

Research on the Model of Talent Cultivation and Cooperation between Industry and Education in Private Colleges from the Perspective of Regional Cooperation

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Abstract. Combination of talent cultivation and production in private universities is an important knowledge innovation model in a national innovation system. It is also a key link in the effective operation of innovation systems in the context of regional cooperation. The cooperation between talent training and production in private universities plays an irreplaceable role in the process of knowledge information circulation and industrial technology upgrading in the innovation system under the background of promoting regional cooperation. This paper is based on the knowledge coupling model of talent training and production and education integration in private colleges, together with the dynamic game analysis of talent training and cooperation between industry and education in private colleges. Through game tree analysis, the income value of both personnel training and production and education integration in private colleges is compared. This concludes that the talent cultivation of private colleges, as well as the integration of production and education, cooperates in technology research and development, the maximum value of income and the optimization of resources. Countermeasures and suggestions for strengthening the cooperation between talents training and production in private colleges under the background of regional cooperation are brought up.

Introduction

In today's increasingly competitive environment, micro-enterprises are increasingly aware that knowledge has become a core competitiveness resource for enterprises. From the perspective of the national innovation system, the combination of talent training, production and education in private universities is an important knowledge innovation model in the national innovation system, and it is also a key link in the effective operation of the innovation system in the context of regional cooperation. All countries in the world attach great importance to the irreplaceable role played by private university personnel training and cooperation between industry and education in promoting the flow of knowledge information in the innovation system of the country or the region and the upgrading of industrial technology in the country. Therefore, all countries in the world, especially the developed countries, have positioned the integration of talent training and production and education in private universities as a major mode of achieving major breakthroughs in industrial technology.

As new university concepts are gradually introduced, new university styles are simultaneously fixed as a model.

Literature

Some scholars have studied the motive mechanism and cooperation mode of talent training and production-teaching integration in private colleges. For example, Yong (2000) concluded that some Canadian companies with relatively high activity and industrial clusters concluded that Canadian universities are in Canada. The research results of Yong (2000) mainly prove that this model of "integration of talents training between universities and civilian universities and integration of production and education" is highly feasible in the real economy. Beaver (2002) is mainly engaged in the training of

talents in private colleges and universities, and the technology-oriented enterprises in the integration of production and education. Through research, Beaver (2002) pointed out that in recent years, the talent cultivation and cooperation between industry and education in small and medium-sized enterprises of small and medium-sized enterprises. At the same time, the influence of talent training and cooperation between industry and education on the productivity improvement and productivity improvement of SMEs is more obvious. In recent years, some scholars have carried out research on the performance evaluation of talent training and cooperation between industry and education in private universities. Etzkowitz (2000) believes that the design principle of performance evaluation of talent training and cooperation between industry and education in private universities is that they must comprehensively consider organizational strategies to improve The efficiency of performance evaluation of talent training and production and education integration in private colleges and universities. Etzkowitz (2000) proposed a balanced scorecard based on organizational strategy and was widely used in various performance evaluations. The balanced scorecard based on organizational strategy in corporate performance has achieved great success. Therefore, the balanced scorecard has also been It is applied to the performance evaluation of talent training and cooperation between industry and education in private universities; after that, many foreign scholars combined this method and further studied with factors such as knowledge elements and technology transfer (Cummings, 2003; Teng, 2003; Kulatunga et Al, 2007; Puilbin et al, 2008). Some scholars also focus on the study of the structure of interest distribution. Scholar Moullin (2002) believes that the structure of benefit distribution is directly related to the integration of personnel training and production and education in private universities in the process of talent training and cooperation between industry and education in private universities. Satisfaction determines whether the parties will cooperate next time. This point has been recognized and borrowed by some scholars. Later, they found that the fairness of interest distribution will directly affect the stability of the cooperation between talent training and production and education in private universities, thus affecting the success of this model cooperation (Pratt, 2005; Lebeaul 2008). Berghe (2008) proposed a new performance evaluation model for talent training and cooperation between industry and education in private colleges. The model mainly reflects the importance of the process of talent training and cooperation between industry and education in private universities, and its evaluation index system. It is mainly based on the two major factors of input and output, and is based on the process of transformation and cooperation between talent training and production and education in private universities.

It can be seen from the above literature review that scholars at home and abroad have carried out extensive research in the operation mechanism, performance evaluation and cooperation model innovation of talent training and production and education in private universities, and have obtained certain relevant research results. Yet analysis of the game cooperation between the personnel training and the integration of production and education in private universities is limited, which leads to the failure of the existing literature to analyze the system and the essential roots. It is vital to study the cooperation between talent training and the integration of production and education in private colleges, especially the game cooperation. In addition, there is little research on the combination of talent training and production and education in private universities in this specific region under the background of regional cooperation. Therefore, it is necessary to further study and improves in this sector.

