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Whole Process Management-Discussion on Economic Risk Management of General Contract Project

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Abstract: ***This paper mainly takes the economic management analysis of the general contract project as the ft starting point, and puts forward specific risk prevention measures according to the risks and related problems in each stage, in order to provide some references and suggestions for improving the level of engineering economic risk management. The software and information technology service industry is a basic, strategic and leading industry that has a bearing on the overall development of the national economy and society. It is characterized by rapid technological renewal, high added value of products, wide application fields, strong penetration capacity, low consumption of resources and full utilization of human resources. It plays an important supporting and leading role in the development of the national economy and society. From 2012 to 2021, the revenue of China's software and information technology service industry increased from 2.5 trillion yuan to 9.5 trillion yuan, with an average annual growth rate of 16%, which is among the highest among all industries in the national economy. Total profits in 2021 reached 1.2 trillion yuan, double that of 2015. In 2022, the GDP of information transmission, software and information technology services grew by 9.1 percent year-on-year.***

Keywords: engineering economy; Managing risks; Preventive measures

1. PROBLEMS EXISTING IN ENGINEERING ECONOMY IN GENERAL CONTRACT PROJECT MANAGEMENT

1.1 Weak sense of economic management

The reason why there are more economic management problems in many general contract project management is the most fundamental reason is that the relevant project management personnel for the understanding of the engineering economy is not enough, not fully realize the importance of the engineering economy, there is a negligent idea for the engineering economy, this level of consciousness on the weak eventually affect the management personnel for the management of the engineering economy.

1.2 The system is not perfect

The system is the basis and premise of any general contract project management. Only a perfect system set up in advance before management can be well implemented in the later management. On the contrary, if there is no perfect system, it will bring great trouble to the management, especially for the engineering economic management, economic management The need for a more strict system to restrict, once the lack of institutional system constraints, it is easy to appear managers dereliction of duty or even favoritism, therefore, the lack of a perfect system is also a major problem in the current engineering economic management.

1.3 Not paying enough attention to the cost of construction period

Time limit cost is the sum of all expenditures in the construction process of our general contract project, which is an important part of the whole project economy. At present, many project managers have extremely serious neglect of the management of time limit cost, especially for the change of time limit there is a greater randomness, this randomness will largely lead to the chaos of time limit cost. Ultimately it affects the economics of engineering. Electric power enterprises have special requirements for safe production and stable operation of power grid. General social public communication information networks cannot meet the special requirements of the power industry, so it is necessary to build a dedicated information and communication network covering all power grids in the country. The dedicated communication and information network of the power industry is one of the largest industrial private networks in China. The special communication network and information network connect all power plants, transmission lines, substations, power supply offices and business halls within the power grid, which is the "information highway" for the operation of power production, marketing, dispatching and other power business systems, and the basis for the safe, stable, clean and efficient operation of the entire power grid.

1.4 Ignoring the construction quality of the general contracted project

Strengthening the importance of engineering economy does not mean ignoring the construction quality of the project, on the contrary, the construction quality of the project and engineering economy is equally important, many project management personnel because too much attention to the economy of the project and ignore the quality assurance of the project, this practice

is highly undesirable, once the construction quality problems then it marks the failure of the project, this is not It will not only help the engineering economy, on the contrary, it will have the opposite effect, and even lead to the cost of the engineering construction enterprises.

2. MEASURES TO STRENGTHEN THE ECONOMIC MANAGEMENT OF GENERAL CONTRACTED PROJECTS

In view of the many problems existing in the engineering economy in the current project management, we should start from the following aspects as far as possible to solve the problem, improve the level of engineering economic management.

2.1 Establish and improve the management organization system and management system

To improve project management and project economic management, the first prerequisite is to perfect the current chaotic management system and management system, so as to provide a good foundation for the economic management of construction projects. A set of perfect management and management system mainly includes two aspects of the content, on the one hand is the setting of the organization, we need to be responsible according to the relevant content of the engineering project management placement of the closed staff, to the specific responsibility to people, to avoid the chaos of the organizational structure; On the other hand, it is about the determination of the constraint system and incentive system. Only with a perfect constraint and incentive system can we fully mobilize the enthusiasm of the relevant staff, promote the staff to strengthen the attention to the engineering economy, and finally improve the management level of the engineering economy.

