

Analysis of Request for Proposals in Construction Industry

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ABSTRACT

Purpose: The purpose of this paper is to identify and determine reasons why construction companies reject some of the request for proposals (RFPS) suitable for them.

Methodology/Approach: The research has several parts. Within the first part the list of reasons which lead to rejection of RFPS and thus potential client are identified. Then the comparison of differences between groups of rejected RFPS with different configuration is made. The last part of research use Pareto analysis to determine most obvious and most costly reasons of rejection of RFPS.

Findings: The paper identifies 12 reasons, why construction companies decline to prepare proposal for their potential clients. It also doesn't confirm that configuration of RFPS has significant impact on the rejection of RFPS. Moreover the results on the other hand showed that insufficient trust represent the main barrier which influences the rejection of RFPS in selected company.

Research Limitation/implication: The main limitation of the research is that it is based on single case study. Although, the quantitative results have to be generalised very carefully, on the other hand paper provide list of the possible reasons why construction companies decline to compete for an offer.

Originality/Value of paper: The paper provides unique perspective because apart from traditional attitude, where only the submitted RFPS are evaluated, this paper analyses rejected RFPS and tries to identify and determine reasons why construction companies decide not to prepare proposal and thus reduce the possibility to acquire new contract.

Category: Case study

Keywords: procurement; construction; RFPS; tender; one-bid offer; trust

1 INTRODUCTION

The construction industry is known for its special attributes which have to be determined in order to understand how companies operate. The one speciality is that most products produced within this sector are unique, which cause a small level of product standardisation (Zunk et al., 2014). It is also a reason why the construction companies have to prepare unique proposal for every product that want to sell and their performance often directly dependent on the success of their offerings within various tenders, selections and procurements processes (Ibem and Laryea, 2014). Therefore it is not surprising that procurement processes conducted within construction industry have been detailed studied and analysed for more than 50 years. The one area is how the numbers bidders affect bidding process and outcome. Although it is discussed from 1956 by Lawrence Friedman, the results are still inconclusive. The Studies conducted in U.S. and UK during the 80. and 90. showed that number of bidders is one of the three most important factors that have impact on bidding decision (Ballesteros-Pérez et al., 2016). Findings like these raise questions regarding the factors, which influence the number of bidders. Majority of the research were focus on factors like size of the contract and market condition. Other studies investigate factor like project type, client, specific location etc. Detailed description of them and their results can be found on Ballesteros-Pérez et al. (2016). According to their study it is very hard to determine what influence the number of bidder in the bidding process. They stated *“Nonetheless, forecasting the number and identity of bidders is challenging, since no conclusive solution has yet been found for its accurate prediction, nor exists a suitable quantitative model to forecast the identities of a single or a group of specific key competitors likely to submit a future tender”*.

In this paper we tried to look on the problem from different perspective. In term of research question, we tried to determine the factors which influence the bidders not to be part of the bidding process. Motivation for research is that although it is hard to *“forecast the identities of a single or a group of specific key competitors likely to submit a future tender”*, it can be easier to identify the reasons why competitors are not willing to submit proposal for a future tender. Therefore, this paper is focused on the process of offer's elimination. We analyse 170 offers of middle-sized construction company from east Slovakia with an aim to determine the main reasons which lead to elimination of offers from the bidding process.

2 CONSTRUCTION COMPANIES IN A PROCESS OF OFFER SELECTION

The vast majority of the research, regarding the procurement processes in construction industry, deals with type of mechanisms, configuration of mechanisms and characteristics of the investors or RFPS. For more information about these studies see Ballesteros-Pérez et al. (2015; 2016), Ruparathna and

Hewage (2015), Szabo (2015), Delina (2014), Ibem and Laryea (2014), Zunk et al. (2014), Eriksson and Westerberg (2011), Eadie, Perera and Heaney (2010), Doucek (2004). We decided to study the beginning of the procurement process, the phase, where the construction company decides to participate in tender. This study tries to describe the process of competition selection from the bidders/participants point of view. It is done by analysis of the bids and RFPs of concrete construction company.

