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**Transaction costs of public procurement
related to software solutions**

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Abstract

Even though public procurement processes are strictly controlled and they have to follow the legal framework, there are still many decisions the contracting authority has to make. It has to choose the method of preparation (whether to use the external help or not), the type of procurement procedure, the method of evaluation of the bids and the evaluation criteria. Those partial decisions have a big impact on the transaction costs of the procurement process. The transaction costs also depend on the complexity and the time and labor consumption of the procurement process.

In this thesis we chose companies inquiring software solutions from the public sector and we compared their preferences, transaction costs and time-consumption of their procurement. We divided the respondents in three different groups to ministries, cities and indirectly controlled institutions (including universities and medical units). According to our analysis the most difficult and the most time-consuming procurement processes take place at ministries, the least time-consuming ones at cities. Also the analysis suggests that the institutions are waiving the external administration and they use the help of the external consultants and the legal advisory more. We find that the price most frequently used evaluation criterion in the Czech Republic because of its low time and labor demands in preparation.

Keywords: public procurement, private procurement, public sector, private sector, software solutions, transaction costs

Abstrakt

I když je zadávání veřejných zakázek přísně kontrolováno a musí se řídit pravidly stanovenými zákonem, zadavatelé sami musí učinit spoustu rozhodnutí. Právě oni si musí zvolit způsob přípravy zakázky (využití externí výpomoci), typ zadávacího řízení, metodu vyhodnocení nabídek a hodnotící kritéria. Transakční náklady veřejných zakázek závisí nejen na těchto faktorech, ale i na celkové složitosti a časové náročnosti daného výběrového řízení.

Cílem této práce je porovnání preferencí, transakčních nákladů a časové náročnosti u jednotlivých typů veřejných zadavatelů. Ti byli rozděleni do tří skupin podle jejich činnosti na ministerstva, města a nepřímo kontrolované instituce (zde jsou zahrnuty i univerzity a zdravotnická zařízení). Výsledky ukazují, že nejnáročnější a nejdelší proces zadávání veřejných zakázek můžeme vidět u ministerstev, naopak nejkratší u měst. Naše analýza také ukazuje, že instituce přestávají využívat externí administrátory a přiklání se spíše ke konzultantům a právnímu poradenství. Z našeho výzkumu také vyplývá cena jako nejčastěji užívané hodnotící kritérium (díky nízké administrativní a časové náročnosti).

Klíčová slova: veřejné zakázky, soukromé zakázky, veřejný sektor, soukromý sektor, software, transakční náklady

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Extent of the work: 41 pages

Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature and they have been cited properly.

The author also declares that the thesis has not been used to obtain a different or the same degree.

Prague, May 15, 2015

Tereza Májková

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1 INTRODUCTION

The time-consumption and efficiency in public and private procurement still belongs between the most frequently discussed topics all around the world. And it is not surprising – the amount of money allocated through the procurement is huge. For example the share of Czech public procurement on total government expenditures is higher than 35%. Also the procurement market significantly contributes on the creation of GDP (according to the Annual Report of Ministry for Regional Development, the share of public procurement on GDP moved around 12% in last three years). Due to the amount of funds included in those purchases, the administration of public procurement is subjected to strict regulation. In the Czech Republic it has to follow the Public Procurement Act (specifically Act No. 137/2006 Coll. on Public Contracts) which defines partial steps and conditions of the public procurement. On the other hand private procurement does not have to abide any legislative framework and uses slightly different tools during the procurement process. Some people claim that private and public purchases are completely different and they operate on different base. Public procurement seems to be tied and flooded with responsibilities and not trying as much to meet people's needs, private procurement seems to be free, open and flexible.

This thesis familiarizes the reader with private and public procurement methods. However, the differences are not just between those sectors – they can be also spotted at different types of institutions in the same sector. In the Practical part we compare the main stages of procurement in different public units such as ministries and their subordinate organizations, cities and other land units and indirectly controlled institutions (including universities and medical units). We were examining for example the evaluation criteria, time consumption of individual steps or possible further negotiations about the procurement.

This work is structured as follows:

In the first chapter we provide a summary of the literature we used as a base for our information.

Next chapter describes the theory which is necessary for understanding procurement issues. First of all, we introduce the main terms to the reader – defining

software, procurement and transaction costs. We also describe the basic structure of the procurement process and we clarify the basic procurement tools such as different procurement procedures or possible evaluation criteria. This is followed by description of the economical aspects of public procurement, where we stated the main differences between regular purchase and public procurement; we described the principal-agent problem that may occur on different levels in the case of public procurement and its connections to the information asymmetry. We have also mentioned some other important factors in public purchasing – the accountability of the process (which is necessary not only because it is given by law, but it can also increase the transparency and lower the chance of a lawsuit) and controlling of the process. The last subchapter is dedicated to the private procurement and its tools and differences compared to the public sector.

This theoretical section is followed by chapter connecting the theory and the practical applications. In this part we describe the method we used for collecting the data and we present our results with the help of many graphs and charts. We divided public institutions in three main groups according to the area of their performance and we examined different aspect of public procurement such as use of outsourced help (legal, administrative, specialized), creation of the price, ways of evaluation of the bids, time consumption of different steps during the procurement process, possibility of negotiating about the subject or implementation of the public procurement and eventuality of ex post changes in the procurement documentation.

Last but not least we summarized our findings and thoughts in the final chapter.

2 LITERATURE REVIEW

First of all we need to introduce the term software to a reader. In these days when the computers are being used by little children and the information technologies in general are very popular, we can find most of the adequate information online. The basic definition can be provided by any English dictionary, more detailed specifications can be found for example in the research paper written by von Engelhardt (2008).

Literature regarding to the issue of public procurement can be divided into two sections – first one is dealing with the legal framework and the second one is focusing on the economical aspects such as efficiency, transparency and additional costs. Despite the importance of public procurement, this topic has not been subjected to the economical analysis for a long time in Europe. Nowadays a growing number of economists is trying to focus their interests on the economical aspects of public procurement (e.g. Pavel, 2009; Nikolovová et. al., 2012; Kashap, 2004; Soudry 2007). When talking about public procurement in the Czech Republic we have to mention Pavel as one of the most important and the most productive people examining and describing public procurement with its economical aspects, efficiency and transaction costs in the Czech Republic. As one of the first authors he pointed out the importance of the economical viewing on the procurement in a publication of Transparency International Czech Republic called Public Procurement in Czech Republic: corruption or transparency?¹ (2005). Another important person is Skuhrovec – the author of many publications and working papers examining the public procurement (e.g. Measuring transparency in public spending: Case of Czech Public e-Procurement Information System, 2010). He is also one of the founders of zIndex² – a tool that helps with measuring the correctness of public procurement assigned by specific public institutions.

Because this thesis analyses the transaction costs associated with procurement process we need to introduce the term “transaction costs” a little more. One of the first

¹ Translated from the original title Veřejné zakázky v České republice: korupce nebo transparentnost?

² www.zIndex.cz

economists who came up with the idea of existence of the transaction costs was R. H. Coase (1937). He says that the transaction costs occur in every exchange of goods or services. His thoughts have many followers, for example Williamson (1981) or Bajari and Tadelis (2001). In one of his works Williamson (1981) provides a large summary of many papers and literature in general regarding to different approaches to transaction costs during last decades. More actual description of different attitudes to the transaction costs issues are described for example by Wang (2003). But there exist also publications connecting the public procurement and the transaction costs created during the procedure. Good overview of the problem presents Reimarová (2011) in her Diploma Thesis focused on transaction costs and the efficiency of the outsourced administration. More specific research was made by a team from PricewaterhouseCoopers led by Strand (2011) which examines the effect of European public procurement directives on single national markets – particularly the costs and effectiveness of administration in selected procurement procedures.

