

# Measures for the Construction Cost Budget and Settlement Audit

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**Abstract:** With the deep and sustainable development of the market economy, the competitive environment and development pattern faced by China's construction industry are becoming more and more severe. In this context, construction projects should actively incorporate the development trends of the market economy and focus on analyzing relevant influencing factors and risk content. Considering previous experience, the audit effect of construction project budget and settlement has a major impact on the quality and economic benefit of construction projects to a certain extent. In view of this, this paper mainly focuses on the content and method of the construction cost budget and settlement audit as well as suggests measures for the construction cost budget and settlement audit, so as to improve the construction cost management level.

**Keywords:** Cost management; Budget and settlement audit; Construction industry; Measures

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## 1. Introduction

For a long time, high-quality construction cost control work has always been the focus of all participating units for overall planning and to plan the work content. However, in line with the actual situation, construction projects face many disturbance factors and risks. Some participating units may be affected by various factors during project cost control, resulting in overbudget or other problems one after another. If the cost management personnel do not accurately identify or control the risk factors and disturbance factors in advance, the construction benefits of the project will face difficulties in achieving the expected results. In recent years, in order to continuously strengthen the deployment and implementation of construction cost control, all participating units mainly focus on basic control affairs, such as budget and settlement audit, as well as on strengthening the benefits of construction cost control by continuously enhancing the level of basic control.

## 2. Analyzing the contents of the construction cost budget and settlement audit

### 2.1. Defining the scope of construction projects

Reasonably determining the scope of construction projects can be regarded as the key content of the construction cost budget audit. Generally, before formally auditing the cost data, auditors need to describe all the construction contents of the project in detail considering the characteristics of the construction project. The main purpose of this is to prevent omission while reviewing the cost budget and settlement. From previous experience, if the scope of the project cannot be defined, there will be problems, such as repeated calculation of cost. In serious cases, the overall capital investment may increase; thus, the rational allocation and application of project funds cannot be guaranteed <sup>[1]</sup>.

## **2.2. Auditing quantities**

As a challenging aspect of the construction cost budget and settlement audit, the audit of quantities will take a relatively long time because there are many construction contents involved in a project. In order to ensure that the auditors can complete the estimation analysis and audit management of the quantities within a limited time, they must have good drawing analysis ability and cost management ability. It is imperative to strengthen the audit and analysis of the quantities of construction projects as well as reduce work errors.

## **2.3. Expense audit**

In the cost review stage, auditors are required to implement the budget and settlement estimation in advance. During that period, it is necessary to focus on the determination and analysis of the equipment cost and material cost involved in the construction of the project. According to the results from the analysis and feedback, different cost accounting objects and various cost accounting forms should be reasonably grasped. It should be noted that in the actual construction process, due to the influence of on-site design changes and other factors, the use of various funds will fluctuate. In view of this, auditors must consider the needs of construction cost control, respond to possible emergencies in advance, and reduce the waste of resources or the increase of capital cost <sup>[2]</sup>.

## **3. Methods of audit in construction cost budget and settlement**

### **3.1. Comprehensive audit**

As a common method and measure for the audit of construction cost budget and settlement, comprehensive audit emphasizes that the auditor should take the initiative to accurately audit the unit price and quantity of the construction project in line with the current market quota form and relevant contents. In the process of audit and analysis, auditors also need to rely on the construction drawings of construction engineering and the contents of construction standards to ensure the accuracy and rationality of audit calculations. From the perspective of applicability, comprehensive audit is more suitable for those construction cost management with relatively small investment and simple construction form. From the management feedback, the audit efficiency can be further enhanced through the rational application of this method. There may be repeated operation problems in the application of this audit method. Therefore, it is suggested that auditors should strengthen the prevention and management of such problems.

### **3.2. Group plan audit**

Differing from comprehensive audit, group plan audit is more suitable for the cost management of those engineering projects with relatively large quantities. It is emphasized that auditors should adhere to the audit requirements of the grouping plan, reasonably define the grouping contents of projects involved in construction cost budget and settlement, as well as make overall deployment. From previous experience, group plan audit shows strong pertinence and efficiency, which can effectively solve the issue of omission that is common in traditional audit methods.

### **3.3. Key audit**

Key audit is completely different from the aforementioned two methods in content and form. This method focuses more on the audit and analysis of the quantities involved in the relatively important construction part of the project. For example, in the budget and settlement audit management of concealed works and key works, key audit is usually used to complete the audit and analysis of quantities. In the process of applying this method, auditors should adhere to the implementation of the concept of fine management to ensure the audit management effect <sup>[3]</sup>.

