

Research on Construction Project Cost Budget and Cost Control

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Abstract: project cost budget and cost control is an important part of construction enterprise management, and is the basic condition to promote the healthy development of construction enterprises. In order to strengthen cost budget and cost control, improve the core competitiveness of construction enterprises, the integrated use of literature analysis and system analysis, this paper analyzes the construction project cost budget and cost control, design of the construction project cost control process, put forward the construction project cost budget and cost control measures: realize the whole process of construction project cost and cost control, improve the project cost budget management supervision system, improve the comprehensive quality of the construction cost budget management, strengthen the communication with architectural engineering design personnel, adjust the construction engineering quota according to the construction market development.

1. Introduction

The construction project cost budget is a plan for the income and expenditure of the construction project in a certain period in the future. The function of construction project cost budget is reflected in three aspects: first, ensure the construction project cost is scientific. After the construction project budget is approved by the relevant departments, it is compiled into the investment plan and becomes the basis for signing contracts and loans. Project budget is also an important basis for investors to establish investment intention and sign contracts between enterprises. After the construction project budget is established, the relevant departments of the state review, if the conclusion is scientific and reasonable, can be issued by the bank loans. Second, it is helpful to draw up building construction plans. In the process of preparing the construction drawing budget, first of all, the construction quantity of the approved drawings shall be calculated according to the national engineering quantity rules. Then, according to the budget quota statistics direct costs and indirect costs; finally, the project cost is calculated and the technical and economic indicators are obtained. Third, guarantee the rationality of construction project cost. The completion of the construction drawing requires the effective combination of the construction drawing and the organization of the specification with the calculation cost of each project. In the budget process of construction project cost, it is expressed by quantitative materials, amount, labor and mechanical equipment. The scientific project cost budget can guarantee the rationality of the construction project cost, while the scientific construction design plan can guarantee the accuracy of the project budget.

Cost control of construction projects refers to the reasonable calculation of construction costs of each link in the construction process of construction projects by construction enterprises in accordance with relevant laws and regulations, and the control of capital input according to the calculation results, so as to ensure the optimal allocation of resources in the construction process of construction projects. Construction project cost budget is the basis of cost control, reasonable project cost budget directly affects the cost control work, and determines the economic benefits of the project construction, thus affecting the overall interests of the enterprise. Therefore, strengthening the construction project cost budget can provide accurate data support for cost control,

improve the accuracy of the construction project cost budget, is conducive to improving economic benefits, and plays an important role in the development of construction enterprises.

2. Problems on Construction Project Cost Budget and Cost Control

The construction project cost budget has not attracted enough attention from enterprises and relevant departments, and failed to fully mobilize the enthusiasm and initiative of every employee to participate in cost management and cost control. In a comprehensive sense, there are still the following problems:

(1) Unable to accurately grasp the price of building materials. For the whole project cost budget, the price of building materials is the top priority, and there are many factors affecting the price of building materials. There are differences in the economic development level of different regions. The prices of building materials are relatively high in regions with a good economic development level. Economically less developed areas, the price of building materials is relatively low. If the construction project is close to the production of building materials, the price of building materials is relatively low. The price of building materials is also affected by supply and demand.

(2) Unable to timely adapt to the changed management system and norms. In recent years, the country has promulgated a series of policies, regulations and management methods, but in the process of cost budget management, enterprises have not timely adapted to the changes in policies or norms. China's current project cost budget quota is not perfect, especially the cost budget control management is not mature enough. Construction projects usually take a long time to complete, and new national policies may emerge, resulting in the actual construction cost far exceeding the budget.

(3) No perfect project cost budget. In the process of preparing the cost budget, it is necessary for the compilation personnel to go deep into the construction site for field investigation, review the relevant materials of the engineering design, and make the budget with the field investigation information. The budget should cover all costs from the beginning of project planning to the beginning of project operation. However, the current budget preparation method is backward, the budget management system is not scientific, the budget content is not reliable, resulting in a large deviation between the budget preparation and the actual cost.

(4) Serious waste of building materials and resources. In order to ensure the quality of construction, designers in the construction industry of our country carry out the responsibility life tenure system. When design, need to consider the difference of construction level and construction quality again, and the building is not standard use and overload circumstance, accordingly, if did not ask quota design, it is better safety, individual design link safety coefficient is too high, cause certain waste. In the construction stage, the lack of comprehensive management and overall arrangement, management personnel consciousness is weak, resulting in serious waste.

