

## Research on Internal Control of Highway Construction

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**Abstract:** Based on the conclusion of internal control system in highway construction and the status of internal control, this paper analyzes some main problems of internal control in highway construction which including the lack of environmental awareness, weak awareness of risk, poor control activities, blocked information communication and weak internal supervision. Then the paper proposed some guidance and advice for highway construction enterprises to improve internal controls, such as strengthening the control environment, doing accurate internal accounting controls, strengthening internal audit control and so on.

**Key words:** Highway; Construction Enterprises; Internal control

### 1 Introduction

In April 2010, Ministry of Finance, Securities and Futures Commission, the Audit Commission, China Banking Regulatory Commission, China Insurance Regulatory Commission jointly issued “the Supporting Guide of Enterprise Internal Control” (hereinafter referred to as supporting guidelines). Together with the previously announcement of “Basic Standards of Internal Control”, The guidelines marks that it that the Chinese system of internal control adapt to the actual situation of China's enterprises and integrate international advanced experience is basically completed.

Internal control is a general name of methods, procedures and general system carried out to restrict and regulate their subordinate units and personnel behavior for the established corporate goals, maintain and effectively utilize assets.

Internal control of highway construction is affected by many factors that are mainly summarized as the following aspects: (1) Environment of internal control system. Han Jianping recommended that Chinese characteristics of highway construction resulted in unaccommodating to environment. Moreover, inadequate understanding and systems are also important reasons. (2) Internal audit. Liu Yushan suggested that the audit of internal control as its strong support plays a vital role, but audit of internal control in China has a few defects in the aspects of institutions, regulations, management system and methods for application. (3) Internal control based on risk management. Zhang Lizhen emphasized on the establish of the link between internal control and risk management will lead to achieve business goals and values, however it is just to stay in the theoretical stage. The researchers discussed the corresponding solutions: we should start from various fields of accounting, audit, budget, projects, human resources, and information systems to develop perfect internal control system, then carry out corresponding implementation of responsibilities and assessment as well as strengthen the quality of managers and all kinds of staff.

In view of the actual situation of highway construction enterprises, this paper's analysis mainly focuses on the key problems about environment, risk awareness, internal supervision and so on.

## 2 Analysis of Current Internal Control of Highway Construction

### 2.1 Lack of awareness of the environment

Control of environment is the foundation of internal control. Without a sound internal control environment, the internal control will lose effective implementation. At present, it lack of cognition of the internal control environment is embodied in the following aspects: Firstly, the weak consciousness in corporate management. Because managers have no deep understanding and adequate attention to internal controls, only corresponding internal control system is established while other key relevant institutions are not. Secondly, the arrangement of corporate governance structure is inadequate. The Board of Directors and Board of Supervisors based on the internal control mechanism has not really set up owing to most of the internal control bodies under the leadership of the controlled object that can not really play the internal control, supervision and restraint function. The existence of governance structure is an empty shell and performs practically no function. Thirdly, enterprise mechanism is out of scientific human resources management, which on account of quality of talents does not keep pace with the times while increasing amount of tasks.

## **2.2 Weakly conscious about the risk**

Many road construction enterprises are lack of knowledge on the risk that will ascribe potential systemic risk, financial risk simply to the poor market environment rather than establishing a sound mechanism of risk prevention. Project can be said the greatest risk areas, which highway construction companies face. Its risk is mainly manifested in two aspects: One risk is in management and control of project cost. There is no overall objective of cost control or poor implementation, which can not reasonably and effectively control the cost. The other risk is in completion of the project settlement. Due to project changes or failing to timely approve the budget, which caused by operational requirements or design problems, the financial settlement is delayed finally. In addition, not only are funds often in short supply in the later stages of the project, but also highway construction companies can not recover the balance due timely, which have increased the financial burden of enterprises and the business risks.