Theoretical Framework

The concept of coupling has now been widely used in various fields of the social sciences to describe relationships that are interdependent and interact with each other. In the process of talent training and cooperation between industry and education in private universities, knowledge coupling plays an important basic role and constitutes the theoretical basis for the cooperation between talent training and production and education in private universities. Information elements and knowledge dissemination in private. Barrier-free circulation between the personnel training and the integration of production and education in colleges and universities is one of the most critical factors for the success of talent training and cooperation between industry and education in private universities. Only through effective

knowledge sharing and information exchange, all parties can achieve knowledge coupling, so as to achieve the purpose of talent training and cooperation between industry and education in private universities. The research of university and other scientific research institutions is oriented towards practical problems by focusing on the practicality of knowledge and the efficiency of information. Enterprises no longer use profit as their sole pursuit, but pay more attention to improving their own scientific and cultural quality. From the perspective of game theory, the game heterogeneity knowledge coupling of industry and academia will greatly promote the faster development of the economy. The above theory constitutes the basic theory of research in this paper, and through the comprehensive application of the above theories, the research on the cooperation mechanism of talent cultivation and production and education integration in private universities is carried out.

Game Analysis

In order to objectively analyze the process of making game choices between the personnel training of private colleges and the integration of production and education, some basic research hypotheses are set:

Hypothesis 1: The participants in the talent training and the integration of production and education in private universities are simplified into two: the producer (enterprise) and the research institute (university and research institute),

Hypothesis 2: The strategic choices of both participants are simplified into two types: cooperation and non-cooperation.

Hypothesis 3: The cooperation method is simplified to two types: technical cooperation a and technology purchase b. The technology purchase method is simplified to the direct purchase of the technical achievements of the research and development party, and does not directly participate in the research and development of the research and development. The technical cooperation mode is simplified to the production side and the research and development side to complete the technology research and development, that is, the producer directly participates in the research and development of the research and development side, and the two parties finally distribute the benefits of cooperation in the $n:1-n$ ratio.

Hypothesis 4: The research results are simplified into two types: high results and low results, and the respective probabilities of high and low results are p and $1-p$ respectively, and the research institutes pay corresponding high cost $C1$ and low cost $C2$ respectively.

Hypothesis 5: Assume that the letter R is used to indicate the expected benefits of the combination of talent training and production and education in private universities.

This paper analyzes the game process of talent training and cooperation between industry and education in private universities through game tree.

