

## Internal control of cost estimation design in road and bridge construction units in Hanoi-Vietnam

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### **Abstract**

*Our study will specify solutions for internal control of cost estimation design in road and bridge construction units in Hanoi-Vietnam*

*Authors mainly use methods of comparison, analysis and synthesis; investigate; summarizing experience; The above methods are used in combination for the purpose of reviewing and evaluating the problems of the research object of the article: theory and practice of internal control for the estimating design of bridge - road in construction units based in Hanoi, period 2015 to 2020.*

*Our research findings show that we need to invest in information technology, purchasing modern computers and backup equipment. Especially those who operate, repair computers and update basic information for design software. Also, the contractor's personnel organization must be flexible to changes in the policy mechanism, i.e interchangeable in the professionalization posture.*

*Finally, author also propose other solutions for better internal control.*

**Key words:** *internal control, Hanoi, cost estimation, road and bridge construction, Vietnam*

**JEL:** *M0, M21*

### **1. Introduction**

The road and bridge construction units based in Hanoi in the process of production and business have a very important and indispensable document that is the design and construction cost estimate. The cost estimate design is one of the documents approved by the investor, agreed on value and volume with the construction contractor through bidding or contracting (contract appointment). It is important because: 1) is the inherent need of construction activities that requires a plan, there must be an estimate as a basis for implementation, 2) according to the provisions of current law, 3) as a basis for finalization, recording of accounting books, assessment of the quality and efficiency of the construction process, completion of the handover, 4) as a basis for evaluating the effectiveness or the achievement of the objectives? . The process of estimating and evaluating design estimates by do-it-yourself or hired, there are always potential risks for many different reasons that require management, must be summarized and learned regularly. , continuity.

Internal control is the totality of an entity's policies and procedures that: 1) protect the entity's assets, 2) ensure compliance with legal requirements, and 3) ensure reporting financial statements that are true and fair, and 4) ensure the efficiency and effectiveness of operations. Given these four objectives of internal control, the design estimate at the Hanoi-based road bridge construction unit may not be fully satisfied. In fact, the author's survey over the years, even for estimates made or appraised by

reputable consulting firms in the world, there are still certain risks. In theory, these are the inherent limitations of internal control.

Therefore, the objective of this article is to: Propose solutions with scientific and practical basis to improve internal control over the design of cost estimates in capital construction activities at construction sites. road bridge construction contractor based in Hanoi. The study of internal control has implications not only for the road and bridge construction companies themselves, but also for the auditors when performing an audit of these entities.

## **2. Previous studies**

### **2.1 Research situation abroad:**

Documents, books and research works on internal control abroad are extremely rich and appear for a long time. These documents are also used for reference and citation for domestic studies. However, there has not been any study on internal control for cost estimation design in capital construction of road bridge construction units/enterprises based in Hanoi, Vietnam.

### **2.2 Researches in our country:**

In Vietnam, documents, projects, books, theses, dissertations, newspapers and scientific journals written on internal control are very diverse. However, each of those documents refers to internal control in different fields and aspects. There has not been a study on internal control for cost estimation design in road bridge construction units based in Hanoi.

An overview of the theory of internal control in the enterprise

### **2.3 Concepts**

The perception process and research on internal control have different points of view. The first reliable definition of internal control was given by the American Association of Certified Public Accountants (AICPA) as follows: “Internal control includes the organization's plan and all methods of coordinating and measures are recognized in the enterprise to secure assets, check the suitability and reliability of accounting data, enhance operational efficiency and encourage performance”.

In Vietnam, according to Auditing Standard 400, “Internal control system is understood as the rules and control procedures that the entity complies with laws and regulations, to check, control, prevent preventing and detecting fraud and errors; to prepare true and fair financial statements; to preserve, manage and effectively use the assets of the entity”. The concept of internal control system according to Auditing Standard No. 400 focuses mainly on auditing and accounting rather than control for internal management purposes. With the great change from the international business environment, the process of globalization and the rapid development of information technology, the update of the international auditing standard system and the specific conditions of Vietnam, the Ministry of Finance issued Circular No. 214/2012/TT-BTC dated December 6, 2012 with a system of 37 Vietnamese auditing standards, in which Auditing Standard 315 was born to replace Auditing Standard No. 400.

