Bid Evaluation

in Import Procurement

(Guide No. 9)

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PURCHASING. **Textbook on evaluation of bids and offers from foreign suppliers (aimed at public sector or other importing organizations in developing countries) - covers procurement terminology and methods; pre-evaluation activities, invitation to bid, preparation of bid documents; establishing criteria; bid processing; bid evaluation; price, technical, time and commercial analysis; annexes include bid submission forms and checklist of important points.**

English, French, Spanish, Portuguese (Free to developing countries)

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Chapter 1

INTRODUCTION

1.1 Background

Traditionally, a government's role has been to provide civil, civic and defence services for its people. Over time, this role has generally widened to include other areas of economic activity - urban and inter-state transportation, power generation and distribution, post and telecommunications, hospital and health services, educational institutions and so on. In developing countries, government responsibilities have extended even further to include the ownership and operation of many enterprises in the agricultural, mineral and industrial sectors. Examples would be state farming, coal mining, steel, chemical fertilisers, petroleum, commercial vehicles and passenger cars [1].

1.2 Institutional structure of public sector and import procurement

As government responsibilities have shifted from being largely administrative to being a mix of administrative and commercial activities, the institutional structure underlying the function of government has also been transformed. These days, the institutional structure of the public sector in a developing country would typically encompass one or more of the following:

- Central (federal), government
- State government(s)
- Municipalities/local bodies
- Departmental commercial enterprises

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1. **In many industrialised countries, the public sector has hitherto had a fairly wide role, which included some or all of these activities. The trend in recent years, however, has been to progressively restrict this to government's traditional role, with modifications as required to meet the present day techno-economic environment.**

- Public utilities
- Public enterprises (industrial)
- State trading organizations/commodity boards

To meet the needs of these expanded activities, governments have been more widely involved in the procurement of goods and services from domestic and international sources. This more diversified structure of the public sector has also brought about changes in the environment in which import operations are carried out. This applies particularly to methods of procurement. It is now more usual to find the procurement method of domestic and international competitive bidding is mandatory. Procedures for procurement are laid down and codified. These procedures are drafted in a way that ensures that all potential suppliers have an equal opportunity to submit their offers.

Procurement officials are expected to be fair in evaluating offers and to be seen to be fair. Fairly rigid standards of accountability are maintained to ensure that set procedures have been fully complied with. Under such conditions, it is not surprising that decision-making tends to be slow. Market conditions for some products change rapidly; a slow or cumbersome decision-making process cannot take advantage of these changes.

Although the situation may differ between countries, procurement procedures in other institutions are often more flexible and the procurement methods used more varied [1]. In fact the inflexibility of methods and procedures used by government procurement agencies in some countries has in the past been used as the rationale for creating bodies like state trading organizations. It was argued that prompt decision-making and quick response to bids and offers (solicited or unsolicited) were essential to efficient commercial operations. This could only be achieved if operators had the necessary freedom of action and were not obliged to follow a set procedure all the time.

1.3 Objectives of this Guide

1. Some unofficial estimates suggest that approximately 78% of supplies of public sector in the EEC group of countries are presently being procured using procurement methods other than that of international competitive bidding. It is, however, expected that when the EEC code on public procurement comes into force from 1st January 1993, the position will change. The present GATT code on Government Procurement has been found to be very limited in scope. The subject is now being debated as part of the Uruguay Round of talks. It should, however, be noted that, in both these forums, this subject is being discussed in the context of restrictive trade practices and not in the context of relative efficiency of different procurement methods.

Whatever the method of procurement, suppliers will submit bids and offers before the purchase contract is made. The bids may be in response to a general invitation to tender or to a special purchase enquiry by the buyer. Sometimes the supplier may make an offer without a buyer asking for it. Once he has received a bid, the importer must evaluate it to see whether he is getting the product he wants on the best possible terms.

This practical guide outlines the approach to evaluation of bids or offers for import supplies for use by public sector and other importing organizations and enterprises in developing countries. Two points need to be noted about its approach and contents:

(1) Although the title of this Guide is *Bid Evaluation*, some of the techniques of evaluation outlined apply to all methods of procurement. Procedural aspects of government procurement are touched upon but not discussed in rigorous detail. This is because the nature of a "public sector" may itself differ and so may the degree of flexibility in its purchasing procedures. For this reason, greater emphasis is placed on the analytical aspects of bid evaluation than on the procedural ones.

(2) Goods imported by these organizations may be of all kinds. They may include consumer goods, industrial and agricultural inputs, transport equipment, general and special purpose machinery, spare parts and components and/or complete plants. Within these broad classes, goods vary in their degree of product standardisation, complexity of technical designs, engineering characteristics, operating features and so on. The nature and structure of the international markets in which these are traded may also differ widely.

Given this diversity in the technical and/or commercial features of the products being imported by developing countries it is difficult to provide a framework of bid evaluation which would be applicable to all. The Guide outlines the general principles designed to help in the understanding of the analytical process which underlies bid evaluation. It does, however, give ample cover to all the different aspects of the process for determining the best bid for a large number of products, such as basic commodities, relatively simple manufactures, general purpose standard machinery and equipment.

One category of imports, project imports, has many dimensions. Project imports often involve procurement of consultancy services, technology, engineering designs, civil construction, specially fabricated equipment (with or without installation and commissioning), provisioning of spare parts, after-sales service and maintenance, training of operators etc. Along with project imports like these often come process know-how and/or specialist equipment within a given technology. They involve special contractual provisions and guarantees on the operating life, the durability of supplied equipment and on maintenance costs. Often because of the high costs of investment, the supply of equipment and services is linked to special financing arrangements - supplier's credits, commercial loans, concessional financing from development aid organizations, for instance. Apart from price, these considerations will be important factors in evaluating bids. The impact of repayments on cash flow during different phases of the project will be particularly significant.

As some of these issues are relevant to import procurement of standard equipment (e.g., a multi-purpose lathe, a power generator or a fleet of passenger buses for city transport), the techniques of evaluation covered in this Guide apply to project imports as much as to other categories of goods. However, the Guide does not go into the detail and depth of analysis required for identifying the best evaluated offer on project imports. Its aim is to treat the subject of bid evaluation fairly comprehensively without getting lost in too many details.

Chapter 2

PROCUREMENT TERMINOLOGY

AND METHODS

This chapter attempts to clarify the term *bid* as it relates to the different procurement methods commonly used by various importing organizations in developing countries and the differing procedures they may follow. It then reviews these methods and procedures as they are generally applied rather than how they may be applied in any single procedural framework. In this way we establish the analytical approach to bid evaluation adopted in this Guide.

2.1 Definition

Terms like *bids, tenders*, and *offers* are often used interchangeably and also in different contexts. There is no standard definition for these. For example, the International Federation of Purchasing defines a bid as: "*A quotation, as a price, whether for payment or acceptance not necessarily an offer."*

One glossary defines a bid as: "*The price or terms at which a person is willing to buy. It may be made in response to a seller's offer in which case it will be at a lower price than the offer or will demand more favourable terms. The seller may accept the bid, make a counter offer or withdraw. Once a bid has been made against an offer, the offer ceases to be valid."* [1]

The same glossary defines a tender as: "*An offer to supply goods or services, stating the price at which the offer is made, in response to an invitation to submit such an offer in competition with others."* [2]

Sometimes a tender is described as: "*An offer or a quotation for large contracts and public sector works."*

Against this, an offer is defined as: "*A declaration by one firm to another of willingness to sell*

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1. *A Dictionary of Economics and Commerce*, edited by S.E. Stiegler and Thomas Glyn, Pan Books Ltd., 1976, p.32.

2. Op. cit. p. 394.

specified goods at a specified price on specified terms." [1]

The International Federation of Purchasing defines an offer as: "*An expression of readiness to enter into a contract."*

Another distinction is sometimes made between a bid and a tender. According to one reviewer:

"Several countries' legislation ..... draws a line of distinction between the method of signing contracts resulting from bidding and tendering. As distinct from bidding, at which all offers are examined at an open sitting and where the temporary adjudication of deliveries of award of a contract to a tenderer offering the lowest price takes place, the tenders are examined in camera, i.e., without the presence of tenderers." [2]

For the purpose of this guide bids *will refer to all offers submitted to an importer by foreign suppliers (or their authorised agents), in response either to an express invitation to bid/tender or to one without such an invitation, for supplies of specified goods indicating the price and other terms of sale.*

2.2 Bid origin

A bid generally originates in response to an importer's invitation to potential suppliers to submit their offers for the supply of the goods he needs. Sometimes a bid may originate without an invitation to bid - a buyer receives an unsolicited offer. Public procurement codes and procedures normally do not provide for acceptance and evaluation of such offers. Only if the bid is received in response to a specific invitation of the buyer and in accordance with the procedure it indicates will it normally be regarded as a bid and accepted for evaluation along with others received in the same manner. In some countries, state trading organizations and parastatals reportedly operate in a less formal or rigid framework and accept unsolicited offers for evaluation. The buyer should always familiarise himself fully with his organization's policy about the acceptance of unsolicited bids and act accordingly.

A buyer can make his intention to buy a specified product known to potential suppliers by a

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1. Op cit. p. 278.

2. Vladimir, Gribanov: "Legal Side of Bidding and Tendering in Foreign Commercial Practice", in *Legal Aspects in Foreign Trade* (monthly journal of the USSR Ministry of Foreign Economic Relations). No. 8, 1983, pps. 43-51.

number of methods. Often public procurement manuals describe in detail the method or methods which such organizations have to use to ensure that the invitation to tender gets due publicity or reaches all potential suppliers. [1] The specific approach to be adopted to achieve this objective depends on the procurement method which the buyer considers to be appropriate for purchase of the goods in question.

It is important, in any case, for the buyer to know the different procurement methods used for procuring imported goods and the advantages and disadvantages of each.

(1) Procurement methods and bids

There are several methods which procurement organizations can use to obtain their supplies. Public procurement organizations use tendering as the preferred method.

There are three variants of tendering:

- Global tendering
- Selective (limited) tendering
- Single tendering

Global tendering

Public procurement agencies generally adopt the method of global tendering to invite bids from all potential suppliers to meet their requirements for a specified product. Government regulations on procurement normally require this method, particularly for standardised products with a large number of potential suppliers. The merits of global tendering are that:

- It offers equal opportunity to all potential suppliers to submit their offers.

- This encourages maximum participation, competition and hence better terms.

- It is free from favouritism and eliminates (or reduces) the scope for procurement officers to indulge in unfair practices.

The fact that global tendering theoretically cuts out any opportunity for favouritism and corruption makes it popular with everyone concerned with public procurement, where transparency, fairness and accountability are of particular importance.

Nevertheless, global tendering also has some disadvantages.

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1. See Chapter 2, page 11, of this Guide for further details on this subject.

- It is a time-consuming process.

- It is costly. A large number of offers (including frivolous ones) have to be processed and evaluated.

- It assumes that all suppliers are reliable.

Selective tendering

To overcome these shortcomings, public procurement regulations allow a use of a variant of the global tendering system. This is referred to as restricted *or* selective *tender. In this method the invitation to submit tenders is sent to a selected number of potential suppliers. There are two versions of the selective tendering system:*

- *with pre-qualifications,*
- *without pre-qualifications.*

With pre-qualifications

This method relies on developing a list of suppliers through a pre- qualification procedure. A procurement agency advertises that it wishes to inform all potential suppliers that it intends to develop a standing list of suppliers, through a pre-qualification procedure, for a specified product (or group of products). Potential suppliers interested in being registered with that procurement organization are required to fill in a form (a questionnaire) prescribed by it for the purpose. The form is designed to elicit information that would enable the buying organization to evaluate the prospective firm's capability to supply the specified product(s) and also other business credentials. The suppliers are asked to submit any documents that would support their claim and help the buying organization to assess their competence.