The evaluation and the management of company's performance are usually based on analysis of all relevant processes conducted within and outside of the company. The performance of the company with a history of many unsuccessful tenders (or other procurement competitions) can be hardly considered as efficient. Based on research conducted in our previous works (Sabolova and Tkáč, 2015; Tkáč and Sabolova, 2015) we can claim that unsuccessful tenders represent for construction company, not only missed opportunities, but also sunk costs of proposal preparation. Although the costs of proposal preparation are usually small compare to the price of winning offer, but there is also a question of capacity management. The people and sources that were used for preparation of losing proposal could be used to preparation of the one that could win. Based on these claims, there are logically two types of mistakes made by construction companies in the process of offer selection. First type of mistake is to select the request for proposal that company shouldn't select (because it is not the winning one). Second mistake is reject request for proposal that company should have selected (because the proposal would be the winning one). The costs of first mistake are costs of proposal preparation. They represent pure loss in company accounting. The costs of second mistake are cost of missed opportunity. The problem with these mistakes is that construction companies can make both of them at the same time. Based on capacity restriction of realization team they choose to prepare proposal for offer that they should not and reject the offer that they should accept. The issue of missed opportunities is also interesting from the perspective of performance measurement. It is hard to quantify the expected profit that could be obtained if the construction company wins the competition that the company decides not to take part in. Such evaluation can't be estimated from accounting of winning firm as well as from any previous information provided by investor. Moreover not winning represents for participant's company some kind of loss, because its expectation was not fulfilled. Moreover the exact size of this loss is unknown, it is called hidden loss.

For construction companies (in terms of their performance) in order to minimize mentioned mistakes is important to improve the process of selection and preparation of offers. Company must continuously analyse their losses, winnings as well as the rightfulness of their selection procedures to determine which competitions are suitable for them. The importance of such analyses became more obvious when company take part in public procurement. Even a small inadequacy, during the process of applying for public offer, can lead to disqualification of offer from competition. In private procurement, the investor

can overcome some inadequacies and decide whether offer will be disqualified or not. Therefore, the characteristics of request for proposal significantly affect not only the company's decision regarding participation in the contests, but also, the outcome of contests and realization of construction projects. Consequently, historical analysis of previous offers and competitions from practitioner's point of view can assure better sustainability of construction companies in construction industry.

3 DESCRIPTION OF THE SAMPLE

The research in this paper is based on requests for proposal (RFPS) collected in the particular construction company from 2009 to 2014. Based on internal company documentation, we have compiled a table that provides information about the various construction projects. The cases were defined by places of realization, the estimated cost of the contract, price of realization, type of procurement mechanism and type of investors. The object of the examination was medium-sized construction company operating in the Košice region in the Slovak Republic. The company was founded Dec. 4, 1992 as a limited liability company. The company has a total of 50 employees, which are broken down by categories. The structure of the company's staff can be seen in Figure 1.

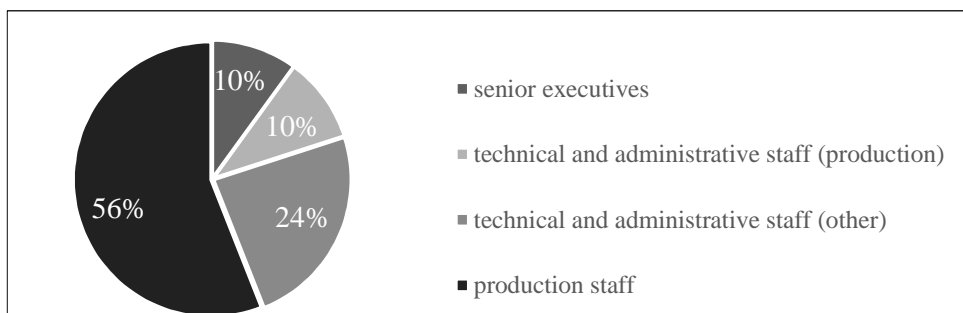


Figure 1 – Structure of employees by categories
Source: authors

The team for realization of construction projects has 28 professionals, concretely 14 bricklayers and concrete workers, two carpenters, one electrician, two steelmakers, 5 drivers and operator of construction machines, two locksmiths and two auxiliary construction workers.