Auditing ISA 315 approaches COSO internal control with many changes in line with international standards. On the basis of the COSO Report, Auditing Standard No. 315 stipulates: “Internal control is the process designed, implemented and maintained by the Board of Directors, the Board of Directors and other individuals in the entity. maintained to provide reasonable assurance about the entity's ability to achieve its objectives with respect to the reliability of the financial statements, the effectiveness and efficiency of operations, and compliance with laws and regulations. related”.

Besides, approaching internal control in the direction of risk management, the Vietnam Accounting Law 2015 defines: “Internal control is the establishment and organization of implementation within the accounting unit of internal control mechanisms. , policies, processes and internal regulations in accordance with the provisions of law in order to ensure timely prevention, detection and handling of risks and achieve the set requirements”. Thus, from an audit perspective, the Vietnamese auditing

standard system has updated the content related to internal control in accordance with international accounting standards in order to enhance the quality of audit services of financial statements. as well as enhancing the responsibilities of the auditors and the audited entity.

Thus, internal control is a process because the internal control system is not just a procedure, a policy is implemented at a certain time, but the internal control system is operated continuously at all times. different levels of the business. On the other hand, internal control is influenced by managers, administrators and other employees of the organization because this factor is the basic element to establish the control mechanism and operate to achieve the control objectives. control of the entity on the basis of policies, procedures, forms, etc. of internal control.

Internal control is established to ensure reasonableness, the use of internal control tools in the entity can prevent and detect violations, but cannot guarantee that it will not happen again. In addition, the decision of internal control depends on the basic principle between benefits and costs. Therefore, internal control provides only reasonable assurance, but not absolute assurance, that objectives will be achieved.

## **2.4 Internal control over cost estimate design**

### **2.4.1. Concept of cost estimation design**

According to Clause 1, Article 8, Decree No. 32/2015/ND-CP on cost management of the Government: The construction cost estimate is the “all necessary expenses” for the construction of the work, determined at the actual stage Executing the project in accordance with the technical design, construction drawing design and the requirements of the work to be performed.

According to Clause 1, Article 8, Decree 68/2019/ND-CP of the Government on management of construction investment costs: Construction cost estimates are all necessary costs estimated at the stage before house selection. Contractors for construction of works, works, and bidding packages are determined on the basis of calculated volumes from technical designs for 3-step designs or construction drawing designs for 2-step designs or FEED design (general technical design file) for the case of implementation in the form of EPC (design contract, equipment supply and construction construction), EC (design and construction contract). construction work), EP (contract for design and supply of equipment), work requirements to be performed, and construction norms and unit prices. The contents of the construction estimate include: construction costs, equipment costs, project management costs, construction investment consulting costs, other costs and contingency costs.

In other words: The construction cost estimate is the "expected cost" that the investor must spend to get the work he expects, determined on the basis of the technical design or construction drawing design. You need to understand that when making the estimate, the project has not yet been completed, the construction has not happened, but the investor needs to know how much money needs to be prepared, so that when the construction works, what expenses will be required. there is money. Estimating what the investor needs to know above is an estimate. That is, it is expected to calculate the necessary cost to build the work before its construction.

Cost estimation design is an activity of a person with design expertise to make a plan about the expected investment cost for a project/work. The cost estimate design must go through estimating, budget appraisal, budget defense, and budget approval.

So the essence of the project/work cost estimation design is: make a construction cost plan. Planning is meant to be made in advance, it hasn't happened yet. If the plan is good, the execution will be good. Currently, there are too many projects that are delayed or delayed because when they are under construction, they run out of money to pay and pay the contractor, that's because the cost planning is not standard. In addition to the cost plan, we also have a schedule plan, a quality (management, control) plan, a bidding plan... The construction cost estimate is different from the bid estimate/requirement proposal outline. The cost estimate design is determined by the Consultant and/or the Investor, the bid or proposed estimate is by the contractor/construction unit.