Only applicants who qualify under the system are registered or listed as eligible to bid later for the specified product. Whenever the buyer enters the market for the given product, invitations to bid are sent only to those on the list for that particular product. The list is usually kept current for a specified number of years. After that it is updated more or less regularly.

Without pre-qualifications

A procurement agency may not think it worthwhile investing the time and effort needed to develop a list of pre-qualified suppliers for all the products it buys. For relatively simple everyday items, it may be an unnecessary expense. At the same time, the agency may wish to avoid the global tendering system because of its disadvantages referred to above. It may choose to restrict its invitation to tender to selected suppliers only, by drawing up a list in one or more of the following ways:

- *It may conduct its own market research to compile a list of potential suppliers. Information sources like directories, chambers of commerce, industry associations, and specialised commercial intelligence agencies will help in this research.*

- *It may refer to its own records on supplier conformance.*

- *It may contact other buyers of the same or similar products to learn of their experience.*

(2) Negotiated purchasing - single tendering method

A third method of procurement is the one known as single tendering. *It is basically the same as purchasing through negotiations. Although not usually recommended for public procurement, single tendering may sometimes be the only course open. This may be for technical reasons or because the purchase is too small to justify the cost and effort of going through global tendering procedures. Listed below are some situations in which this method is used.*

- *There is only one source of supply (e.g., proprietary item).*

- *There is evidence of collusive tendering.*

- *The quantity and value of purchase is small.*

- *Supplies are needed urgently and delay would cause difficulties.*

- *Spares are available only from the supplier of the equipment.*

- *Purchases must be acquired in secrecy.*

Negotiated purchase may also be the most useful method where the buyer wants to know from prospective suppliers what different technology options are open before deciding which best suits his needs.
In such cases, "when evaluating quotations, the buyer should consider the possibility of conducting negotiations with the vendors. The objective is to reach an understanding and an agreement on all terms and conditions of the requirement, including the specifications and price to be paid for the item or the cost of the work to be done ." [1]

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1. Page, Harry Robert, Public Purchasing and Materials Management, Lexington Books, D.C. Heath and Company, Lexington, 1980, pps. 233-234.

(3) The hybrid method

In some situations, a public procurement agency may prefer to combine selective tendering with negotiations. This hybrid method is known as the *two-part bid system*. It has two forms: a two-part single bid, or two-part two bids.

Two-part single bid

Here the buyer invites selected suppliers to submit bids in two parts. In the first part, suppliers present the technical features of the product which they claim will suit the buyer's needs. In the second part, suppliers set out details of price and other commercial terms. The bids are submitted in two separate envelopes but under one cover on the same closing day.

The buyer opens and examines the technical part of the bids first. After discussions with the bidders, he is able to firm up his technical specifications, which he conveys to all the participating bidders. In the light of any changes in his specifications for technical capability or performance, the buyer may at this stage give suppliers the opportunity to revise their previously submitted prices. Only then are the price bids opened and evaluated to see which is the most advantageous in terms of price and other terms and conditions.

The two-part single bid is more appropriate where the buyer has a good idea of the technical and other characteristics of the product (its technical and performance specifications), but may not be fully aware of the latest design and other developments which may have recently taken place in the product to be acquired. In such cases, discussions with bidders will be by way of an update on design and other technical features.

Two-part two bids

This method is a variant of the previous one. It can be referred to as a two-stage, two-part bid system. Instead of being asked to submit the technical and the price bid at the same time, the selected suppliers are invited to submit initially the technical bids only.

The buyer discusses the technical bids (or, more appropriately the technical proposals) with the bidders individually. He aims to gain a reasonable idea of the technical features of the product and how it will meet his need. After this discussion, the buyer should then be able to:

- Describe the product (and not only the need).

- Define the manufacturing process, design, technical performance and other relevant specifications of the product.

The buyer then invites the bidders who had earlier submitted technical bids to submit their price bids for the product as now described and specified, allowing them sufficient time to work out their price offers. The bid submission, their opening and evaluation then follow the usual procedures.

This approach is justified when the buyer is aware of the need which is to be met but does not have a clear idea of the technical features of the product or of any recent developments in the manufacturing process, design, technical, performance and other specifications. He must depend on the suppliers for this information in order to define the product which will best meet his need.

It may happen that only one bidder submits a price bid - the bidder whose original technical bid was closest to the one that emerged as a result of the pre-price bid phase of discussions. In that case, the buyer should ask the bidder to submit his detailed cost calculations and then decide whether the price quoted is reasonable.

Chapter 3

PRE-EVALUATION ACTIVITIES

3.1 Importance and nature

Although bid evaluation is the subject of this guide, it will be helpful to describe the sequence and inter-relationship of activities and events which lead up to the submission of bids.

Chapter 2 described how a bid usually results from a buyer's invitation to supply a product that he requires. If this invitation is prepared carefully, it will help to make the evaluation of bids easier once they are received. A precise invitation will also ultimately help the buyer to procure the product he wants at the most advantageous terms.

The buyer needs to pay careful attention to two elements of his invitation to bid - the bidding procedure and the technical content.

The procedural element concerns:

- **The formalities connected with the way the invitation is communicated to potential suppliers.**
- **The instructions regulating how these bids will be received and processed.**

The technical content must communicate precisely:

- **The buyer's needs.**
- **The terms and conditions which will regulate the purchase contract.**

It is important that the importer describes the product he wants to buy, complete with its specifications, so that all well-meaning potential suppliers will understand what his needs are and submit a responsive bid.

Pre-bid procedures

The importance of the procedural element in pre-bid activities will vary on the one hand with the institutional character of the buying organization, and on the other with the nature of the product to be purchased.

In most countries, government procurement is generally regulated by statutes or executive orders. Usually purchase procedures are codified in procurement manuals. These have to be followed in inviting and evaluating bids and in awarding contracts in all cases except those which are specifically exempted by a designated authority as provided for in the procurement regulations. In some developing countries, many departmental commercial undertakings, public enterprises and state trading organizations also have their own manuals, which serve as guides on the procedures to be followed. These are modelled on the same lines as for government procurement. How mandatory these are in practice and how rigorously they are followed will vary from one public procurement organization to another - within a country and across countries.

How flexible procedures are is also largely determined by the nature of the product to be procured. In general, the procedural requirements are less flexible in state enterprises which handle imports of standardised products on a repetitive basis. Procedures tend to be more flexible for the purchase of technologically complex equipment or projects. Here it may be essential to discuss the technical design and other parameters with prospective suppliers before the contract is awarded. This will firm up the buyer's perception of the need. There may be alternative technically feasible, appropriate or economical ways in which this can be met, which the buyer may not have been fully aware of. Re-tendering for price bids or negotiating prices may be inevitable.

For evaluating bids, the procedural elements are less important than the analytical ones. However, since some of the procedural aspects have a bearing on the analytical questions, these are touched upon in the following sections. Procurement officials need to recognise and adhere to procedures as these, often codified in manuals, are the framework within which they have to operate.

Buying organizations should be aware that they will always be purchasing in a dynamic environment of national and international change. Political, social, economic, technological and other developments will all affect the commercial environment in which they make their purchasing decisions. A manual of orders, instructions and procedures prepared in the context of conditions prevailing at the time of writing will not generally remain valid for all times. It would be a good thing for public procurement organizations to have a policy of reviewing the manual periodically, to ensure that it is in line with current requirements.

3.2 Invitation to bid

One of the merits of *global tendering* is that it ensures competition, and therefore better procurement prices. This is possible, however, only if all potential suppliers come to know that the buyer is in the market for the product which they are in a position to offer. An invitation to bid, or tender notice, is

the means by which a buyer seeks to inform all potential suppliers of his intention to buy a specified product. If it is to achieve its objective, a tender notice should get the widest possible publicity. Although buyers from public procurement organizations may be bound by mandatory provisions to follow a specified method of tendering, informing all potential suppliers can usually be done in one or more of these ways:

- By inserting a paid (or unpaid) advertisement in a national newspaper, a trade journal and/or in an international financial newspaper/journal with a wide circulation.

- By posting a procurement notice on a bulletin board and/or at a specified public place usually used or assigned for this or similar purposes.

- By using the buyer's own mailing list of bidders, compiled from his past purchase records and/or through his own supply market research.

- By using a mailing list of bidders prepared by the buyer in the process of pre-qualifying eligible suppliers.

- By using registration records, if a system of prior registration of suppliers (usually for rate/running contracts) is operative.

Inserting a paid or unpaid advertisement in a local paper alone will not usually ensure a wide participation when purchases are to be made from the international market. Experience suggests that only foreign suppliers with agents in the buyer's country will come to know about his announced intention to buy. This results in the same four or five firms, through their local agents, submitting bids for all types of goods. This restricts competition, although the intention is otherwise. To gain maximum participation, it is better to choose an advertising medium which will get more global coverage. Even if the buyer is obliged to advertise tenders through newspapers, he should also have the option of mailing tenders directly to the most promising suppliers. It will increase competition. To the same end, the buyer should take advantage of any foreign representatives present in his country, as well as his own nation's representatives in other countries.

3.3 Preparation of bid documents

Before issuing a tender notice or an invitation to bid, a buyer must prepare the bid documents. The purpose of a tender notice is to inform potential suppliers of the buyer's intention to buy a product. This is usually described in generic terms, plus a few more details about the quantity required or the performance expected. Suppliers will need more information than this if they are to make responsive bids.

Bid documents are designed to give bidders sufficient details for them to prepare their bids and submit them within the prescribed time limit. The bid documents may be relatively simple or complex. The documentation may consist of a few pages or run into hundreds. The content will depend on the nature of the product and its technical sophistication. In general, bid documents should include some or all of the following.

- **A copy of a tender notice or an invitation to bid.**

- **A product or project description (a project should include a synopsis).**

- **Specifications (where necessary, technical parameters, designs, engineering drawings, performance standards or ratings, operating features etc.), packaging required, tests to be carried out for quality conformance and so on.**
- **Bid proposal forms (or sheets where necessary).**
- **Special terms and conditions of contract.**
- **General terms and conditions of contract.**
- **Bid bond format (if such a bond is desired).**
- **Instructions to bidders (in the case of formal bidding, spelling out how, when, where and in what form bids must be submitted).**
- **The criteria to be used for evaluating bids.**

The number of documents the buyer should plan to prepare, and particularly their content, will vary from one procurement package to another. The amount of effort and care required to prepare these documents will also differ according to the nature of the product.

The task is relatively easy when the buyer is importing a standard product. It is even simpler if the product is being purchased on a repetitive basis. For standardised products, it is not difficult to describe the product, its specifications and packaging requirements and to lay down the general terms and conditions of contract.

However, for non-repetitive or less frequently purchased equipment with non-standardised technical specifications involving customised designs, preparing the bidding documents is a complex matter.

When an industrial project is to be imported, the task is even more complex. Compatible work packages must be prepared and their scope defined. Special terms and conditions must be formulated for each package, taking into account any special features.