2.2 Strengthen the management of economic contracts

Contract is an important basis for our economic management of engineering projects. We can deal with any economic disputes in the management of engineering projects in accordance with relevant contracts. Therefore, strengthening the management of economic contracts in engineering projects can improve the management level of engineering economy to a large extent and avoid some unnecessary economic losses.

2.3 Pay attention to project quality management and control

The construction quality of the project is as important as the engineering economy, and there is a close dialectical relationship between the two. A good project quality management is equivalent to avoiding some unnecessary losses in the engineering economy, and improving the management level of the engineering economy from the other hand. The first stage: From 1960s to early 1980s, it was the initial stage of computer application in electric power enterprises. During this period, power computer technology was mainly applied in digital calculation of electric power test, engineering design and calculation, scientific research calculation, automatic monitoring of power plant equipment, automatic monitoring of substation, etc. Its goal was to improve the automation degree of production process of power plant and substation. Improve the monitoring level of electric power production and transmission, increase the calculation speed of engineering design, shorten the cycle of electric power engineering design, etc. The second stage: From the mid-1980s to the early 1990s, it was the primary development stage of electric power informatization. This period was the single and primary application of information technology in the production management of electric power enterprises. Computer technology was applied in the vast business fields of electric power, and computer systems were widely used in the electric power industry. Such as power grid dispatching automation, power plant production automation control system, power load forecasting, computer aided design, computer power simulation system and so on.

The third stage: from the mid-1990s to the early 21st century, the construction and application under the network environment were the main characteristics during this period, the construction of electric power informatization showed scale, and the information technology was widely applied in the electric power industry. The application of information technology in each power enterprise extends from the operation layer to the management layer, develops from single machine and single project to network, integrated and comprehensive application, from local application to global application, and from single machine operation to network operation.

The fourth stage: From 2005 to now, the construction of electric power informatization has entered the scientific development stage. During this period, the construction of electric power informatization has changed from perceptual to rational and from tactical to strategic. After decades of information construction, the understanding of enterprise decision-making on information management has been greatly improved, and the work of decision-making level, management level and production and business level is inseparable from information system. Informationization has been integrated with the production, management and operation of electric power enterprises, and has further evolved into intelligent and digital forms.

2.4 Strengthen the control of the construction period

Before construction, the construction planning of the project will be prepared in advance. If the change of the construction period will lead to the increase of the cost of the construction period, and then affect the engineering economy, so we should

strictly control the construction period in the construction of the project, to avoid the chaos of the construction period. In conclusion, engineering economy as an important part of the construction engineering project is enough to cause our attention, only in the engineering project management to do the engineering economy well in order to really promote the smooth implementation of the whole project, but in terms of the current development status of engineering economy in our country there are many problems need us to change and improve, only really do the projects Project economic management can be beneficial to the healthy development of engineering enterprises.

3. MEASURES TO STRENGTHEN THE ECONOMIC MANAGEMENT OF EACH STAGE OF THE GENERAL CONTRACT PROJECT

3.1 Engineering economic management in the design stage

Engineering design is the key step of engineering construction and engineering cost control. In the preliminary design stage, the maximum investment limit should be determined according to the construction scale, construction standard, structural form and use function of the general contracted project. After completing the construction drawings, To accurately calculate the cost of the project. In the engineering design, according to the construction technology, local geological conditions, economic development level, etc., to compare the various design schemes, choose high feasibility, strong economy, high safety design scheme, good design scheme can effectively reduce the construction period, save construction costs, according to the statistics of the design phase of the cost of the entire project 1%, but the design stage of the project cost to the overall contract project cost control has 75% of the effect, therefore, scientific and reasonable engineering design is the basis of good engineering economic management.

