

# The Study on Stage of Development of Knowledge Service Industry and Collaboration and Innovation Model: Faced to New Urbanization

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**Abstract.** Technology is from knowledge, while technology serves production. The society in the future is a society with knowledge and economy, certainly the new urbanization will construct in such a society. Therefore, the main problem for the new urbanization construction is how to combine the knowledge service industry and the new urbanization construction. In our study, we established a knowledge collaboration and innovation model facing the new urbanization. The characteristics of this model were as follows: (1) high interaction; (2) promoted by the urbanization; (3) coordinated by the intermediary; (4) dominated by the colleges and universities; (5) the democratic innovative subject.

## Introduction

Urbanization is a "double-edged sword", it has become the major events of the national people's attention. How do new urbanization development, how to make the urbanization process of risk to a minimum, how to let a person become the biggest beneficiaries of, become the new urbanization be solved the problem. About how to build socialism with Chinese characteristics of new type of urbanization has been the research hotspot in recent years, many scholars from different Angle of view put forward the development path of China's urbanization, these paths tend to emphasize market, factors such as population, the government, the system's important role in promoting urbanization, and based on this, advances the dynamic mechanism of urbanization, development mode, evaluation and its impact on economic and social. As for knowledge service industry in promoting the urbanization construction in the role of the few scholars attention. At the same time, the knowledge of collaborative innovation research in recent years in terms of innovation system and innovation model, but also the background of urbanization situation hasn't into the related study.

## An Analysis of Effect on Urbanization, Knowledge Service

Knowledge is different from other kinds of factors of production, it is invisible, can infiltrate into all fields of social life, become the "basic resource" of the society, which play an important role for promoting the new urbanization construction.

## By Accelerating Economic Growth and Promote the Urbanization Process

In the theory of urbanization, many scholars study shows that there is a connection of urbanization and economic growth, the economic growth must bring the improvement of urbanization level, the improvement of urbanization is bound to speed up the economic growth. Academics believe by collection of knowledge service such as capital and technology, will influence the economic growth in different ways, thus promote the development of urbanization of a country or region. Knowledge service will produce cumulative effect and multiplier effect, to promote economic growth, and its service object is mostly urban areas, rather than in rural areas. Knowledge service agglomeration

effect, the relationship and leading role before and after to make it more powerful, all kinds of knowledge are more tend to be concentrated in urban areas, the government also pay more attention to the city's infrastructure construction and all kinds of preferential policy tilt, this will have a cycle of ratchet effect, at the same time of promoting economic development drives the local urbanization.

### **By Optimizing the Economic Structure and Promote the Urbanization Process**

In essence, the urbanization is a population's migration from rural to urban, gradually reduce the proportion of agricultural activities, and gradually increase the proportion of non-agricultural industry structure evolution process. Knowledge service is under the background of globalization and the important ways of technology transfer and industrial transfer, which affect the optimization and upgrading of industrial structure. First of all, knowledge service has hastened the disintegration of traditional agricultural economy, agricultural surplus increased to promote the development of urbanization. Although from the investment proportion of knowledge service, knowledge service mainly to the field of the second and the third industry, but the increase of knowledge service in inevitably along with the increase of agricultural production mechanization, the improvement of the technical level of agricultural production and the improvement of labor productivity. On the one hand, a large number of labor be liberated from the traditional farming, flowing into urban areas, become the important source of urban population growth and agglomeration, it can promote the development of urbanization; On the other hand, the improvement of agricultural productivity can satisfy the basic needs of more and more urban population, expanded the boundary of the urbanization. At the same time, knowledge service has promoted the rise of the third industry and expansion, as subsequent power of urbanization. When a country's industrial modernization industry to urbanization role is abate, and the third industry, especially the new type of the third industry, relying on high-tech, become a subsequent power of urbanization.

### **Affected by Institutional Change and Promote the Urbanization Process**

Knowledge service will change the system of the regional environment, institutional change; Changes in the environment and urban region system and the system vicissitude, tend to strengthen the location advantage of the region, so as to attract more large-scale knowledge services, visible knowledge service, institutional change and conceptual change, and urbanization is to contact each other and influence each other, restrict each other. In general, a good system environment that can attract knowledge service, not a satisfactory system environment, greenfield investment costs will be very high, the technology transfer cannot be protected by intellectual property rights. After entering the knowledge service, has changed the external system environment and lead to the change pattern between the economic subject of interests, so as to accelerate the formation of local new institutional arrangements, the final effect on urbanization, form a three-way interaction pattern.