The buyer will have to design and draft carefully all the elements and components of bid documentation. He must pay particular attention to:

- **Product description**
- **Specifications**
- **The bid proposal form**
- **Special terms and conditions of contract**
- **Instructions to bidders**

(1) Product description

Product description [1] is the name by which a product is commonly or commercially known. Describing a product by its common name poses no problem when its name conveys the need which the product is expected to meet. However, this is not always the case - even when the product concerned is a relatively simple one. For example, a purchase enquiry for a "machine tool" will not produce offers for a special-purpose machine tool for automatically polishing aluminium pistons on their sides, tops and slanted edges. A product description should be more precise, stating, in addition to its generic name, the specific need it is to meet or the function it is expected to perform. This will help suppliers understand more exactly what the buyer wants. The buyer can then hope to receive more responsive bids than he would otherwise.

(2) Specifications

Even when details are given of the need it is meant to meet, describing a product by its common or commercial name is rarely sufficient to define the item fully. A stated need can often be met by very close substitutes having the same generic name. Even a product like wheat has at least six different grades or varieties (according to U.S Grain Standards). Only when a product is defined in terms of all its features and characteristics which enable it to satisfy the desired need can potential suppliers know precisely what specific product the buyer is looking for.

The *specifications* of a product refer to all those features and characteristics which it should have to meet the special and specific needs of the buyer. In order that he receives responsive bids, the buyer should make known the complete specifications of the required product to potential suppliers. Besides its physical, chemical and technical properties, a full description of the specifications of a product should include the test methods, the apparatus and instruments which the buyer may use to evaluate the quality of the supplied product.

The specifications of a product can usually be spelled out by reference to any one or more of the following:

- Brand name or trade mark
- Market grade (for primary commodities and products)
- Manufacturers' standards
- Standard: national, other country's or international
- Technical specifications:
  - Physical, chemical and/or mechanical characteristics

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1. **See also International Trade Centre UNCTAD/GATT: Guide No.7*, Supplier Quality Conformance in Import Procurement*, Geneva, 1990, p.5.**

- Material specification of inputs
- Method/process of manufacture
- Design features
- Performance requirements
- Operating features
- Test methods and instruments to be used for quality conformance evaluation

- Engineering drawings, dimension sheets
- Samples

For a complete product definition, a buyer may have to combine these different ways of setting specifications. The exact combination he uses will depend on the type of product to be imported. For a complex integrated project involving different types of imported materials and equipment, several combinations may have to be used. Each of these must be suited to describing a product adequately enough for suppliers to perceive precisely what is wanted. This will also help later, at the time of delivery, when the quality of the supplied product will be verified.

The buyer should remember that product specification includes a description of the methods of shop and site testing that he may employ to ascertain that the product conforms to the quality standards implied by the specifications stated in his invitation to bid.

(3) Bid proposal form

A bid proposal or submission form is meant to provide a format according to which prospective bidders submit their price offer and other information which has a bearing on it. A uniform format facilitates comparison of different offers at the time of bid opening.

No single standardised format exists which will suffice in all cases. The specific structure of the format will depend on the nature of the product being procured. In the simplest cases, such as standardised products, the format may be designed to obtain information not only on prices, but also on quantities and delivery schedules if bidders are allowed some latitude for this. [See Format I, page 16]

For more complex products, like machinery, the format may also have to provide for other components of the procurement package. These might include a price break-down of spares, their guaranteed life, price adjustment factors and bases, proposed work completion schedules and so on. In Annex 1, a sample bid proposal form for lifts, for use in mine shafts, illustrates the requirements for such products.

(4) Terms and conditions of contract

The terms and conditions of a contract define the rights and obligations of the buyer and the seller concerning the quality and quantity of the goods to be supplied, including:

- Packing and marking requirements
- In-plant, in-process, pre-shipment and/or post-shipment inspection
- Delivery and payment terms
- Guarantees
- Recourse in the event of non-performance of the contract
- Procedure for settling claims and disputes

For standard products, importing organizations should draw up a set of standard terms and conditions. These should be suitably adapted to meet the requirements of a particular purchase. [1]

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1. 10. See Vukmir, B, "General Terms and Conditions - An Important Element in Foreign Trade Transactions" in *International Trade FORUM*, International Trade Centre

(continued...)

For complex projects, involving the supply of plant and equipment, such standardised terms and conditions are not normally adequate. Because the procurement process is so complex in such cases, the transaction is usually completed over a long period of time. Consequently, the duties and obligations of the buyer and the seller pertain to a time-scale different to one used for the purchase of goods.

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1. (...continued)
(UNCTAD/GATT), October-December, 1984, Geneva, pps 24-30.

The terms and conditions of contract must reflect such peculiarities and provide for these. For example, in the case of project imports, it is not uncommon to link payments in some way to progress in implementation. The payment clause in the contract may therefore have to provide for advance payments, instalments, and/or payments according to progress. Alternatively, the seller may have agreed to offer supplies on credit terms. The clause in the contract on payment terms will have to reflect the agreement on this precisely and unambiguously. This will reduce the scope for misinterpretations and disputes later. For these and other reasons, a buyer will often have to draft contract-specific terms and general conditions each time he is in the international market for such projects.

Some international organizations and industrial associations have designed and published sets of standard terms and conditions for purchase or sale of industrial equipment for construction contracts, for the purchase of technology and for consultancy services etc. If requirements are specific most of the time, the buyer will have to develop and use his own terms and conditions. [1] He should, however, recognise that drafting general and special terms of contract for complex projects is itself a complex job. For this, the contract terms and conditions developed by international institutions and organizations offer a set of useful models to draw on. Besides providing guidelines for drafting contract clauses equitable to both buyer and seller, these provide a checklist against which the buyer can compare his own wording of the clauses and verify the contents of the contract for completeness. [2]

(5) Instructions to bidders

The purpose of bid instructions is to provide prospective bidders with information that will enable them to comply with the bid submission and opening procedures. Instructions will also cover the criteria, methods and techniques which the buyer will use when the bids are evaluated.

Among other things, these instructions will include the following:

- The date and time by which the bid has to be submitted (that is, should reach the buyer).
- The name of the person to whom it should be addressed and where it should be delivered.

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1. Westring, Gösta, *International Procurement, A Training Manual*, International Trade Centre UNCTAD/GATT, Geneva, United Nations Institute for Training and Research, New York, The World Bank, Washington DC, 1984, p 41.

2. *A Compendium of Contracts on Import Procurement of Goods*, Volumes I, II and III, International Trade Centre UNCTAD/GATT, Geneva, 1989.

- The form in which it should be transmitted (post, telegraph, fax etc.) and in which language(s).

- The period for which the bids should remain valid.
- The time, date and place of opening the bids and/or the procedure that will be followed for the purpose.
- The criteria and methods according to which the bids will be examined and evaluated.

- The extent of deviations which will be accepted in specifications, delivery and/or other terms and the basis on which prices will be adjusted for such deviations for purposes of evaluation and comparison.

- The means to be adopted for seeking clarification on any aspect of tender.

The instructions should be complete in all respects and written in a style that can be easily understood, even by distant suppliers who may have limited facility with the language used in the tender notice and documentation. Only then will the tenderer achieve his objective of maximum response and competing offers.

3.4 Establishing evaluation criteria

The most efficient procurement will result from selecting a tendering method which encourages competition between the greatest number of suppliers. Suppliers will be encouraged to participate when they expect to be given fair treatment.

By establishing the criteria to be used for evaluating bids and by making them known, the buying organization will achieve two things. First, it will be seen to be offering equal treatment to all potential bidders. Second, it will leave less room for evaluators to be subjective in their assessment of bids. The buying organization should make these criteria known in their bidding documents or instructions.

The need for establishing evaluation criteria is not always that obvious. The general impression is that a clear set of contract terms and conditions will themselves incorporate criteria for the evaluation of offers. This may be true if terms and conditions provide little or no room for suppliers to deviate even slightly from the norms indicated by the buyer.

However, if the buyer's terms and conditions in a purchase enquiry are too rigid, some suppliers may be deterred from participating. This will defeat the buyer's objective of stimulating good competition among bidders. To take a simple example, if a buyer indicates that he will consider tenders only from suppliers who can supply iron ore of 64% Fe (ferrous content), only suppliers who can offer iron ore

of this specification will submit bids. This already reduces the number of potential suppliers and therefore competition. If on top of this the buyer also prescribes an inflexible delivery time of, say, four weeks, the number of potential suppliers will go down still further. Generally therefore, the buyer is well advised to allow for deviations which are technically acceptable and/or commercially consistent with his objectives of "right" product, time and price.

Fairness demands, however, that when potential suppliers are invited to submit offers, they should know the nature and extent of deviations which will be acceptable to the buyer in his terms and conditions. They should also know what criteria he will use to evaluate bids for such deviations. For many standard products, there are at least two areas where it may be advantageous for the buyer to allow for flexibility in contract terms. These are for the technical specifications and the delivery schedule.

(1) Deviations in specifications

It is often possible to meet a given need by products which are technically perfect, or near perfect, substitutes. Use of one or the other then is a matter of evaluating relative commercial advantage. For example, for steel produced through the blast furnace route, it is technically possible to use iron ore of varying grades within a range. The buyer of iron ore can possibly achieve efficient procurement by allowing some flexibility in the acceptable grade of ore. This would require the buyer to indicate the range in the percentage of ferrous (Fe) content which would be technically acceptable to him. Specifying a range rather than a single percentage content is likely to increase competition and hopefully result in better prices for the buyer.

To be fair the buyer should make this known to potential suppliers through his invitation to bid and the bidding documents. He should announce, for example, that all supplies of ore with Fe content of less than or equal to 66%, and greater than or equal to 62%, will be accepted, but the pricing basis will be that of iron with Fe content of 64%. This means that all offers of ore containing Fe of 62% to 66% will be acceptable to the buyer and that the lowest price offer for ore with 64% Fe will be used as the standard for comparing prices of those suppliers offering ore of higher or lower ferrous content than 64%.

A little bit of additional information from the buyer will establish the criteria which he will use to evaluate different offers. Since the standard price for the Fe content is 64%, the buyer should announce the ratio he will use to adjust prices of ore deviating from the standard. He might indicate the following basis:

Fe content	Price adjustment %
= 62 %	+ 3.0 %
> 62 % but < or = 63 %	+ 1.0 %

> 63 % but < 64 %	+ 0.5 %
= 64 %	0.0 %
> 64 % but < or = 65 %	- 1.0 %
> 65 % but < or = 66 %	- 2.0 %
= 66 %	- 3.5 %

This extra information will clearly show prospective suppliers that the buyer will adjust upwards the quoted price for ore containing 62% iron (Fe) by a ratio of 3% to see how the adjusted price compares with the lowest quoted price for ore of 64% iron (Fe). Quoted prices of other grades of ore will be adjusted according to the above scale for identifying the lowest evaluated price offer. This adjustment, it should be noted, will be made only for evaluation purposes. Once this supplier is identified, other things being the same, he will be awarded the contract at his quoted price for ore of the grade in his offer.

The same approach may not apply to non-standard products. Even so, from the beginning the buyer should indicate as clearly as possible the acceptable tolerances for deviations from the desired technical and/or performance specifications. In addition, the invitation to tender should indicate the method
which will be used for the evaluation of offers (weighted index principle, total costing, merit point system, net present value, etc.). [1]

(2) Deviations in delivery schedule

Permitting some flexibility in delivery can also help maintain competition and the possibility of better terms for the buyer. Unless there are overriding considerations, great urgency for instance, the buyer can benefit from stating acceptable as well as the preferred delivery schedule. At the same time he should announce a scale of price adjustments for deviations in delivery schedule, say, per week of late delivery.