#### 2.4.2. Detailed objectives of internal control for the cost estimate design

Any type of information arising in an entity may contain the possibility of material misstatements in the process of reporting and processing information. Effective and sufficiently active internal control should be designed and operated in accordance with the detailed control objectives designed and operated in accordance with the detailed control objectives for that type of information, to prevent and detect and correct possible errors. The law also clearly stipulates that violations are subject to sanctions for project/work design content in general and cost estimate design in particular.

For the cost estimate design, due to its characteristics influenced by law, design standards and norms in the basic construction to form it, the detailed objectives of internal control include:

The work contents presented on the estimate design must have sufficient grounds (reasonable basis). Effective internal control must ensure that economic transactions and work contents presented in the design must have a scientific and practical basis.

The work contents must be properly approved (approval). The approval sign for the content of the estimate design represents the inspection, review and self-responsibility of the competent person for the actual existence of these works. Internal control must be designed to ensure that management approval is carried out regularly, continuously and appropriately.

The job contents must be fully listed/described (completeness). Internal control must be established to ensure that no economic transaction or work content is omitted, redundant or duplicated.

Business content, economic content, possible assets must be reasonably calculated in quantity and recorded at an appropriate value (assessment and calculation). Internal controls shall design appropriate controls to ensure that errors do not occur in calculating unit prices, quantities, and recording amounts of work items or assets on design. cost accounting.

The economic contents must be properly classified (classification). Internal control must be developed to consider the correct classification of costs such as construction costs (including material costs, labor costs, construction machine costs), equipment costs, cost of design consultancy, cost of supervision consultancy, cost of project/work management, cost of site clearance compensation, cost of temporary works, tax cost, project audit cost...

The work content and economic content must be reflected in a timely manner (timeliness). Internal control must be designed to ensure that the contents in the cost estimate design must be updated flexibly, timely, on schedule of the project/work.

The work contents and economic contents must be properly recorded in the cost estimate design and must be accurately summed up and presented in the explanation for making the estimate according to regulations (accumulation and presentation). Internal control must be designed to ensure that the compilation and listing of economic and work contents and the presentation on the notes to the cost estimate are correct and accurate, in accordance with applicable laws and regulations. related determination.

### 3. Methodology

- The article uses descriptive statistics, synthesis and analysis to present theoretical and practical contents;

- Methods of comparison, analysis and synthesis; investigate; summarizing experience; The above methods are used in combination for the purpose of reviewing and evaluating the problems of the research object of the article: theory and practice of internal control for the estimating design of bridge - road in construction units based in Hanoi, period 2015 to 2020.

### 4. Main results

#### **4.1 Actual survey on cost estimation design in road and bridge construction units based in Hanoi**

During the implementation of the article, the author has surveyed 4 typical cost estimation designs of road bridge construction units from 2010 onwards. The reason for choosing such a long time is because the design of road bridge works takes a long time, after being approved, it is continuously verified, revised and supplemented with the estimated design; On the other hand, it is only through the long-term research process that the authors can assess the impact of the change of law on the estimate design, have a comprehensive perspective to evaluate the internal control of the design. estimates, thereby proposing suitable solutions.

The detailed surveyed cost estimate designs are as follows:

Package 4: construction of the road to the north of the road tunnel project through Deo Ca - National Highway 1 in Phu Yen and Khanh Hoa provinces (including route and bridge part excluding steel bridge). The construction unit is a consortium of contractors TCT to build traffic works 8 and Joint Stock Company for investment and construction of roads and bridges 18.6. The survey document presents an excerpt from Appendix 1 to Appendix 3. Hereinafter referred to as “Bid Package 4”.

Construction cost estimate documents for sub-projects: Hung Vuong Street connecting the East-West Economic Corridor and Southeast Quang Tri economic zone, made according to Circular 09/2019/TT-BXD guiding Decree 68/2019 /ND-CP dated August 14, 2019 of the Government. Belonging to the technical infrastructure project "Basic infrastructure for comprehensive development of Nghe An, Ha Tinh, Quang Binh and Quang Tri provinces (BIIG2)". The project is in the process of submitting to the Department of Construction of Quang Tri province for design appraisal.