During the mentioned 5 year period company analysed 170 requests for proposals (RFPS). Most of these (126) were transformed into proposals and company use them in various selection and procurement processes. On the other hand closely to one quarter (40) of all RFPS were rejected without any proposal preparation procedure. The winning rate, (55%) apart from losing rate (19%) suggests that company carefully selects which competitions are suitable and which are not. The detailed structure of analysed RFPS is described in Figure 2.

In the study we will focus on the offers that were rejected, in order to determine main reasons why company decided not to participate in these particular competitions.

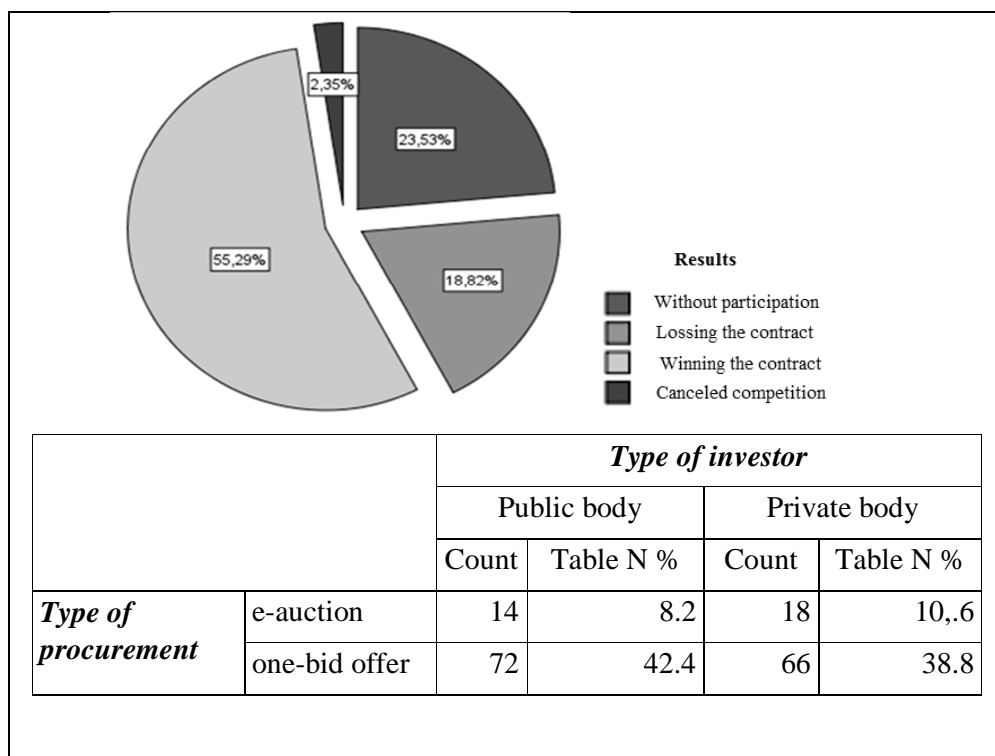


Figure 2 – Structure of RFPS based on company the results
Source: authors

4 METHODOLOGY

The research in paper has two parts. First part is based on basic comparison of rejected RFPS based on their characteristics. Although every single RFPS was unique, we manage to identify 3 parameters, which can be recognized from all of them. These parameters are:

- Predetermined estimated price of project
- Type of investor (private procurement vs. public procurement)
- Type of procurement (e-auction vs. one-bid offer)

According to these characteristics, we create descriptive tables to identify differences in rejected offers based on different type of investors or procurement method. Motivation for such analyses is to determine whether some type of

procurement methods or some types of investors are rejected more frequently than others.