(3) Deviations in other parameters

In pursuit of procurement efficiency, the buyer may wish to provide for flexibility in other parameters of his invitation to bid, order quantity, for example. Even when he has taken advantage of all the information and techniques available to work out his estimates, the buyer may still be a little uncertain about the exact quantity he needs. One way of providing against this uncertainty is to include in his invitation to tender his right to vary the quantity tendered for by, say, up to 15%. He may also state that he will exercise this option a certain number of weeks before the contractual delivery schedule.

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1. See Chapter 5 of this Guide.

A provision like this will not only insure the buyer against uncertainty of demand but also enable him to take advantage of changing international market prices between the time the contract is signed and the due date of delivery. If the buyer expects the international price of the product in question to go up, he can decide to opt for the greater quantity. If he expects the price to go down, he can opt for less.

A contractual provision like this sometimes brings supplier offers which link prices to the order quantity - including (or excluding) the optional quantity. A lower price may be linked to a larger quantity. If the buyer puts an optional quantity provision in the tender invitation, he can opt for the higher quantity if it is to his advantage. Buying the larger quantity may not only make this the cheapest offer overall, but also compensate for the additional inventory costs of storing it.

Fairness demands that the buyer makes such intentions known to potential suppliers through his invitation for offers, so that each knows the basis on which the buyer is going to evaluate bids.

3.5 Bid processing

When bids are received, the buyer must study them to see that bidders have followed the procedures for bid submissions that he had outlined in his instructions to them. For public procurement organizations particularly, this means going through a set of processing procedures. If there are deviations, the buyer will have to evaluate which of these are of a material nature and which minor. He will not accept any material deviations for examination and evaluation but will return the bid to the supplier. He may decide to accept bids with minor deviations if, on further analysis, he is satisfied that the reasons and/or motives for them are valid.

(1) Bid submission

Bids must normally be submitted in double sealed envelopes one inside the other. The outer envelope should bear the name and address of the importing organization and also the tender number. The inside envelope should bear the name of the bidder. This makes it easier to correspond with the bidder (returning his bid, for instance) if he has not followed the proper submission procedure.

The initial instructions to bidders should say how bids should be transmitted to the buyer. A common practice is for the buyer to stipulate that these should be either delivered by hand and deposited in a locked sealed box kept for the purpose, or sent by post. Mailed bids will be put in the box by the importing organization itself, provided they are received by the stated due date.

(2) Treatment of late bids

Bids received after the date and time stated in the invitation to tender or in the instructions to bidders should normally be rejected. This not only makes for efficient and more economical procurement but also shows the method of tendering to be fair. Late bids sent by ordinary post (if permitted) should normally be returned unopened to the bidder. If a bid sent by registered mail arrives late, it is the responsibility of the postal authorities to return it to the bidder. It is good practice to stipulate that bids not delivered in person should be transmitted only by registered mail. This avoids problems that can arise if bids fall into the hands of unscrupulous employees in the importing organization, who may tamper with them rather than return them promptly to the bidder.

However, it may happen that a bid submission is delayed because of factors beyond the control of the bidder - a postal strike, for instance. In such cases the procurement organization should exercise its discretion. If it is satisfied that the bid was posted well ahead of the closing date and it was delayed unduly, as revealed by the postal mark on the envelope, the bid may be accepted. [1]

Procurement regulations about the treatment of late bids seem to differ across countries. A buyer's best guide would be his organization's own rules or guidelines as incorporated in its manual of procurement, if one exists.

(3) Bid alterations

Normally no alterations should be allowed after bids have been submitted by the bidder and deposited in the box the importing organization has assigned for this purpose. However, if errors or discrepancies are noted at the time the bids are opened, the buyer should assess these according to their nature. If the errors or discrepancies are minor and their alterations do not amount to a substantive change in the contents of the bid and leave the relative competitiveness of others unchanged, such alterations are allowed more or less universally.

(4) Bid opening

The procedure for opening bids should be in line with the regulations or the guidelines contained in the procurement manual of the buyer's organization. In his instructions to bidders, the buyer should already have indicated the specific procedure that he will follow along with the time, date and place

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1. "A late proposal will be considered for award if it is received before the award is made, and (a) it was sent by registered mail not later than the fifth calendar day prior to the date specified for receipt of offers, (b) it was sent by mail (or telegram if authorised) and it is determined by the government that the late receipt was due solely to mishandling by the government after receipt at the government installation, or (c) it is the only proposal received". Page, Harry Robert, op cit, p. 240.

of bid opening.

Procurement procedures for opening bids vary across countries and across organizations in the same country. Procedures may provide for bids to be opened in public, requiring the procurement official to read aloud the names of the bidders and the more important features of each bid, including the quoted price. Alternatively the procedures may provide the proceedings to be closed. In this case, the bids have generally to be opened in the presence of an internal committee of designated officials. Procurement procedures can also vary with the products being procured. For relatively simple products, with price as the sole criterion for bid evaluation and selection, organizations may allow interested members of the public to witness the proceedings. Sometimes only bidders' representatives may attend. For complex products, some organizations follow a policy of closed-door proceedings. In such cases, bids are opened in the presence of a committee of officials who, besides preparing a list of bids, also examine, evaluate and compare the bids in order to identify the best one.

Chapter 4

BID EVALUATION

4.1 The purpose

Bid evaluation can be summed up as the analytical process involved in appraising offers or bids received from different suppliers, to enable the procurement organization to identify the one which is the most advantageous. While this objective of bid evaluation is common to import procurement of all products, the extent and the depth of analysis that the buyer will have to carry out for the purpose will vary from product to product. In general the evaluation of bids for commodities, raw materials (processed or semi- processed) and simple manufactures, the analysis required to find the best evaluated bid is relatively simple. For capital goods, the exercise is more complex, the degree of complexity increasing with the nature and type of capital equipment.

4.2 Bid tabulation

A preparatory step in bid evaluation is the tabulation of bids. Most often a buyer will find that no two of the bids received are similar in all respects. Tabulation makes it easier to compare them. It is useful for the importing organization to design a format for this purpose. However, it is worth noting that no standard format will be suitable for all products all the time. Any specific format for comparing bids will depend on several factors, including:

- The nature of the product.
- The commercial custom or practice characterising the market for the particular product.
- The contract terms envisaged.

In general, the format of the tabulation, for a standardised product with established market grade specifications, will be quite simple. Essentially, it will provide for the offer prices of the different bidders to be compared. On page 24 is a sample design of such a format, Format II, which the user may have to adapt to his specific needs. It may be necessary to adapt or modify this for the simple reason that, while bids may meet all basic or essential conditions of a tender enquiry, some may not

conform to all its details. [1]

1. Public procurement regulations in many countries do not consider a bid showing any deviations considered to be substantive to be conforming to the terms and conditions of the purchase enquiry. Such bids are then routinely rejected.

For example, a bidder whose offer price is the lowest may not offer the full quantity indicated in the purchase enquiry. A column showing the quantity which a bidder is offering may have to be provided for. It is not uncommon for a bidder to offer a quantity discount, or to offer some quantity lot at one price and another lot at a higher or lower price. The seller may do this because of his expected production profile, his order book position, his level of stocks or for other similar reasons. A bid tabulation format will have to be suitably modified so that these deviations can be shown, along with other details.

The format may also need to be modified to accommodate the details suppliers were required to give in accordance with the buyer's purchase enquiry terms and conditions. For example, the tender notice may have stated that, for CFR quotes, a supplier should indicate separately the element of freight in his CFR price. This enables the buyer to know the FOB price and the CFR price. He can then decide whether to go for an FOB contract and arrange for the transportation of goods himself and bear the freight cost, or to go for a CFR contract. He would go for the FOB option if he finds that he can arrange transportation of goods at a lower price than that indicated by the supplier. The main point here is that the bid tabulation format will have to be modified so that it can incorporate information of this type.

One of the concerns of the buyer is that he receives bids which are responsive. A *responsive bid* is one submitted by a potential supplier who will be ready to sign a contract if his bid is accepted. The buyer can take measures to ensure that he receives only responsive bids. He can prescribe in his tender invitation or instructions to bidders that a bid will be accepted for evaluation only if the supplier (or an agent on his behalf) submits a bid bond for a specified sum of money along with his bid. This sum is usually a percentage of the bid amount.[1]

Once the buyer stipulates that a bid bond must be submitted before an offer can be considered, he must provide a column in the bid tabulation format where he can note whether or not a bidder has complied with this requirement.

In short, for purposes of comparison and evaluation, the bid evaluation format should be designed to provide for all those commercially important elements required. This will facilitate the process of identifying the best evaluated bid.

Apart from these commercially important elements, the buyer must sometimes take account of other factors in his evaluation of bids as well. He may have to consider existing trade and commercial relations between his country and the countries of some bidders. For example, the buyer's country

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1. Since submitting a bid bond will mean an additional cost to a potential supplier, this will be reflected in his price quotation. For this reason, buyers sometimes exempt all but first-time suppliers from submitting bid bonds.

may have bilateral trade, payments and clearing agreements with some countries of the world. As part of a deliberate policy of trade promotion with such countries, his government may wish to encourage its buying organizations to give preference to supplies originating from these countries, other things remaining the same. On the other hand, the buyer's country may have imposed a trade embargo on one or more countries of the world. Country of

origin can therefore be another factor in bid examination and evaluation, so a column will be needed for country of origin against each offer.

The bid tabulation format will depend on all the factors relevant in each case. Even for repetitive purchases, a buyer will find it useful to design a fairly detailed format. Once the basic format has been designed, it is easy to readjust it to meet any specific need. A sample of a reasonably detailed format (Format III) is given on page 27. Buyers can use this as a model, and modify it to meet their specific requirements.

4.3 Approach to analysis of bids

Bid evaluation aims to identify the best **evaluated bid and not necessarily the** lowest-priced **bid. To select the best, it is often necessary to analyse a bid with reference to more than one parameter. Which parameters will be the most significant will vary between products.**

For analytical purposes, products generally imported may be divided into two broad groups:

- **Standardised products purchased repetitively and/or at regular intervals. These include foodstuffs, raw materials, semi-manufactured goods, simple manufactures and general purpose machinery.**

- **Special-purpose plant, machinery and equipment, including transport, mining, earth moving, construction.**

For the first group of products, the most relevant parameters are often the price and delivery terms. For the second group, there are other parameters besides these. These might include costs (fixed in relation to operating costs), quality/specifications, durability, and special terms and conditions of contract on after-sales service, spare parts supplies, training of personnel, financing and repayment arrangements. This distinction between the two groups presumes these different parameters. Although this grouping has merit, it ignores some overlapping grey areas; even for some standardised products, a purchase decision may mean weighing factors other than quoted price and delivery terms.

For this reason it is best to outline a step-by-step approach to bid evaluation and to suggest different techniques at each point. Users of this guide can then adopt the one most appropriate to the case under consideration. The analysis will be centred around the following three parameters:

- **Prices and/or costs**

- **Technical features**
- **Time frame**

Logically, a technical analysis of bids should precede a price analysis. However, price analysis is placed first because the technical evaluation for many products, particularly in the first group, is relatively simple.