## **2.3 Poor control activities**

As much as we know, internal control system isn't exhaustive enough. Most highway construction enterprises in China did not develop a comprehensive internal control system department while internal control system is formulated separately by the functional departments. But it is the responsibilities of different departments, different permissions, different positions, and working out with the narrow nature of the internal control, together with various departments lacking of communication and coordination that resulted in a number of regulations are difficult to reconcile to each other, let alone to play its proper control of the effectiveness of internal control system. Moreover enterprises are in the absence of responsibility of business constraints and effective accountability system and a clear act of violation of discipline penalties, or even no punishment measures.

After that, internal control system has inferior execution. Implementation of the system of internal control is a system which needs full participation. Yet some part of the highway construction company pay insufficient attention to the internal control system, which involves only a small number of departments, a few links, and dose not penetrate into all aspects of business management in various departments.

## **2.4 Blocked information communication**

To begin with, there is poor communication between upper and lower levels. As construction enterprises with the characteristics of liquidity, corporate headquarters and project managers are far apart from each other, which resulting in ineffective management, supervision and communication between higher and lower levels mainly by phone, documents, management of traffic to complete their daily work. What's more, there is inadequate communication between various functional departments. Often a construction project will be jointly operated by a number of functional departments to complete, but the lack of communication between various functional departments could easily lead to information and data dispersion, poor resource sharing, and low data utilization, which can not form a unified and effective message so as to make the management costs increase. The last but not the least, the third factor is the deficiency of information system support. General road construction enterprises hold that they belong to extensive ones, and the management of degree of information is generally low, even if there is the basic platform of information, the range of professional applications software is narrow, such as finance, budget software. Combined with relevant staff of the low level of computer applications, particularly in the construction site, whose part of the work is by hand so that It can't be realized that sharing the information resources and automatic transmission.

## **2.5 Weakening internal supervision**

Internal supervision of highway construction focused on the project progress and quality inspection. The executive of internal control lacks effective evaluation and correction system in the process of the project implementation. For one thing, the establishment of internal audit institutions is unreasonable. Audit independence and objectivity is not strong, quality of auditors is uneven, and some of whom has poor experience and are not familiar with the process of the construction project about the business chain. As the consequence it is difficult to carry out audit work. Some of these problems existed in the construction project can be checked out, but as the institution in the control, the supervisory role is much lower. For another thing, internal audit always gives priority to compliance and post-inspection, even if there is early and mid-term audit of the project, but also not more than a mere formality, which did not play a real role in the supervision and inspection, therefore there is no effective system of checking the operation of assessment, and it is not able to propose appropriate measures for improvement. Hence internal control deficiencies in the system are difficult to improve. Errors may occur in advance, it will not reach the effectiveness of internal control.

### **3 Recommendations about Improving the Internal Control in Highway Construction**

In terms of entering the market of Highway construction, and ensuring that we can gain a firm foothold and certain economic benefits in a rapidly changing market environment, we must strengthen the internal control system. There are many ways of internal control. Highway construction enterprises shall unite those ways according to industry's and its own characteristics, making their own set of strict internal control system.

#### **3.1 Strengthening the control environment**

Internal control is a program formulated by managers with full participation, so we should pay attention to human factors. Leaders at all levels should first strengthen internal awareness of internal control. From the chairman and general manager to the project leader, they shall give adequate understanding to the establishment and implementation of internal control system and strong support to the establishment of internal audit activities and the conduct of the audit and audit findings. Managers through continuing and effective education infuse internal control concepts into every employee's ideas in order to make internal control become clauses and encourage people to set a good example for other employees.

#### **3.2 Doing accurate internal accounting control**

##### **3.2.1 Separation of incompatible duties control**

In the design and establishment of internal control system, we should focus on the control separation of incompatible duties to determine clear duties and powers, and establish mutual supervision, restriction of checks and balances. Organizational design in the enterprise shall be erected on the concept of "incompatible separation" consciousness, and strengthen it. Starting from the basic accounting work, we ought to make a strictly limited set on incompatible positions. To ensure the safety and integrity of corporate assets, improve the quality of accounting information, and control a variety of business risks will ensure rapid and stable development of enterprises.

