

Research on the Interactive Development of “Featured Towns” and Universities from the Perspective of Collaborative Innovation: A Case Study of Xi'an City

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Abstract. At present, the interactive development of universities and regional economies has become a consensus, and how to promote the coordinated development of the two has become an important topic in the development of higher education and regional development. The featured town is an entrepreneurial and innovative ecosystem which integrates industrial chain, investment chain, innovation chain, talent chain and service chain. With the rapid development of China in recent years, the government has highly affirmed this innovative development model, and in this context, all regions can encourage universities and featured towns to carry out strategic cooperation to realize interactive development and coordinated innovation. From the perspective, this article expounded the essence and role of collaborative innovation and then analyzed the current situation of the interactive development of regional economy and universities in Xi'an and the existing problems. Relevant suggestions for the interactive development of “featured towns” and universities in Xi'an were also put forward from the perspective of collaborative innovation in this paper.

Keywords: collaborative innovation; featured town; higher education; Xi'an.

1. The Essence and Role of Collaborative Innovation

“Collaborative innovation” is an open-ended innovation model. With the participation of various innovation entities such as enterprises, universities and governments, it effectively integrates new resources and elements in the region based on innovation targets, breaks through barriers between departments, organizations and industries and fully releases the vitality of talents, capital, information, technology and other innovative elements to realize deep cooperation, so as to achieve the purpose of technological innovation. The essence of collaborative innovation is that enterprises, governments and knowledge production organizations (universities and R&D institutes) and intermediaries break through barriers between existing departments, organizations, sectors, industries and regions and develop large-scale integrated innovation organization model, with the purpose to achieve technological innovation through innovative management models. From the current innovation practice at home and abroad, the main form of collaborative innovation is the industry-university-institution collaborative innovation and the industry-university-institution-government cooperation. In the two forms, enterprises and knowledge production institutions (universities and R&D institutes) are the core subjects. They invest in their respective superior resources and elements to achieve deep cooperation. At the same time, they must seek collaborative support from relevant entities such as the government, financial institutions and intermediaries, so as to complete collaborative innovation activities. The development model of collaborative innovation is of great significance for enhancing regional independent innovation capability, enhancing the core competitiveness of the industry, continuously improving the management level and profitability of the enterprise and promoting the stability and health of the regional economy. At the same time, this innovative development model can continuously improve the scientific research ability and the schooling level of the universities, so that they can continuously deliver high-quality talents for regional economic development.

2. The Status Quo and Problems of the Interactive Development of Economy and Universities in Xi'an

The experience of developed countries shows that relatively developed higher education can provide sufficient human capital support and strong motivation for the rapid development of regional

economy, while the rapid development of regional economy can also stimulate the sound development of higher education in the region.

In recent years, the scale of Xi'an universities has developed rapidly. Every year, the number of college graduates in the Xi'an City exceeds 10,000, involving various economic pillar industries in Xi'an, including manufacturing, energy and chemical industry, aerospace and non-ferrous metallurgy. The rapid development of higher education in Xi'an provides sufficient human support and strong motivation for the development of Xi'an economy. At the same time, the scientific and technological innovation ability of universities in Xi'an has been continuously enhanced and scientific and technological achievements have emerged in an endless stream, which has also promoted the development of scientific and technological innovation capabilities of Xi'an. On the other hand, as the only mega city in the northwest of China, the economic strength of Xi'an has continued to grow rapidly in recent years. The economic development of Xi'an in recent years has provided resource support for higher education, and the investment in education from all aspects of Xi'an has also increased.

In the past decade or so, the economic development of Xi'an has basically shown positive interaction with the development of higher education. However, there are still some problems in the interactive development of higher education and regional economy in Xi'an, which hinders the interaction and virtuous circle between higher education and regional economy.

2.1 Rich Research Results of Universities, with Low Transformation Efficiency into Productivity

The scale of universities in Xi'an has developed rapidly in recent years. In addition to the large number of colleges and universities, the total amount of scientific and technological achievements of these schools is very rich every year. The advantages of science and education are extremely significant, and the comprehensive scientific and technological strength ranks third in the country. However, the transformation rate of these scientific research results is not high in Xi'an, only about 30%. In other words, the technological advantages cannot be transformed into economic advantages and promote economic development. Therefore, universities do not fully play their role in promoting regional economic development.

2.2 The Failure of Professional Structure of Universities to Adapt to the Adjustment of Regional Industrial Structure

In recent years, Xi'an has optimized its industrial structure by consolidating its economic foundation. On the one hand, it develops advantageous industries and increases the intensity of technological innovation to strengthen the secondary industry. On the other hand, it promotes the further optimization of the tertiary industry, making the cultural industry and tourism become new economic growth points in the economic zone. These adjustments and changes objectively require that the disciplines and professional settings of universities must be closely adjusted in accordance with the needs of regional economic construction and development. However, the establishment of the specialty structure in higher education in Xi'an does not well support this goal. For example, at present, Xi'an has started the construction of "the capital of Hard & Core Technology, aiming to build Xi'an into a high-tech industrial development center, such as the advanced manufacturing base, the new energy base, new material base, etc. However, there are very few relevant specialties about new materials and new energy in colleges and universities, and it is difficult to meet the needs for such talents in the future.

2.3 Lack of Perfect Coordinated Operation Mechanism of Universities, Governments and Enterprises

At present, the industry-university-institute cooperation in Xi'an is mainly a point-to-point project in a certain field, and there are few mechanisms for cooperation and innovation around the industry chain. In particular, there has not been a mechanism where the government, enterprises, R&D

institutes and universities form a community of interests in development strategies, project development, platform construction and personnel training.