Annex II gives a checklist of points for buyers to keep in view when evaluating bids.

Chapter 5

PRICE AND COST ANALYSIS

The price of a product is clearly a major consideration in import procurement. An analysis of prices is often sufficient to identify the best offer. This is particularly true when procurement involves the purchase of commodities, raw and semi-processed materials which conform to internationally accepted standard specifications. The same is the case with a fairly large number of fully manufactured products with standardised specifications and/or simple manufacturing processes. For the procurement of other products, price analysis, along with other parameters, is an important and integral part of bid evaluation.

5.1 Scope of analysis

Price analysis is simple if the buyer states in his tender notice that offers must strictly conform to the product specifications and the commercial terms and conditions laid down in it, and that any bids that do not conform will be rejected. For example, a tender may stipulate the following conditions.

- **The quoted price is to be for CIF deliveries.**
- **Prices must be quoted in a particular currency only.**
- **Quantity is to be so many units of measurement.**
- **No deviations will be allowed in technical and other specifications.**
- **Delivery must be according to schedule.**

When terms have been made clear, a buyer has to examine the bids, reject those that show deviations of any sort and tabulate the quoted prices of the rest. A simple comparison of different prices will reveal the most advantageous offer.

Excessive restrictions, however, limit competition and in a sense defeat the objective of global or selective tendering. [1] Unless the procedures of the importing organization allow no room for tolerances and minor deviations in the invitation to tender, a buyer should not adopt too restrictive an approach. It is better to permit supplier offers to have some flexibility, but within acceptable technical and commercial ranges, about trade terms, currency in which price may be quoted, delivery schedule and so on. If he allows this, the buyer is likely to find that the bids he receives may

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1. **See Dunmore, Terry, "Why Public Procurement Is Not Changing Fast Enough" in *Purchasing and Supply Management,* I.P.S. London, August 1983, pp.34-35.**

differ in their content. To identify the best evaluated offer the buyer will then have to adjust quoted prices and reduce them to a comparable basis. How he adjusts them will depend on the specific term or condition to which the differences relate.

Some of the issues and approaches associated with reducing differing offers to a comparable basis are discussed in the sections that follow.

(1) Trade terms

Trade terms define the role and responsibilities (including the sharing of costs) of the buyer and the seller associated with the delivery of goods from the seller's to the buyer's premises. The price quoted by a seller will naturally reflect the extent of responsibilities the buyer wishes him to share.

In theory, a buyer's terms and conditions of contract may ask prospective bidders to submit price quotations on any one or more of the trade terms commonly used in international commerce. In practice, he either restricts prices to be quoted for one specific trade term only, or allows for some flexibility and leaves it open for the seller to quote for trade terms which are close substitutes for a given mode of international transportation.

For example, if a buyer initially considers that maritime transportation will be the most economical way of meeting his objectives, he may ask sellers to quote prices on any one of the following terms:

- Free alongside the ship (FAS)
- Free on board the ship (FOB)
- Cost & freight paid to receiving port (CFR) - [previously C&F]
- Cost, freight and insurance paid to receiving port (CIF)

In such a situation it is likely that different bidders will offer different trade terms in their bids. If he is to identify the most competitive offer, the buyer will have to adjust these prices to a comparable basis. For example, to compare an FAS quote with a CFR quote, he will have to adjust it according to:

- Customs clearance charges
- Export duties, taxes and other official charges
- Loading on board charges (where applicable), and trimming costs (for bulk goods)
- Freight charges

Quotations on other terms may have to be adjusted for additional cost elements. For instance, if a quotation is ex-works, the buyer will have to add to the costs above the cost of moving goods from the seller's warehouse to the ship's side.

(2) Inland transportation

If in his tender invitation the buyer has indicated the preferred port of delivery in his country (or if the country has only one port of entry), he can compare two CFR quotations straight away, without any further adjustments. It is reasonable to assume that inland freight will be the same, irrespective of which bidder is selected to supply the goods.

However, if the country has several ports and the supplier is free to select the port of delivery, the buyer should adjust the quoted prices by the amount he will have to pay in freight charges for moving the goods from different ports. What is important for the buyer is to compare the prices of different bids on delivery rather than on CFR bases. If inland freight varies from different ports to the buyer's place of use, the delivered cost of supplies to the buyer will be different, even if the CFR price quoted by various suppliers is the same. Adjusting for the inland freight component is an essential step in identifying the most competitive bid.

(3) Packaging

The packaging costs for certain products may differ substantially between countries. If the buyer asks for product quotations in bulk rather than in packaged form, one bidder may stand out as being the most competitive. If suppliers were asked to submit quotations in packaged form, another bid might be the most attractive. Of course the buyer can take the easy option of specifying that quotations should be for a product in bulk only or in packaged form only.

But the easy option will not be the most cost-effective way of procuring the product in question. If, for example, the cost of the packaging material is lower in his own country, the buyer would do better to select the lower-priced bid for the product in bulk and get the packaging done in his own country (for further inland distribution, for example). This would be the better decision provided that an alternative quotation for supplying a packaged product is higher than the total cost of the product in bulk and the local packaging charges. This applies to some chemical fertilizers where such differences have been observed in packaging costs. In such cases, a prudent buyer is well advised to leave the bidder the option of quoting his price for the product in bulk or in packaged form. The buyer should then work out the cost of packaging (bagging, for fertilizers) for the bulk product offers and compare these with those for the packaged material. This way he can easily assess which offer is the most competitive on total costs.

(4) Currency

A buyer should carefully weigh the advantages and the disadvantages of how rigid or flexible he should be about the currency in which he requires potential bidders to quote prices. He can stipulate

that all bid prices should be quoted only in a specified currency. Sometimes this has the effect of reducing competition. For a wider response it may be desirable to leave it open to bidders to quote prices in currencies of their choice. If the buyer leaves this option open, he is likely to receive offers in different currencies. Before he can select the most competitive offer, he will have to convert all currencies into his own currency or into any other freely convertible currency, using prevailing exchange rates. [1]

1. In competitive bidding, the usual practice is to indicate in advance, in the instructions to bidders, the basis of exchange rate conversions. While there are many options open to the buyer, generally the rate prevailing on the bid opening day (or on a specified day prior to the opening day) is used. In a regime of fixed exchange rates, the selection of a particular day is a matter of indifference to all bidders as well as to the buyer. However, with floating rates, the relative competitiveness of different offers will to an extent depend on the exchange rates prevailing on the selected specified day.

(5) Price analysis, collusive tendering and other issues

Price analysis is often the best way to identify the most competitive bid, particularly for relatively standardised products. It is also prudent to compare the lowest price offer with the price at which the buyer may have made his previous purchase of the product as well as its prevailing market price. This will be a check against collusive tendering or other malpractices.

The market price for many products depends on current conditions of overall demand and supply. When demand is weak in relation to supply, the current market price for some products may be lower than the cost of production. Conversely, the market price may be very much higher than the cost of production. By itself a market price may not therefore provide evidence of any collusive tendering. However, if the buyer takes both market price and price analysis into consideration, he may be able to detect signs of collusion.

For example, if the lowest offer price is reasonable in relation to the market price, the buyer will have no reason for to investigate further. But if the lowest quoted price, as well as all other offer prices are way above ruling market prices, the buyer should investigate the reason for such abnormal deviation. He may find the price is high for one of several reasons:

- The lot size he is ordering is small.
- The specifications in the tender invitation are too restrictive.
- The specified delivery schedule was too tight for most bidders.
- The payment terms he required did not conform to normal practice in this trade.

The main point is that the buyer should try to assure himself that the deviations are within reasonable limits or qualitatively explainable. He should be as alert to an abnormally high price quote as to one that is abnormally lower than the market price. A fly-by-night operator may be looking for an unwary buyer. On the other hand there may be sound commercial reasons for a bidder to quote a low price. He may be saddled with high inventories that he wants to reduce. A seller may offer a low quotation as part of a sales promotion or as a strategy to gain a foothold in a new market.

An intelligent buyer will keep himself informed about all the variables in a price analysis. He should take into account a supplier's reliability, the quoted delivery schedule and other terms and conditions of sale. In this way he will be able to evaluate bids realistically and select the one most advantageous to him. When bid prices are suspect and when information on market prices is not available, the buyer should rely on cost analysis for bid evaluation.

5.2 Cost analysis

(1) The need

Recognised markets exist for many products imported by developing countries. Their daily prices are quoted on these markets and widely reported in the commercial press. There are other products for which there are no such markets. But if they are standardised and important as internationally-traded products, their contract prices are published in the press from time to time. For some other products, leading manufacturers issue list prices which are valid for a period. These prices provide the buyer with a good indicator against which he can compare his offer prices.

For some products, proprietary items for instance, no similar price indicators exist. With a single source of supply, a prospective buyer has no yardstick against which to judge whether a price is reasonable. This also applies to other non- standardised products or those built to customer specifications. A buyer needing replacements for worn-out parts also faces the same problem; spares may be available only from the original supplier of the equipment. To assess whether or not the price quoted is reasonable, one recourse is to analyse the price of the item in terms of its current cost of production. Although it may be difficult for him to estimate all the relevant cost elements, particularly overheads, the buyer can make a rough assessment to provide some basis on which to compare the bid price.

(2) The method

Cost analysis is a way of estimating what it costs the supplier to produce the product for which the buyer has floated the enquiry and the supplier has submitted his bid. To work out this cost, the buyer will have to gather information on all the different production inputs of the product - and their cost. He may ask the supplier for this information or collect it from other sources. Information will be needed on these elements of cost:

- Material inputs
- Direct labour
- Overheads
- Selling, general and administrative expenses
- Profit

For products built to a buyer's design and specifications, the cost elements would also include all charges of a special and non-recurring nature which a supplier would incur to meet the buyer's specific requirements. Besides the costs already listed, these might include:

- Set-up
- Special dies and/or tooling
- Development of prototype or sample
- Any re-work or re-design of goods as a result of changes suggested by the buyer in the course of product development

Cost analysis should therefore examine in detail each element of cost in producing the item in question. For a proprietary item, the buyer should ask the supplier to submit his cost accounting data to him. The buyer should then study these as objectively as possible to see if the costs are reasonable. At the same time, the buyer should make his own estimate of these cost elements from all the relevant information he can gather. For this, he will need information on:

- All relevant raw material prices and their likely trends.
- The going wage rate for labour in that and similar industries.
- Technically acceptable information on input usage and wastage rates of different raw materials used up in the production of that product.
- Relevant scrap prices and/or their disposal costs.

If he knows these things, the buyer can make a pretty good estimate of the inputs and costs directly traceable to the production of the item in question. However, the most difficult part is estimating inputs and their costs which cannot be allocated to or directly traced to a particular product. Allocating overhead costs is extremely difficult, especially in a multi-product firm.

Because it is so difficult to estimate the production costs of a particular product, it is important to know a good deal about the technique, practice and procedures of cost accounting. This knowledge is essential to the buyer in understanding the supplier's approach to pricing. It will also equip him well in negotiating with suppliers - so often unavoidable in this type of market situation. Negotiations can be effective only if the buyer has (a) collected well-documented information and (b) used standard accounting techniques in his estimation. Unless the procurement officer or manager has this expertise himself, it is advisable to use an experienced cost accountant whenever it is necessary to apply cost analysis to a bid evaluation exercise.