The situation with private procurement is more complicated. There is not much literature dealing with private sector procurement, we were working mostly with articles regarding to this topic. For example Antrás and Helpman (2004) examine the growing number of international private procurements. Or Grossman et al. (2005) discuss the advantages and disadvantages of outsourcing and foreign sourcing and prove their thoughts with many models. According to Heller (2013), the main difference between public and private procurement is that private companies are focusing on their profitability. Their funds are different, the rules are different. They are not forced to use a competitive process in every bigger purchase they make. But because they are direct users of the good or service they purchase, it is in their own interest to use a procurement process and follow similar rules as in the case of private procurement. According to Tadelis (2012), the differences such as the funding sources, focusing on earnings or necessity to follow the Law cause lower constraint on the side of the private contracting authority and they give a space for more efficient procurement process.

Because we are using questionnaires to carry out our research, we also needed some information about how to perform a research and how to create, distribute and evaluate questionnaires. For example Průcha (2014) gives us an overview about the structure of the questionnaire. He claims that the questions need to be clear and the

questionnaire needs to have an appropriate length (according to Gavora (2010) the maximal time spent filling in the questionnaire should not exceed 45 minutes). He also discusses the distribution and the response rate of the questionnaires or pros and cons of questionnaire survey. Also Kotler and Keller (2007) have provided tips about how to formulate questions and answers in the questionnaire.

3 THEORETICAL PART

3.1 Defining basic terms

3.1.1 What is software

Software is a set of all programs, applications and procedures on a computer. Von Engelhardt (2008) claims that the distinction of software might differ, but basically it can be divided into three groups to system, application and development software. In general we can say that system software ensures correct operation of the computer and all of its basic functions, application software is designed to help the user to perform particular tasks and development software helps to optimize, maintain and upgrade the computer and its tools. It is essential for every larger business to have high quality software so companies are willing to spend millions to ensure a functional business, e.g. the data from 2013 show that 299 billions of US Dollars were spent worldwide on the enterprise software and it is assumed that this number will grow for about 6% every year (Ranger, 2014).

3.1.2 General definition of public procurement

The issue of public procurement is usually defined in the legal perspective. It has a good reasoning – public procurement needs to be well-defined in the legal terms because of the best possible understanding and interpretation of the problem necessary for avoiding the corruption and keeping the highest possible level of transparency.

Legal understanding of the term is significantly influenced by national legislatures. In general we can say that public procurement is agreement contract fulfilling the Public Procurement Act of each country. According to purposes of this work we will focus on public procurement only in the Czech Republic. The main rules for the procurement in the Czech Republic are the same like in the whole European Union because since the Czech Republic is a member of the European Union, it has to accept European legislation and implement it to its legal system - this includes adopting different directives regarding to the public procurement issues.

Pavel (2009) claims that public procurement can be confused with the term “public project”. Public project was defined by Ochrana (2004) and his thoughts can be

summarized by saying that public project is an investment using money from public funds with a material or spiritual result. The decision-making process is carried out by public choice and it has a time limit for its realization. There are two possible realizations of public project. Firstly by using in-house production, in other words tools public sector owns and secondly by using outsourcing, which means using external company (or external sources) for realization of some project for consideration. Pavel (2009) also states that the second type of realization is considered a public procurement. Previously described realizations are also known as a make or buy decision process.

In general we can say that public procurement is a contract between the contracting authority (institution from the public sector) and the contractor (a private company offering its goods or services). During the procurement procedure, the institution offering its goods or services to the contracting authority is called the candidate or the bidder.

By the contracting authority we mean any institution using money from the public budget - more than 50% of revenues of the institution have to come from the public budget.³ We distinguish between three types of contracting authorities – public, sector and subsidized.⁴ All of those institutions have to follow the Public Procurement Act of the Czech Republic when inquiring some goods or services. Other definitions can be found in the Public Procurement Act of the Czech Republic (Act No. 137/2006 Coll. on Public Contracts).

3.1.3 Basic scheme

Public procurement is being divided into different groups according to their subject or the anticipated value. The contracting authority may inquire delivery of some products, services or construction work – this is the division by the subject. Division by

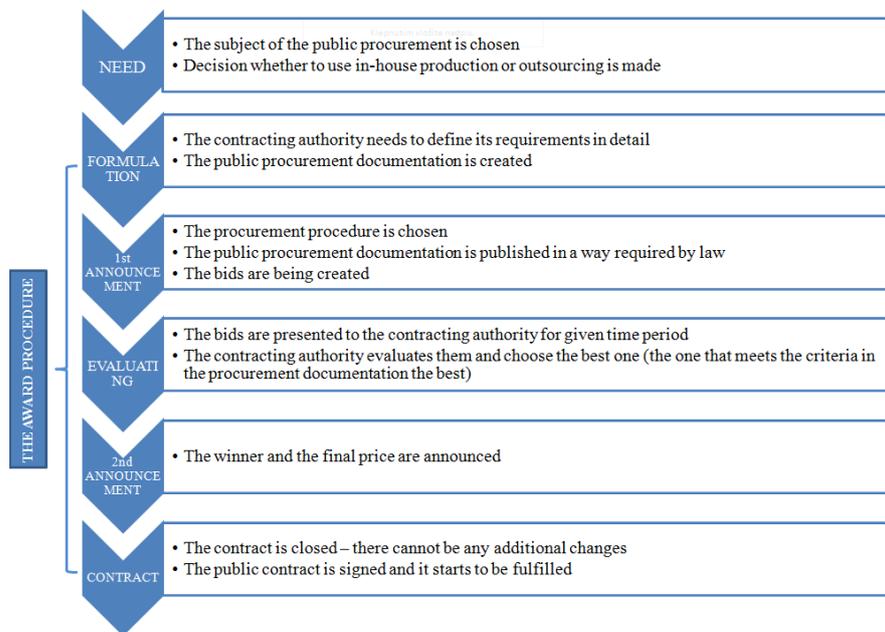
³ § 2 Zákona č. 137/2006 Sb. o veřejných zakázkách (§ 2 Act No. 137/2006 Coll. on Public Contracts)

⁴ **Public** contracting authorities are for example state-funded organizations or government units; **sector** contracting entities are usually operating in specific departments like transportation, energetic resources, etc. and **subsidized** authorities are not included in the public sector, but they are using a grant coming from the public budget. For more details please see the above mentioned Act.

the anticipated value is specified by the amount of money necessary for the implementation – below the threshold, over the threshold and small scale procurements.⁵

A basic scheme of the public procurement is that a contracting authority chooses a subject of the public contract. Then they have to specify their requirements and summarize the information into the procurement documentation. They also have to decide, if they are making the procurement by themselves or if they will use outsourcing. Then the procurement procedure is chosen, the requirements are published and during a specific time period, the bids of candidates are presented. The bids are evaluated, best applicant is chosen and the contract is signed (see *Graph 1*).

Graph 1: Simplified process of public procurement



Source: Own construction based on Reimarová (2011)

Let us take a look at some of the parts in detail.

⁵ If interested, please see again the Act No. 137/2006 Coll. on Public Contracts for more detailed description.