3. Relevant Suggestions on the Interactive Development of “Featured Towns” and Universities in Xi'an from the Perspective of Collaborative Innovation

The “featured town” is not an urban town in the administrative sense. It refers to a spatial platform that has a clear industrial orientation, cultural connotation, tourism and certain community functions, and it is in the interior or at periphery of a large city and relatively independent in development. In August 2017, the Xi'an Municipal People's Government issued *Guiding Opinions on Accelerating the Construction of Featured towns in Xi'an*, stating that it will strive to cultivate and create 50 featured towns in batches through five years of efforts. Since then, the development of featured towns has been in full swing in Xi'an. A large number of featured towns have continuously hatched through their own innovative advantages, such as the Town for the Cultural Tour of the Datang Xishi Silk Road which featured by cultural tourism, Baliu Fund Town which featured by financial fund, Western China Science and Technology Innovation Harbor -- Wisdom Town and Chang'an University City Science and Technology Town. These featured towns have not only become a unique landscape in Xi'an, but also inject new impetus into the economic development of Xi'an.

Under the opportunity of Xi'an deepening the development of featured towns, universities can carry out strategic cooperation with these towns to realize interactive development and coordinated innovation. The rich science and education resources of colleges and universities can provide knowledge, technology and talents for the development of these featured towns, and the think tanks of colleges and universities can also provide suggestions for the cultivation and development of these towns. On the other hand, the development of featured towns can not only accelerate the transformation of scientific research achievements of R&D departments of universities, but also effectively transform them into productive forces to promote the development of urban industries. It can also cultivate high-quality applied talents through the production-education integration and school-enterprise cooperation, and then enhance students' employment and entrepreneurial ability and strengthen schools' ability of promoting the economic and social development and their capability innovation-driven development.

3.1 Build an Industry-University-Research Platform Relying on the Rich Science and Education Resources as well as Preponderant Discipline of Colleges and Universities

Xi'an “featured towns” can give full play to their advantages in science, education, scientific research and human resources, and establish a number of “industry-university-research platforms” by relying on the rich science and education resources of the surrounding universities and taking advantage of the disciplines, with the purpose to accelerate the promotion of scientific and technological research and achievement transformation. In turn, colleges and universities will be promoted to apply new thinking, new methods and new technologies of scientific research into teaching, and transform scientific research results and cutting-edge science and technology into teaching resources in a timely manner. By applying scientific research into the whole process of teaching, students can be exposed to the frontier knowledge of disciplines and master the latest scientific research trends, and their consciousness of innovation and innovation capacity can also be improved through the coordinated development of science and education.

3.2 Carry out in-depth Cooperation with Universities to Create Secondary Schools with Regional Industrial Characteristics

In this respect, some featured towns and universities in Zhejiang have already acted as pioneers and begun to explore a new model of cooperation involved in the government, industry, universities and R&D institutions. For example, Zhejiang Longquan Celadon Town conducted deep cooperation with Lishui College. Relying on the advantages of the industrial resources of the town, they created the new way “colleges + featured town”, namely running universities in a small town. It promotes the

talent cultivation, cultural inheritance and industrial innovation of Longquan Celadon Town. Xi'an "featured towns" can carry out strategic cooperation with universities to build secondary colleges together. With the advantage of industry resources, it is feasible to set relevant majors for characteristic industries and realize the coordination and development of campus resources, cultivating innovative talents who meet the market demands for regional industries.

3.3 Build an Innovative and Entrepreneurial Ecological Service Chain by Perfecting the Innovation and Entrepreneurship Ecological Service System of "Featured Towns"

At present, many local governments in China have issued a series of policies to encourage college students to start their own businesses, and colleges and universities also offer entrepreneurship courses to encourage their students to start business by themselves. However, both the government and the university only provide a single service (tax incentives, start-up funds, entrepreneurship guidance, etc.), without an ecological service system for innovation and business startups. Therefore, the construction of Xi'an "featured towns" should focus on the integration of "industry, city and humanity". The construction of "featured towns" should not only include the platform of industry-university--research cooperation, the platform of achievement transformation and trading and the financial service support system, but also cover the supporting hardware facilities, such as elegant office space, comfortable business apartments, communities, various types of professional service organization, etc. Establishing a "full-chain" service system from "project selection" to "industrialization" and improving the innovation and entrepreneurship ecological service chain of colleges and universities can provide a good external support for the innovation and entrepreneurship of college teachers and students.

3.4 Cooperate with Universities to Build Innovation and Entrepreneurship bases for College Teachers and Students

In recent years, many regions have introduced a series of support policies to encourage university students to innovate and start their own businesses, and colleges and universities have also opened courses such as college Students' Entrepreneurship Guidance to encourage them to practice and start businesses. But students who lack practical skills and experience are clearly unable to succeed only with enthusiasm. The "featured town" can rely on the advantages and specialties of their surrounding schools to integrate the related education resources of enterprises and research institutes to build practice bases and study bases for innovation and entrepreneurship, which can develop students' vision and provide a good practice platform to train their practical skills.

At present, national strategies such as "One Belt and One Road" and "Building a National Central City" have brought rare development opportunities to Xi'an. From the perspective of collaborative innovation, giving full play to the advantages of Xi'an education resources and combining the construction of "featured towns" and universities to construct an interactive development and collaborative innovation mechanism will help to promote the development of universities, industrial optimization and upgrading and the realization of the goal of regional economic innovation in Xi'an. In addition, the innovative and interactive development of universities and "featured towns" may also bring prosperity to other industries such as tourism and leisure, and thereby promotes the sustained, rapid and healthy development of economic strength of Xi'an.

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