### **By Promoting Migration and Promote the Urbanization Process**

From the point of the flow of population, urbanization of rural population into urban population and urban development perfect process. Fundamental symbol of urbanization is a large number of rural population's migration to cities, concentrated in urban areas in social economic and cultural activities such as production and living. Although urbanization population urbanization is not simple, but can not deny the fact that the population migration is an important characteristic of the urbanization process. Knowledge service can promote urban economic growth, can bring more employment opportunities, to attract the countryside surplus labor force and regional labor migration to the cities, improve the level of urbanization. Knowledge service increase jobs in part because its directly provide jobs; In part that is associated with the knowledge service of forward and backward enterprises in foreign capital, driven to develop to create new jobs. At the same time, knowledge service has changed the enterprise and the employment policy and employment concept. On the one hand, make women and minority groups such as greater access to employment.

## **The New Knowledge Collaborative Innovation Model of Urbanization**

In the process of urbanization construction, may produce some new contradictions and problems, while in the process of solving these contradictions and problems, will inevitably generate new ideas, create new methods, new discovery, so as to enrich the human existing knowledge system and thus the power of knowledge innovation. Gibbons, according to the change of knowledge production mode, under the background of globalization was proposed in 1994 by two kinds of knowledge innovation model. In order to better with the coordinated development of urbanization, on the basis of reference gibbon, pattern 2, put forward new mode of knowledge collaborative innovation - agency coordination, promote urbanization, the dominant knowledge of the people of collaborative innovation model. The mode is mainly to solve the urbanization in the process of knowledge innovation and the people of subject in a dominant position of such problems as how to embed intermediary department.

### **To Promote Knowledge Collaborative Innovation Model of Urbanization**

According to the social network theory, the so-called "social network" refers to a series of "nodes", and the "node" is a series of social relations in a particular way connected [7]. By the person or organization to form a "node", after the continuous social contact can produce all kinds of relations, thus forming a mesh structure with special shape and operation rules. Network has two main characteristics, one is the contact characteristics, the other is a structural features. Before a characteristic mainly includes the strength, diversity and asymmetry; After a feature mainly including density, centrality, stability, etc. And new urbanization will change the contact characteristics and structural characteristics of the network, the author thinks that the new urbanization construction in the process of network will be a strong relationship and the center for sex), which makes the network structure change, become a new kind of state of the social network environment.

Knowledge has its own characteristic; this also means that different network structure and intensity corresponding to the different features of knowledge, only in this way can the specific knowledge in specific network makes sharing to achieve optimal efficiency. As a result of knowledge sharing in different stages have different characteristics, lead to knowledge innovation also reflects different forms [8]; At the same time different network relations can show different stages of knowledge sharing features and the degree of knowledge sharing, that is knowledge sharing stage characteristics reflected by different network relations. Then, when a certain period of the network changes, knowledge sharing, and because of its characteristics at different stages will have corresponding change, it will directly affect on the efficiency of knowledge sharing, and reflect in the knowledge innovation. Obviously, the change of the network characteristics, through the characteristics of knowledge sharing and phase to change the efficiency of knowledge sharing, and then change the type of knowledge innovation [7]. The relationship between the two, can be expressed as shown in the figure below:

### **To Coordinate the Knowledge Intermediary Departments Synergy Innovation Model**

National innovation system and triple helix model in the actual operation due to innovative idea has not been a consensus of the parties to the differences of innovation value orientation, this problem will make the system of the characters in the cooperation position is not clear[5]; Institutional hurdles remain, on the other hand, the channels of cooperation, it is necessary to further cleared. Policy is constantly changing, the mechanism is divorced from reality, the difficult to fusion and effective interaction. Based on this, it is necessary for us to find a kind of special agencies to be scheduling, and this kind of intermediary institutions in terms of coordinating the relationship between stakeholders, has an irreplaceable function. At the same time providing knowledge service has great advantages compared to the government and market. From the above study found that the triple helix model of cross mixed organization can become one of the patterns of the intermediaries.

Of course, in addition to the cross mixed group, we can also study other forms of organization, in brief this kind of intermediary organization in the knowledge innovation system can promote the

communication, strengthen the contact. Based on the experience of the developed countries, this kind of intermediary service agencies may instead of the government to perform some function, and to expand the service function, optimization of the resources of science and technology and the integration of social forces, and establish a more reasonable sound operation mechanism of transformation of scientific and technological achievements. In the knowledge in collaborative innovation model and its main function [6] mainly includes the following several aspects:

(1) Strengthen the cooperation of different institutions, promote the flow of people. Such as both the professor in university of science and technology park in company's consulting and part-time work, also have enterprise technical personnel or management personnel engaged in the lectures, study in university. Can effectively help the flow of information through personnel flow, realize information sharing, promote innovation.

(2) On the main body of knowledge innovation for commercial evaluation, commercially valuable knowledge for applied research in depth;

(3) For the main body to provide related services, such as patent, legal aid, etc.;

(4) Through the introduction, workshops, joint scientific research methods such as help each participation main body to create common and varied.