3.1.3.1 Procurement procedures

We have 5 main types of procurement procedures:

- **open procedure**
 - no restrictions, no limit for number of bidders
 - the contracting authority evaluates qualifications of the bidders
 - based on the qualification and the evaluation criteria they choose the best bid
 - most transparent procedure
- **restricted procedure**
 - no restrictions, no limit for number of bidders
 - the bidders need to prove their qualifications
 - the ones that fulfill the qualification requirements are asked to present the bids
- **negotiated procedure with prior publication**
 - restrictions listed in § 22 Act No. 137/2006 Coll. on Public Contracts, limited number of bidders
 - the contracting authority negotiates the terms and conditions of the procurement only with selected bidders
- **negotiated procedure without prior publication**
 - restrictions listed in § 23 Act No. 137/2006 Coll. on Public Contracts
 - the negotiations about the conditions of fulfillment of the contract take place before presenting the bid to the contracting authority
- **competitive dialogue**
 - complicated subject of public procurement
 - the contracting authority does not have clear vision about the fulfillment of the contract, so they are having a discussion with potential suppliers
 - after finding a solution, the bids are presented and the best one is chosen
- **simplified below the threshold procedure**
 - only for public contracting authorities

- the contracting authority sends a call to create a bid to at least five suppliers and publishes this call, but not in the ISVZ, but on the authority's profile
- they are obliged to evaluate the bids from other applicants, but since the procurement is not published at ISVZ, only a little number of potential suppliers know about the procurement
- high opportunity for corruption (the bidders depend on the contracting authority – it might help them to provide e.g. money or free service to the contracting authority)

In the Czech Republic, the procurement must be published at the Public Procurement Information System (ISVZ)⁶ and at the European public procurement journal Tenders Electronic Daily (TED), when talking about above the threshold procedures.

For purposes of this work we need to know only open and restricted (those two are according to the PwC study (2011) the mostly used ones) and the negotiated procedures, the other ones are listed only for the complexity of the survey.

3.1.3.2 The evaluation criteria

There are two possibilities how to evaluate a bid – with emphasis on the lowest price or taking in consideration other factors such as additional service and costs, time of delivery etc. (this is called the economical advantageousness of the bid). The evaluation criteria need to be specified in the procurement documentation and in the case of the economical advantageousness, they have to include weights assigned to each partial required factor.

3.1.4 Transaction costs and public procurement

The money the contracting authority pays to the private supplier is not the only money figuring in the public procurement process. We also have to include the all costs

⁶ translation of “Informační systém o veřejných zakázkách”

created during the awarding procedure (the above mentioned transaction costs). They can be divided into three groups:

- **preliminary** (ex ante) **costs** – generated during the preparation of the public procurement
- **interim** (continuous) **costs** – generated during the realization of the procurement
- **consequential** (ex post) **costs** – generated after the procurement is made

The transaction costs can be identified on both sides – at the contracting authority and at the contractor (or during the procurement process called the bidder). In the following **Table 1** we can see which processes can be included in transaction costs taking into consideration two types of contracting authorities – private and public ones.

Table 1: Examples of transaction costs on the side of public and private contracting authority

		transaction costs		
		ex ante	continuous	ex post
public c. a.	<ul style="list-style-type: none"> • creating the procurement documentation • setting the administration of the procurement process (own administration or external company) • getting advices from relevant experts • legal evaluation of materials (the documentation, the final contract) 	<ul style="list-style-type: none"> • negotiating about the subject of the procurement, the price, way of fulfilling the contract • changing the procurement documentation 	<ul style="list-style-type: none"> • re-announcement of the procurement (if there was no proper bid) • costs connected with delay in fulfillment (fees, paying to the employees, etc.) a lawsuit 	
private c. a.	<ul style="list-style-type: none"> • specifying the subject of the procurement • acquiring the qualification presumptions • possible negotiations about price, subject and way of fulfillment of the contract • changing the specifications 	<ul style="list-style-type: none"> • possible small additional changes in the contract 	<ul style="list-style-type: none"> • a lawsuit 	

Source: Own construction

3.2 Economical aspects of public procurement

The above mentioned legal definition is not the only way of defining the public procurement. The public procurement issue can be also viewed from the economic perspective. From this point of view we can define it as a process which requires public spending.

3.2.1 Differences between regular purchase and the public procurement

There are many differences between a regular purchase and the public procurement process. We will focus on the most visible and most important differences mentioned by most authors (e.g. Pavel 2005 and 2009; Rothbard 1956; Nikolovova et al. 2012).

3.2.1.1 The utility

At first we have to emphasize that during the public procurement, the contracting authority has to follow strict, formal process specified in the Act. According to Pavel (2005), the purpose of the public procurement is to simulate the free market, where the only demander is the contracting entity. As we have mentioned above, the legal framework of this system is necessary because of protecting both sides (the contracting authority and the applicants). They have to be able to prove every step that was taken during the procurement procedure to avoid any accusations. There is also a requirement for high level of transparency – every step has to be searchable and all milestones have to be published at the ISVZ and TED.

In the public procurement, the contracting entity is not the final user of the product, it is only the intermediary. Also a public company is not focusing on the profit – potential mistake will not have a direct impact on the public institution, but on the people using the purchased product. Let us take an example of a public company inquiring new software for its business. Employees of this company would use it regularly and it is vital for their everyday work. IT department will hear the needs of the employees and it sends a proposal of the procurement to the general management of the company. Usually the management of the company makes a decision whether carry out the contract or not (in cooperation with the IT department), but it is not the final user –

the employees are. Or another example could be some online application with forms etc. people would use to solve their problems with the public institution faster (for example study application forms) – here, the final user is not the management of the company, but the people. This has a serious impact on the motivation of the contracting authority to choose the best possible bid. Because the contracting entity is not the final user, not choosing the best bid will not have direct impact on their utility but on the utility of final users. There might be indirect impact on the utility of the contracting entity – from previous examples we can see that choosing lower quality product can lead to inefficient work, problems with administration or more. But even if the lower quality product is chosen because of the better price, there is still possibility that it will work correctly and possible errors will be revealed later while using the product. Because of the lack of direct consequences for the person in charge of the procurement (no direct impact on his utility or the profit of the institution), there is much space for corruption.

Here the question about successful fulfillment of the final user preferences arises. As Pavel (2005) claims there is a system of a representative. People choose one person – their representative and they present their preferences to the contracting authority through him. In our case we are talking about the preferences regarding to the functional side of the software. But the preferences of the final users are neither consistent⁷ nor constant – people might act irrationally and their preferences might change in time. And because the public procurement procedure takes a lot of time, there might occur a situation when the purchased product would not match neither with the preferences of final users nor with the preferences of the contracting entity (Rothbard, 1956).

3.2.1.2 The amount of funds

Also the amount of money allocated through the public procurement is significantly larger than in the case of regular purchase. In contrast with the regular purchase where we are talking about spending thousands of CZK, in the public

⁷ This is also called the rationality assumption – it can be described on a simple example: let us have three products – A, B, C. If a person prefers product A over product B and product B over product C, it means he will also prefer A over C.

procurement we talk about billions CZK. The amount of money allocated through the public procurement was moving around 500 billion CZK in past four years, but only half of those procurements are published at the Public procurement Information System (ISVZ; see *Table 2*). The enormous amount of money allocated through public procurement is very hard to control – usually in a procurement including millions CZK no one cares about the extra tens of thousands spent. This might lead to lower efficiency and unnecessary money spending. According to Nikolovová, there is much space for saving money in public budgets and it can be made especially through the improvement of the allocation efficiency.

