

Contract Strategy, Concept, Choices and Methodology

1 Concept of Contract Strategy

Contracts are used to procure people, plant, equipment, materials and services. Contracts are therefore fundamental to the management of almost all engineering projects. The type of contract should be selected only after consideration of:

- ✚ the nature of the parties to the project
- ✚ the project objectives
- ✚ the equitable allocation of duties and responsibilities, and
- ✚ allocation of risk.

‘Contract strategy’ outlines the main components of the process used to determine how the project will be procured.

Contractual Issues

- When is an agreement a contract?
- Is a purchase order a contract?
- What are conditions of contract?
- Why are there different types of contract and various terms of payment, and how do they motivate contractors and others?

‘Contract strategy’ provides some knowledge and ideas for answering these questions. It is an introduction to the relationship between legal means and engineering ends.

2 Construction Business Strategy

The development of construction industries in Nepal is in a continuously growing stage. Presently, there are a large number of Civil Engineering Contractors working in the development field. They have to formulate certain strategies for the success of their business. The followings are the main strategies to be adopted by the large civil engineering contractors of Nepal to make their business successful.

i. Stay in the Market

- Bid for existence in the market
- Bid for maintaining labor force
- Bid for utilizing plants and equipments
- Bid for the sake of subcontractors
- Bid for maintaining suppliers

ii. Maximization of Profit

- Bidding for profit
- Bidding for the extension of the firm
- Bidding for improved social status
- Lower OH cost
- Increase efficiency

- Reduce material wastage
- Reduce purchase cost
- First hand quality
- Use of construction garbage

iii. Keep Name/Fame/Reputation

- Attainment of reputation
- Gain the trust of the clients
- To be recognized by the subcontractors
- To gain the faith of suppliers
- To uplift morale
- To gain the faith and trust of employees and workers
- To have good name and fame in the market
- To increase goodwill of the firm (Intangible Assets).

For construction industries to exist successfully in the market, their policies should be such that they can survive in the competitive market. For that they have to undertake projects even at low profit margin for the sake of maintaining their workers, subcontractors and plants and equipments.

When they get succeed in staying in the market, then their strategies should be converted to profit maximization, which is necessary as the construction industries are profit-oriented, professional and commercial organizations.

After getting sufficient profit, they should divert their strategies towards earning the goodwill and reputation of the firm. This strategic principle helps them to be established in the market.

From above, we see that the **Maslow's Principle of Hierarchical needs** (Unsatisfied needs motivates organizations to perform better) can be applied in the context of business strategies of contractors.

3 Concept of Construction Business development and Growth

Construction is a very general term meaning the art and science to form material or immaterial objects, systems or organizations. Construction is used as a verb: the act of building, and a noun: how a building was built, the nature of its structure. Construction is often used as a synonym with *building* in its verb tense

Construction business is one of those businesses that require you to do a decent amount of research and background study before making the first move. As part of the construction business, you shall get contracts, and you will have to use your infrastructure and manpower to complete the project. This requires huge upfront investment. Therefore, you must be ready to make that investment. Besides, there are a number of other factors that require consideration in the startup phase of a construction business.

There may be many obstacles holding construction business back from growing or profiting in the market. These obstacles may be:

- ✚ Too many cheap competitors
- ✚ Less jobs to bid
- ✚ Low profit margins
- ✚ Jobs bidding below your costs etc.

Goal for Growth

1 Continuous Improvement

- ✚ Capacity of the firm
- ✚ Credibility of the firm
- ✚ Technical capabilities
- ✚ Managerial capabilities
- ✚ Quality of the works

2 Research and development

- ✚ Research capabilities of the firm
- ✚ Track record of new product development
- ✚ Laboratories and testing facilities
- ✚ Coordination between research and operations

3 Corporate Resources and Personnel

- ✚ Corporate image
- ✚ Clout (power and influence) with governmental and regulatory agencies
- ✚ Dynamism of top management
- ✚ Competence and commitment of employees
- ✚ State of industrial relations (relations between workers and employees or management)