##### **3.2.2 Control of fixed assets**

Value of fixed assets are highly used during highway construction, so the internal control of them is particularly important, especially in the large machinery and equipment of higher frequency of use, what wear fast, have high-speed transfer of value. Determining whether rental and purchase is more economical is the primary. As for its own fixed assets, they should be conducted a reasonable depreciation by the accounting department. Financial departments should establish a complete fixed asset accounting, which needs periodic inventory, reconciliation and verification. Lease of the assets should get approval from the relevant leaders. Recipients during the project department should pay attention to asset maintenance. If damaged abnormally, the responsible parties must be held accountable. For a large number of engineering materials, we should prepare procurement plans and apply bidding system to take the project department to set up the real accounts and check acceptance of storage of engineering materials. Recipients should make a record, regular inventory, and real checking account. Materials accounting should pay attention to material accounting for prohibiting purchase with consumption, and empty into while virtual out. When shortage or overage situation occurs we should find the reasons and deal with them according to the relevant system.

##### **3.2.3 Decentralization of authority control**

Most of China's highway construction enterprise used the project manager system, project managers were commissioned by the legal representative of the overall responsibility for project construction. It is an advanced project management system imported from the overseas. But in practice there are still many shortcomings. For example, how to do a scientific and rational decentralization of authority between the enterprise legal person and the project manager is still one of the key issues. On the one side, from external part of the project, the enterprise should bear the responsibilities and obligation during the project to give a clear mandate to its managers for working. On the other side, from internal part of the project, the manager who command the overall situation to guide the decentralization and authorization so that various departments perform their duties, and are responsible for carrying out their work. To establish authorization should pay attention to whether the scope of work is all included.

#### **3.3 Focus the control of the project department**

##### **3.3.1 Control of project cost**

Project cost is the full cost of the synthesis incurred in the construction companies, which including materials, machinery rental fees, wages, management fees and so on. Firstly, to improve cost control and improve the economic efficiency of enterprises should adopt the target costing approach. Secondly, to

control labor cost should strengthen management of technical training for workers, implement a reasonable reward and punishment system and minimize the labor costs of the expenses. Thirdly, to control material cost should strengthen the material procurement, expenditures, custody and other aspects, pay attention to rational planning at the construction site to reduce the material loss of secondary transportation, and adopt quota requisition system to limit and control waste. Fourthly, to control mechanical fee should rationally use equipment according to the construction progress and do maintenance work well for improving utilization and efficiency in the case of ensuring intact rate. Project managers shall regularly hold meetings for comparative analysis about the target cost index to find the reasons for cost overruns or saving and sum up experience so as to ensure the realization of the total cost of the project goals. Establishment of bonus incentives tied to performance will mobilize the full enthusiasm.

### 3.3.2 Project risk management

Because of companies' many uncertain factors, highway construction projects, which contain a lot of risk is an important risk control point. We should enhance the project risk management particularly and strengthen the risk assessment. After the identification of project risks, risk characteristics of various values shall be estimated, and on this basis the likelihood of project risks and the consequences of the loss will be quantified, in other words, it is the overall risk assessment and the foundation of risk management.

### 3.4 Meticulous budgetary control

Budgetary control is a very important content in the internal control system of projects. Budget of construction enterprise is the target what business volume, revenue, cost, etc. which should be determined to achieve in the case that the enterprise centers on the business objectives. Budgeting is helpful to improve the basic management of the project.

