# Internal Audit of Infrastructure Projects in Public Hospitals——Based on The COSO ERM Framework Research

DOI: 10.23977/ferm.2022.050408

ISSN 2523-2576 Vol. 5 Num. 4

# Mengqian Wang, Xinxiang Huang

The First Affiliated Hospital of Nanchang University, Nanchang 330006, China

Keywords: Infrastructure, Internal audit, Enterprise Risk Management, Public hospital

Abstract: The infrastructure projects of public hospitals are closely related to social economy and national life. Their special significance makes public hospitals attach great importance to the investment in infrastructure projects, and the management of infrastructure projects is also an important link of high-quality development and safety management of hospitals. The whole process of the project involves many units and departments, and the project realization cycle is long. Its complexity and comprehensive characteristics make it difficult for the hospital to comprehensively control the infrastructure project. Therefore, the internal control of the hospital on the infrastructure project requires the participation of all departments, and the internal audit department plays a role of supervision and evaluation in the process of the hospital operation, and can find out the problems and deficiencies existing in the hospital operation in time, which is very beneficial to improving the internal control level of the hospital infrastructure project. It has become the focus of internal audit in infrastructure projects, improve the efficiency of the use of funds, and prevent the risks of the whole process of projects. This paper cites the COSO ERM risk framework to discuss how internal audit plays a role in infrastructure projects.

### 1. Introduction

The in-depth reform of China's medical and health care system has encouraged public hospitals to assume important responsibilities in medical technology, social services and comprehensive development. To create a better-quality medical environment and service level, the scale of public hospitals needs to achieve high standards, high quality, high safety, it also depends on the smooth implementation of hospital infrastructure projects. Therefore, strict internal audit will improve hospital infrastructure internal control level, ensure the construction project compliance, and provide high-quality medical services for the people.

# 2. Organization of the connection of COSO ERM and internal audit

The COSO Enterprise Risk Management (ERM) framework (Figure 1) is a guiding theoretical guideline proposed by the US Anti-Fraud Finance Committee on how risk management serves the implementation of organizational strategy and performance. The framework mainly focuses on the

organizational governance and culture, strategy and goal setting, performance realization and risk control, reviewing risk change and revision system, mastering information and analyzing the report, the purpose is to prevent risks in economic operation activities and create reasonable and high-quality benefit results.



Figure 1: 2017 ERM Principles and Components

The internal control of hospital infrastructure projects needs to establish and improve the management system of capital construction projects, clarify the responsibilities and authorities of internal departments in construction projects, and reasonably carry out risk control. The internal audit department should strengthen supervision, risk management and internal control construction, otherwise, establish and improve risk control mechanisms. Therefore, from the perspective of internal control, the core objectives of the COSO ERM framework coincide with the risk internal control expectations of public hospitals. The internal audit department of public hospitals can base on the ERM theoretical support, and combined with the guiding ideology of relevant policies and measures, assess infrastructure projects. The project carries out all-round risk control, provides systematic support and basis for the construction of the infrastructure system, and realizes the vision of efficient use of funds and high-quality development of the hospital.

# 3. Internal control risk points of infrastructure

The public hospital infrastructure projects are different from ordinary construction. It carries the significance of medical functions and social responsibility, which also makes the internal management of infrastructure projects more difficult. Throughout the entire infrastructure construction process, the precise positioning of risk is the key point to promote the rational and standardized internal control of infrastructure. Combined with the principles of performance realization and risk control in the COSO ERM framework, the construction process risks can be briefly reflected in the following figure Figure 2.

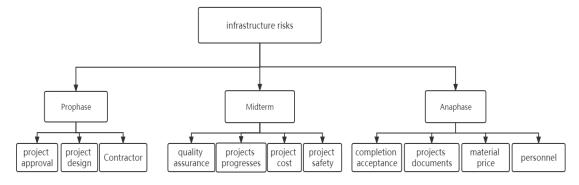


Figure 2: Risk analysis

The quality of the preliminary design work is difficult to control. Infrastructure project design affects the whole project cost calculation, the owner, design units, and consulting unit should meet the needs of the user department, and conform to the design specification, but also ensure the design drawings project complete. It is easily leaded to the late construction process of budgeting, engineering change, visa and other cost increase.