(3) Cost analysis and capital equipment

Capital equipment has certain characteristics which distinguish it from raw and semi-processed materials, processed consumer goods and other finished and standardised manufactures. Some of these latter products are passed on directly to consumers. Some others require further processing before they reach the consumer. Others again are used as inputs for the production of consumer and/or investment goods. Goods like these are imported on a repetitive basis and at frequent intervals. Past purchases therefore provide information for evaluating supplier reliability, product quality, price trends and other data useful for bid evaluation in later purchases.

Unlike these goods, machinery and capital equipment are used to produce other goods or services over a period of time, perhaps over several years. Because of the long interval of time between one purchase and the next, a past purchase does not generate much information which would be a useful guide when the same or similar product is purchased later. Design changes and new technological features introduced during the intervening period may be so basic that comparing two pieces of equipment may be of little or no analytical value. Costs and prices may have changed so much during

the period that these are of little use as a bench mark when evaluating a new purchase. Unlike some products, there are no market prices for capital goods to serve as guide posts.

These factors, as well as special physical and technical characteristics of capital goods, make bid evaluation especially difficult. Special methods and techniques are needed to analyse bids for capital products. Besides costs and prices, these methods take into account special features and characteristics.

Characteristics and features

Capital equipment usually has features and characteristics which are intrinsic or inherent to it. These determine the ultimate real cost to the buyer of acquiring such a piece of equipment. They also distinguish one piece of equipment from another, even if the two are designed for the same function.

Four distinguishing features and characteristics, which the buyer has to take into account when evaluating bids are *productivity, dependability, durability* and *ease of maintenance*. The productivity of a machine is its efficiency in the use of material inputs, energy and raw materials, for instance - also labour per unit of output. The less raw material and other inputs a machine uses per unit of output, the greater its efficiency compared with another machine. Productivity is also a measure of output realised per unit of time. The greater the volume of a machine's output per unit of time, the more efficient it is relative to another machine.

Dependability has to do with the number of breakdowns a machine has over a given period of operation. The greater the number of break downs the greater the maintenance costs. More breakdowns also mean more downtime, and consequent loss of output.

Durability implies the relative length of a machine's usable life span. The longer the usable life span of one machine relative to another the more durable it is, other things remaining the same.

Maintenance is easier for some makes or brands of machine than for others. The easier it is to carry out routine repairs and maintenance, the less expensive the machine will be to operate.

Machines meant for the same use often differ on these scores. Their different characteristics and features imply different costs. The buyer should be aware of these when he decides which piece of equipment to go for. The initial cost of acquiring a machine is often only one element of the cost of owning and operating it. Operating costs may be higher than the cost of purchase and must be taken into account if they are significant.

Several methods of bid evaluation have been specifically developed to help buyers identify the

best bid for capital equipment. Some of these are discussed in the sections below.

Weighted price evaluation [1]

One of these methods for evaluating bids for capital goods is that of a weighted-points price comparison. Weighting is given to machine features that contribute to its cost and/or operational efficiency. Productivity, dependability, durability and ease of maintenance are often considered important features and the buyer may wish to include these in the evaluation process. He will have to decide on the relative weights he would like to allot to the price, on the one hand, and to each of these attributes, on the other. How he distributes the weights will reflect the importance he attaches to each. This method is best demonstrated by an illustration.

Suppose a buyer considers the following weights as reflecting the importance which he attaches to different attributes:

Price	60%
Productivity	20%
Dependability	10%
Ease of maintenance	10%.

Suppose also that, in response to his invitation to bid, a buyer receives two price offers, from two bidders, say, A and B. After adjusting for trade terms etc., these are $180 and $200 respectively. If evaluation is restricted to price only, the best offer is that of bidder A. However, since the buyer has decided to take the other attributes of the machines offered into account he will have to adopt a step-by-step approach towards identifying the better bid. The lowest price offer A will score 60 points for the price element in the offer. The following calculation will get B's score on price competitiveness:

$$\frac{Pl}{Pb} \times 60$$

where
Pl = price of lowest bidder

1. **See also pp 42-43 on merit point system.**

P b

= price of bidder B

6 0 %

= weight given to bid price

Points for other attributes will have to be allotted to the two bidders according to how the buyer assesses the features of the product offered by each. Doing this objectively will be easier for some attributes than for others. For this he may have to draw on information submitted by sellers, field trials, his own past experience, the market's assessment, and so forth.

The buyer will be better able to assess the productivity of each machine by referring to the bidder's information on the number of operators required to operate it and amounts of different inputs consumed to produce each unit of output. The one with the lowest number and/or quantity will score the highest point for this attribute.

The number of breakdowns which a machine suffers (past experience) or is expected to suffer (manufacturer's data) during a given period of time is a good measure of the dependability of the product on offer. The machine with the least number of expected breakdowns will get the higher score for dependability. Criteria like the following can help allot the score to bidders:

Number of breakdowns in the first 5 years of use

u p t o 5	10
> 5 but < or = 10	6
> 10 but < or = 15	2

Ease of maintenance may be judged by whether or not routine and simple maintenance can be carried out by training an in-house man or whether more professional repair and maintenance facilities are available easily for overhauls and major replacement jobs. Score points can be allotted to each of the bidders according to these situations with a maximum of 10 points for the better offer. Once all assessments have been made and points allotted to different bids, the better evaluated bid will be identified as follows:

On the assumptions made in the example, the lower-priced bid does not turn out to be the better evaluated bid when some of the other attributes of a piece of equipment are taken into account.

Total costing

Another method of bid evaluation is that of total costing. Simply stated it suggests that the initial or acquisition price of equipment alone may not suffice to identify the best evaluated bid. The additional costs of owning and operating, as appropriate, should also be taken into account.

The initial price of the equipment may be high in relation to operating costs. At the same time, the rates of output or operating efficiency may be about the same for machines of different makes. In such cases, it is sufficient to evaluate the bids on the principle of total costing. This method takes the prices quoted by each bidder for the machine and adjusts these by adding to them the costs of repairs, spares and servicing. The bid with the lowest total cost is rated as the best evaluated offer.

A more extended version of the total costing principle takes into account many other costs which the buyer will have to incur while operating it. These operational costs may not be the same for the different machines on offer for the same function. If these costs are excluded, the buyer may be led to select a piece of equipment which turns out to be more expensive.

Sometimes other factors are relevant and should be brought in when bids are being evaluated. Some machines have a longer service life than others. The scrap value of machines of different makes may vary. This will affect the net costs of having one rather than the other.

The buyer should include these other costs in his equation:

- **Variable costs**
- **Spares**
- **Maintenance and after sales service**
- **Training of personnel in operations and routine maintenance**
- **Serviceable life of equipment**
- **Scrap or salvage value**

<u>Variable costs</u>

The efficiency of different machines may vary. One index of efficiency is the ratio of output to input. Variable cost varies directly with output. However, the more efficient a machine the higher this ratio will be. In other words, a more efficient machine will consume less inputs, for

the same level of output, compared to another less efficient one. [1] Ideally, a buyer should add the variable costs to the fixed costs for a proper evaluation of bids. In his bidding instructions, he should therefore ask suppliers to submit information on these points as part of their bids.

1. The same is true of the other index of efficiency, namely, productivity measuring rate of output per unit of time. A more efficient machine will give more output per unit of time. This means a higher value of output per unit of time and also over the life of the machine, if two compared machines have the same life span.

Spares

The availability of critical spares is essential if equipment is to operate at its optimum level throughout its service life. Suppliers should offer some assurance that spares can be obtained over such a period. For standardised products, a supplier's assurance is usually sufficient. Even so, it will be helpful for evaluating bids to know about current and predicted prices for spares and their likely service life. The costs of these will have to be added to get the total cost of owning and operating one of the machines on offer as opposed to another. [1]

For non-standardised equipment, the buyer should stipulate in his instructions to bidders that a bid will be considered responsive only if the bidder:

- Is prepared to provide a guarantee for continued availability of spares and is willing to hold stocks of these himself, if required to do so by the buyer.

- Has submitted a complete list of critical spares, their present and future prices (which may in certain cases be determined by a price revision formula).

Maintenance and after sales service

The continued operational efficiency of equipment requires its periodic servicing. This involves costs. One cost is for downtime while a machine is being serviced - the loss in output while the machine is out of service. The other element of maintenance cost is inputs (material and human) that will be used in the process of servicing. Two machines, otherwise comparable, may differ on their costs of repair and maintenance.

Yet another cost will depend on the availability and accessibility of after-sales service - again a significant issue in bid evaluation. [2] For simple and routine maintenance a bidder may offer to train a buyer's staff. For this service he should naturally receive a higher rating than another bidder who does not offer to do so, other things remaining the same. However, for periodic major overhauls, the

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1. Buyers sometimes require bidders to provide guarantees about the maximum costs of maintenance and repairs over the life of the equipment. This not only facilitates the comparison of bids, but also assures the buyer that spares will be available when needed.

2. Where there is a large volume of sales for a particular model of equipment, the supplier may already have a network, or some arrangement, for after-sales service. If this is not the case, the buyer should make provision for this in his invitation to bid or bid instructions.

buyer should ensure that the supplier is prepared to:

- Enter into an agreement to provide after-sales service.
- Specify the charges for this.

Training personnel in operations

Operating specialised equipment usually requires some training. The level of training required will vary according to the complexity of the equipment. For major industrial plants, the level of skills will range from key production managers to shopfloor operators. The bidder who offers or agrees to train key personnel and/or other levels of staff/operators, depending on the requirements, should receive a higher rating than others whose training component in the bid requirement is either missing or ambiguous. Whenever a training need is envisaged, the buyer should ask in his instructions to bidders that they indicate the cost of training component separately. This information will be necessary for evaluating bids on a total cost basis.

Scrap or salvage value

Once their useful life for the buyer is over, machines will have to be sold in the second-hand market or as scrap. Two machines with different initial costs may also command different salvage or scrap values. A higher cost machine may have a higher salvage value than another cheaper one. This means the net cost after adjustment for resale value may be lower for the machine that was more expensive to buy in the first place. [1]

Serviceable life

A buyer will often be faced with equipment offers which match the prescribed technical and/or performance specifications, but do not offer the same number of usable or serviceable years of life. One machine may have low initial price, but may also have a shorter serviceable life compared to the other. [2] A straight comparison of the two offer prices would be misleading. The buyer should allow for this difference in a suitable way. For instance, he might deduct from the cost of the machine with the longer service life the value of the extra output during its period of operation.

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1. Sometimes purchase contracts provide for a minimum guaranteed resale or re-purchase value by the supplier. This should obviously be taken into account when evaluating the total cost of an item.

2. In suitable cases, contracts may also provide for supplier's guarantee of a minimum serviceable life.

5.3 Life-cycle costing

Total costing has some shortcomings. While it takes into account most of the costs it ignores their time profiles - the specific years in which these costs are incurred and at what rates. Nor does total costing take into account the output of machines during their serviceable life spans. Machines meant for the same purpose may differ because their total cost of owning and operating and/or their output per unit of time are not the same.

Their time profile of costs and revenues may also be different. Ideally the buyer should use a method which takes into account all these differences and select the one which gives him the maximum *net* revenue over the entire service life of the equipment. Life-cycle costing takes into account revenues as well as total costs and also their respective time profiles.

On the cost side, life-cycle costing includes not only those costs which may be included by the bidder in his bid, but also others which the buyer will have to incur in the course of operating a machine.