Package XL24-CT: bridges on the main route and the aggregate road from km99+080.3 to km109+080.3, belonging to the construction investment project of the Bac Giang - Lang Son expressway, the expressway component in the form of a contract BOT. The construction unit is a consortium of 5 construction contractors, including: Saigon Bridge Construction Investment Corporation Joint Stock Company, 873 Joint Stock Company - traffic construction, Ban Thai Construction Investment Joint Stock Company. , IDC Indochina Joint Stock Company and Khanh Minh Investment and Construction Joint Stock Company. The brief survey documents are cited in Appendix 5. Hereinafter referred to as “bid package 24”.

Project cost estimate: repair and ensure traffic safety on the streets of Thuoc Bac - Hang Dong - Bat Su - Hang But, Hoan Kiem district, Hanoi city. The construction unit is Minh Dang Construction and Trading Joint Stock Company. The survey documents are summarized in Appendix 6. Hereinafter referred to as “Bid Package 2”.

During the investigation and research, the following results were obtained:

##### **1> About the control environment:**

+ Integrity and ethical values of people involved in the process of controlling cost estimates: Leaders of construction units are qualified, capable, careful and meticulous people. The design estimates are all handed over by the design consultant, the construction unit considers and agrees to sign the construction contract.

+ Management philosophy and operating style of business leaders: The project/work construction unit must comply with the law, comply with professional regulations, have the capacity suitable to the project/company. has been established for a long time and has a good reputation in the market.

+ Organizational management structure of the enterprise. For the estimate design, the construction unit has a suitable design department capable of receiving and criticizing the estimate design.

+ Defining the responsibilities and rights of managers. The content of this control through the survey of the author group found that the decisions, the work performed all have assignment documents, authorization documents, and reporting mechanisms.



+ Qualifications and qualities of employees. The construction unit's staff has the appropriate experience and qualifications to control the cost estimate design.

+ Human resource policy: contractors have flexible human resource policies, selecting employees with sufficient capacity, experience and good ethics, greatly contributing to the effectiveness and efficiency of the control environment.

Location of the entity's internal control department. Regarding the internal inspection mechanism, "Bid Package 4" the investor established the Deo Ca Project Management Board, which is the focal unit for project management, so the supervision is quite good. The main contractor Cienco 8 is also a large, reputable contractor with a fairly strict control process, especially the portion of the estimated volume to be distributed to the joint venture contractor.

However, the internal inspection and internal audit of the remaining contractors for the design estimate have not been focused. Mainly monitor the progress through closely following the estimate for contract implementation and acceptance according to the design with the supervision consultant and the investor.

## **2> Risk assessment**

\* For "Bid Package 4": The investor submits a request document, which is a list of works and corresponding volumes together with technical drawings. The contractor consortium submits a proposal with the unit price. The investor has accepted the proposal of the consortium of contractors due to the competitive price and the guaranteed volume and quality. Estimation designs evaluated by the contractor may introduce volume risks. The reason was the acceptance test and field inspection, the technical department found that when lowering the road foundation, there are sections of rocky mountains, some sections are mixed soil and rocks that are difficult to bulldoze, demolish, some parts are soft soil, easy to sink during construction. Therefore, the unit has discussed with the design consultant and the investor about the possibility of generating volume due to higher machine and labor costs than the approved estimate. On that basis, complete the proposal and submit it to the investor and the design consultancy unit for approval and contract signing.

The detailed content of the estimate that the consulting construction unit needed to adjust was then re-evaluated by the Institute of Construction Economics and stated in the appraisal report (Appendix 2).

\* For "Bid Package 2": The construction unit won the appointment of a contractor for the construction of the work, upon contacting the estimated design, the unit found that some work items in the estimate were redundant. The estimated unit price is quite high compared to the unit price of materials that the construction unit can buy. Since then, the process of negotiating and signing a contract with the Traffic Infrastructure Maintenance Project Management Board, under the Hanoi Department of Transport, the construction unit has reduced the bid package price lower than the estimate (Appendix 6, construction contract).

On the other hand, due to the characteristics of construction methods in the crowded and narrow street of Hoan Kiem district, the unit will execute from 22:00 the night before to 6:00 the next morning, so the construction unit has adjusted the labor unit price. be suitable. However, because the estimated value of labor is enough to compensate, the construction unit does not require repair of the estimated design.