3.2 Project economic management in the construction phase

3.2.1 Overall budget management of general contracted projects

Budget management is an effective way to promote enterprise management, but also an important means of enterprise management, so in the general contract project construction implementation of budget management. In the budget management, we need to ensure the comprehensiveness of the budget management, to ensure the height of the budget management, only in this way can we comprehensively manage the general contract project. Also need according to the characteristics of the general contracting enterprise, the general contracting project budget reasonable and effective preparation, improve the effective release and adaptability of the general contracting project budget preparation, and then seriously, strict implementation of budget management.

3.2.2 Strengthen the review of design changes

Engineering change is a key point of engineering cost control in the construction stage. Engineering change includes design change, construction condition change, new project, construction period change, etc., among which design change is the most important influence on project cost control. Therefore, strengthening design change management plays a very important role in engineering economic management. In the construction process of general contract project, especially in large general contract project, design change is inevitable, in the design change, as far as possible in advance, because the earlier the design change occurs, the less the economic loss of the general contract enterprise. If the design changes occur in the design phase, only the construction drawings need to be changed, the economic loss will not be very heavy; If the design changes occur in the procurement stage, not only need to modify the design drawings, but also need to re-purchase construction materials and construction equipment; If the design change occurs during the construction phase, it is very likely that the completed project will be dismantled, which will cause great economic losses. Therefore, it is of great significance to strengthen the design change management. In the design change, the project cost should be controlled within the scope of the total budget estimate. If the project cost exceeds the total budget estimate after the change, it should be reported to the relevant departments in time, and the change can only be carried out after the consent of the relevant person in charge. In the process of design change, the reasons for the change must be indicated, so as to provide the basis for the project settlement.

3.2.3 Strengthen on-site visa examination

On-site visa examination should be strengthened, and visa supervisors should master the necessary knowledge of project economic management and project pre-settlement, and it is strictly prohibited to grant visas to projects that should not be granted. The supervisor shall carefully examine the visa filled in by the construction unit, and can only seal and confirm after confirmation. Supervision personnel should focus on examining the construction unit jerry-building, with less to report more, fraud, settlement stage surprise phenomenon, strict examination of non-contracted project site visa. Strengthen contract management. The construction phase is the whole project

The cost of the most stage, therefore, the construction stage of the project economic management of the whole process of the contract project has a very important role. In the bidding and tendering stage, the tender unit should be strictly in accordance with the relevant provisions of the tender offer, the tender unit in the bidding process, to actively use the bill of quantities

valuation, so as to effectively improve the technical equipment and management level of the contracting unit, reduce the project cost. After signing the contract, the contractor should strengthen the contract management in the construction stage and carry out the construction in strict accordance with the contract provisions.

3.3 Project economic management at the settlement stage

3.3.1 Review of engineering quantity

For the use of bill of quantities valuation of the project, in the project settlement, to focus on the examination of the quantities, the settlement of the quantities to sign the contract documents in the bill of quantities as the basis, the examiners to master the necessary quantities of calculation, drawing review knowledge, to fully understand the overall contract project design scheme and construction process.

3.3.2 Quota and fee review quota

The unit price is the cost consumed by the subitem of quota. Under normal circumstances, the unit price of quota can be directly applied in the project accounting. When applying the unit price of quota, the accuracy of the unit price of quota should be ensured, and the phenomenon of high or wrong sets should not occur. Some items need to be fixed conversion, when carrying out the fixed conversion, to ensure the accuracy of the conversion method. In the process of fee review, it is necessary to ensure that there is no phenomenon of too high fee base, and the type of fee should be the same as the relevant requirements of the bidding documents and contract documents.

4. CONCLUSION

Economic management of general contracting project is a more complex project, in the economic management of general contracting project, to the whole process, comprehensive control management, effectively reduce the construction cost of general contracting project, optimize the resources of various construction of general contracting project, shorten the construction period, improve the economic benefits of general contracting project, enhance the market competitiveness of general contracting enterprises, so as to promote general contracting Package the rapid development of enterprises.

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