

SPECIFICATION OF CONTRACTOR SELECTION BY DIFFERENT TYPES OF CONSTRUCTION PART FROM PERSPECTIVE OF MAIN CONTRACTOR

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Abstract

Development of supplier's selection in construction depends on various type and scope of demanded parts. Obviously, development is different in selection of suppliers of construction materials and selection of suppliers of installation of those materials. Also different way takes place selection of suppliers of specialized professional sections and selection of security provisions of buildings and constructions. This article is about various approaches and specifications of tenders in accordance to different types of construction parts.

Keywords

contractor selection; selection variety; scenarios and evaluations; selection criteria

Introduction

During the implementation of the construction contract, by the main contractor (MC), the procedure of the selection procedure is changing in the individual selection procedures. The basic goal in the choice of the procedure is the maximization of the success of the selection procedure – i.e. the choice of the most suitable contractor for the given part of work. Simultaneously the time used for the selection procedure needs to be minimized. This is essential because nowadays the quality demands are increasing and the construction deadlines are being shortened. The basic evaluation criteria of success are meeting the deadline, quality and keeping the given budget.

The evaluation criteria of the offers are changing along with the procedure of the selection procedure.

Project structure by selection procedures

Before the start of the selection procedure the MC's project management should structure the project into logical parts that will become the subject of the selection. In rare cases the project is assigned to only one subcontractor. No selection procedure is carried out in case the MC has their own specialized centre for a particular part of work. Considering the economic results of the project, the project is usually structured into a few tens of parts and these are assigned to specialized subcontractors. Those parts are demanded as supplies and assemblies in the most cases. In the course of the project it is necessary to ensure separate deliveries of material for which different procedure and selection criteria are applied. If construction management chooses the associated supply (i.e. supply and assembly) or if they divide the selection and implementation into separate delivery and separate assembly, depends on the value for money. The risk of each type of delivery is necessary to be taken into consideration. The advantage of the associated delivery is simple transfer of guarantee conditions to a third party. If the delivery and the assembly are done separately, it is more complicated and riskier to transfer the guarantee conditions (sometimes it is difficult to determine if the problem was caused by bad material or incompetent assembly). Another group are services whose subject is neither delivery of the material nor assembly but carrying out of services or activities.

Construction project can be structured into groups:

- **Delivery of material including assembly** - e.g. laying the foundations, monolithic constructions, prefabricated constructions, isolation, carpentry constructions, assembled constructions, sheet metal constructions, joinery constructions, locksmith constructions, ventilation system, health installations, heating, cooling, compressed air, electrical heavy and weak current installation, communication, engineering networks, garden adjustments etc. according to the building character.
- **Delivery of material excluding assembly** – e.g. construction material, material and elements for setting the building site, material for administrative work (paper etc.)
- **Assembly without material** – e.g. craftsmen (carpenter, tinsmith, bricklayer etc.)

- **Services** – e.g. engineering, cleaning, tools/scaffold etc. hire companies, ensuring of references, expert opinions, certifications etc.

Selection criteria and their choice

The criteria can be divided into two basic groups:

- objective criteria
- subjective criteria

Tichý (2008)[1] described these two groups as follows:

“Objective criterion makes it possible to set a limit of the required quality or compare the measure of quality with sufficient accuracy. Objective criterion does not depend on the evaluator because its use must give the same outcome when the evaluated “object“(in a general meaning, i.e. not only a physical object but also an activity, quality etc.) will be examined by whoever. “ [1, s. 108]

“Subjective criterion calls on the evaluator to deliver an opinion to the subject of evaluation. If a certain object is evaluated by a team of a few evaluators, the outcome can be different at each team member even if the same criterion has been used. “ [1, s. 108]

