Research on Model, Mechanism and Policy of Regional Collaborative Innovation Platform Under Computer Network Environment

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Abstract. With the strengthening of the trend of economic globalization, science and technology, especially the development of information technology by leaps and bounds, the acquisition of production tools, regional collaborative development and product marketing range is expanding, social production, material circulation, commodity trading and its management mode is and will continue to produce far-reaching changes. For various reasons, there are information islands and data islands between many regional collaborative development, and information systems are often designed and developed for different departments. With the intensification of competition, it is urgent for RCA to eliminate information islands and data islands so that each application can work together independently and effectively, integrate different applications into a complete RCA information environment, and realize the integration of RCA with other regions.

Keywords: Supply Chain, Integration, Computer Work, The Information System

1. Introduction

Computer network is not only the guarantee for the normal operation of industrial production, but also the link and bridge connecting the coordinated development of the upstream and downstream related regions of industrial clusters\(^2\). The efficient computer network is directly related to the benefit of regional cooperative development and can reduce the operation cost of regional cooperative development\(^3\). According to statistics, in the United States, processing and manufacturing account for only 5 percent of the total production time, while computer network processes such as transportation, handling, storage and packaging account for 95 percent. Manufacturing cost is less than 1/100 of the total cost of the product. In Japan, for every 2.6 percent increase in computer networks, the economy grows 1 percent, and computer networks account for about 10 to 12 percent of total costs. At present in Our country, the cost of computer network accounts for about 70% of the price difference of goods, while the cost of computer network reflected in books only accounts for 40% of the total cost of goods\(^4,6\).

2. Concept and generation of supply chain

Traditionally, the need for management and control, the coordinated development of regional has been adopting the management mode of related activities and resources product production and operation:
either by the self-investment to expand its scale, or participating in regional coordinated development to form a supplier and seller ownership regional coordinated development to provide raw materials, semi-finished products or components. This model has some rationality under the relatively stable market environment, but under the situation of the intensified competition of global regional coordinated development and unpredictable market, this model shows various defects. Since the 1980s, the concept of using the external resources of regional coordinated development to quickly respond to market demand and win competitive advantage with low cost, high quality and early listing has emerged, forming a "network chain" connecting the coordinated development of all regions from suppliers to manufacturers to dealers. Obviously, the coordinated development of these regions must realize synchronous and coordinated operation so as to benefit all the regions along the chain. Therefore, the concept of supply chain management came into being.

3. Summarize the important role of regional collaborative innovation system and its management system

3.1. Definition of regional collaborative innovation system management System

According to relevant literature research and the author's practice, regional collaborative innovation system management system mainly refers to the establishment of a set of staff daily work information collection and performance appraisal as one of the management system. The "wheel" model shown in Figure 1 below can effectively reflect the development process of regional collaborative development:

![Figure 1. Regional collaborative development performance management "wheel" model in a cycle.](image)

As shown in the "roulette" model shown in Figure 1, in the development process of regional collaborative development, excellent employees are constantly developing, while those with poor performance are gradually losing. In this way, regional synergetic development can not only evaluate employees' work efficiency with the help of this method, but also, more importantly, use the corresponding reward and punishment standards for performance evaluation to ensure that their tasks can be completed in time and quantity, while promoting employees' work efficiency.

3.2. The important role of regional collaborative innovation system management system

According to the author's research on the management system of regional collaborative innovation system, this system has the following two important functions: first, it is helpful to improve the competitiveness of regional collaborative development. Information system after the implementation of
the management system, regional coordinated development can use this system will be the first to the development of performance management goal decomposition, and then on the basis of the responsibility assignment of the corresponding task according to different department, department according to the index and the tasks assigned to department performance management, in combination with the practical case of department personnel quantity and reasonable assigned to each employee's task, the following figure 2 shows clear regional synergy innovation system management can be effective coordination of all aspects of the effort:

![Figure 2. The role of MIS management: Coordinating the efforts of the owners for regional collaborative development.](image)

It can be seen from Figure 2 that regional coordinated development can gradually allocate development tasks and improve the competitiveness of regional coordinated development under the condition of efficient completion of corresponding work. Second, it helps to stimulate the enthusiasm, initiative and creativity of employees. Regional collaborative development implements information management system, which checks the reward and punishment mechanism to meet the work needs through the work content of different departments and the set of department performance management indicators. In other words, when an employee completes a prescribed work task, regional collaborative development shall give a certain compensation incentive mechanism, and punish if he/she fails to complete the prescribed task. Through such a performance appraisal mechanism, it will be very helpful to stimulate the enthusiasm, initiative and creativity of employees.

4. Discussion on the construction of regional collaborative innovation system management system
Since the management system of regional collaborative innovation system plays such an important role in the development and staff of regional collaborative development, it is very necessary to promote the good survival and development of regional collaborative development by establishing a perfect management system. It is found that although the information system plays an extremely important role, it is only a link in the management system of regional collaborative innovation system. In combination with practice, regional collaborative development can proceed from the following three aspects to build a perfect information system management system:

4.1. Information system planning
A complete regional collaborative innovation system management system, information system planning is very important and basic link, and makes the program not only can clear the coordinated development of regional staff to carry out the purpose of information system, at the same time, more important is can make them master information system, standard and values, etc., on the basis of maximum safe play a great role in the regional collaborative innovation management system.

Regional coordinated development in the information system planning, therefore, must first according to their own performance management want to achieve their goals in different periods of decomposition, and combining with the work of the specific content in different periods of the information systems division standards, methods, etc., and then combined with the coordinated development of regional development goals in different period to develop the corresponding information system plan.

4.2. Establishment of information system method library

Through the research, it is found that there are various evaluation methods used in the management system of regional collaborative innovation system at present, and different evaluation methods have differences in evaluation criteria, use conditions and other aspects, leading to different results of the evaluation of the same object due to different methods. Therefore, in order to ensure the accuracy of the management system evaluation of regional collaborative innovation system, a relatively rich information system method database should be established for regional collaborative development, so that regional collaborative development can adopt appropriate methods with the help of this method. In combination with the author's practice, the performance management system mainly adopts three methods: balanced scorecard, critical events and 360-degree assessment. Therefore, the author thinks that these three methods should be included in the method library of regional collaborative innovation system.

**Figure 3. Indicators of regional collaborative innovation system management.**

First, the balanced scorecard method. In the information system management system, regional collaborative development develops a balanced scorecard model for employees according to the relevant methods of the information system, and integrates the vital interests of employees such as education and training, promotion, salary and welfare into the BALANCED scorecard for management.

The second is the 360-degree evaluation method. The evaluation method of information system
management system is special. It mainly conducts a questionnaire survey on all the personnel around the appraisal object, such as leaders, colleagues, subordinates, customers, etc., generally involving the appraisal object's work performance, work attitude, comprehensive quality and other aspects.

Third, the critical event method. Different from the above two assessment methods, the critical event method mainly evaluates the contribution degree of the key to the overall development of regional collaborative development or the damage degree of the interests of employees. Employees should be rewarded if their contribution value (benefit value) meets the criteria specified in the assessment method.

From the perspective of practice, the core of the critical event method lies in the evaluation criteria, and the regional coordinated development must be formulated in strict accordance with relevant norms.

5. Conclusion
In today's big wave of market economy, the competition of modern regional collaborative development is increasingly fierce, whether a sound and reasonable regional collaborative innovation system management system can be effectively established is related to the survival and development of regional collaborative development. At the same time, it should ensure the effectiveness, feasibility and scientificity of the system, so as to improve the quality and level of human resource management of regional coordinated development, further enhance the comprehensive competitiveness of regional coordinated development, and finally promote the healthy and sustainable development of regional coordinated development.

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