Second part of research focus tries to identify main reasons why these offer were rejected. The information system of the company require from the managers to state the reasons of rejection of RFPS. Based on these statements, we identified several key causes of rejection. The frequencies of these reasons were analysed by statistical methods known as Pareto analysis. Pareto analysis is a specific type of histogram, which helps to identify priorities and determine problem areas. It is used for effects' determinations of corrective measures or a variance analysis between two or more methods (Doležal, Fireš and Míková, 1992) defines three types of Pareto analysis:

- 1) The fundamental analysis that identifies the causes of the most common problems of quality management,
- 2) Comparative analysis that solves outbreaks of any option,
- 3) The weighted analysis providing measurement of significant factors which do not appear at first sight.

The analysis is based on the Pareto principle: 80% consequences due to the 20% of causes. According to Veber (2004) analysis helps identify priorities that need to be targeted (on which products, processes, activities) rearrange items according to frequency of occurrence and determine the relative cumulative frequency.

5 THE RESEARCH

The first part of research focus on analysis of RFPS based on their different features to find out whether specific group of them isn't rejected more likely than the others. As was mentioned in the methodology the RFPS were divided based on characteristics such as type of investor and type of procurement method into four groups. The distribution of rejected requests is presented in the first table of the Table 1. Second table of the Table 1 represent the same division of RFPS into the four groups, but instead of frequencies it presents sums (in €) of estimated project prices predetermined in particular RFPS.

As can be seen from Table 1, there are small differences between groups of rejected RFPS. The differences became even smaller when the results from rejected RFPS are compared to the sample of all RFPS (Figure 2). The distribution presented in the sample of all RFPS is very similar to distribution of rejected RFPS. In both of the samples the public one-bid offers represent majority of RFPS. The presented results of rejected RFPS don't show significant change in distribution of RFPS in compare with overall distribution of the whole

database. It seems that, type of procurement method or type of investor doesn't seem to be a barrier for the construction company to participate in competition.

Table 1 – Distribution of rejected RFPS based on their characteristics (Source: authors)

		<i>Type of investor</i>			
		Public body		Private body	
		Count	Table N %	Count	Table N %
Type of procurement	e-auction	6	15.0	6	15.0
	one-bid offer	17	42.5	11	27.5

		<i>Type of investor</i>	
		Public body	Private body
		Sum [€]	Sum [€]
Type of procurement	e-auction	11 601 998.39	11 058 019.39
	one-bid offer	14 082 992.32	10 968 960.10

The second part of research is based on the use Pareto analysis, in order to determine main reasons for rejection of RFPS. Based on reasons of rejections stated in the information system of the company we identified 12 reasons why company rejected selected RFPS. The identified reasons are: Time issue - short term of realization, Time issue - short term for proposal preparation, Financial incapability, Uncomplete project documentation, Insufficient capacities, Obscure financing - private investor, Unfavourable contract condition, Unattractive contract, Different type of construction, References, Technical difficultness of construction. Based on these reasons we created two Pareto diagrams. First diagram (Figure 3) represents the frequency of the causes and the second one (Figure 4) represents value of the causes. The value of the cause is determinate as sum of estimated projects prices predetermined in RFPS which were rejected because of this particular cause.

As can be seen from Figure 3 and Figure 4 almost all the reasons for which the company has decided not to participate in the competition are not related to any "insurmountable" obstacles, and therefore they can be seen as a missed opportunity of the company.

In term of frequency, the cause the largest share in the sample was "unattractive contract." For the company unattractive contract means that it is a contract which is not big enough for its realization, i.e., the company realizes bigger buildings and management was not interested in the project. The second reason for

rejection of the RFPS was that the company does not realize this type of construction. These types of RFPS represent technologically advanced, water or historical buildings projects. It should be highlighted that the RFPS on construction projects which cannot be realized by selected company because of its incompetency were removed from sample and analysis. The cause “different type of construction” represents buildings which can be built by the company but from a certain point of view, they are unusual and company decided that this extra effort is not worth it.