Table 2: Share of public and sector contracting entities on the public procurement market

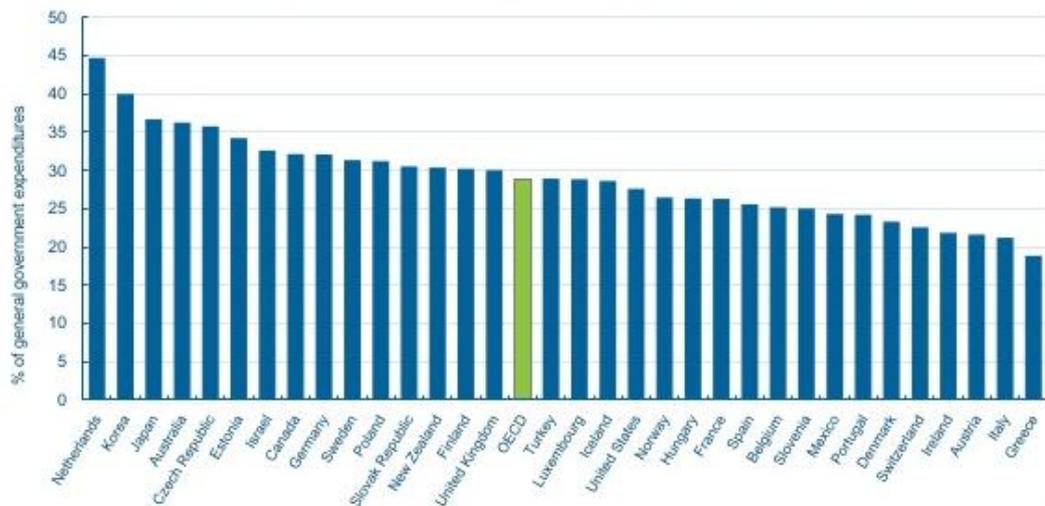
	2010	2011	2012	2013
GNP (billion CZK)	3 791	3 829	3 846	3 855
Total expenditures of public institutions (billion CZK)	1 658	1 650	1 712	1 671
Public procurement market (billion CZK)	594	502	493	475
- public contracting authorities	475	439	414	406
- % GNP	12,6%	11,5%	10,8%	10,5%
- sector contracting authorities	119	63	79	69
- % GNP	3,2%	1,6%	2,1%	1,8%
Published at ISVZ (billion CZK)	315	283	325	300
- share on the public procurement market	53%	56,40%	65,90%	63,40%

Note: all values include the VAT (value added tax)

Source: Own construction combining tables from the Annual Report of Public Procurement of the Czech Republic, 2013, available at <http://www.portal-vz.cz/getmedia/8965ea38-8a96-490b-ad0f-ce4e1c0a32c9/Vyrocní-zpráva-o-stavu-verejnych-zakazek-za-rok-2013.pdf>, pages 10 and 11; 28.2.2015

The size of public procurement market differs across the authors and reports. According to the OECD⁸ in the member states it moves around 13% of its GDP and it represents 29% of general government expenditures (see **Graph 2**).⁹

Graph 2: Government procurement as a share of total government expenditures in OECD countries. (2011)



Source: OECD National Accounts Statistics (database).

Source: The OECD Library

3.2.2 The principal-agent problem and the information asymmetry

Another problem which might occur during the public procurement is the principal-agent problem, also called the agency dilemma. It is a general term used when the principal hires an agent to perform a specific activity (Eisenhardt, 1989).

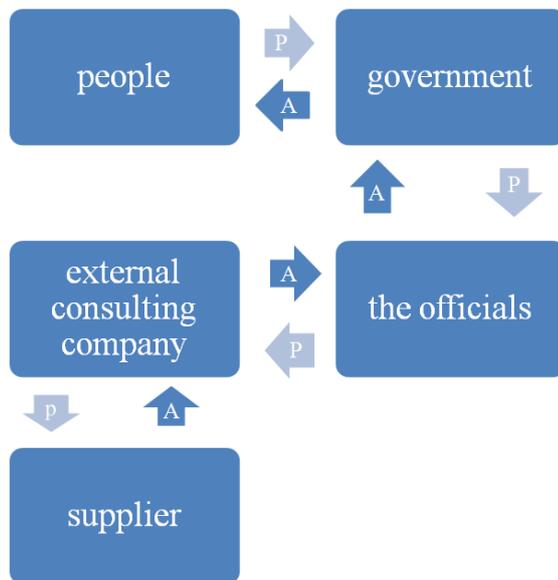
According to Bandier et al. (2009) there are more stages of the principal-agent problem in public procurement. In our case we could talk about the contracting authority – the principal hiring some specific institution (of course after the whole public procurement procedure takes place) – the agent to deliver specific good or service. Or McCue and Prier (2007) present another type of the principal-agent problem

⁸ Organization for Economic Co-operation and Development including 34 countries all around the world.

⁹ Government at a Glance 2013 retrieved from www.oecd-library.org; 18.4.2015

– employees of the company as agents who expect that the government (or politicians) as the principal will fulfill their needs. And there is more – we can see the chain of principal-agent problems begins with people (the users of the good inside or outside the public company), ending with the supplier (see **Graph 3** – the principal is illustrated by an arrow directed away from him with P, the agent is illustrated by an arrow directed away from him with A).

Graph 3: The principal-agent problem in public procurement



Source: own construction

Two types of problems might occur – either the goals of the principal and agent differ or the agent knows significantly more about the problem than principal. Usually there exists an information asymmetry between the contracting authority and the applicants – the contracting authority gives the freedom to the bidder while creating the bid or implementing the contract and it is limited while controlling the process of implementation. Especially in the context of public procurement regarding to the information technologies and software solutions, the information asymmetry is being a big problem. The contracting entity does not always fully understand the process of implementation, it can only valorize if it works properly or not. This gives the agent huge advantage and it might also cause the adverse selection – choosing a lower quality product because of the lack of information of the principal.

3.2.3 Accountability

The accountability of the public procurement process is necessary not only because of following the law, but also from the economical point of view. Violation of the accountability might have not only legal, but also economical consequences. As many authors claim (e.g. Pavel 2009; Soudry, 2007), the lack of accountability may lead to additional costs, corruption¹⁰ or prioritizing (preferring specific bidder over another regardless of price or quality) on the side of the contracting authority. Soudry (2007) claims that there may appear problems also on the side of the supplier (or the bidder), when he will be less induced to offer high quality product either because of the wrong reputation of the contracting authority or because he knows he is preferred over other bidders.

The accountability is the key assumption for efficient procurement process. The lack of accountability in the procurement procedure may cause many problems including low consumers' utility or it might lead to the information asymmetry not only between the contracting authority and the supplier (or the bidder) but also between particular employees. Those problems should be eliminated by regular and thorough controlling of the public procurement procedures.¹¹

3.2.4 Controlling

The transparency, efficiency and proper spending of money from the public funds should be ensured by regular controlling of the whole procurement procedures. But the controlling system has many imperfections – not in the Czech Republic, but worldwide. As Pavel (2009) claims, the controlling mechanism is one of the main weaknesses of the public procurement in our country. He says that we can see an

¹⁰ According to Transparency International, public procurement and politics are two fields with the highest level of corruption worldwide.