4 Finance and Accounting

- ✚ Financial leverage (debt capital/ordinary share) and borrowing capacity
- ✚ Cost of capital
- ✚ Tax situation
- ✚ Relations with shareholders and creditors
- ✚ Accounting and control system
- ✚ Cash flows and liquidity

4. Project slicing and Packaging

Procurement activities need to be organized to assure quality products and services at the same time benefiting from economies of scale by ensuring projects is attractive to the prospective suppliers and contractors. Project slicing and packaging is a procedure whereby a large homogeneous project is sliced into smaller similar contracts, which are bid simultaneously so as to attract the interest of both small and large firms; firms offer bids on individual contracts (slices) or on a group of similar contracts (packages), and award is made to the combination of bids offering the lowest cost to the Employer.

There is a fine line between slicing and packaging of tenders and tender splitting. Slicing and packaging is breaking project procurement into smaller components for various technical and economic reasons; whereas tender splitting is breaking a project into smaller components for reasons of avoiding procurement practices associated with thresholds or tender value limits.

As an example, the 500km Highway improvement project can be sliced and packaged into five 100km stretches that can be awarded to different providers on whatever model of private-public partnership or outsourcing that the government may adopt. The major reasons being the desire to manage project risks of quality and schedules by involving more players and/or motivation of construction industry growth.

Awarding the 600km stretch to one contractor could be construed as creation of monopolies in the construction industry given the current state of the construction industry. When the same project is split into smaller components of informal tender lots of \$0.1 million to avoid public tendering would be a clear tender splitting case. Such a move would inevitably increase costs due to the duplication of avoidable multi-preliminary and general costs associated with construction projects.

On the other hand, the size of the project determines the quality of contractors and service providers that an organization is capable of attracting. As the projects increase in size, the value increases likewise and the more the interest of the bigger players. Bigger players are generally experienced and produce quality products and services. There is reasonable competition in bigger projects as opposed to smaller ones giving some economic and technical benefit to the buying organization.

It must be known that there is value in dealing directly with specialists when a project has been sliced and packaged appropriately. Construction projects can be split into civil works for roads and sewer, electricity reticulation and a separate project for the construction of the houses.

It is possible to appoint one contractor on a turnkey basis to deliver the construction project but it is at a cost. The main contractor indirectly includes a mark-up or management fees for the subcontractor portion of the costs. The public and private sector face the same challenges when dealing with procurement.

The motivation in the public sector is complying with procurement rules at the same time embracing the principle of value for money and equal opportunities. Some countries have incorporated provisions in their law to manage tender splitting and guidelines for slicing and packaging projects.

The motivation of the same in private sector is for embracing competitiveness and profitability of the businesses. There is, therefore, need to ensure that there is a reasonable connection between

the measure adopted and the objective when projects are being sliced and packaged given the implications discussed above.

5 Preparing contract packages, setting up Contracts, Engaging the Contractors

The number and sequence of contracts can vary greatly from project to project. Often a consultant or design contractor is employed just for the feasibility stage of a proposed project and a project management consultants to advise on risks and contract strategy. For implementation it may be appropriate for a promoter to employ a contractor for only a part of a project and one or more others for the remainder. Or a project might be so large that more than one contractor is appropriate to share the risks. For the equipment required for a new factory one contractor might be employed to install equipment supplied by others.

A series of contractors can be employed in turn for construction work; for instance one for demolition work, another for new foundations, the superstructure and building work, and others for designing and supplying equipment, installing it, completing systems and services, testing and commissioning for replacing part of a factory, each under different terms of contract. For a building project, different contractors could be employed separately for the structural, finishing and service work, instead of one main contractor; these specialist tasks could be sub let or a jv or consortium approach could be adopted.

Most project managers make use of model or standard forms of contract. These are conditions of contract that have been prepared for general use in a particular industrial sector by an appropriate or representative authority. For example in civil engineering sector FIDIC conditions of contract are in use. The advantage of adopting a tried and tested form of contract are seen to be wide acceptability, consistency of use, familiarity in use and legal case law precedents.

(Students are advised to refer different types of conditions of Contract and methods of preparation of bid documents.)

