PROFESSIONAL SKILLS MODULE

Provide procurement advice, advice on contract documents and price determination documents for built environment projects

Module 3 Examination

May 2018

Time: 3 hours
Total marks: 100

Suggested Memo
QUESTION 1

Two types of procurement methods are most commonly practiced currently, namely Fixed Price Contracts and Cost Reimbursement Contracts.

(a) Briefly discuss the alternative forms of contracts for each methods.

**Fixed Price Contracts**
- Lump sum contracts - only to be used for small and simple projects
- Performance specification - contractor required to provide a price based on client’s brief and used requirements only. Vague approach and contractors tends to choose cheap material and method of construction
- Schedule of rates - no quantities available, only rates supplied
- Bills of Quantities – best option for estimating, tender comparison and contract administration
- Provisional Bills of Quantities – early start required, incomplete drawings and/or specifications, all quantities subject to remeasurement

**Cost Reimbursement Contracts**
- Cost plus percentage – actual cost plus a pre-determined percentage
- Cost plus fixed fee – actual cost plus a fixed pre-determined fee
- Cost plus a variable fee – fixed amount and a variable amount that is dependent on the actual cost

(b) Discuss the advantages and disadvantages of the two types of procurement methods.

**Advantages and disadvantages (Fixed Price Contracts)**

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer’s financial commitment is known before entering into a contract.</td>
<td>Design takes time and this results in an increased overall project time and a lengthy time for inception to start.</td>
</tr>
<tr>
<td>The design is complete or far advanced.</td>
<td>Client has no control over the contractor’s programme.</td>
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<tr>
<td>Cash flow requirements can be determined.</td>
<td>Unavailable information for documentation may result in inadequate contract documentation.</td>
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<tr>
<td>Relatively low tender prices are obtained.</td>
<td>Contractual claims are endemic – late supply of project information and variation orders.</td>
</tr>
<tr>
<td>Risk of variations is contained. Client assumes less financial risk.</td>
<td>Premium for the risk is paid to the contractor whether the risk materialises or not.</td>
</tr>
<tr>
<td>Built-in incentive for the contractor to work effectively and to complete the work as soon as possible to maximise his profit</td>
<td>Time and production cost savings are lost to the client and only the contractor benefits.</td>
</tr>
<tr>
<td></td>
<td>Lack of contractor involvement in the design.</td>
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</tbody>
</table>

**Advantages and disadvantages (Cost Reimbursement Contracts)**

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</tr>
</thead>
<tbody>
<tr>
<td>Early contractor appointment and commencement with construction is guaranteed.</td>
<td>Client assumes higher financial risk.</td>
</tr>
<tr>
<td>Time saved because there is no preparation of valuations and site measurements.</td>
<td>Little financial incentive for the contractor to work efficiently.</td>
</tr>
<tr>
<td>The fixed fee introduces an element of competition.</td>
<td>Cost effectiveness cannot be controlled.</td>
</tr>
<tr>
<td>High quality is assured as the client assumes the financial risk for time spent on site.</td>
<td>Increased site supervision cost to manage the economical use of materials.</td>
</tr>
<tr>
<td>The client has greater flexibility to issue variations during construction.</td>
<td>Contractor selection is based on the added fee and doesn’t guarantee the contractor’s efficiency.</td>
</tr>
<tr>
<td>Contractual disputes and claims are minimized.</td>
<td></td>
</tr>
<tr>
<td>Time and cost for tendering is saved.</td>
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</table>
QUESTION 2

Every built environment construction project is subject to risk. The choice of the procurement system determines how risk is distributed on the contracting parties (employer/contractor).

With the aid of an appropriate diagram, discuss the spreading of employer’s and contractor’s risk in terms of various contracting strategies in relation to various pricing strategies. Also illustrate the impact of employer’s flexibility.

Relevant discussion required [10 marks]
Refer to Figure 4 in module [max 10 marks]

![Figure 4: Allocation of Risk](image)

QUESTION 3

The FIDIC suite of documents was founded in 1913 and in 1999 FIDIC extended its ambit into other disciplines, with the publication of first editions of a new family contracts comprising four new standard forms of contract. The FIDIC suite of documents are known throughout the world for producing standard forms of contract for civil engineering construction and mechanical and electrical plant.