¹¹ In the Czech Republic we have a website zIndex.cz focusing on the accountability of the public procurement process – particularly on the “good behavior” of the contracting authorities. It provides a z-index calculated out of 11 partial criteria (e.g. transparency, competition, control), creating a deep analysis of different public contracting authorities.

improvement with meeting the formal steps, but the economical rationality regarding to the evaluation criteria or to the subject of performance is still missing.

The controls are carried out by two institutions in the Czech Republic – the Supreme Audit Office (Nejvyšší kontrolní úřad, NKÚ) and the Office for the Competition Protection (Úřad pro ochranu hospodářské soutěže, ÚOHS). NKÚ is not as competent as the ÚOHS. Main task of NKÚ is to control the management of government money and how different companies are dealing with them. If they detect a violation of the law, they can only draw attention to it and mention it in their report. The report is handed to the government, the Chamber of Deputies, Senate, to the Czech National Bank (if CNB is the controlled entity) or to given Departments. It also has to be published at the NKÚ Journal.¹² It is only up to those institutions if they are going to take that notice into consideration. But ÚOHS is examining also the compliance with the law and it can impose a fine on the company violating the Act.

It raises a question about the efficiency of controlling the public procurement. Is it still efficient when a group of people has to work on certain procurement for a significant amount of time, they find a problem in dealing with money from public budget and the controlled company would not draw any conclusion out of the report they have made? We can see that the number of administrative proceedings initiated by ÚOHS has grown, but is it a sufficient proof for the efficiency? This topic is also discussed in a study from year 2009 made for the Czech office of Transparency International and it includes a research also made by Pavel. The study suggests that although the ÚOHS controls are more efficient than NKÚ controls, this system is not efficient enough because only a little number of penalized authorities is looking for the person responsible for the violation of the rules or is taking remedial actions which should prevent the violations of the Act later.¹³

¹² according to the description of the controlling process available at <http://nku.cz/cz/kontrola/default.htm>

¹³ For more information please see PAVEL, Jan, 2009: *Efektivnost fungování kontrolních systémů veřejných zakázek v České republice*, Praha: Transparency International – Česká republika, ISBN 978-80-87123-10-2

3.3 Private procurement

In the previous paragraphs we have discussed procurement initiated by companies from the public sector – ministries, municipalities, public schools etc. which inquired a good or service produced by the private sector company. We agreed on the fact that this type of procurement has to follow many rules – for example the legal framework or requirements of publicizing every step taken during the public procurement process for the highest possible level of transparency. In private procurement, we are talking about companies from the private sector which want to purchase a good or service from a different private company.

3.3.1 Differences between private and public sector procurement

3.3.1.1 Following the rules

In comparison to the public sector companies, private sector companies do not have to use procurement processes in every purchase they make. The obligation to use a procurement process is usually determined in the internal guidelines of the company (they usually set a maximal price for purchases without a need of procurement, procurement is obligatory for purchases exceeding that limit) and it is also necessary when a company applies for a European grant for some particular project¹⁴. Private companies are not led by the state but by directors, shareholders and other private entities. The company's earnings are made through sales and not from the national budget or different grants. As Heller (2013) claims, the private sector is driven by profitability of companies. The most efficient ones will stay on the market – it is in their own interest to choose the best possible supplier for delivering a good or service because it has a direct impact on the utility (and profitability) of the private company.¹⁵ In a procurement procedure the management of the company can immediately see differences between individual bidders and compare them. That is why it is advantageous to use a procurement procedure also in the private sector.

¹⁴ The process of application for the European grant has to follow specific steps – for more details please see <http://erc.europa.eu/apply-funding> or <http://www.strukturalni-fondy.cz/cs/Jak-na-projekt>.

¹⁵ See chapter 3.2.1.1. The utility for description of the utility in the public procurement process.

When the private company decides to use a procurement process, they follow similar approach. They are not forced to do so (again with the above mentioned exception of specific internal directives and the application for the European grant), but again, it is in their own interest. They are not limited by any legislative framework, according to La Grassa (in Newman, 2003) the bidders have more freedom to adapt the task – the negotiations and discussions are allowed. This may lead not only to better understanding of the problem by the contracting authority and to more efficient work of the purchased product, but also to lower price. The negotiations usually take place before signing the contract. For example Bajari et al. (2003) claims that at more complex and bigger projects the negotiations about the price or about the fulfillment occur very often. He also argues that it is more efficient to use ex ante negotiations than the ex post ones because the ex post ones are more administrative and financially consuming.

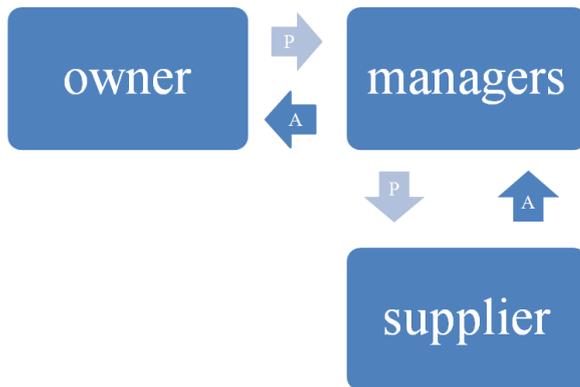
Also the private companies rarely use open or restricted procurement procedures. They usually use the invitational bidding processes – that means that the particular suppliers are addressed directly and they are asked to submit an offer to the private company. Then the company evaluates the bids and chooses the one that is the best. This is usually followed by negotiating about the implementation of the process.

McCue and Pitzer (2005) defined the private purchasing strategy as a supply chain management (SCM). Heller (2013) describes the SCM as a “strategy for integrating suppliers and customers with the objective of improving responsiveness and flexibility of manufacturing organizations”. Some authors (e.g. Heller, 2013; Green, 2014) also indicate that the private procurement has better understanding of the procurement process and some of the public procurement features could be implemented into the public sector tools.

3.3.1.2 The principal-agent problem

Also in private procurement might occur the principal-agent problem, but in much simpler form. Here we are talking just about simple relationship between the owners of the company, managers and the supplier (see *Graph 4* on the next page).

Graph 4: Principal-agent problem in private procurement



Source: own construction

3.3.1.3 Controlling

As we have already mentioned, private companies are not forced to follow any rules determined by the legislation of particular country. That means that controlling of the procurement process has to be performed by the employees of the company, usually by the managers who oversee the time horizon and help with solving eventual problems of the contract or the people familiar with the subject of the procurement – in our case we are talking about people from the IT department of the company.

Different situation arises when the private company is using a grant from the European fund. Then the procurement process is subjected to the strict controlling mechanism which is the same as in the case of public procurement – according to the Ministry for Regional Development the highest demands are placed on the administration of the project (publishing the procurement, writing regular reports about the fulfillment of the contract) and demonstration of the sustainability of the project (it means that the good or service created with the help of an European fund has to be functional for a specific time period, usually for five years).¹⁶ Other approaches may

¹⁶ According to [http://www.strukturalni-fondy.cz/cs/Jak-na-projekt#7\)_Realizace_projektu](http://www.strukturalni-fondy.cz/cs/Jak-na-projekt#7)_Realizace_projektu), 10.4.2015 administered by the Ministry for Regional Development

occur according to the rules determined in the internal guidelines of individual companies.

4 PRACTICAL PART

After going through previous chapters, we have a basic knowledge of private and public procurement and their different approaches. Now, we will focus on the application of the theory in reality. The practical part is divided into 3 main sections describing the collection of the data followed by their analysis.