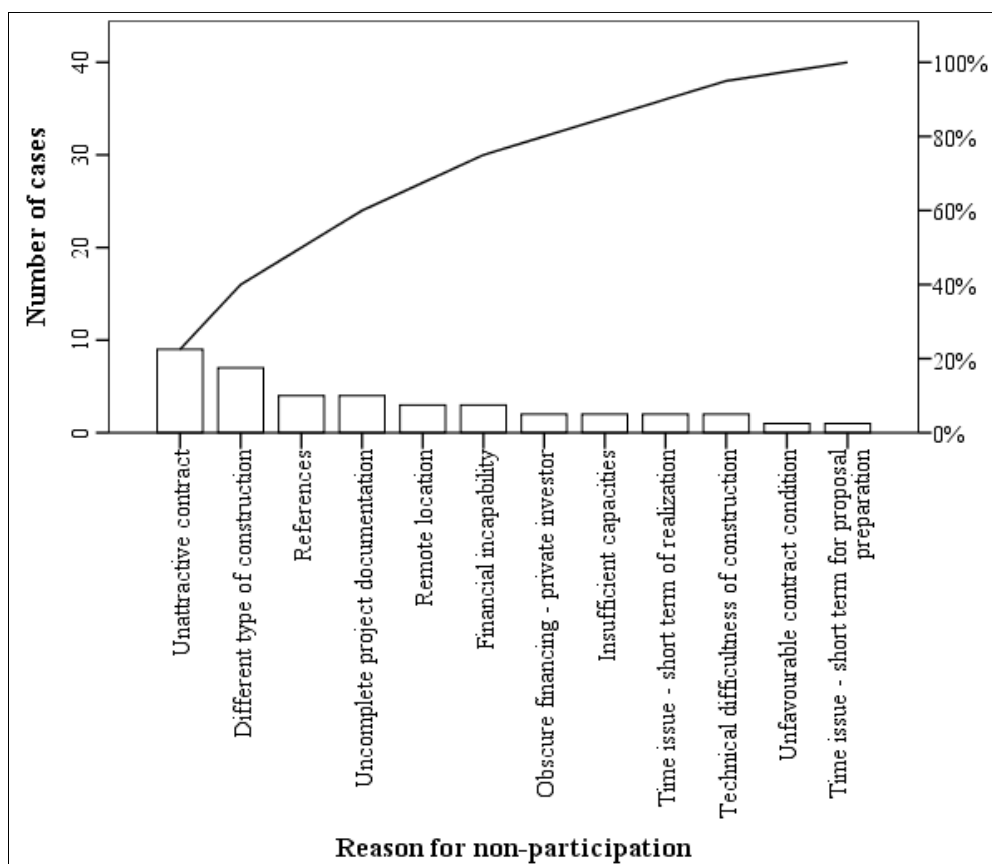


Figure 3 – Pareto diagram of reasons for non-participation in the competition based on count of RFPS

Source: authors

The third reason for rejection is represented by insufficient references. The RFPS state the volume and type of references that should be provided by company in order to be part of competition. Usually in this case the applicant must provide a reference letter with the name and company name of the customer, the address of its registered office, name and company name of the contractor, the name of the subject of contract, the total contract price in EUR without VAT, dates of commencement and completion of work, places of realization and a brief

description of the contract which expressed that the work has been performed in accordance with the contract and with the required quality. The references should also include customer's contact person (name, phone number), who can verify these information.

The uncomplete project documentation was the fourth reason why the company has decided not to participate in the competition. Reason why this cause occur so frequently is that procurement's documents (RFPS, contracts) issued manly by public bodies regularly include statements, which disadvantage construction companies. Investors' motivation for inclusion of such statements is to get rid of responsibility for the completeness and correctness of the entries. The statements usually held construction companies financially responsible of errors in the project, poor technical specifications, insufficient specifications of the contract and poor budget planning. This is the reason why construction companies usually choose to participate only in competitions, where the project documentation is done correctly.

Remoteness of location was also one of the reasons why the company decided not to participate in the competitions. Company operates in regions of Košice and Prešov. When RFPS requires carrying out construction outside these territories, the company declined such contract.