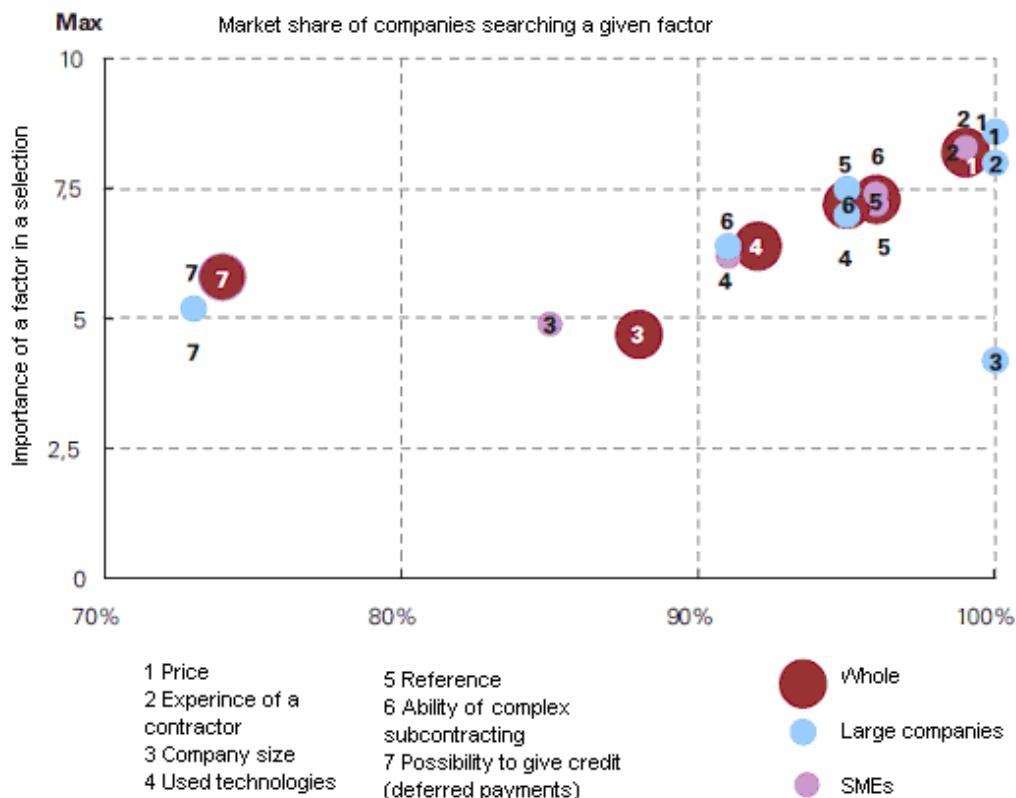


Figure 1 Key criteria when selecting contractors and construction companies [5]

Figure 1 depicts the most frequently used criteria in construction companies in the Czech Republic. These criteria are used in the selection of complete deliveries including assemblies.

The assignment of evaluation criteria by type of selection procedure is different in individual companies. For example see below quoted criteria of a construction company which is the main contractor in the Czech Republic.

“The number and type of selected criteria has significant importance for the quality of selecting decision. The price, delivery period and quality of the goods cannot be the only criteria at important material or at supply that is bigger in volume.” [2]

Main selection criteria by type of selection procedure:

- **Delivery of material including assembly**

- Price
- Reference
- Speed of construction
- Reputation
- Experience with the given subcontractor

- **Delivery of material excluding assembly**

- Price
- Reference
- Speed of delivery
- Reliability of delivery
- Delivery dates

- **Assembly without material** – e.g. craftsmen (carpenter, tinsmith, bricklayer etc.)

- Price
- Quality of delivery (mainly the reference is evaluated)
- Experience with the given subcontractor
- Implementation deadlines

- **Services**

- Price
- Reliability of delivery (own experience is evaluated)
- Quality (experience from other projects is evaluated)

Procedures of selection procedures and their choice

The choice of procedure of selection procedure depends on a few factors. It is of particular importance to lay down how much time the selection procedure will take (how much time can the choosing person afford). It is necessary to take the selection procedure type (see the groups above) into consideration. Last but not least the choosing person must consider other facts (mainly from the economic perspective) that are necessary for a successful selection procedure. Lengthy three rounds selection procedures and complicated selection of subcontractors into the selection procedures are not necessary in some cases. Sometimes it is sufficient to use simplified methods or use a device - e.g. reverse auction.

- **Delivery of material including assembly**

Shortened selection procedure for deliveries including assemblies – standard way [4]:

1. Preparation of demand documents
2. Studies of specifications and continuity
3. Choice of companies into selection procedure
4. Preparation of demand sheets
5. Distribution of demand documents to chosen companies
6. Preparation of custom lists
7. Acceptance of first offers. If an offer has not been submitted, find out if the offer will be processed with delay.
8. Comparing price offers and specifications
9. Checking the scope and completeness
10. Second round of the selection – specification of the price offers. Exclude redundant elements and complete with missing items.
11. In the second round it is necessary to specify subcontractors' alternative solutions suggested in the first round.
12. Negotiations with the subcontractors – with the best economic offers. Specification of the scope, deadlines, technical implementation or specification of the alternative solutions. Familiarizing of the subcontractors with trading conditions.
13. The third round of a selection. Final demand with exact specification and solution alternative
14. Final comparison of price offers
15. Selection of economically and technically the most advantageous subcontractor (or other criteria by type of the character of the construction work or its part).
16. Completion of custom lists. Comparison of the cost prices and tender prices, determining the amount of profit or loss.
17. Submission of custom lists for company management authorization.

18. Drawing up the draft of contract of work
19. Specification and signing the contract of work
20. Notify not selected companies about completion of the selection procedure.

The mentioned procedure is standard in cases when the demand includes both delivery and assembly. This procedure is lengthy and cannot be used for requirements of accelerated constructions. In that case the selection procedure has only two rounds or it is replaced by the electronic reversion auction.

- **Delivery of material without assembly**

The course of the selection procedure is considerably simplified and shortened (above mentioned points 2, 10, 11, 13 are not carried out). The selection of subcontractors is easier regarding the specialization of the subcontractors in specific building material selections (the number of potential contractors is decreasing). Because of higher transport costs, companies which have their storages further from the building site are in most cases excluded from the selection.

- **Assemblies without material**

Selection procedure is simplified with comparison to the previous group. Into selection procedures main contractors usually choose companies they have experience with. The selection does not have more than two rounds. The evaluation and selection of the subcontractor come after the offers have been sent.

- **Services**

The selection procedure is simplified again. First a face-to-face meeting is organized to discuss required outcomes and requirements of the services supplied. A tendering procedure and evaluation follow.

Conclusion

After the basic structure has been done, it is necessary to classify the tenders into groups. Choice of the type of the selection procedure follows. At the same time evaluation criteria of the offers are set. When deciding what type of the selection procedure to choose the implementation dates must be taken into account and goals of individual selection procedures must be set.

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