4.1 Methodology of the research

We have chosen questionnaires as a tool for our research. We used Průcha (2014) and his tips to formulate the questions and answers clearly and comprehensibly. Following the recommendations we created two similar questionnaires – one for public sector companies including 9 different questions and one for private sector companies including 11 different questions.

The questions in both cases are examining the evaluation criteria of the procurement, creation of the price, usage of outsourcing, time consumption of the procurement process and possible changes of the procurement documentation. When talking about the private sector questionnaire, we were also asking whether the companies publish the procurement in any online database or whether the companies allow not directly addressed companies to participate in the procurement (both questionnaires can be found in Appendix).

To ensure higher response rate from public companies we have used a formal application based on the Law on Free Access to Information¹⁷ because it imposes an obligation on the public company to provide the information in the limit of 15 days¹⁸.

We wanted to determine the use of external help during the procurement process – the share of administrative help, legal advisory or external consultants. We expected that the highest share would belong to the use of external administrative help. We were

¹⁷ Zákon č. 106/1999 o svobodném přístupu k informacím (Law No. 106/1999 Coll. on Free Access to Information)

¹⁸ This time limit can be increased by another 10 days.

also interested in the evaluation criteria – which are used the most. We thought that it would be the lowest price because of the smallest level of possible contest. We also wanted to compare the time-consumption of the partial steps taken during the procurement process and the number of man-days necessary. Here we expected the creation of the procurement documentation to be the most time-consuming.

4.2 Collecting the data

4.2.1 Public procurement

As we have mentioned in the theoretical part, public institutions are obliged to publish the information about the procurement at ISVZ. According to this database we have selected public procurements regarding to information technologies published and implemented in years 2011 – 2013. From that we obtained a database including 154 different assignments and different persons responsible for preparation and realization of the procurement. Some companies changed the organization structure so the people in charge of public procurement regarding to IT named at ISVZ were no longer relevant, some of the addressed people were not employed in the company anymore or we had contacts for more people working in the same team – that gave us 106 different people in charge of public procurement regarding to the information technologies.

We send the questionnaires to 106 different email addresses along with the official application based on the Law on Free Access to Information. Despite the use of the Law, we obtained only 47 responses from which 45 could be used for the purposes of this work.

The respondents were then divided into three groups according to the activities they perform – to cities and regions, ministries and their subordinate offices and indirectly controlled institutions (including universities and medical units). For each group we obtained approximately 15 responses. According to Průcha (2014) the ideal response rate of the questionnaire moves between 30 and 60%. If someone obtains this percentage of completed questionnaires, he can draw conclusions out of them. In our case we have obtained almost 43% of completed questionnaires so we could continue with our research.

4.2.2 Private procurement

Searching for private procurement regarding to the information technologies was harder. As we have mentioned in the theoretical part, private companies are not obliged to announce the procurement in any publically accessible database. That is why we found only a little number of companies inquiring new software in online databases.

We have managed to send the questionnaire to 34 different companies. We could not use any law to force the companies to provide us any information because the Law on Free Access to Information can be applied only on public sector institutions. We send the questionnaire three times during three weeks but we obtained only two answers. This represents the response rate lower than 6% so we were forced to change the subject of this work a little and compare only different groups of public institutions with the information about private procurement described in the theoretical part.

4.3 Presenting the results

4.3.1 Public sector

Because of the problem with private companies, we decided to mainly compare the public institutions. They were divided into three groups:

- **Ministries and their subordinate organizations** – with 17 respondents
- **Cities and regions** – with 13 respondents
- **Indirectly controlled institutions** (including universities and medical units) –with 15 respondents

Even if the number of institutions in each group is uniform and it can provide us comparable results, the number of respondents in each group is small (it does not have to represent opinions and approaches of all related institutions) and we cannot generalize the results. In the following paragraphs we will use only the abbreviated names of the groups for the easier orientation in the text (“Ministries”, “Cities” and “ICI”).

4.3.1.1 Outsourced help

As one of the first steps when creating public procurement, an institution has to decide whether it will rely on the knowledge of the employees or it will need help from external organization. We have three types of the outsourced help that can be used – the consultants, legal advisory and administration support. The consultants might be useful when specifying the subject of the procurement and the procurement documentation – especially in the case of inquiring new software, where the knowledge of the employees of the institution does not have to be that substantial. The legal advisory may be used when formulating the documentation (clear requirements, no misleading statements etc.) or in creation of the contract. The administration support speaks for itself – the hired company provides all administrative duties.

Using external company for help with the procurement process might increase the efficiency and lower the information asymmetry between the public institution and the supplier (especially in the case of consultants), but it might also end up with incurring higher costs. That is why we included the question regarding to the use of external help into our questionnaire.

Most of the institutions rely on their employees and they do not use any external help. Taking into consideration the use of external companies in different groups, Cities operates mostly with consultants, Ministries and ICI use consultants and the legal advisers in the same proportion (see *Graph 5*).

Graph 5: Using external help in the procurement process



Source: own construction – evaluation of the data

One of the possible reasons for low number of outsourced administrators might be the fact that the use of in-house administration is much cheaper than the outsourced one and it usually does not even lower the probability of formal errors created during the procurement process (Reimarová, 2011).

4.3.1.2 The evaluation criteria

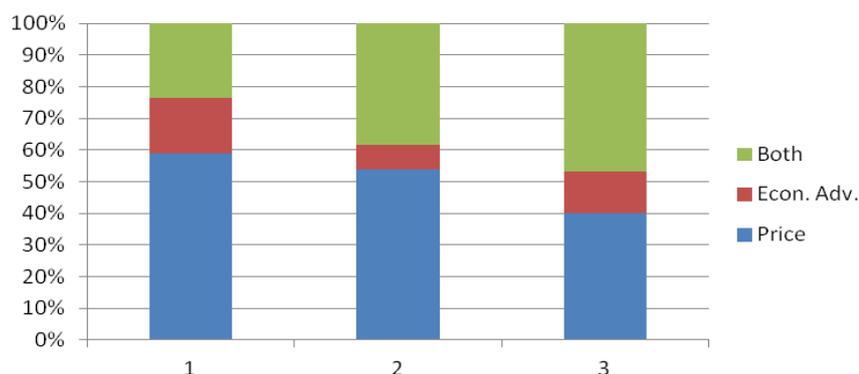
At first let us just repeat the fact that the bid in public procurement can be evaluated in two possible ways – with emphasis on the lowest price or taking in consideration other factors (=MEAT, most economically advantageous tender).

More than 50% of examined institutions¹⁹ is using the lowest price as the only evaluation criterion necessary for choosing the bid (50,89%). This method most commonly occurs at Ministries and Cities, where more than a half of respondents are using the lowest price as the only evaluation criterion.

One third of respondents use both criteria – the lowest price and the MEAT according to the type of the procurement (if differs when talking about completely new software or just a license renewal). This system of evaluation is the most abundant at ICI where almost one half of the respondents are using it.

MEAT is used as the only way of evaluation of a bid in almost 13% of all institutions (the proportion of using different types of evaluation of the bid is shown in **Graph 6**).

Graph 6: Share of the main evaluation criteria in examined groups



Source: own construction – evaluation of the data

¹⁹ From now on, we are talking only about institutions which completed our questionnaire.

