

Current Situation and Countermeasures of Cost Control in Construction Project Management

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Abstract: Nowadays, it is in the critical period of the rapid development of China's construction enterprises. Facing the fierce market competition, the construction enterprises can not only integrate resources and realize the optimal allocation of resources, but also significantly improve the economic benefits of enterprises. In terms of above, this thesis mainly analyzes the problems existing in cost control in the process of project management of construction enterprises, and then puts forward corresponding measures for reference by others.

Keywords: construction engineering; Management; cost control

1. Introduction

Engineering project is the core of any construction enterprise to carry out cost management. Doing good job in engineering project cost control can not only help enterprises to analyze the defects in the existing cost management system, but also help enterprise leaders to adjust their strategic business objectives in time, and at the same time, it can also optimize enterprise resource allocation, reduce and improve enterprise economic benefits. However, as far as the actual cost management of construction enterprises is concerned, there are many problems that need to be solved urgently.

2. Construction Project Cost Control Research Status at Home and Abroad

By analyzing the development status of domestic construction projects, we can know that the cost control in China can be divided into three stages: the first stage is mainly aimed at the estimated the second stage is mainly aimed at the whole process cost of the project, and the third stage is to continuously optimize the cost project control level by combining foreign advanced concepts and experiences.

For example, Li Shuanglu, a well-known scholar, based on system, schedule and cost control, analyzes various factors that affect the cost control of construction enterprises. Zhong Ling, a scholar, studied and analyzed the outstanding problems exposed in the cost control stage of construction and put forward corresponding rectification measures. Liu Jingkuang, a scholar, introduced in detail the relationship between construction progress and cost control of engineering projects by applying system dynamics model. Yang Chaohui, a scholar, provides a system framework for construction enterprises to carry out cost control by constructing the concept of life cycle management^[1].

The project cost control is systematic and coherent, which runs through all the links of the project. According to different types of construction links, the cost control methods adopted are different. It is necessary to focus on the cost control of construction links, and its cost management is difficult of the large cost consumption of construction links. Therefore, the construction unit should deeply analyze the problems in the project cost management stage according to its own actual situation and formulate targeted cost management countermeasures.

The research on cost management of construction projects abroad developed earlier. In 1980, Simon, a British economist, took the lead in putting forward the concept of strategic cost management. Sankoh optimized and upgraded the concept of strategic cost management. Jack Tapp, a scholar, stressed that traditional information management model must be changed with the increase of the difficulty of cost project control. In the face of fierce market competition, doing a good job in cost control of engineering construction projects can not only enhance the core competitiveness of enterprises in the market, but enhance the economic benefits of enterprises and help enterprises occupy a bigger market "cake".

3. The Importance of Strengthening the Cost Control of Construction Project

Firstly, improve the economic benefits of enterprises. No matter what type of construction enterprises, the core purpose of formulating the project cost management system is to meet their own interests. Construction enterprises can analyze the factors that affect the efficiency of cost management, and then formulate corresponding cost control measures according to local conditions to control the cost of each construction link in the construction project within the scope of project budget.

Secondly, the application of each construction cost can be reviewed. In the process of cost control, construction law enterprises can rely on the cost control strategy to review the daily operation and production expenses, the use of funds and the flow of funds, so as to ensure that the use of project funds meets the budget standards, effectively reduce the consumption and waste of cost resources, and help enterprises achieve their own economic goals^[2].

Thirdly, enhance the core competitiveness of enterprises in the market. In the field of project bidding, more and more enterprises apply reasonable low-price bidding method in order to improve the winning rate. This method has become a key method for enterprises to enhance their competitiveness. Due to the limited development level of China's construction enterprises, if the low-price bidding method is blindly adopted, its own advantages will be weakened. Enterprises should improve the price advantage by improving the cost control level of engineering projects, and enhance the market competitiveness while highlighting the technical and management advantages of enterprises.

4. Construction Project Cost Control Methods

4.1 Strengthen plan management and optimize project resource allocation

The cost control of engineering projects requires enterprises to do a good job in planning management according to their own actual conditions and realize the optimal allocation of project resources by relying on a sound cost management system. Construction enterprises can start with project budget, project budget estimate and project bidding, optimize resource allocation and continuously reduce costs, thus helping enterprises to obtain higher economic benefits^[3]. In addition, in the actual project construction, it is necessary to formulate a cost plan management scheme, and improve the project cost management level of construction enterprises in an all-round way by optimizing the allocation of project resources such as materials, manpower and mechanical equipment.

4.2 Optimize the investment portfolio structure of enterprises

Engineering enterprises can improve their own economic benefits by optimizing the investment portfolio structure. At the moment, many construction enterprises assist their investment by developing project cost management system. In order to meet the business objectives of enterprises, in the process of building a project cost management system, we should analyze our own optimized portfolio structure in combination with its actual situation, and evaluate business performance by relying on the number of projects implemented.

