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Highway projects: Prices in public bids

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Abstract

Highways and roads are an important part of public assets in all countries, allowing movement between communities. As well as other types of infrastructure, the roads infrastructure requires a proper procurement process. The research shows that prices presented in public bids are lower than those expected by contracting authorities. Public owners are restricted to the public bidding procedures, especially the provision to use low bid price in the Public Procurement Act. Often a public owner has concerns about the contractor bidding with the lowest sum. Contractors are repeatedly requested to explain the reasons for their low price. This leads to time extension of the bid process. The lack of contracts for construction work and an additional competitive concern to win out in the bid process may be the reason for low prices. An incorrect calculation of the estimated contract price by the contracting authority itself could be another reason.

The cost analysis of two sections of highway clearly showed incorrect cost estimates by the relevant contracting authority. The difference was primarily due to significantly lower rates of indirect costs and profit, rebates granted when buying building materials, and lower cost of plant. The author summarizes the possible causes of the incorrect estimates of expected value and at the same time proposes methods to achieve better estimates for the contract price. The public sector may use the results of this study to identify the ineffectiveness of procurement in the area of infrastructure projects in the Czech Republic. The proposed procedures should improve the efficiency of procurement and provide better cost estimates by the public agencies.

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1. Introduction and literature review

Highway constructions in the Czech Republic are procured using public contracts financed by the state budget [1]. The number and financial volume of these public contracts in 2013 and 2014 is presented in Table. 1.

Table 1. Public contracts in the area of highway construction in the Czech Republic

Year	Number	Volume (EUR)
2013	1676	1 682 000 000
2014	1607	1 946 000 000

Public owners, such as government agencies, have to use specific procurement methods. The contracting authority must proceed according to the Public Procurement Act. The contracting authority defines the scope of the project, usually with a detailed set of plans, specifications and detailed quantity take-ups. The contracting authority requires detailed cost estimates as part of all proposals.

Contractors submit a unit price; the contractor with the lowest sum should be selected for award. Bid contracts generally are awarded solely on price. The contracting authority may require prospective contractors to submit documentation of their qualifications for review; this is known as prequalification of contractors. The contracting authority selects the contractor submitting the proposal that is ranked highest based on the owner's evaluation criteria (typical criteria include price, project duration, expertise of project management team, contractor's experience with similar projects), and negotiates a contract price [2,3,4].

Enhancement of the competitiveness of a construction company is one of the most important strategic objectives in the construction industry. The company's management system, work organization and employment of available assets are some of the most important factors through which overhead costs and the bidding price of a construction company depend directly [5].

The prices presented in public tenders are lower nowadays than those expected by contracting authorities. Bid prices reach only 60% - 70% of the anticipated price determined by the contracting authority. This situation seems to be a significant problem. The contracting authorities are inhibited in selecting the contractor with the lowest sum because of this difference. During the last few years, the Czech Republic became a place where this issue has been thoroughly tested in practice in many sectors. One of the main problems with an abnormally bid tender price is the proper identification of low tender price practices without affecting the competition itself. Contractors may offer advanced solutions allowing for significant reduction of prices.

The issue of abnormally low tender prices has become a problem for many public procurement markets in Europe. In autumn 2013, the European Bank for Reconstruction and Development (EBRD) organized a special conference dedicated to this problem.

The issue of cost of highway projects has received much study, especially at national level [6,7]. There are also several studies in the Czech Republic that relate specifically to the project efficiency of the construction and maintenance of highways within the life cycle [8].

Few highway agencies use performance measures for cost estimating. The study [9] synthesizes, categorizes, and validates existing performance measures for cost estimating of highway projects in order to assist with improving estimating accuracy.

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