This overall suggests that the price is the most important criterion when talking about public procurement in general. But still whole 49% of respondents are using MEAT or both tools for evaluating the bid. We examined different economical aspects of the bid which might be considered important and we ask the respondents to assign the weights to them (we asked them to divide 100% between given criteria). Some of the respondents answered that the aspects differ across the procurements, but they assigned approximate weights to them. All respondents stated that the two most important criteria when using the EA are price and quality of the demanded product²⁰, but then their answers differ (see *Table 3* on the next page). It is interesting that we included references as one possible criterion in the questionnaire which can be required when submitting the bid²¹ – many institutions stated that references cannot be used as a criterion when evaluating a bid, but some institutions gave a certain weight to them.

²⁰ This is a problematic term – according to the report of Ministry for Regional Development, it needs to be specified in detail in every procurement documentation – for more detailed information please see http://www.portal-vz.cz/getmedia/c084f99f-c4ea-4eac-b169-d85fdadf8361/3E_vs_principy_ZVZ_B6

²¹ They can be specified in the procurement documentation – that means if there is a requirement in the documentation to attach some references to the bid and bid is submitted without it, the bidder is automatically eliminated from the procurement process. But according to the Public Procurement Act, references cannot be used later in the process.

Table 3: The importance of different evaluation criteria when using the economical advantageousness of a bid

	MINISTRIES	W	SD	CITIES	W	SD	ICI	W	SD
1	Price	46,75%	23,21	Price	66,60%	33,99	Price	55%	27,89
2	Quality	23,33%	19,27	Quality	21,10%	13,52	Quality	15%	14,14
3	Customer service	9,39%	10,29	Customer service	4,43%	4,19	Additional costs	12,50%	13,33
4	Other	7,73%	10,61	Time of delivery	3,33%	3,72	Time of delivery	10,83%	13,15
5	Time of delivery	6,96%	7,28	Other	3,33%	3,72	Customer service	4,17%	4,16
6	Additional costs	5%	12,7	Additional costs	1,10%	2,8	References	0,83%	1,58
7	References	0,83%	1,86						

*Note 1: By Other we mean for example partial technical parameters, number of possible users etc.
 Note 2: In column “W” we present the average of weights assigned to the criterion by respondents in particular group (the respondents were asked to divide 100% between listed criteria), in “SD” we present standart deviation of particular criteria in selected groups*

Source: own construction - evaluation of the data

In the terms of transaction costs, the most demanding type of evaluation is assessing the economical advantageousness of the bid. It takes the longest time because of considering and specifying all of the partial criteria when creating the procurement documentation. Also the evaluation takes a lot of time compared to taking into consideration only the price of the bid.

Many authorities stated as the only important criteria when using MEAT the price and quality of the product but some of them chose more criteria – that is why we can see the largest standard deviations on the first two places (at price and quality of the inquired product). On the other hand, references were mentioned only in a few cases and that is why they have the lowest standard deviations. Also based on the standard deviations we can say that the most consistent answers were provided by cities and the most diversified ones by ministries. This might be also caused by complicated and specific structure of each institution form the first group (the ministries and their subordinate organizations).

Public procurement has to respect the public funds they use to finance their projects. Also they want to avoid any doubts and possible confrontation on the side of

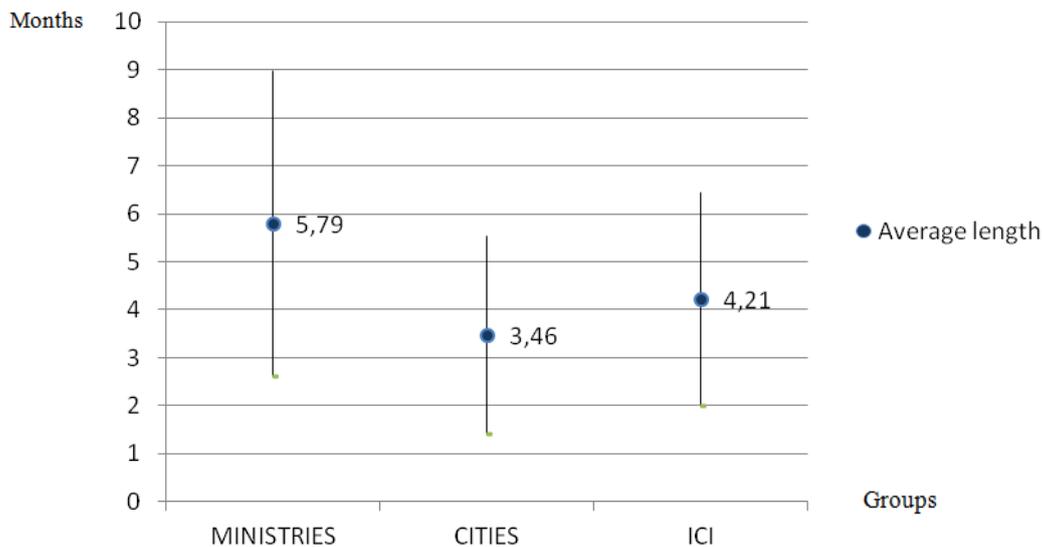
other bidders – and the partial criteria such as the additional costs, customer service or quality (as mentioned above) are easily contestable. Those are other possible reasons why the price is the mostly used criterion and also the most important partial criterion when talking about the MEAT, sometimes at the expense of quality.

4.3.1.3 Time-consumption of the whole process

In this section we determine the average length and the most time-consuming parts of the procurement process. We have also introduced another term – a man-day. Man-day is a unit of measure – one man-day means the amount of work done by one person in one day with standard working hours (8 hours a day).

We asked the institutions to provide the usual time interval necessary for the procurement process. The average length measured since creating the procurement documentation to signing the contract moved between 2,8 and 6,17 months. Based on the previous data, we expected the time demands to be the highest at the ICI because the share of using the MEAT as the evaluation criterion is the largest in this group. But the longest average length of the process occurred at ministries and their subordinate organizations, the shortest at cities. We took the bottom sides of intervals presented by each group and we averaged them. We did the same thing with the upper sides and from that we obtained average intervals necessary for the procurement processes. At ministries the average length moves between 3,8 and 7,76 months (with the standard deviation 3,19 months); in the second group between 2 and 4,91 months (with the standard deviation 2,06 months) and in the third group between 2,58 and 5,83 months (with the standard deviation 2,22 months). This is clearly elaborated in **Graph 7** on the next page.

Graph 7: The average length of the whole procurement process with standard deviation in examined groups



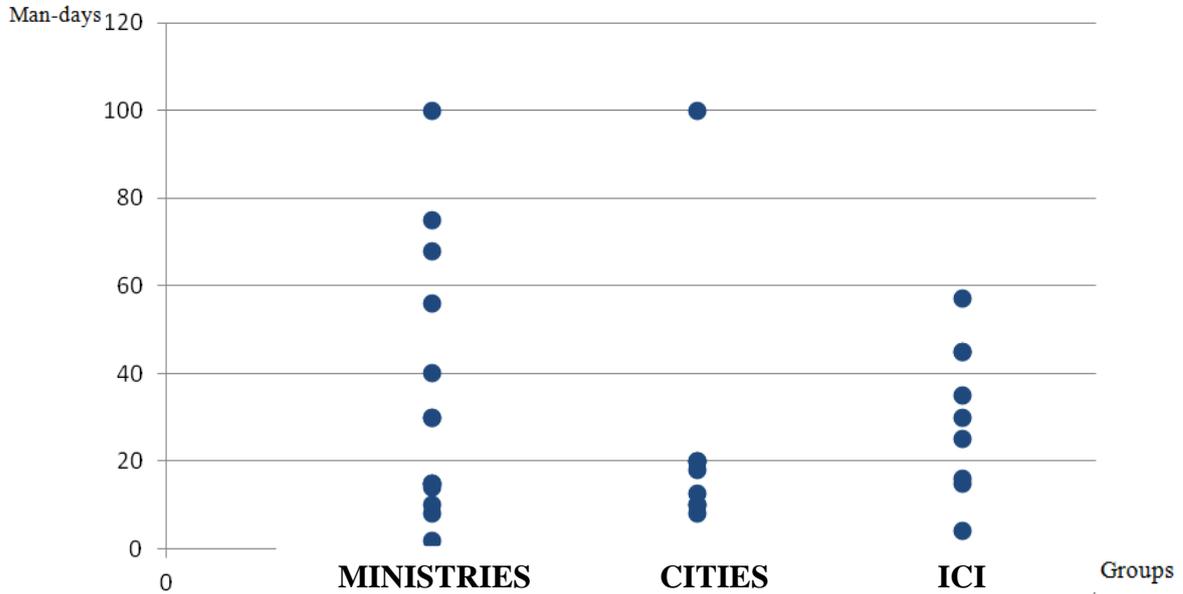
Source: own construction – evaluation of the data