4.3 Establish a scientific budget management mechanism

A complete project cost management system can help construction enterprises to obtain high economic benefits, but if construction enterprises fail to do a good job in budget management, it will indirectly affect the cost control level of enterprises. Facing the incentive market competition, enterprises should constantly optimize and improve the budget management mechanism and optimize the budget management system in combination with the actual situation of engineering projects. Currently, the budget management mechanism formulated by the management of many construction enterprises does not conform to the actual budget implementation, which not only has a negative impact on the allocation of human resources in enterprises, but also intensifies the waste of construction materials and resources. All these factors will affect the construction cost of construction enterprises.

5. Problems Existing in the Current Cost Control of Construction Projects

5.1 Weak awareness of cost control

Many enterprises lack comprehensive control consciousness in the process of controlling the cost of construction projects. If construction enterprises want to achieve the set target cost, they should practice the structure, production organization and specific implementation process. Although some enterprises have a cost management system, in the actual cost management process, there is a general lack of cost awareness, and some people even regard cost control as an independent work of the financial department.

5.2 Lack of a sound cost control system

At present, the cost management mechanism adopted by many construction enterprises in China is not perfect enough, which intensifies the market competition in the construction industry. Especially in the process of project bidding, unfair competition is frequent. Although domestic construction enterprises have established the corresponding cost management system, in the actual implementation process, there are widespread problems such as attaching importance to human feelings and relationships, and many construction enterprises blindly lower prices to gain competitive advantages. All the above factors have a negative impact on the development of construction enterprises^[4]. Furthermore, there are loopholes in the project management mechanism applied by some construction enterprises, especially when carrying out project cost control, the financial personnel have higher authority. Although this kind of management mechanism can also help construction enterprises to control costs, its control effect is limited and there are certain management risks, which are not conducive to the healthy and stable development of construction enterprises.

5.3 Cost control method lags behind

In the closed-loop cost control system, many engineering costs are often calculated only after completion. This method of controlling only the cost afterwards has obvious lag. If the construction of the project changes in the design stage or construction stage, it will inevitably have an adverse impact on the overall cost.

6. Measures to Strengthen the Cost Control of Construction Projects

6.1 Establish a more perfect cost control system

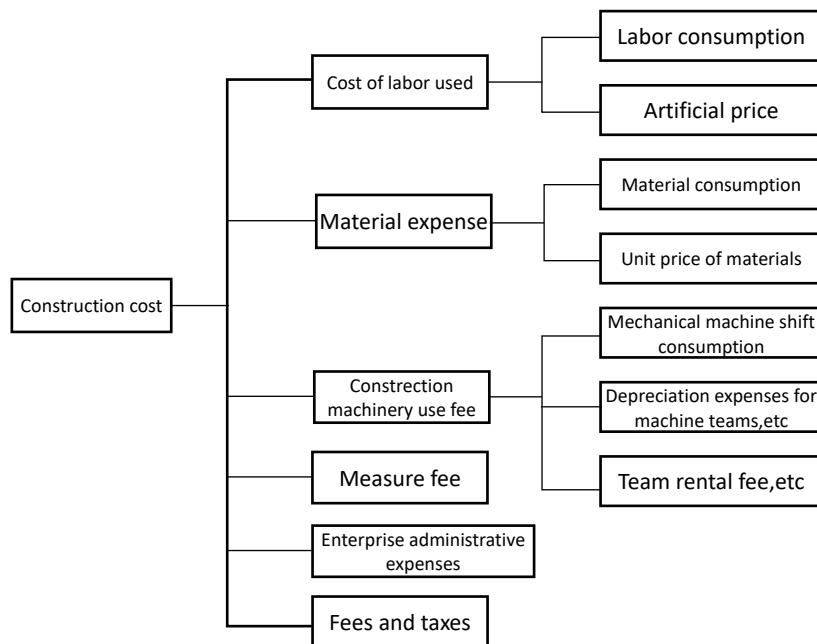


Figure 1: Construction cost composition

Construction enterprises should set the target cost according to the actual situation of the project, so as to improve the cost control system. The following measures can be taken: i. Construction enterprises can subdivide the construction site into several parts, then calculate the cost of sub-projects and finally calculate the total cost of the project^[5]. For example, the construction enterprise can estimate the engineering quantity by compiling the organization chart of the project, and then estimate the cost, compare the differences between the estimated scheme and the project cost target, and analyze the reasons leading to the differences between the estimated scheme and the project cost target, thus helping the leadership of the construction enterprise to improve the cost decision scheme. ii. In the process of determining the target cost, we should consider all kinds of risk factors that may be faced in the actual construction stage of the project in an all-round way, and finally determine the reasonable target cost. As shown in Figure 1 below, it is the construction cost structure diagram.