The same frequency of occurrence had the reason called "financial incapability", which is given in terms of Bulletin of Public Procurement. Company for example, must provide ownership confirmation of bank account. Separate candidate must also have access to credit and other financial facilities in order to ensure cash flow during the realization of the contract / order. Another condition for the fulfilment of economic and financial capability is the certificate of insurance liability for damage caused at pursue the occupation or proof of insurance liability for damage, as well as the presentation of the income statement or statement of income and expenses for the specified years as well as certified photocopies provided by the tax authority while the candidate must colour-highlight its turnover. The candidate has to also provide the sum of turnovers for the specified years and so on (UVO, 2016). In term of the investigated firm insufficient financial sources was main reason why investigated company decide to reject these RFPS.

In case of private investors, the construction company generally verifies the liquidity of investor, as well as the riskiness of such contract. If there was a doubt that potential contract with company would have obscure (unclear) funding from the private investor, company generally decided to ignore the competition.

Insufficient capacities were also impulse for the non-participation of company in the competition. Here company need to consider whether the estimated price of project and subject of the contract will be so interesting for a company that it would risk its name and outsource capacities from other company.

In a few cases the reason for rejection was technical difficultness of construction or technical capability. In the latter case the applicant has to provide a list of construction works conducted within past few years with are similarly oriented as construction in RFPS. The list must also include required budgetary costs and must be supplemented with at least three reference letters. The content of these reference letters was mentioned earlier. The candidate also has to appoint at least one person directly responsible for managing of construction works. This person need to be professionally competent as construction manager, i.e., must have a certificate SKSI or equivalent about passing the professional examination in accordance with the Act. No.138/1992 Coll. of authorized architects and authorized building engineers, as amended, authorizing the implementation of selected activities under construction in accordance with § 45 of the Act. No.50/1976 Coll. Building Act, as amended. Construction manager submits a copy of SKSI or equivalent certificate with original signature and stamp of the professionally qualified body. The candidate also stated in the affidavit the persons with appropriate qualifications and which are competent to realize the contract.