There are several recommendations about the implementation of budgetary control: budgetary management should be combined with information system, accounting, cost management, financial management, budget management and auditing work. Firstly, budget preparation and control need to keep abreast of information. Budgetary control can not be done without information management systems of the enterprise, which has put forward higher requirements to the latter. Secondly, accounting is the basis of budgeting, because budgeting plays the role of accounting better. Thirdly, the cost estimate is one of budget management, which is also an important component of cost management. Cost budgeting process should be closely linked with the construction, the implementation of the budget target will resolve to the management of every lower level and evaluation system will accord to budgetary control for evaluation of budget performance so that rewards and punishment is clear to improve work with full enthusiasm. Fourthly, budget preparation, implementation and evaluation process need to establish appropriate audit mechanisms. Budget audit requires quantitative analysis to use statistical work for ensuring the development of reasonable budget goals, clarity, and adaptability. Budget execution audit has the obligation to expose issues raised in the implementation of budget management, check the fulfillment of the departmental budgetary target for ensuring the implementation of the safe, efficient and robust. Budget evaluation of audit requirements of the evaluation report on the budget analysis takes a variety of evaluation methods such as the difference between the analysis, ratio analysis, indicators of decomposition and so on to analyze the causes and make recommendations.

### 3.5 Strengthening internal audit control

In practice, due to distinct characteristic of companies of road construction, the internal control that designed according to conventional business would be difficult to fully play its effectiveness, coupled with some external, director of the factors, the effect of internal control is often limited. At this time, internal audit can overcome these constraints. To give full play to the internal audit function, we must do the following:

3.5.1 At the first, we must protect the independence and objectivity of internal audit. That the audit results are directly reflected to the highest management is more effective than its low sector, which also can promote the improvement of internal control. Independence and objectivity of internal audit in highway construction is mainly reflected in the set of an independent department, independent performance assessment and evaluation, appointment and removal of personals.

3.5.2 Improving the quality of internal audit staff also plays an important role in internal audit control. At present, many auditors are transferred from the financial sector so that they lack of management, legal knowledge and professional knowledge about the project, which are restricting the effects of audit task completion. This area requires a company's existing auditors to study hard, and constantly improve their own knowledge structure. Managers also need to promote the talents with rich diversity of

knowledge rather than just a single value of financial knowledge so that internal auditing institutions can be equipped with diversified high-quality talents.

3.5.3 The audit staff should go down to the first line to regularly inspect construction projects and construction results in order timely to submit internal control weaknesses, and promote the effective implementation of internal control.

### **3.6 The emphasis on human-resource management**

It is important to strengthen attention to the first level so as to take advantages of human resources of road construction enterprises, and establish a scientific and human resources management system, then use computer management information system to collect and aggregate the distribution of corporate human resources and determine what type of talents is inadequate in enterprises. Establishment of a scientific personnel selection, incentive mechanism and rigorous recruitment process of enterprise design and checks ensures that talent is really required. Regular staff training shall improve their professional skills. Regular evaluation of staff work performance is helpful to decide rewards and punishments in accordance with the provisions. The rotation system should be applied to the important positions. The project management team ought to focus on training and study for improving their level of project management to meet corporate talent requirements. Qualification evaluation on a regular basis improves file management. It's also significant to establish a competitive selection mechanism for project managers, who make a good performance will be given the major awards, and who mismanage causing the major incident, will be given the removal and economic penalties.

### **3.7 The establishment of a communication system of scientific electronic information**

With the development of electronic commerce, we can see the sophistication of business management. The information system can accelerate communication among management, departments and other relevant staff in order to enhance the efficiency and effectiveness of internal control. Because project departments are away from the corporate headquarters, it is necessary to establish a network of communication channels that can make a better understanding of the implementation of the project and degree of progress. When need to make major decisions, corporate headquarters can make a reasonable decision in a timely manner according to the network information, which is the defect of the traditional means of communication.

## **4 Conclusion**

Internal control is the most important, fundamental, and effective means of management in modern enterprises. Whether establish and improve internal control or not is directly related to success or failure of highway construction enterprises. A large number of actual cases show that the majority of causes of failure and decrease of enterprises are short of internal control, and particularly due to ineffective internal control. With the rapid economic development and the establishment of modern enterprise system, enterprises will become independent, self-financing, self-discipline and self-development operators. To gain a place in the market and maintain stable and healthy development, the enterprises must establish a perfect internal control system.

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