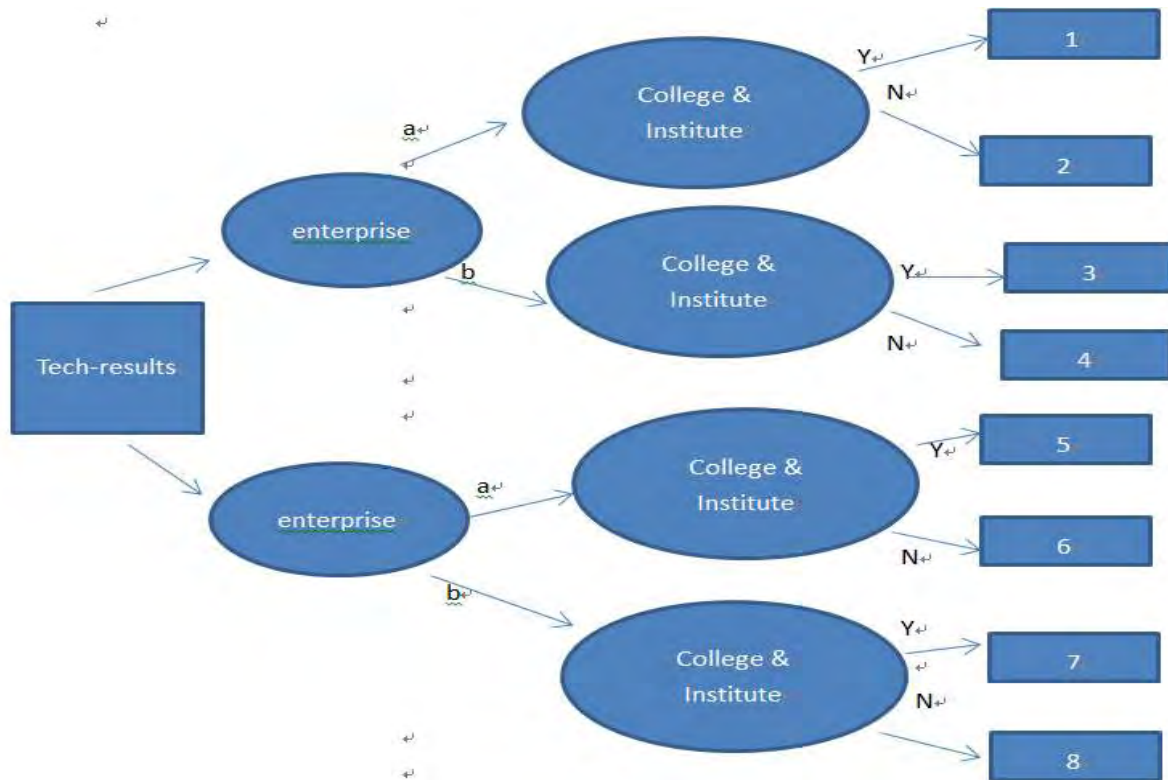


Figure 1. Game Tree of Talent Cultivation and Cooperation between Enterprises and Private Colleges

Scenario 1 If the producer and the research institute choose to cooperate, the probability of high and low results based on the hypothesis is p and $1-p$, respectively, and the expected return $E1$ of the producer is: $p \cdot R \cdot n + (1-p) \cdot R \cdot n$;

Scenario 2 If both the producer and the researcher choose to trade, the producer expects the return $E2$ to be: $p \cdot [R-P] + (1-p) \cdot [R-P]$;

Scenario 3 If the strategist of the producer's transaction or cooperation does not accept, the producer's expected return $E3$ is: $p \cdot [R-C] + (1-p) \cdot [R-C]$;

In the above three cases, the research and development party can decide whether to accept the cooperation or trading behavior proposed by the producer according to its own cost-benefit game. Through the above game decision tree analysis, this paper conducts dynamic game analysis on $E1$, $E2$ and $E3$, and can conclude that the research institute can decide whether to accept the cooperation or transaction behavior proposed by the producer according to its own cost-benefit game. If the cooperative R&D plan proposed by the manufacturer is in line with the economic interests of the research institute, the research institute will choose to accept the proposal proposed by the producer; if the researcher does not accept the plan of the producer, the two parties choose to independently carry out technical research and development; The party proposes to purchase the research results of the research and research institute. At the same time, both parties can benefit when the research institute is willing to sell, but the benefit value is less than the cooperative income value. It can be seen that based on the above game analysis, the two parties choose to cooperate in technology research and development to maximize the return value and optimize the resources.

Conclusion

Through the above game decision tree analysis, the conclusion that can be obtained from this paper is that the research and development party can decide whether to accept the cooperation or transaction behavior proposed by the producer according to its own cost-benefit game. When the two sides choose to cooperate in technology research and development, the revenue value is maximized and the resources are optimized. Based on the conclusions, the countermeasures are proposed as follows:

Promote the construction of strategic alliances for industrial technology innovation, and form a group of long-term, stable and sustainable development of institutionalized private colleges and universities. Under the background of regional cooperation, we should build a number of key laboratories for the needs of national economic and social development, carry out industrial cooperation innovation bases for industrial common technology research, demonstration and promotion of application services, and realize the connection of industrial technology supply and demand in the context of regional cooperation. Through the layout of major forward-looking technologies, we will co-ordinate the establishment of a number of key laboratories for the development of the country in the context of matching regional cooperation. Creating the economic development of key laboratory services is a fast channel for talent training and cooperation between industry and education in the context of regional cooperation. Focusing on the policy needs of enterprises, universities and scientific research institutions in the context of regional cooperation in the context of regional cooperation in the training of talents in private universities and the integration of production and education, based on the facts, the relevant support policies are formulated and improved, especially in the context of regional cooperation. Regional talent exchange policies between research institutes and related research evaluation and title evaluation policies, venture investment and financing policies, and policies to encourage the development of science and technology intermediary service institutions. At the same time, the policy can design a new mechanism for cross-school, cross-border and school-enterprise talent training in the context of industrial cooperation in the context of regional cooperation; use the top-level design of macro-policy to build an alliance training platform in the context of regional cooperation, and carry out teacher training and enterprises in the context of regional cooperation. Employee training; building a platform for results transfer in the context of regional cooperation, promoting the integration of production and education in the context of regional cooperation; establishing a quality evaluation working group by the government to explore the new quality evaluation of talent training and cooperation between industry and education in private universities under the background of regional cooperation Indicators, etc.

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