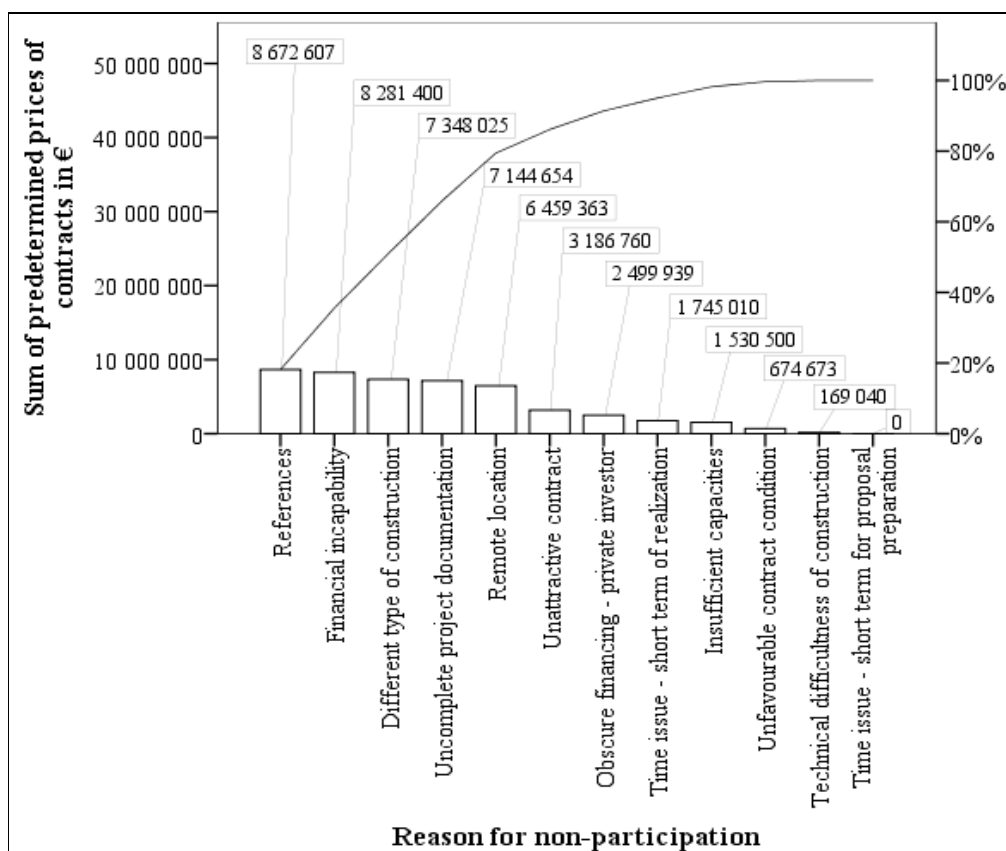


Figure 4 – Pareto diagram of reasons for non-participation in the competition based on sum of predetermined prices of RFPS

Source: authors

The value (in €) of the cause of rejection is represented by Figure 4. Interestingly, cause of insufficient references represents most expensive bulk of rejected RFPS. On the other hand, the financial capability is usually requested in expensive and large projects, so it can't be surprise that financial incapability is between the most expensive reasons for rejection of RFPS.

6 DISCUSSION AND FINDINGS

The analyses provided in this paper lead to some interesting conclusions. Firstly, it should be mention, that research was done based on the results of one particular construction company. That is the reason why, one has to be very careful to generalize quantitative results to the whole construction industry. On the other hand, one of the main purposes of this paper was to determine the reasons why company decline RFPS and thus eliminate their chance to compete for contract and to attract new client. We identified 12 such reasons which should be considered in any Slovak construction company. The next part of the study focus on basic characteristics of RFPS. It tries to determine whether the characteristics, such as type of investor and method of procurement have influence on decision of the company to decline the RFPS. The results showed, that distribution of rejected RFPS in term of number of cases and total sum offers' price are nearly the same, when you divide the sample according to method of procurement or type of investors. Based on these results, we can't confirm that rejection of RFPS is significantly influenced by type of procurement method or by type of investors. The companies had their own internal reasons, why they reject the RFPS. As was mentioned before, we identify 12 of them. As our study shows, some of the reasons are completely dependent on decisions of these companies (unattractive contract, different type of construction), others represent the barriers determined by the investors through the RFPS and procurement restrictions. They are recognized as barriers because, these restrictions cause that construction companies cannot be part of competition, even if they want to. Interestingly, the analyses showed that most frequently recognized cause as well as most expensive cause represents the same barrier. It is the barrier of insufficient trust between investor and contestants. The insufficient trust is the reason why investors secure their RFPS with the one of the simplest of trust building mechanisms, the references. Moreover, this barrier of distrust is not efficient both for investor as well as for contestant. Insufficient trust would prevent healthy company with good record to provide proposal maybe better than the proposal of winning company. The question also is what an appropriate number of references is. Is company with three references worse than company with only a two? Moreover, the references mentions only the successful projects not the unsuccessful ones. It doesn't provide any success ratio of a construction company. Although it is understandable, that in construction sector the trust is an issue, but the current business environment provide some other more advanced trust building mechanisms, which increase trust and don't penalize investors and the company. The problem with references as a system is,

that in order to get some references, there must be an investor, who is willing to hire company without any previous references. Therefore, to get a chance to a new company to compete, the trust of the investor should be assured by other trust building tools. The insufficient trust of contestant to private investors can be also an issue. For example the unclear funding of the investor was recognized as one of the reasons why perfectly capable company lose their interest in participation on competition.

7 CONCLUSION

Presented paper analyses the process of selection of requests for proposal in the construction company. The motivation for such research is to determine reasons which influence construction companies to select competitions appropriate for them. Research was based on analysis of 140 Request for proposals. From these requests we identified 40 offers which company consider as not suitable for preparation of proposals. These offers were analysed in order to determine reasons why they were rejected. The study identified 12 reasons the construction company decline the RFPS. Pareto analysis was then used to describe most common reasons. Based on analysis, it can be assume, that apart from other specific reasons, there is a significant barrier of insufficient trust which prevent the construction company to take part in competitions.

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