6.2 Further strengthen the awareness of cost control

Leaders in charge of project construction and grass-roots employees must be deeply aware of the importance of project cost management. Construction enterprises can organize a series of lectures and trainings on project cost management to help grass-roots employees and leaders understand the connotation, value and specific application of project cost management. What's more, in the exact construction stage, the construction unit should strengthen the publicity and education of cost control, so that every employee can deeply realize the value of cost management. For example, a construction enterprise can improve its employees' awareness of cost control by creating a good cost control atmosphere.

6.3 Adopt diversified means of cost control

The cost control of construction projects can't be carried out only for the interpretation of construction projects. It is essential to implement the cost management system in the whole process of construction projects, and combine the life cycle characteristics of construction projects to manage them from the pre-tender stage, construction preparation stage, construction stage and post-completion acceptance stage. The process of project cost management is systematic and coherent, and different types of cost control methods need to be applied in different stages.

Firstly, cost control is carried out in the bidding stage of engineering projects. Many construction enterprises pay too much attention to the cost control in the construction stage of engineering projects and neglect the cost control in the bidding stage. The quality of bidding cost control directly determines the level of project construction cost control. In the bidding stage of engineering projects, construction enterprises should effectively control the bidding cost according to the actual situation of the project, and indirectly improve the economic benefits of enterprises by doing a good job in bidding estimation.

Secondly, do a good job of cost control in the early stage of construction. The key purpose of cost control for construction enterprises in the early stage of project construction is to understand the needs of enterprises to undertake the project, and on this basis, optimize and improve the construction organization plan, implement the construction deployment, improve the progress plan, and do a good job in construction material procurement and mechanical equipment leasing. Finally, the target responsibility cost and planned cost of the project are defined in combination with the characteristics of the project, and the cost control level is continuously optimized.

Thirdly, control cost in construction stage. When managing the cost in the construction stage of an engineering project, the main management contents are cost management and cost analysis. Cost management mainly aims at managing all kinds of direct costs generated in the construction process. For example, the construction unit needs to manage the human resource cost, material cost and mechanical equipment cost. Before the construction, the technical personnel of the project department should know the general situation of the project cost, and focus on the technical review in the construction area where a large number of construction technologies are needed to ensure that the machinery, materials and labor costs are within the budget range, so as to ensure that the economic benefits of the enterprise will not be damaged. The cost analysis mainly focuses on the accounting results. After the project department obtains the cost accounting plan, it needs to be reported to the leadership for review. The leadership should approve the project budget according to the cost accounting plan and strictly limit the scope of project funds. It is necessary to analyze the part that exceeds the budget to ensure the efficiency of the construction funds of construction enterprises.

