Research on the Whole Process Engineering Consulting Service of Risk Sharing based on CIM Reward Model

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Abstract: In order to fully study the CIM reward model risk sharing process of the whole process of engineering consulting services, this paper analyzes the three common outsourcing modes of engineering consulting by AHP, and analyzes the work flow by black box data flow. Finally, this paper believes that the policy analysis and case study of response engineering should be strengthened before the risk analysis of specific projects under CIM reward model can be made.

Keywords: Whole Process Engineering Consulting, Service of Risk Sharing, CIM Reward Model

1. Introduction
On February 21, 2017, in order to deepen the reform of the construction industry and promote the reform of the engineering consulting industry, the general office of the State Council issued the opinions on promoting the sustainable and healthy development of the construction industry (GBF [2017] No. 19), encouraging the engineering consulting industry to carry out the whole process of engineering consulting services, encouraging investment consulting, survey, design, supervision and other consulting enterprises to form through joint operation, merger and reorganization, etc Consulting enterprises that can complete the whole process of engineering consulting services for construction projects[1]. Formulate technical standards and contract model for the whole process of consulting services, and integrate with international project management mode as soon as possible. Call on the government to take the lead in investment projects and give priority to the whole process engineering consulting service mode. The Ministry of housing and urban rural development of the people's Republic of China followed the policy steps and carried out the pilot work of the whole process engineering consulting service [2]. On May 2, 2017, the Ministry issued the notice on carrying out the pilot work of the whole process engineering consulting service (Jian Shi [2017] No. 101). The pilot work was...
carried out in 8 provinces (cities) and 40 enterprises, including Beijing, Shanghai, Jiangsu, and the duration of the pilot work was 2 years.

In the aspect of industry development, the whole process of engineering consultation can effectively improve the management level of construction projects, improve the industry concentration, increase the investment benefit, standardize the market order and improve the project quality. The promotion of the model provides the direction for the development of the consulting industry[3]. The mature consulting enterprises, such as investment consulting, survey and design, construction supervision, have shown great enthusiasm. They have adjusted their internal business structure, planned the transformation of enterprises, and expected to intervene in the whole process of engineering consulting as soon as possible. From the macro level, the whole process engineering can speed up the integration of China's consulting enterprises with the international project management service mode, which is an inevitable requirement for the consulting industry to adapt to the development of the socialist market economy. The following is an analysis of the development drivers of the whole process of Engineering Consulting:

The development of whole process engineering consulting has been inspired by the international whole life cycle engineering consultants. With the development of consulting industry, international engineering consulting companies have emerged in the field of engineering construction in developed countries. Different from design institutes and supervision companies, this type of companies can provide the whole process engineering consulting services for international projects. Due to its outstanding achievements and efficient management efficiency, China began to promote the whole process of engineering consulting.

2. Whole Process Engineering Consulting Industry Structure
The whole process engineering consultation is a kind of international general engineering construction organization mode, which fundamentally solves the problems of increasing management cost and complex management interface of the traditional consulting mode. The traditional mode is in the charge of different consulting institutions in different stages, only responsible for the business scope of their own, without considering the extension of services. This mode splits the whole construction project The inner connection of. And the lack of familiar participants to control the whole project from the beginning to the end, resulting in the fragmentation of construction project management. In the domestic market, the specialized consulting service has developed for a long time, the work content of the consulting agency is too single, and the hard combination of professional consulting units can not fundamentally solve the nature of the separation of consulting services. In the market, the consulting agencies are randomly combined, and small enterprises take advantage of their low cost advantages to occupy a favorable position in the price. However, it causes low remuneration for consulting services, and it is difficult for large enterprises to intervene in the whole process of consulting, which seriously hinders the orderly development of the consulting market. However, small enterprises can not meet the requirements of large-scale and complex large-scale projects with high efficiency requirements. It is necessary to provide a new consulting service mode for consulting enterprises to solve the problems arising from market development. As a new construction management organization mode, the whole process of engineering consultation should be born from time to time. As shown in Figure 1.
The whole process engineering consulting service mode is an integration mode to engineers. At present, the concept of general consultant proposed by many scholars is an exploration of the whole process engineering consulting mode. According to different project management modes, there may be different calculation methods to determine the whole process engineering consulting service remuneration. For example, what consulting services the general consultant provides to the investor, whether it meets the needs of the investor, etc., the investor shall pay the remuneration related to the work content and give a certain reward according to the performance of the general consultant in the project. Under the background of chaotic payment mode, uneven consulting service results and slow promotion of the whole process engineering consulting service market, the eager discussion of the whole process engineering consulting service mode and the exploration of the compensation model have become the urgent issues in the practice and theory circles. [4]

3. Mechanism Mode of Whole Process Engineering Consultation Industry

The incentive theory of management science has evolved from the demand theory and is becoming more and more mature. Among them, the representative theories are Abraham Maslow's demand level theory, Frederick Herzberg's incentive health theory, Clayton erdev's ERG theory, David McClelland's achievement incentive theory, etc. these incentives belong to the content-based incentive theory. The process incentive theory includes the expectation theory of Fromm and the fairness theory of Adams. The incentive theory of management focuses on the analysis of the common characteristics of human beings. Based on the needs of human beings, through the study of the incentive process, it determines the incentive elements, seeks effective incentive methods, and serves the needs of managers to mobilize the enthusiasm of producers. The cognition of motivation theory and its law is the process of human beings' cognition of their own needs, which develops with the deepening of human cognition. People are the people of the society, and need to obtain incentives in the society to meet their own needs.
requirements. Enterprises are no exception. For the whole process engineering consulting institutions, they must have a clear understanding of the remuneration they want to get for their own services, and they can negotiate with investors on Incentive terms, that is, they are responsible for themselves and for achieving the objectives of investors. The following is the division of management incentives as shown in Figure 2.

![Figure 2. Mechanism Mode of Whole Process Engineering Consultation Industry](image)

4. Summary
In this paper, the whole process of engineering consulting service remuneration is determined mainly from two aspects of work elements and risk sharing. The risk remuneration of management remuneration and reward part is established, which is verified by case analysis. At present, there are only a few or even no scholars studying the whole process engineering consulting service compensation model. This paper only makes a preliminary exploration on the whole process engineering consulting service compensation, and sincerely hopes to improve the compensation model scientifically and reasonably in the future research. The following is an explanation of the shortcomings of this paper, hoping to improve the research level in the future:

First, this paper uses the work factor weight analysis and the traditional charging standard to determine the management reward, and considers the risk reward determined by the risk probability in the investment balance reward part, and establishes the two-part reward model, but the policy and literature analysis method used in the model building process have certain limitations.

Second, this paper mainly identifies the risk events involved in the whole process of engineering consulting service through case analysis. In the later stage, it can conduct research visits to the practical experts and risk research experts who have experience in the whole process of engineering consulting service, adopt scientific and reasonable identification methods, identify the unique risks in the whole process of engineering consulting service management, and improve risk awareness Other accuracy.

Acknowledgement
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