These will usually comprise:

- Product design and development
- Fabrication and manufacturing
- Installation
- Commissioning
- Training of personnel
- Yearwise operating (variable) costs
- Maintenance and servicing (including downtime loss of output)

On the revenue side, life-cycle costing includes:

- Yearwise value of output
- Salvage/scrap value of equipment at the end of its service life

One of the main strengths of this method of costing is that it introduces the notion of the time value of money in the evaluation of bids for products which have economic value over an extended period of time. As machines may differ on many counts - on their usable life spans and the time profile of their costs and revenues (output levels) - time is an important variable in bid evaluation.

This method requires the buyer to estimate the cost of owning and operating the equipment on a yearly basis. He should accordingly ask each bidder to include in his bid information which will help the buyer make a reasonable estimate of the major inputs that will be required for the expected optimal level of output for each year of the life of his product. The buyer will have to make his own projection of the prices of the required inputs to get the estimate of yearwise operating costs. To arrive at a yearwise cost of operating the equipment, he will have to add to these the other costs of scheduled maintenance and replacements.

As far as revenue is concerned, the buyer will have to estimate the yearwise capacity utilisation rate likely to be achieved and the resulting output of the equipment. Data provided by the supplier can often help in making the estimate of physical output levels. However, the buyer will also have to make an estimate of the yearwise price of the product. For this he will have to use one of several statistical techniques, as appropriate. The two together will enable him to work out an estimate of likely revenue for each of the years in question.

The last operation is to find the present value of the stream of costs and the revenues, using an appropriate discount rate. The following illustrates the framework and the steps which have to be taken for using the method of net present value in the context of life-cycle costing in bid evaluation.

Suppose there are two machines with the following characteristics:

Let C^i, C^i, ... C

i

1 2

t

represent all costs which will be incurred in year 1 to t to own and operate the first (i = 1) machine and the second (i = 2) machine.

Let O^i_1, O^i_2, ... O^i_t

represent output in each of the years from 1 to t for the first (i = 1) machine and the second (1 = 2) machine.

Let p_1, p_2, ... p_t

represent price of the product for each of the years 1 to t.

Then $O^i_1 p_1$, $O^i_2 p_2$, ... $O^i_t p_t$

will be the revenue for each of these years for the first (i = 1) machine and the second (i = 2) machine.

The net revenue for the two machines, for each of the years 1 to t, will be given by:

$$NR^i_n = O^i_n p_n - C^i_n$$

where i = 1 and 2 for the first and the second machines respectively, and n = year 1, 2, 3, ... t.

The total net revenue over the life of two machines is then given by the expression:

$$NRi = R^i_1 + R^i_2 + R^i_3 + \ldots\ldots + R^i_t$$

that is $\sum_{n=1}^{t} R^i_n$

1 n

where i = 1 (first machine) or

2 (second machine).

The present (discounted) value of the aggregate net revenue for the two machines on offer will then be:

$$NPV^i = \sum_{n=1}^{t} R^i (1 + r)^{-n}$$

where r = discount rate

t = is the serviceable life of each of the two machines.

(note that t **may be =** x **years for one machine and** y **years in another).**

i = 1 for the first machine and

2 for the second machine.

The bid yielding the highest present value of net revenue (NPV) would be evaluated as the best one, other things remaining the same - vendor reliability, delivery and so on.

Chapter 6

TECHNICAL ANALYSIS

Technical analysis is concerned with evaluating offers from a technical point of view. To evaluate and identify the best evaluated bid, the buyer will have to carry out two broad aspects of this analysis. He will have to compare:

- **The specifications offered by each bidder with those in his tender invitation.**
- **The specifications offered by different bidders with each other.**

6.1 Nature of deviation

Bids received in response to a tender invitation may or may not conform in all respects to those indicated by the buyer. In some, the deviations may be minor; in others they may be major. These may be desirable or not so desirable. The mix of offers is generally likely to contain bids which:

- **match the indicated specifications,**
- **offer superior specifications, and**
- **offer inferior specifications.**

The basic objective of technical analysis is to assess whether or not the deviations are technically acceptable. And if they are, how should the buyer adjust offer prices for such deviations for evaluation purposes?

6.2 Treatment of minor and major deviations

(1) Minor deviations

Minor deviations in technical specifications should not as a rule be used as grounds for rejecting a bid. In fact, for many standardised products (commodities, for example), technically acceptable specifications have a fairly wide range. So long as a bidder's specifications are within that range, the bid should be accepted and evaluated along with others. In such cases, the normal procedure for the buyer is to indicate in his invitation the acceptable range and the price adjustment factor which he will use

in the evaluation process. [1] Reducing different bids to a comparable basis does not then pose much of a problem.

In some manufactures, however, even when precise specifications have been indicated by the buyer in his bid invitation, there may be offers which, while technically meeting the requirements, have superior features. For example, a bid invitation for a 16 HP engine car, with given minimum (or maximum) body dimension and/or passenger seating capacity, may stimulate various offers. One of these has also an additional feature - an automatic warning system indicating when the fuel has dropped below the safe level. If this offer happens also to be the lowest-priced one (assuming a comparable fuel consumption rate and other maintenance costs), the bid evaluation is straightforward and should result in selecting this offer. However, if this offer happens to be priced higher than some others, the evaluation will require the price of this offer to be adjusted, provided the buyer considers the feature to be a desirable one. The problem will be the basis of adjustment.

A purist approach would be to re-tender for changed specifications including the superior feature. However, re-tendering means additional costs. These costs could be higher than the difference between the price in the offer which includes the additional feature and the price from the lowest-priced bidder, whose product just conforms to the buyer's specifications. The buyer should be guided by his organization's rules, if any, on such matters or seek advice from his peers.

In general, bids with minor deviations in technical specifications may be accepted, provided that the product in question meets the basic performance and operating specifications. As far as possible, acceptable deviations should be quantified in value terms. This will help in adjusting bid prices and in making them comparable for evaluation purposes.

(2) Major deviations

Deviations are usually minor in bids for standardised products - commodities as well as some manufactures. It is therefore relatively easy to handle these in the bid evaluation process. In the case of non-standardised products, deviations at times tend to be major and not easily quantifiable in value terms. Moreover, the deviations may not be in one but several elements of specification, such as technology, performance or operational features. These types of deviation are more often found

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1. **See Chapter 3 of this Guide.**

in bids for plant and equipment.

The best way for the buyer to avoid receiving such bids is to define rigorously his specifications in the bid documents and make it clear in the instructions to bidders that the specifications are binding and no deviations will be accepted. If, despite these precautions, the buyer receives some bids which do not strictly match his specifications, he should reject them.

However, bids received in response to a tender invitation may deviate for more subtle reasons. This tends to be the case for non-standardised products which are also technically complex. Two of the more common reasons for deviations of this kind are:

- The buyer's specified requirements are not sufficiently precise and clear. This may be because the buyer himself is not fully aware of all the technical options offered on the market.

- Different suppliers may have alternative technologies to offer which meet the same need.

In such cases the buyer's objective will not be served by rejecting the bids. He will have to treat the deviations as minor, even though they may be major, and accept these bids and evaluate them along with others. However, the problem of evaluation becomes complex. As the deviations may extend over different elements of specifications (such as process technology, performance characteristics or operating features), assessing any trade-offs between these features is somewhat difficult. For similar reasons it is not easy to quantify in value terms some of these deviations in features.

(3) Merit-point system

Various techniques have been devised to help, as objectively as possible, the process of bid evaluation in such cases. One of these technique is the system of merit points. Points out of 100 are allocated to different technical features of a piece of equipment. These points are based on the buyer's perception of his ideal requirements. They are allotted for each feature of all bids depending on how close a feature is to the buyer's ideal conception of it. The total points awarded to all the different features of a bid give the score of the bidder concerned. The price quoted is divided by the score, giving the price per point for that bid. The one with the lowest price per point is identified as the best evaluated bid.

An illustration on the following page explains the use of the method in practice.

Source: Westring, Gösta, International Procurement, A Training Manual, International Trade Centre UNCTAD/GATT, Geneva, United Nations Institute of Training and Research and The World Bank; New York 1985, p.129.

Chapter 7

TIME ANALYSIS

Time analysis is concerned with two aspects of bid evaluation: the validity period of a bid and the delivery schedule for goods. Bids should be evaluated with regard to both of these aspects.

7.1 Validity period

The invitation to bid as a rule indicates the minimum period during which the bidders should keep bids open for acceptance by the buyer, after the last submission date is over. The validity period is usually determined by the nature of the goods to be imported. It may be as short as a few hours for commodities; it may be 5 to 7 days for standardised products purchased repetitively. For plant and machinery and other non-standardised equipment, the period may be as long as 4 to 6 months or even more.

Bids sometimes do not conform strictly to the validity period stipulated by the buyer in his invitation to bid. In some buying agencies, government procurement organizations, for instance, regulations and rules usually prescribe that any bid open for less than the prescribed validity period should be rejected at the bid examination stage itself. For a buyer in such an organization, the time analysis of a bid is complete when he has examined the bid, noted that it is valid for less than the required time period and rejected it. However, if the procurement organization has a less formal

policy, a bid with a shorter validity period than that prescribed in the invitation to bid may be evaluated along with those which conform to it. If the price quoted by this bidder is higher than another one (or more), acceptance of his bid for evaluation does not alter the outcome. The lowest priced bidder will get the contract, assuming that the lowest priced bidder also meets other criteria. The result is the same as it would have been had his offer been rejected at the outset for non-conformance to validity period.

The problem is different when the bidder whose validity period is shorter than that prescribed offers the lowest-priced bid. The buyer may adopt this strategy:

- First, he may ask the bidder whose price is the next highest if he would be willing to match the prices of the lowest bidder.

- Second, he may ask the lowest-priced bidder if he would be willing to extend the validity of his bid to the prescribed validity period.

If the first agrees to match the prices of the lowest-priced bidder, then he should be awarded the contract. If he does not, but the other agrees to extend his validity period, then the latter will be awarded the contract. If neither agrees to alter his offer terms, then the first will be awarded the contract, even if his prices are higher than those in the lowest price offer which does not meet the validity requirements. This approach to time analysis is more relevant to bids for standardised products than for non-standardised products like plant and machinery. In the latter case, the setting down of a realistic bid submission period and the validity period are the result of pre-bid discussions with potential suppliers. Buyers often consider these discussions beneficial for setting terms and conditions, including the validity period. Otherwise, terms and conditions may turn out to be too impractical or onerous.

7.2 Delivery schedule

If the buyer tenders globally for his goods, he will normally specify the delivery schedule in his tender notice or instructions to bidders. He may allow some flexibility in delivery. If so, ideally he should state the criteria he will use to adjust prices for bid evaluation purposes. [1]

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1. A buyer may indicate price adjustment criteria for deviations in the delivery schedule as follows:

(continued...)

In most countries, government procurement regulations do not allow bids to be accepted if the promised delivery time does not comply with the time specified in the tender documents. In such cases, time analysis implies that price adjustment criteria should be applied - if the buyer has established and announced any. If the buyer has set no such criteria, it means he wants potential suppliers to submit bids only if they can supply goods strictly according to the delivery time he has specified. The question of time analysis does not therefore enter into the bid evaluation exercise. All bids not conforming to the prescribed delivery time would have been rejected at the bid opening stage itself.