(5) Lack of active control and management. Project cost budget management is a complex work, involving many factors. For a long time, construction enterprises do not pay enough attention to project cost budget management, and the enthusiasm and initiative of construction cost budget management personnel are not high. The one-sided view that the project cost management is the work of the cost management department leads to the incoordination of the relevant departments in the project cost management work and the disconnection of each work link, which brings a lot of unnecessary losses to the enterprise's cost control work.

(6) Professional quality and technical level of the authorized personnels are not high. The construction project cost budget is a very technical work, the requirements for professional knowledge is very high, the current problems are: not familiar with the drawings, can not understand the design essence and design intention, the budget data calculation is not important; no professional training, lack of systematic professional knowledge, not familiar with relevant laws and regulations; lack of investigation and research on the site and construction status, all by their own subjective assumptions, the budget from the actual project.

3. Process on Construction Project Cost Control

Control is to check that work is carried out according to established plans, standards and methods, identify deviations, analyze causes, and correct them to ensure that organizational goals are achieved. Scientific budget control can ensure the quality of construction projects and improve the overall economic benefits. Cost control of construction engineering is a dynamic cyclic process. Cost control is needed in the whole process of construction engineering, as shown in fig.1. Each cycle consists of three steps: first, track the progress of the construction work, and collect data on actual costs and expenditures. The second step is to compare the construction cost budget with the actual cost. If there is any deviation, proceed to the next step; otherwise, return to the previous step. The third step is to adopt control measures, revise the construction cost budget, output the cost control results, and start a new cost control cycle.

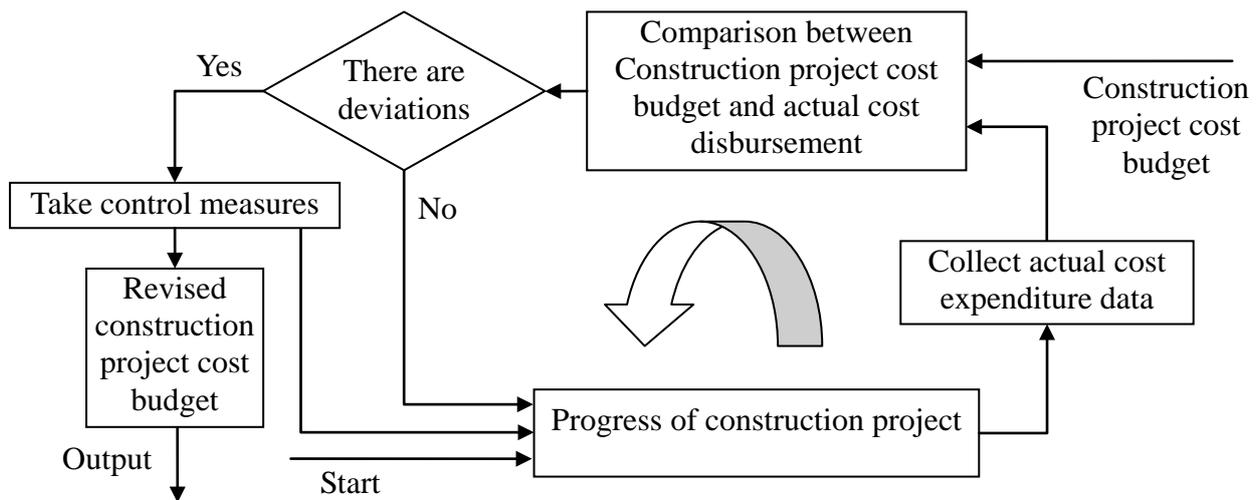


Fig. 1. Process on construction project cost control

According to the time sequence of the construction project cost occurrence and formation, the control can be divided into pre-control, in-process control and post-control. First, pre-control. Also known as feedforward control, in advance to estimate or assume the impact of various factors on the cost, according to the expected cost to implement the control. Second, in-control. Also known as protective control, is in the cost formation process to establish a cost constraint mechanism, and strengthen management from the system, through the prevention of deviation and waste to ensure the smooth construction project control. Third, post-control. Also known as feedback control, it refers to the comparison between the actual value of the controlled quantity and the expected value to analyze the causes of the deviation and determine the corresponding improvement measures. Post-mortem analysis is the beginning of the next cycle of pre-control scientific prediction and the continuation of cost control. On the basis of insisting on comprehensive analysis for each construction project, timely inspection, analysis, modification and supplement are carried out to achieve the goal of cost control and efficiency improvement. The three stages of cost control have sequence, but are not completely separated, and have the feedback function of responding to each other and providing cost control information to each other. The influence of prior control on the latter two stages; The in-process control will be fed back to the decision making department before the event and the post-event analysis. The control after the event is continuously fed back to the prior event and the event, affecting the prior decision and the protection in the event. The cost control information provided by each other has a positive impact on each stage of cost control, forming a cross and progressive cost control situation, making cost control more effective.