Usually, infrastructure projects are arranged by the construction party, the construction agent and the owner unit according to the contract agreement, project design, schedule and so on. This stage is the most difficult in the whole process. During this period, a large amount of people, property and other resources will involve numerous stakeholders, and the internal and external change factors are difficult to measure, which will easily lead to problems in the progress, quality, safety, cost and so on.

There are many types of project cost quota, and the division standard is not clear. Different cost calculation methods will generate different results, which makes the exact index basis for the judgment of the project cost in the final account. In the process of on-site acceptance, it is necessary to review the building materials intuitively. However, the price of materials in the construction market is different, and there are various kinds of materials, so we need to fully grasp the material price in order to make accurate judgment. Not only that, some decision changes in the construction process may affect the verification of the actual work quantity during the final completion acceptance, and the actual project quantity may be inconsistent with the contract provisions, which requires high requirements for the accurate and authenticity of the completion final account. This also requires the final account auditors to have a high professional quality in the project construction control, and to be able to clearly and accurately make a professional judgment based on the relevant regulations, combined with the actual site, and judge the final accounts.

## 4. Risk control measures

Establishing a clear audit goal is the support point to reasonably carry out internal control work, to avoid unnecessary contradictions in the process of internal audit. Due to the particularity of the internal audit of public hospitals, the goal positioning of the internal audit in the hospital management is to supervise and evaluate the hospital operation activities, provide audit opinions, and help the superior leaders to make reasonable decisions. Therefore, the control of infrastructure projects is different from the external audit. The main purpose is to assist the infrastructure departments to carry out the project construction with higher quality and safety, and to ensure the authenticity, legality and efficiency of the project implementation process.

The setting of the internal audit work plan plays a vital role in the whole process of the internal audit of the infrastructure projects, and determines the final effect of the infrastructure project audit. Formulate the audit work plan well, and the internal audit department should control the whole process of infrastructure project from project approval to project settlement, and make clear the timing of audit intervention in the final accounts of the project. Before the final account of the project, it is necessary to conduct a comprehensive prior investigation on the hospital infrastructure project, conduct in-depth investigation and analysis of the possible hidden audit risks, and establish targeted management measures. The final account audit link should collect and review evidence according to law, such as: project contract or agreement, project as-built drawings, concealed project visa, etc., to ensure the authenticity, effectiveness and comprehensive legality of the audit basis. At the same time, auditors should form a certain sense of audit risk and self-protection, and take laws and rules as the criterion of final account audit.

### 5. Conclusion

Public hospitals in seeking higher quality and safer management mode, triggered the internal control of economic activity control of new thinking, also prompted internal audit combined with COSO ERM framework concept, innovation audit way, control infrastructure engineering risk point, play to the role of internal audit to assist infrastructure project construction more reasonable compliance, maximize capital benefit, and promote the improvement of hospital internal control level.

### **References**

- [1] Shi Yuanyuan, Wang Yaqin, Jiang Xiaohui. Research Based on Internal Control Management of Sporadic Maintenance Engineering under COSO Framework—— takes H Hospital as an example. Finance, (2021) No.16, p.163-165.
- [2] Zhou Ting, Qiu Jincai, Zhu Yuanhua, Wang Tao, Lin Huaying, Yu Xingmin. Research on Strengthening Internal Control of Medical Income in Public Hospitals Based on COSO Framework. Contemporary Accounting, (2020) No (18), p.29-30.
- [3] Wang Huijun. On the management problem and optimization strategy of hospital infrastructure project. Rural Health in China, Vol. 12(2020) No.14, p.81
- [4] Zhang Sen, Xu Ke, Cheng Kun. Comprehensive management analysis of hospital capital construction engineering quality. Economic Research Guide, (2021), No.19, p. 156-158.
- [5] Wang Chao. How does a hospital internal audit "diagnose" for infrastructure projects. Finance, (2019), No.15, p.147-148.
- [6] Ninglang Tao. Application of whole-process tracking audit in public hospital infrastructure projects. Wealth Today (China Intellectual Property Rights), (2021) No.07, p.173-174.