In less regulated systems, buyers may be more flexible about the delivery time that suppliers indicate. For standardised industrial inputs, a buyer will normally have linked his preferred delivery schedule, set out in his tender documents to:

- His usage rate (per day, week or month)
- An estimate of lead time
- The desired level of (safety) stock

When he uses the competitive method of bidding, a buyer may not be able to estimate lead time very precisely. Lead time will depend, among other things, on the geographical location of the bidder who turns out to have the lowest bid. If at the time of preparing the bid the buyer were to have known the location of the supplier likely to put in the lowest bid, the buyer could have set a delivery schedule more appropriate for this unknown
supplier. This would assume, however, that the buyer's stock level of the goods in question was adequate to see him through the extended delivery time.

The main reason for keeping stocks of inputs is to enable the buyer to meet his needs, even when the rate of usage goes up or supplies are delayed or disrupted. If the buyer has a good level of stocks at the time bids are evaluated, he can be more flexible about delivery schedules. If, for example, the lowest-priced bidder has quoted a more

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1. (...continued)

Deviation from the preferred one	Price adjustment %
10 weeks	+ 5
< 10 but > or equal to 8	+ 4
< 8 but > or equal to 4	+ 2
< 4 but > or equal to 1	+ 0.5

These adjustment criteria show that the buyer will not accept bids which have a delivery schedule extending beyond 10 weeks.

distant delivery, time analysis would suggest that the buyer should assess how this longer delivery period might affect his level of stocks. If he is satisfied that such a delivery time will not mean reducing stocks below the critical level, the buyer may consider accepting the bid. He would then benefit both from the lower price and from reduced stock-holding costs.

A buyer may also receive an offer which is also low-priced, but with a delivery time shorter than the one he has stipulated. If he were to accept this offer, the buyer would have to hold extra inventories for the period between the delivery date he had indicated and the shorter delivery period this supplier has offered. For instance, the following situation may arise:

The buyer's preferred delivery is 10 weeks. He receives three price quotations for this delivery.

Supplier A $100

Supplier B $107

Supplier C £108

A is clearly the lowest-priced amongst the three who comply with the delivery schedule. However, there is also a Supplier X, who quotes $90 with a shorter delivery of 6 weeks. X, although quoting the lowest price of all, does not comply with the delivery schedule. Time analysis in this case would mean that the buyer has to work out two things:

- The cost of holding the extra stock from X for the additional 4 weeks.
- The difference in price offered by A (the lowest-priced bidder complying with delivery) and the price offered by X and adjusting this to allow for the extra cost of storing X's goods for the additional four weeks.

The buyer will opt for A or X, whichever proves more advantageous.

7.3 Time and the procurement of equipment

This time analysis approach to delivery schedule is not applicable to the

procurement of imported plant and equipment. This is because the delivery schedule for different supplies is derived from the project plan. The project usually consists of many segments, the components for which will almost certainly be technically interdependent. Timing the procurement of these is complex. Some will be needed at the same time while others will be needed only when a previous stage has been completed. Delay in the supply of one component can hold up the entire project. This means that bids which do not conform to the given delivery schedules have to be rejected.

Chapter 8

COMMERCIAL ANALYSIS

The quoted price is always an important element of the commercial terms of a bid and for many products will be one of the main deciding factors in bid selection. For this reason Chapter 5 was devoted to price analysis. However, other terms are also significant for commercial analysis. These will be discussed in this chapter.

8.1 Significant elements

Significant elements in the package of commercial terms in a bid include:

- Payment terms
- Financing arrangements
- Credit provisions

Proposed financing or credit terms may be a decisive factor in the selection of a bid. In many developing countries desperately short of foreign exchange, permission to enter into a procurement contract for a major project is sometimes granted only if the supplier arranges concessional finance or offers supplier's credit over short or medium term. If this is indeed so, *responsive bids* will be those which offer acceptable financing terms. The *best-evaluated bid* in this situation will be the one which offers relatively softer credit terms. The softness of the terms may mean either the length of the grace period for payments, the payment period and/or the implicit or explicit associated financing cost.

8.2 Payment terms

A supplier's payment terms have an effect on the ultimate cost to the buyer of acquiring the goods he needs. Whether the impact of payment terms be slight

or very considerable, the buyer should take these into account when he evaluates the bids. The impact of payment terms is the result of two of their broad features:

- **The timing of the payment**
- **The mechanism of payment**

(1) Timing of payments

The timing of payment (when it is due) will greatly influence the cost of imports to the buyer. Payment mechanisms can themselves affect timing, as some methods of payment are faster than others.

For example, payments made through telegraphic transfers are faster than those made by bank draft. A bidder who wishes payment to be made by telegraphic transfer will probably have allowed in his price for the cost savings he will make through fast payment. From the buyer's point of view, bank charges for telegraphic transfers are higher than for bank drafts, meaning a slight difference in cost to the buyer.

(2) Mechanisms of payment

Two common methods of payment used by importers in developing countries are:

- **By commercial letter of credit (L/C)**
- **By documents against payment (D/P)**

Letters of credit (L/C)

A letter of credit is a document drawn up by importer's bank which assures the exporter that he will be paid provided he complies with the instructions set out in the document.

First, the buyer applies to his bank (the issuing bank) to open a letter of credit in favour of the beneficiary (the seller). This document is negotiable at a bank nominated by the seller (the negotiating bank). Once the seller has proved, by presenting the documents required in the letter of credit, that he has complied

with its instructions, he can claim payment from the negotiating bank.

The required documents normally include:

- **A transport document - bill of lading/air waybill, etc.**
- **A certificate of insurance**
- **A certificate of origin**
- **Copies of the commercial invoice**

Payment is usually made some time before the buyer receives his goods at the named destination point.

Documents against payment (D/P)

When the method of payment is by documents against payment, the importer has to pay the value of the draft issued against him by the seller before he can receive the documents giving him title to the goods. The buyer can, in this case, delay payment until the goods arrive at the named destination point.

If the buyer receives two bids identical in every respect except for the method of payment, the buyer will find more attractive the one which offers to sell on D/P terms rather than L/C terms. D/P terms mean savings of interest on the payment amount for the period the goods are in transit. The bid for D/P terms will therefore effectively offer a lower price.

8.3 Long manufacturing cycle and progress payment

Payment terms for some goods are often conditioned by their nature. Specialised equipment or custom-designed machinery usually involve a long manufacturing cycle. If the terms of the procurement contract also include for installation, commissioning and trial runs, the supplier will complete his obligations only after a long period of time. In the meantime, the supplier has to commit substantial sums for buying the required raw materials, components, sub-assemblies and for meeting other expenses. Although, ideally the buyer should be required to make full and final payment only after the supplier has discharged all his contractual obligations, commercial practice links payments to the different stages of progress.

Progress payments are frequently paid in this way:

- **Initial advance (on the conclusion of the contract).**
- **Progress payments (one or more instalment payments) linked to the progress of fabrication.**
- **Payment on dispatch of goods as evidenced by shipping documents.**
- **On receipt of goods at site.**
- **On installation.**
- **On commissioning and successful completion of trial runs.**
- **On discharge of remaining contractual obligations, if any.**

The progress payment instalments are usually expressed as some percentage of the cost of the total project. [1]

From a buyer's point of view, other things remaining the same, the best payment terms

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1. **A large project may involve one or more consultants and/or contractors, several sub-contractors and suppliers of goods and services. Each contract and sub-contract will specify the schedule of progress payments linking these to different jobs within each sub-contract.**

in a bid proposal are those which require him to make full payment when all contractual obligations have been fulfilled. If no bid proposal contains such a provision, the one in which the bidder proposes to accept a major part of the payment close to the final delivery point would be preferred.

In general, the buyer is more likely to receive offers which contain different time schedules of progress payments and varying instalment plans. In order to compare the bids, the buyer should ideally work out the present worth (value) of these different scales of progress payment. For him, the best bid in terms of payment would be the one for which the present worth of scheduled progress payments was the lowest. If the buyer adds the present value of future progress payments to the down payment of each supplier, he can identify the best evaluated offer.

8.4 Credit terms

As is often the case with domestic supplies, in international procurement it is not uncommon for suppliers to offer to sell goods on credit. Two or more offers, identical in all other respects, may contain different credit terms. One bidder may ask for prompt payment on delivery of goods or shipping documents. Another may quote the same price but offer goods on 180 days credit - the buyer will have 180 days after the goods have been delivered to him in which to pay. For the buyer, the effective price quoted by the two suppliers is not the same: one demands prompt payment, the other offers credit. The bid offering credit on payments is cheaper by the amount of interest at the going market rate which the buyer would save (or earn) over the 180-day period.

Annex I

Bid Submission Form

Annex II

Checklist of important points in bid evaluation

A. Pre-bid invitation stage

1. Define as precisely as possible the need that is to be met.

2. Identify the product that will meet this need.

3. Specify operating and other relevant parameters.

4. Lay down specifications, as required, by reference to:

   a. Standards:

      (i) national;

      (ii) international;

      (iii) other country's;

      (iv) industrial associations.

   b. Brand names

   c. Catalogues of sellers

   d. Drawings, engineering designs

   e. Samples

5. Specify test methods and procedures.

6. Research supply market to know the structural characteristics of the international market for the product.

7. Decide on procurement method and strategy.

8. Identify potential suppliers, through desk research.

9. Shortlist the more reliable ones through a pre-qualification system or otherwise.

10. Prepare bid documentation and the invitation to tender. Define contract terms and conditions and scope and nature of guarantees required. Check for precision and completeness.

11. Establish evaluation criteria.

B. On receipt or opening of bids

1. Examine for compliance with instructions.

a. Timelines of submission
b. Completeness of documentation, (e.g. bid bond and guarantees)
c. Authorised signature on bids

C. At bid-evaluation stage

1. Design a suitable format for bid tabulation.

2. Reduce all variables in different bids to a comparable basis, e.g. either all FOB or CFR terms.

3. Express all prices/costs in a single currency and use an appropriate exchange rate for the purpose.

4. As the ultimate cost to the buyer is more important than the price, compare the relative cost of supplies from different bidders and not only their price quotations.

5. For equipment, be assured by the supplier of the later availability of spares/replacements and their supply price.

6. As operating costs are as important an element of evaluation as the initial cost of the equipment, adopt a total-costing/life-cycle costing technique when evaluating bids for equipment.

7. As the time profiles of the costs and possible output (and hence, revenues) of different bids for equipment are likely to differ, use the net present value technique and take into account the serviceable life, salvage value at the end, and operating costs.

8. Follow these two objectives for the technical evaluation:

   a. Assess deviations from prescribed specifications and, if these are acceptable, make appropriate adjustments to the price for positive and negative deviations to compare offers.

b. Appraise the differences in process/engineering technologies of the different offers for productivity differentials (use of material and/or human inputs per unit of output).

9. For commercial evaluation, reduce the payment terms of different offers to a comparable basis. In the case of deferred payments, make use of the net present value analysis technique.

Annex 1

Bid submission form

1. Total firm price

Net and frim prices, free of all taxes and duties, drawn up in accordance with the provisions stipulated in the tender documents for:

(a) Supply, installation and commissioning

Prices in US dollars

See details under 2)

	Ex Works	**FOB**	
CFR	**Transport**	**Installed and**	**TOTAL**
		costs to site	
commissioned	**A+B+**		
			a t m i n e
sites	**C+D+E**		
	A	**B**	
C	**D**	**E**	
Lifts for			
mine shafts			