\* For "package 24": The consortium of contractors has completed the proposal on the basis of the cost estimate design in the investor's request. After the construction contract was signed, the contractors had a meeting to divide the volume according to the proposed cost estimate and report in writing to the investor. However, the contractors all found the risks of the cost estimation design including the application of unit prices and the inappropriate quantity survey; the shipping price is not close to the market price; construction terrain is plain and deep mud increases construction costs when contractors have to come up with appropriate construction plans....

\* For "Hung Vuong project": The estimation is made by the investor who hires a design consultant and is in the appraisal stage by the Department of Construction of Quang Tri province. This estimate is made based on the latest regulation on management of construction investment costs, which is Circular 09/2019/TT-BXD guiding Decree 68/2019/ND-CP of the government. Therefore, there are many risks in this estimate, in addition to the normal risks that can be identified, there is a potential risk that the unit applying the new guidance of the Government may misunderstand the content in the preparation process. The content leads to the cost content may be redundant/missing, or there is an error in the calculation.

**3> Control activities for the cost estimate design of the project/work include the following contents:**

- + The construction unit has assigned and assigned tasks for each person, each task to receive the design and consult and critique the design. The construction unit "contract package 4" self-appraisal of the estimate when making the proposal. Other units only consult and ask the design consultant to do it for them.
- + When preparing the cost estimate design to complete the proposal, "Bidding Package 4" and "Bidding Package 24" process information to ensure that according to the plan, report to the unit leader, investor and unit. design consultancy. "Bid Package 2" is mainly based on the consultation of the design consultancy and supervision unit of the investor.
- + When controlling material: All units ensure the protection and preservation of tools, means and documents collected during field survey; Control spending on careful and thoughtful design work. Particularly, "Bid Package 2" does not carry out physical control when receiving and criticizing the design.
- + Review work when appraising the estimated design to complete the proposal: The person responsible for "Bidding Package 4" and "Bidding Package 24" shall review the design product, repair or update it. Update information to get a quality, convincing and workable design. "Hung Vuong Project" and "Bid Package 2" did not review the design estimate

**4> Information and communication**

The information here is the "cost estimate blueprint", the type of operational information that is paid great attention by the contractors, kept confidential and ensures the quality of the proposal or high consensus. with the investor and independent design consultant until the construction contract is signed.

The contractor's communication problem with the estimate design is very limited, heavily procedural and relies heavily on the investor and consulting contractor. The process of exchange and coordination is not really honest, leading to the design of the estimate, which is sometimes just an estimate and is not feasible in some work contents.

**5>Monitoring**

Monitoring is carried out regularly in all four projects/works mentioned above. This helps to monitor the progress of the project/work, amend and supplement the design and estimate in a timely manner. Disbursing design costs with supervision by accounting department. Designated supervisors all have a written decision from the contractor's leadership. The monitoring mechanism is the organization of field meetings, meeting minutes, and reporting requirements.

**Assessment of the current state of internal control for cost estimation design in road and bridge construction units based in Hanoi**

In terms of advantages: Internal control for the cost estimate design of road and bridge construction units based in Hanoi is relatively comprehensive in most of the control contents. In particular, the process of operating and designing policies and procedures for the cost estimate design focuses on the content of risk identification and assessment. It is easy to understand because the risk in the estimate design can make the construction contractor inefficient in production and business, patchwork

construction leading to loss of credibility in the market. The careful consideration of the design and cost estimates makes the contractor proactive in construction, ensuring efficiency.

About limitations:

- The control environment is overlooked, heavily begging-giving, leaders pursue profit goals and want to find jobs to supplement their qualifications, so they sometimes ignore it. Get a blueprint that works but doesn't get it right to make a profit. Receiving a sloppy estimate design that is not in line with regulations, with the market, but because trying to find a job to do, it is acceptable to generate volume or increase prices without being paid by the investor.

- The risk assessment process is based on intuition, on regulatory documents without respecting the market, leading to unit price risk. The unpredictable fluctuations of the market cause the contractor to panic, the unit price and work items are not included in the estimate design.