Setting up Contracts

(Students are advised to refer Contract formation process and bidding process in chapter Procurement of Works, Goods and Services)

Engaging Contractors

The promoter needs to consider carefully the motive in employing a contractor. Promoters generally employ contractors for one or more of the following reasons:

- *To utilize the skills and expertise of the contractor and his personnel;*
- *To have the benefit of contractors' special resources such as plants, equipments and materials;*
- *To get work started quicker than would be possible by recruiting and training direct employees;*
- *To get contractors to take some of the cost risks of a project;*

- *To get contractors to obtain the financial resources for a project, and perhaps also for operating it;*
- *To be free as promoters to concentrate on the objectives of projects, their subsequent use, and other interests;*
- *For the development of construction industry.*

One of these reasons must have priority in deciding to employ a contractor, and the others given lesser or no importance.

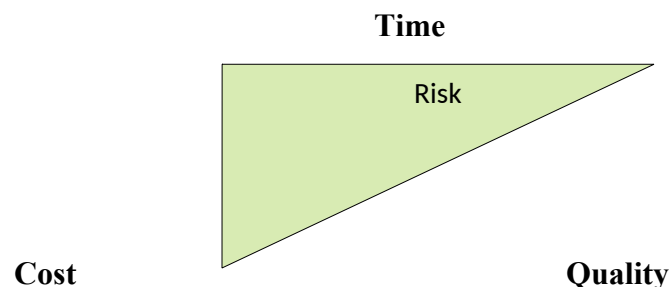
(Students are advised to refer 'Contract management Chapter also.)

5.1 Choices and Methodology

The development of a contract strategy for any project should be based on a thorough assessment of the choices available for the implementation and management of design and construction. The main topics for consideration can be sub divided as follows:

- *Project objective*
- *The organizational system for design and implementation*
- *Risk allocation*
- *The terms of payment*
- *The conditions of contract*
- *The tendering procedures*

5.1.1 Project Objective



The normal project objectives are concerned with cost, time and quality. These are interrelated and may often conflict.

- minimum time, timely completion, early start to construction;
- minimum cost, fixed budget;
- high or appropriate quality.

Other objectives may be

- Management and control of risk

- Training of the promoter's staff
- Retention of the construction plant by the promoter
- Promoter's involvement in project and construction management
- Co-operation of construction and implementation contractors in design
- Substitution of labor based construction
- Establishment of a maintenance force

5.1.2 Organizational Choices

- Points to be considered
 - the ability to meet project objectives
 - the resources and services offered
 - the resources and expertise that the promoter is able to commit to the project
 - the balance between management, design and construction
- The common organization system
 - Package deal (Turn Key)
 - BOOT
 - Separation of design and implementation (Conventional type)
 - Management Contracting
 - Direct labor

5.1.3 Risk Allocation

A prime function of the contract is to allocate risk. Contractors would have to cover themselves by high prices in excess of the most probable direct and indirect costs that they might incur. Governments and other promoters in countries with less engineering expertise at times ask bidders to carry more risk, but the trend in industrialized countries has been that a risk should be the responsibility of whichever party is best able to manage it to suit the objectives of a project.

5.1.4 Terms of Payment

- Price- based (lump sum, unit rate)
- Cost- based (Reimbursable and target cost)

5.1.5 The conditions of Contract

There are a variety of model forms of standard conditions of contract. Project managers can use private, in-house contracts or commission new contracts for a specified project. There are

drawbacks with this approach: primarily that the contract will not have been ‘tested at law’ and the precise meaning and interpretation of any clause in new contract could, potentially, be the source of lengthy litigation. It is more likely that the project manager would select the conditions of contract that most closely match the requirements and then modify clauses or add additional ‘special’ clauses as necessary.

5.1.6 Tendering Procedure

- Competitive
- Two Stages (Consultant/Contractor)
- Negotiated

The factors affecting contract strategy are as grouped below:

- **Primary** : Time, Cost and quality
- **Secondary** : Promoter’s involvement, Cooperation, Capital, Actual cost
- **Tertiary** : Technology, Market, Industrial relations