With specific reference to the FIDIC (Red Book), discuss the main features of the document relative to:

(i) Application
(ii) Provision for different contracting strategies
(iii) “Tender” vs “contract”
(iv) Structure
(v) Design by either party
(vi) Limitation of liability
(vii) Financial risk allocation
(viii) Role of the Employer and his agents
(ix) Subcontracting
(x) Claims procedures
(xi) Dispute management


<table>
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<th>Aspect</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Building and Civil Engineering contracts</td>
</tr>
<tr>
<td>Provision for different contracting strategies</td>
<td>Construction: Building and Engineering works designed mainly by the employer.</td>
</tr>
<tr>
<td>“Tender” vs “contract”</td>
<td>“Tender” included as part of the “Contract”</td>
</tr>
<tr>
<td>Structure</td>
<td>Separate documents with many common clauses repeated in each document. (Documents are structured around 20 similar clauses, which are adapted as required by each contract.)</td>
</tr>
<tr>
<td>Design by either party</td>
<td>Intended to be by the employer but contracts provide for design by the contractor to the extent specified in the contract. Parts designed by the contractor to be fit for purpose.</td>
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</table>
### Limitation of liability

- **Loss of revenue, loss of profit, indirect and consequential**
  - Other direct losses during the contract period
  - Loss and damage to employer’s surrounding property
  - Latent defects

  Capped at amount stated or contract sum if not stated, with exceptions. This cap applies to the contractor only.
  - Unlimited for defects to the extent which contractor is responsible, uncertain for others.
  - Contractor liable, including for consequential loss, arising from breach of contract, negligence, or other legally actionable wrong.

  The contract is silent, hence covered by the law of the contract in which the site is situated.

### Financial risk allocation

- **Employer carries quite a few risks**
  - Engineer / Employer to determine (extra time & cost) by consultation in an endeavour to reach agreement. Alternatively, engineer can determine.

### Role of the Employer and his agents

- **Red book refers to employer and the engineer (a person who may not necessarily be an engineer).**
  - Engineer is the employer’s agent but may be restricted by the employer.
  - Engineer is required to determine any matter by consultation with the parties and if agreement is not reached, to determine the matter by making a fair determination in accordance with the contract, accounting for the circumstances.

### Subcontracting

- **Contractor is liable as if he had not subcontracted.**
  - Provision for Nominated Subcontracts.

### Claims procedures

- **If Contractor considers himself entitled to make any claim for extension of time or additional payment, he shall notify the Engineer within 28 days of the circumstances giving rise to the claim, after which the Employer has no further liability. This is a strict / full time bar.**

### Dispute management

- **Disputes first referred to a Dispute Adjudication Board (single person or three-person board) for settlement. If no notice of dissatisfaction is received it becomes final and binding.**
  - General Conditions of Dispute Adjudication Agreement included as an Appendix in each main contract document.
  - If dissatisfied, a party notifies the other and amicable settlement is attempted. If still no agreement, proceed to international arbitration by three arbitrators under ICC rules, unless otherwise agreed by the parties.

### QUESTION 4

Your firm has been appointed as the consulting quantity surveyor for the construction of a ten storey office building.

The client’s budget is R 200 million while your estimate for building work amounts to R 240 million. Drawings and specifications to the project are not fully completed yet but could be used to compile price determination documents.

The client emphasize the importance of time in terms of the tendering time-frame (as soon as possible) and a minimum construction period is proposed.

With reference to the current circumstances, write a recommendation report to your client, discussing the following aspects:

(a) **Various factors that has influenced the selection of an appropriate form of contract**

  General discussion required based on the following factors:
  - Client objectives
  - Client – Private or Public
  - Type of work to be undertaken
  - Status of the design
  - Size of the proposed project
  - Price determination method

(b) **Discuss and motivate the most appropriate price determination method and form of contract that will be suitable for the above project.**

  - Candidates required to discuss and motivate the best appropriate price determination method – A Provisional Bill of Quantities will be suggested.

  - Form of Contract suggested – JBCC PBA

  Motivate and discuss why
  Discuss Application of Contract, design responsibility, risk allocation, role of the Employer and consultants.