## **4. Measures and suggestions for construction cost budget and settlement audit**

### **4.1. Pay attention to the key points of the audit and improve the level of project cost management**

As an important, yet difficult part of the construction cost budget and settlement audit, quantity audit requires the auditors to actively collect and analyze the construction quantity data and information as well as complete the quantity calculation with high quality. At the same time, during the audit management period, the auditors should standardize and unify the construction quantities and pricing units, so as to ensure the smooth development of the audit.

It should be noted that in order to ensure that the audit effect reaches the expectation, relevant responsible personnel should take the initiative to understand the engineering geological conditions and transportation at the construction site in advance, so as to reduce the blindness of the audit work. Moreover, when preparing the work plan for the construction cost budget and settlement audit, auditors should always carry out scientific implementation in accordance with the contents of the contract and relevant requirements. In this process, the details of the contract terms should be analyzed properly.

### **4.2. Perform well in drawing audit and on-site visa to enhance the accuracy of audit results**

The scientific implementations of drawing audit and on-site visa can be regarded as important means to effectively enhance the accuracy of audit results. Concerning the audit of project cost budget and settlement, auditors should strictly control the key works, such as visa submission and project changes, as well as complete the review and processing of visa and other documents in time. If it is found that the content is inaccurate during the audit, auditors must pay more attention to it, so as to reduce the error of project cost management. Other than that, in the on-site construction stage, auditors should also bear their own cost management responsibility and focus on the cost of materials and equipment used at the site in strict accordance with the pre-settlement audit management standards and the requirements of admission inspection standards.

### **4.3. Enhance the professional quality of staffs and eliminate the overbudget issue**

From previous experience, the construction cycle of some large-scale construction projects is relatively long, which may be affected by several uncertain factors during construction, leading to design changes. When there is a design change, auditors should analyze the causes of the design change in an in-depth manner and scientifically take targeted measures to strengthen the proper handling of the issue, so as to prevent the overbudget phenomenon.

On one hand, it is necessary to strengthen the consciousness of budget and settlement auditors in terms of their job responsibilities as well as prevent and control the factors that cause problems with design change in advance. On the other hand, auditors and cost managers should be deeply aware of the importance of their post and responsibilities as well as strengthen the accurate acquisition of key data and information of projects through field investigations or other means in advance. In addition, relevant personnel engaged in cost control should constantly update their knowledge structure and professional understanding to minimize the overbudget issue <sup>[4]</sup>.

### **4.4. Improve the audit management system and strengthen the interaction between departments**

In order to reduce the problems in the budget and settlement audit management affairs, all departments should build a good interactive relationship, which helps focus on improving the budget and settlement audit management system. For example, prior to audit work, the construction unit can strengthen the early response and effective treatment of audit risks by establishing scientific and standardized audit procedures. After the audit, the responsible party shall sign for confirmation. In the contract signing stage, the members of both parties should focus on inspecting the contents of the contract.

Also, they should examine the detailed rules in the contract based on relevant legal requirements. If any irrationality is found, it should be communicated in time to effectively safeguard the legitimate rights and interests of both parties. In addition, as an important basis for calculating quantities, auditors are required to have an in-depth understanding of the contents of the design drawings, clarify the intention of the designers, and ensure that the calculation of quantities is accurate. It should be noted that the issue of omission during the audit must be handled in time to avoid the increase of project construction cost.

## **5. Conclusion**

In short, in order to ensure the continuous improvement of the benefits of construction cost control, all participating units of construction projects should be deeply aware of the importance of budget and settlement audit. Through the scientific construction of interactive and coordinated work patterns, it is necessary to strengthen the overall deployment and effective management of project budget, settlement audit, and cost control. At the same time, in order to prevent the occurrence of overbudget or other problems, the relevant personnel engaged in the audit should take the initiative to combine the characteristics of construction cost risk management and the performance of common problems as well as take scientific and reasonable measures to strengthen the advance planning and risk prevention and control in the construction budget and settlement audit, so as to effectively enhance the construction benefits of construction projects.

## **Disclosure statement**

The author declares no conflict of interest.

## **References**

- [1] Li X, 2022, Construction Engineering Pre-settlement and Construction Cost Management. *Real Estate World*, 2022(02): 81-83.
- [2] Lu Y, 2022, Analysis of the Budget Settlement Audit Method of Civil Engineering Cost. *Construction and Budget*, 2022(01):19-21.
- [3] Ding Y, 2022, Discussion on Pre-Settlement of Construction Project Cost and Construction Cost Management Measures. *Jiangxi Building Materials*, 2022(02): 226-228.
- [4] Li S, 2022, Disputes and Solutions in the Audit of Project Completion Settlement. *Real Estate World*, 2022(03): 107-109.
- [5] Niu H, 2021, Problems and Solutions of Cost Estimation (Settlement) of Housing Construction Project. *Transpworld*, 2021(24): 69-71.

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