The lack of experience and sloppy "far water can't put out fire near" by duty personnel as well as unreliable surveys lead to unpaid volume generation, or loss of volume. find rational ways to take money from the investor, causing the reputation to be reduced.

- Control activities have but are not effective in some design content, the control is sometimes loose, leading to the making of estimates not on schedule, not in the right volume compared to technical design drawings. Therefore, the quality of the design and investment cost estimates cannot be guaranteed. The person in authority is sometimes absent-minded or intentionally obstructs control activities.

- Information processing is slow, information is distorted, not in line with reality and market rules. The cost for the design estimate is sometimes inadequate, leading to the lack of reliable information for making and evaluating the design.

- In the process of supervision, the person with the supervisory authority sometimes relaxes, even respects them, leading to the control procedures being overdone, perfunctory, making yes, giving enough.

The cause of the limitations:

Firstly, the basis of design estimation changes, sometimes becomes outdated, causing the estimated design to not reflect the market value of the work product. Specifically, the impacts from scientific and technical progress, such as the improvement of new materials, affect the norm and unit price of materials, machine shift norms, salary scale system, unit price. materials in the province/city, the material quotes are not honest or suitable. This issue affects all contents of internal control for the estimate design.

Second, the staff is inexperienced, lacks bravery, leadership is sometimes superficial, not drastic, focusing too much on efficiency but forgetting about compliance, economy and effectiveness of internal control. People who have the ability to read technical drawings to design estimates are very limited, sometimes "dissect" wrong, do not regularly update the modes, regulations, and norms into the estimation software. This issue affects the control environment and risk assessment process of internal control.

Third, in the context of a strong application economy and achievements of the 4.0 technology revolution, the application of software in estimating design has been quite popular. However, the problem is that the computer problem also significantly affects the estimation work, affecting the supervision and control activities in the computerized environment.

Fourth, the regulations on management of investment costs are often changed, affecting the design of the estimate according to the new regulations. This change sometimes increases/decreased investment costs, affecting activities of controlling, monitoring and processing accounting information.

Fifth, the influence of customers' activities, changes in relevant laws or key personnel that change the nature of the construction unit affects the control and supervision environment. of the authorized person.



### **Some solutions to improve internal control for the cost estimation design of the road bridge construction unit based in Hanoi**

Firstly, if the basis for making the estimate design changes, and the types of outdated norms due to scientific and technical progress affect the unit price for making the estimate, the internal control of the construction unit for the cost estimate design must direct to project quality and business efficiency. That is, the unit/contractor must consider the quality, economy and efficiency of the work to choose the proposed bid/estimate estimate based on the investor's estimate or change by a new estimate.

Secondly, personnel involved in the process of making, appraising, defending and approving the cost estimate design must be continuously trained in both professional and ethical aspects. They must be propagated ideals as well as bravery in the process of doing their jobs. For example, the enthusiasm, hard work to research and collect reliable information about the prices of materials and construction machines on the market in the process of making estimates to ensure the quality and feasibility of the estimated design.

Third, focus on investing in information technology, purchasing modern computers and backup equipment. Especially those who operate, repair computers and update basic information for design software.

Fourth, the contractor's personnel organization must be flexible to changes in the policy mechanism, ie interchangeable in the professionalization posture. The contractor also needs to actively design the controls, monitoring activities and information processing mechanisms of the accounting system to ensure the effective operation of the internal control on the cost estimate design. Relevant agencies need to have normative documents, overcome weaknesses, improve the reliability of cost estimates design, as a fulcrum for effective investment and appropriate budget allocation.

Fifth, contractors pay attention to the principle that transactions with customers must ensure the prestige, progress and quality of products on the basis of economic contracts with insurance to prevent force major risks during the inspection process. monitoring, while improving the control environment for the project/work estimate design.