Intermediary function also needs certain conditions into full play, as the authorities should intensify support and support for it, offer certain policy in respect of taxation, finance and other tilt, key protection backbone of the development of science and technology intermediary organizations, and give full play to its positive role in the science and technology intermediary service organization of cross-industry cooperation and exchanges, to establish a scientific and democratic decision-making process, effective self-management, the pattern of common development. Believe that this kind of intermediary institutions in promoting the integration of innovation system and focus on the technology research and promotion mechanism, evaluation of cooperation projects, to follow up and implement the policy will play more and more important role.

Of course, the depth of the study the agency has yet to be deepened, such as its organizational form, property, operation rules, how to manage intellectual property rights, such problems as how to motivate members to join for a long time it remains to be discussed in this paper.

### **Knowledge of the People of Collaborative Innovation Model**

With the development of times and social progress, the change of the connotation of the knowledge innovation main body lead to the evolution of knowledge innovation model. Urbanization construction in this big background, the main body of knowledge innovation have?

Knowledge and cross, integration, the innovation of the compound features such as requirements to spread out some resources for effective integration and coordination, and further become the common source of competitive advantage for group [8]. Feng.Mr Pell (von Hippel, 2005) focus on consumers as the center of the innovation system, he points out that with the development of computer and communication technology, more and more consumers tend to with the help of computer and communication technology to develop their own new products and services. The concept of mass collaboration, by staples cape with Williams in 2007 specifically, they point out that the economy of the 21st century is going through a democratic revolution, its main features are global, openness, peer and Shared. The above view is at the heart of how to realize the innovation of the public, to the innovation resources and how to make use of a dispersion higher broader level of knowledge innovation and value creation. This means that knowledge innovation main body in the form should be more diversified, including not only enterprise, government, colleges and universities, should also include the ordinary individuals. People, only innovation subject of the innovators have different characteristics of innovation resources to effectively use, can effectively realize the reproduction of knowledge, thus more value is created. In the process of knowledge innovation, innovation participants will own knowledge socialization, so that we can contribute to the collective innovation output, so that the collective output is greater than a single output (Sawhney, 2000).

From the perspective of knowledge sharing, it is the individual by some Shared knowledge in

organization, its own private knowledge into a total of knowledge, and let all individual knowledge sharing in the organization and the use process [8]. Thus it can be seen that can only be done in knowledge sharing, knowledge innovation and knowledge sharing is inseparable from the knowledge of individual carrier.

### **Knowledge Collaborative Innovation Model Dominated by Colleges and Universities**

At present, there are three kinds of balance system based on knowledge production, respectively after the Humboldt mode, national innovation system and triple helix model [6]. After the Humboldt mode is divided into Humboldt and Humboldt model, but these two kinds of model are compared with the traditional innovation category, they are referring to innovation is mainly refers to the research and invention activities of scientists and engineers, is a kind of individual behavior, is a personal dominant knowledge innovation model [9]. The company as a national innovation system innovation, and the triple helix model claims up innovation key roles should be determined by the university. So in the new urbanization construction in the process of the history of this complex, who be more scientific knowledge innovation has become the dominant?

The author thinks that knowledge innovation should be determined by the scientific research institution and research university (college), because the analysis from the Angle of knowledge learning, knowledge absorptive capacity, integration ability and social ability are much higher with other innovation main body. In reality, however, innovation process, with scientific research institutions and research universities have their own local interests, and the characteristics of the system, resulting in the effective cooperation between the two at the same time and complete the overall goal has the certain difficulty. At the same time, so far, the study of the knowledge innovation system is relatively less, not to clarify both the interface characteristic and evolution law of the produced both in the theory of collaborative knowledge innovation practice guidance. Scientific research institution and research university knowledge innovation synergy to improve the efficiency of knowledge innovation system has a very important role. So some scholars complete degree according to the agreement, the cooperation of mutual close degree, put forward the two commonly used for knowledge innovation synergy of two modes: the first is a scientific research project cooperation agreement, and the other is a cooperative project research laboratory (the) [10]. Only for both highly collaborative knowledge innovation, to achieve system integration effect, can better reflect both the dominant position.

### **Endnotes**

The development of complexity science, the arrival of the knowledge society for the development of new urbanization provides broader opportunities. Knowledge for the urbanization from the perspective of complexity science collaborative innovation model is highly interactive features, under the push of urbanization needs to coordinate intermediaries, thought that universities dominant is the main body of innovation and people. Applied to the new urbanization construction in China, to be able to healthy development, reduce the risk in the construction. In can better solve the problem of "agriculture, rural areas and farmers" at the same time, also can become a drive China's economic growth and realize China's dream of a powerful endogenous sources of power.

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