is to strengthen exchanges and cooperation. To enhance competitiveness and influence at home and abroad, colleges and universities in ethnic minority areas should adhere to the combination of bringing in and going out, strengthen academic exchanges and cooperation, and track new trends in the subject development. For example: Encourage scientific research personnel to go out to participate in international and domestic academic conferences, and at the same time select scientific research backbones to go to first-class foreign universities or research institutions to conduct cooperative research, train high-level scientific research teams through in-depth international cooperation, or actively invite domestic and foreign experts and scholars to give lectures and academics Report and carry out cooperative research. Establish a visiting scholar system, extensively attract high-level overseas talents to carry out groundbreaking research, and provide new ideas and new methods for the research of scientific and technological innovation in domestic universities, so as to implement the introduction and going out of the country. Extensively absorb favorable factors from abroad, treat the conflicts and contradictions at home and abroad rationally, and lead the scientific and technological innovation of colleges and universities to a higher level; the third is to enhance basic research. Colleges and universities are the main departments that carry out basic research and shoulder the principal mission of innovation management. Colleges and universities should make basic research practical and excellent, and lay a solid foundation for all further scientific and technological innovation activities, so as to make better use of colleges and universities. Therefore, when colleges and universities carry out scientific and technological innovation research work, they should clarify the research and research direction at the initial stage, formulate a systematic research plan for the university, and implement a rigorous mid-term implementation plan. During the implementation process, it should be implemented while upgrading in real time according to the actual situation. Improve the planning, and strengthen the summary, reflection and evaluation in the later stage, and finally provide a nice development environment for university research.

### **4.2. Government**

The first is to enhance investment in scientific and technological research and development to promote the building of innovation capabilities. R&D investment is to inject the soul into scientific and technological innovation of colleges and universities. Only sufficient investment in R&D can promote colleges and other innovation entities to have things to do and do. [1] In the progress of innovation in our country, it is very necessary to promote the active

joint innovation of universities and other innovation entities and increase the investment in research and development funds. It is necessary in order to start with the reform of the system and mechanism to solve the problem of investment and utilization of research and development funds. Government investment is important, but collective investment is also very important. We must broaden the channels for investment in scientific research and allow all actors of the society to participate in it, forming a government-led situation with extensive participation of societal actors. The second is to enhance the construction of the intellectual property system. The intellectual property system is to clarify who is the creator of scientific research results, who is the creator of scientific research results determines who is the recipient of the benefits of scientific research results, which will powerfully mobilize society's enthusiasm for scientific and technological innovation and develop society's scientific and technological innovation. The greatest potential for innovation is also the respect for researchers who love science, knowledge, and dedication; the third is to increase various preferential incentive policies. Such as: preferential policies such as housing, medical insurance, scientific research vacation, taxation, etc., or the establishment of special rewards and allowance systems, life reward systems, team reward systems, etc. Masnow's five needs theory tells us that the five levels of human motivation are: physiological needs, safety needs, emotional belonging needs, respect needs, and self-realization needs. The addition of various preferential policies can really meet the needs of the first four levels, solve the worries of scientific researchers, and enable scientific researchers to focus more on the needs of self-realization, so as to better dedicate their own value and contribute to technological innovation.

### **4.3. Enterprise**

It is necessary to strengthen cooperation with universities in production, education and research, and the scientific research results of tens of thousands of researchers who have devoted themselves to research for many years should not only remain in the laboratory or on a few pages of papers. Then technological innovation ignores the market and does not allow enterprises to become operational in technological innovation. Enterprises is an important part of market activities and is responsible for product production and market circulation. Only the company learns how to integrate the results into the products that the society needs, and knows where the consumers who need these products are. Therefore, enterprises should give full play to their leading role, strengthen cooperation with universities, realize the combination of university talents and technology, and ultimately achieve a win-win outcome of the common

progress of economy and technology. Only the continuous introduction of new technology and innovation is the long-term solution for enterprises.

## **5. CONCLUSION**

The development of the provincial economy determines the technological innovation of colleges and universities, and the technological innovation of colleges and universities has a negative effect on the regional economy. The degree of the reaction is influenced by factors such as talent training, capital investment, and achievement conversion. Strengthen exchanges and cooperation, strengthen basic research, etc. to enhance the impact on the economy; the government can increase the investment in science and technology research and development, strengthen the construction of the intellectual property system, and increase various preferential incentive policies to enhance the impact on the economy; in enterprises On the one hand, the impact on the economy can be enhanced by strengthening cooperation with universities in production, education and research.

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