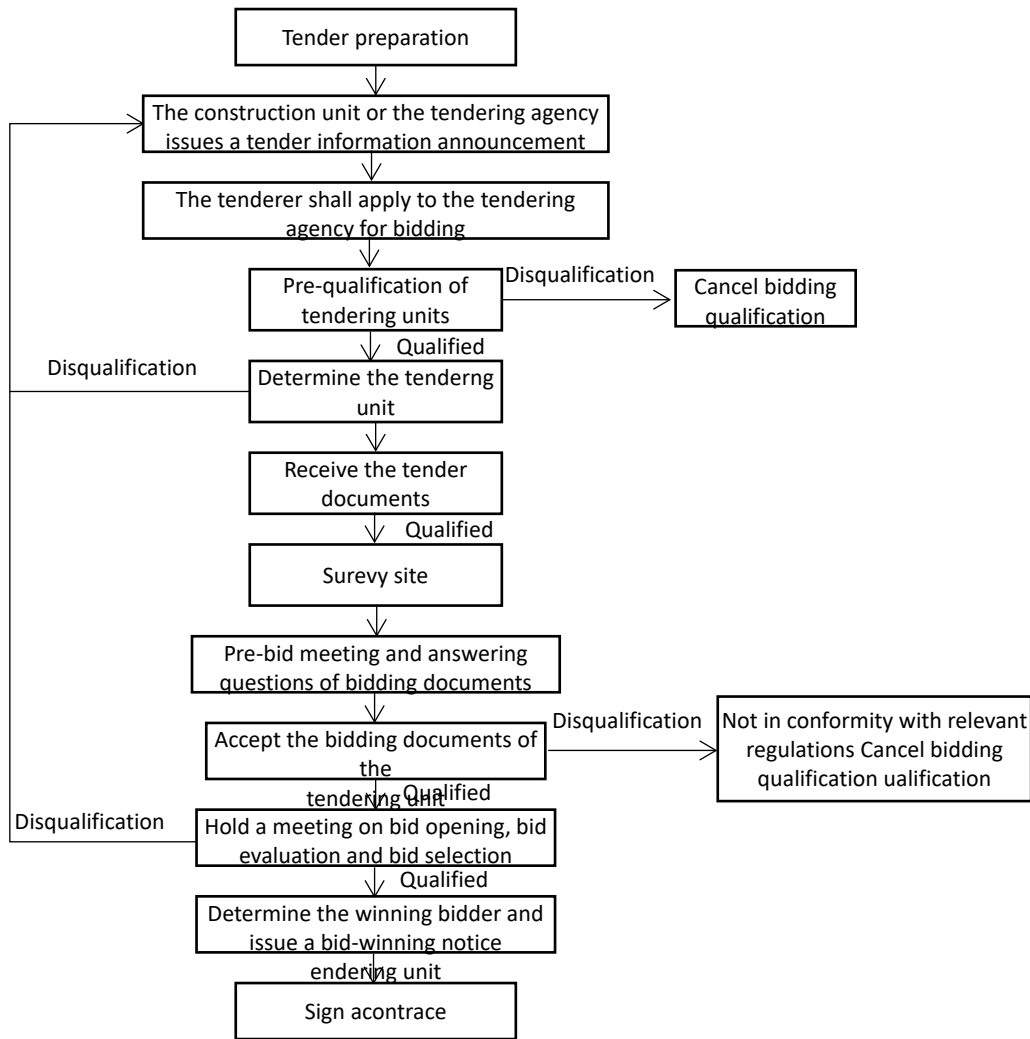


Figure 2: Flowchart of Bidding for Construction Project

Fourthly, cost control in completion settlement stage. When the construction project is completed, the construction unit should not only apply for the completion settlement price, but also calculate and integrate the visa change and all the expenses of the project. Especially for the design changes and construction contracts of engineering projects, it is vital to carry out key audits, thus creating convenient conditions for the completion and settlement of later engineering projects. The financial personnel of the engineering project department should list the settlement list in advance, and make special explanations for the contents beyond the contract price. After the completion of the project settlement, it is necessary to compare and analyze the actual cost and the target cost, find out the reasons for the differences and constantly optimize the cost management process to help the construction enterprises obtain more economic benefits.

As shown in Figure 2, it is the bidding flow chart of the construction project.

6.4 Excellent cost management team

In order to further improve the quality of project cost management, construction enterprises need to build a cost management team with high comprehensive quality and strong professionalism.

It is required that the personnel in charge of project cost management must be familiar with the concept of project investment calculation, target cost and dynamic cost management, have complete experience in cost planning, and conduct in-depth analysis and research on cost management problems in combination with the specific characteristics of the project. In addition, the construction unit also needs you to do a good job in the business training of cost managers, and the construction enterprises should evaluate the business training results to ensure that the cost managers fully internalize the training content.

6.5 Strengthen the cost control of construction materials

First, construction enterprises should control the construction materials on site. The relevant material warehouse keeper must issue the corresponding material delivery document after the material is delivered out of the warehouse, and the material supplier name, purchase contract number, material name, unit price and quantity must be clearly marked in the delivery document. Before building materials are put into storage, they should be submitted to the project manager and purchasing personnel for acceptance and confirmation. Before materials enter the site, it is necessary to conduct repeated sampling inspection on the quality of materials to ensure that their performance and quality meet the construction requirements of the project. For materials with quality hidden dangers, it is strictly forbidden to enter the construction site.

Second, well-prepared in the storage of construction materials. In order to reduce the waste of materials, it is significant to divide the designated storage area to store materials, and to store used materials and unused materials separately. Suitable storage conditions should be created for materials with requirements for storage environment.

Third, in the process of purchasing engineering materials, we should strictly follow the material purchasing system of construction enterprises. Construction enterprises can define the procurement plan in combination with the cost budget scheme, and select the appropriate material suppliers by bidding method. Meanwhile, we should pay attention to the fluctuation of market price in the procurement process, and try our best to purchase construction materials with low transportation cost and high cost performance. Confirm the unit price and amount of materials again when signing the material purchase contract. In addition, environmental protection construction materials should be purchased as much as possible to reduce energy consumption in construction.

7. Conclusion

In summary, in the face of fierce market competition in the construction industry, construction enterprises can not only enhance their market core competitiveness, but also better promote the transformation and upgrading of Chinese construction enterprises by strengthening the cost control of engineering projects. Construction enterprises need to closely combine the dynamic characteristics of the market, apply advanced construction technology and scientific management system, so as to effectively improve the management effectiveness of enterprises. Enterprises should focus on project cost control, constantly optimize the output-return ratio according to the actual situation of the project, and promote the healthy and stable development of China's construction enterprises.

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