4. Measures on Construction Project Cost Budget and Cost Control

Project cost budget and cost control is an important part of the management of construction enterprises and the basic condition for the healthy development of construction enterprises. Aiming at the problem of construction project cost budget and cost control, this paper proposes the

following measures according to the principle of construction project cost budget and the process of cost control, and referring to the previous research results:

(1) Realize whole-process control of construction project cost. In the stage of investment decision, we should collect basic data and conduct market research, analyze data carefully, and provide reliable basis for investment decision. In the design stage, fully understand the design intention and use requirements, optimize the design unit, design a reasonable quota, and make an economical and reasonable design scheme. In the construction stage, a strict price system should be established, the bidding and contract signing work in the early stage should be done well, the cost control should be done well under the premise of ensuring the construction quality, the change audit should be attached importance to, and the project cost should be adjusted at any time according to the site conditions. In the completion settlement stage, the settlement confirmation shall be conducted in strict accordance with the technical documents such as design drawings, alteration and verification, and the contents inconsistent with the project cost shall be found out in time and the reasons and basis shall be found.

(2) Improve project cost budget management and supervision system. The project cost budget management and supervision system is the premise to ensure the effectiveness of the project cost budget. Try to avoid the phenomenon of overcalculation, omission and recalculation in the construction process, accelerate the work progress and improve the accuracy of the cost budget. The allocation and implementation of project cost budget is the main work of cost budget management and the main content of project cost budget management and supervision. In the process of project cost budget implementation, it is necessary to mobilize relevant manpower, material resources and financial resources, supervise and implement the project seriously, pay attention to the rigid adherence to the cost budget, do not change the cost budget at will, and make the cost budget work along the normal track.

(3) Improve the comprehensive quality of cost budget management personnel. In the era of economic globalization, talents have become the key factor to determine the comprehensive competitiveness of enterprises. It is necessary to continuously strengthen the construction of professional talent team and improve the comprehensive quality of personnel engaged in cost budget. We should strengthen education and training in professional knowledge, laws and regulations, attach importance to the cultivation of professional ethics, improve the comprehensive quality of project cost budget personnel, train high-quality compound application talents, and improve the management level of construction project cost budget. When carrying out education and training, it is necessary to make scientific training plans, enhance the continuity and pertinence of education and training, adapt to various needs of construction project cost management, and better integrate with the international cost market.

(4) Strengthen communication with construction engineers. Designers should combine the actual situation of the construction project, design to meet the requirements of the program. The design drawing is a complete vision of the future construction project, and the final design can only be completed in the construction stage, so modification and improvement is inevitable. The design drawing is the important basis of the cost budget, therefore, the cost budget management personnel need to communicate with the design personnel, fully understand the design intention. Communication is mainly from two aspects: one, ensure the accuracy of equipment data, only in this way can the reasonable quotation; second, ensure that the design description and the budget content in line, the designer of the design scheme or description of the modification, need to timely notify the cost budget management personnel, in order to reflect in the cost budget.

(5) Adjust construction engineering quota according to the development of construction market. Construction engineering quota is the quantity standard of labor, materials and machinery that must be consumed to complete the qualified products of the unit under normal construction conditions, which reflects the specific quantity relationship between a qualified product and various production consumption in the construction project. Quota level will directly affect the construction unit enthusiasm, if the quota is too high, the enterprise's profit space is relatively reduced, it is likely to cut corners to make profits; if quotas are too low, firms can easily make money and lose the

incentive to boost productivity. Therefore, considering the level of most enterprises and market trends, timely adjustment of budget quota can improve the efficiency of budget work, improve the economic benefits of enterprises, and achieve the final budget management goals.

5. Conclusion

The construction project cost budget and cost control play an important role in the construction project investment and the construction enterprise benefit, therefore, in the construction project development process, must pay attention to the project cost budget and cost control. As an important part of construction cost, the budget control of construction project is related to the normal development of the whole construction project. Enterprises should constantly strengthen and improve the budget control system, carry out scientific and effective budget preparation, in order to effectively control all kinds of unexpected expenditures in the construction process, realize the optimal allocation of expenditures, and promote the optimization of budget control in each stage of the project. Budget management needs to have professional knowledge of engineering cost, strong professional quality, and acute market consciousness and the long-term strategic vision, develop the reasonable construction project cost budget, the budget quota is determined under the premise of considering the budget of the volatility, will each construction project cost control in the budget, improve the construction enterprise economic benefits and social benefits.

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