### **5. Discussion**

Inherent (inherent) limitations of internal control

Establishing and operating a good internal control system can only minimize violations, internal control always has inherent limitations stemming from the following reasons:

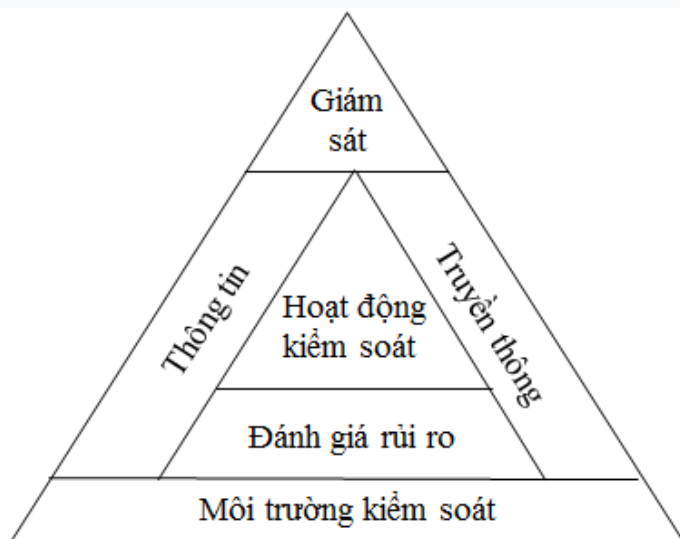
- The usual requirement is that the costs of internal control should not exceed the benefits that the system brings; or the costs of control should not exceed the likelihood of loss or damage.
- Most internal control procedures are usually established for routine and repetitive transactions rather than for occasional transactions;
- Errors caused by people's lack of attention, absent-mindedness when performing functions and tasks or not understanding job requirements;
- The ability of internal control to not detect collusion by members of the Management Board or employees with other people inside or outside the unit;
- The possibility that the person responsible for carrying out internal control procedures abuses his privileges;
- Due to changes in management mechanism and requirements, control procedures are outdated or violated.

Therefore, when the internal control system is strong and effective, control risk is low and the auditors have complete confidence in the entity's internal control during the audit process. can rely on the internal control of the audited enterprise to perform the audit is very effective.

### Components of internal control

According to Vietnam Auditing Standard No. 315 issued under Circular No. 214 /2012/TT - BTC effective from 01/01/2014, internal control covers a wide range, usually includes 5 components: (1) Controlled environment; (2) The entity's risk assessment process; (3) Information systems related to the preparation and presentation of financial statements; (4) Control activities; (5) Supervision of controls.

According to the issued COSO report on internal control, internal control consists of five components: (1) Control environment; (2) Risk assessment; (3) Control activities (4) Information and communication; (5) Supervision.



*Figure 1 - Components of internal control*

### 6. Conclusion

Completing internal control for the cost estimate design is actually completing the policies and procedures for the cost estimate design in order to comply with legal regulations, ensure honesty, and economic effectiveness and efficiency of estimation design activities in particular and design work in general. From there, preventing, detecting and handling errors in the cost estimate design contributes to affirming that it is a reliable and reasonable information for the investment process to achieve the goal.

It can be said that the design of the cost estimate of a project/work is an important and practical document in the investment process. It is the investment cost plan for each specific job, each work item. Planned investment helps to improve the quality of the work and the investor after spending money will achieve the investment goal. As a basis of data in the sales-collection cycle, the cost estimate design for the contractor serves as the basis for approving the sale (decision to participate in the construction bidding). Internal control over the cost estimate design not only ensures the sale of a quality construction product, but also serves as a basis for evaluating the effectiveness of the business process (profit or loss).

More importantly, internal control accurately assesses compliance with legal regulations and determines the cost structure (cost) of construction products. With this in mind, it is impossible not to recognize a guarantee that the investment cost estimate design is a kind of document, a very reliable type of contractor/constructor's operational information. Currently, the Prime Minister has issued Decision No. 2038/QĐ-TTg dated December 18, 2017 approving the project to complete the system of norms and construction prices. On that basis, the Steering Committee of the project to perfect the

construction norm and price system - The Ministry of Construction has issued Decision No. 565/QD-BCDDMG dated May 2, 2018 on Promulgating the implementation plan of the project. judgment. Recently, the Government also issued Decree 68/2019/ND-CP on construction cost management, which is also an important basis for the contractor's internal control to do a good job of controlling this activity, improving the quality of construction work. internal management quality and product quality.

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