One of the possible reasons for this might be the complicated structure of ministries in our country and the biggest number of employees who need to agree on every step taken during the procurement. Another possible reason may be the fact that ministries usually inquire very complex software solutions for many users – this goes hand in hand with the need of deeper analysis of the requirements and thorough approval process. This fact should be also related to the number of man-days necessary for the realization of public procurement – according to this analysis, we expect the number of man-days to be the highest also at ministries.

The question focused on the number of man-days was open – that means that every institution reported the average number of man-days necessary for the public procurement process regarding to software solutions. The distribution of the number of man-days in our groups corresponded with the length of the entire procurement process – the highest number of man-days (on average) is required by Ministries (34,14 man-days), the smallest by Cities (24,28 man-days). For the distribution of the responses in individual groups please see **Graph 8** on the next page. This also suggests that the length of the process is caused by higher requirements for the labor – more people have to agree on different aspects included in the procurement process (e.g. formulating the procurement documentation, evaluating the bids) and the structure of the employees is

more complicated (the decisions made have to be approved by many people with different levels of responsibilities).

Graph 8: : Distribution of the number of man-days in examined groups



Source: own construction – evaluation of the data

4.3.1.4 Time-consumption of the partial steps of public procurement

We have also specified seven main partial steps that need to be taken during the public procurement (identifying the requirements, creating the procurement documentation, first publication of the procurement, receiving the bids, evaluating the bids, other negotiations, signing the contract) and we asked the respondents to order them from the most time-consuming to the least time-consuming ones. Then we took the given orders, we calculated average order of partial criteria in each group and we rounded it to whole numbers.

All respondents agreed that the most difficult part is creating the procurement documentation and the easiest part is signing the contract, but then the answers in different groups varied a little (see **Table 4** on the next page). But in general we can say that the responses are consistent across all groups – creation of the procurement documentation, evaluation of the bids and identification of the requirements belong between the most difficult parts in the public procurement, signing the contract and publication to the easiest parts.

Table 4: Time-consumption of steps taken during the procurement process

	MINISTRIES	CITIES	ICI
1	Creating procurement documentation	Creating procurement documentation	Creating procurement documentation
2	Evaluation of the bids	Evaluation of the bids	Identifying the requirements
3	Identifying the requirements	Identifying the requirements	Evaluation of the bids
4	Receiving the bids	Negotiations	Negotiations
5	Negotiations	First publishing	Receiving the bids
6	First publishing	Receiving the bids	First publishing
7	Signing the contract	Signing the contract	Signing the contract

Source: own construction – evaluation of the data

4.3.1.5 Additional information

We were also questioning the respondents whether they change the procurement documentation during the process (and if they do, to what extent) and how they set the price (if the price is fixed in the contract or if it is created during the implementation of the procurement).

All of the respondents have answered that the price is fixed and specified in the contract. Also almost all of them (with the exception of three²²) stated that they change the procurement documentation only under very special circumstances and the changes are only partial without a significant effect on the final product.

4.3.1.6 Summary

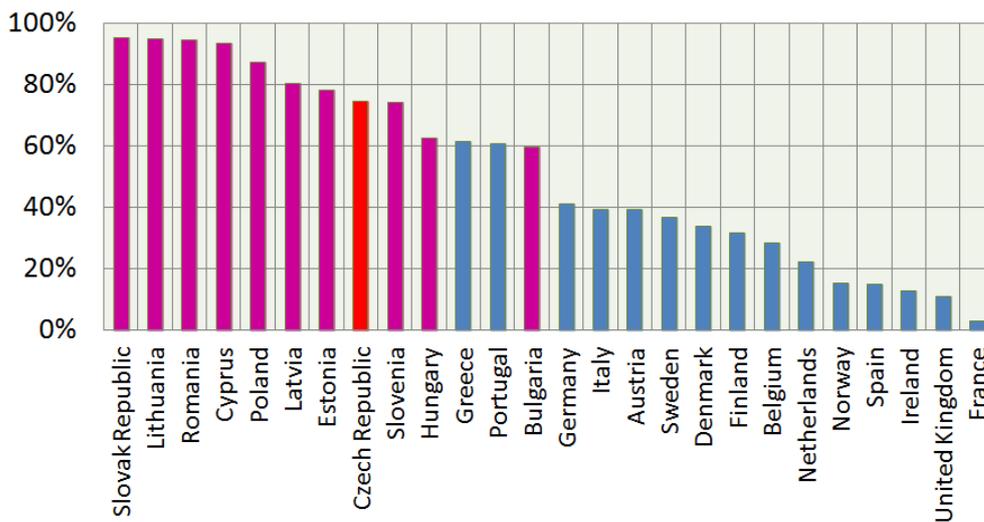
Based on the previous analysis we can say that almost 46% of all examined institutions do not use any outsourced help when creating and implementing the procurement process. Excluding those, Cities and other land units mostly use the help of external professional consultants (near 31% respondents from this group), Ministries

²² Two institutions from the first group and one from the third group answered differently. One ministry and one pharmaceutical unit stated that they change the procurement documentation often, one organization from the first group stated that their documentation is never changed.

and their subordinate organizations and also Indirectly controlled institutions use consulting and legal advisory in the same proportion (in both cases the average number of respondents using this type of outsourced help is a little above 33%). Possible reasons for using the help of consultants might be provision of better understanding of the problem, possible better specification of requirements or lowering the information asymmetry between the contracting authority and the potential supplier. Legal advisory is useful when creating the procurement documentation, publishing the procurement or the results of the procurement and even during signing the contract. Overall, their main task is to prevent problems of the procurement process and also prevent lawsuits.

When talking about the evaluation criteria we can say that the most frequently used criterion is the price – it is being used as the only criterion in almost 51% of all examined cases and even when we talk about the MEAT, the greatest emphasis is given on the price of the purchased product or service. When talking about MEAT, the second most important criterion is the quality of a product (the weight assigned to price moves between 15% and 23,3% of the total 100% that was distributed between the partial criteria). The smallest weight was assigned to references as one evaluation criterion – that was surprising because according to the legislation, references should not be included in the criteria at all. Then the answers differ – ministries and cities prefer customer service over time of delivery and possible additional costs, ICI claim the exact opposite. In contradiction to our findings the PwC study (2011) says that the over 70% of institutions which participated in their research use the MEAT and the remaining 30% use the price as the only criterion. Taking into consideration the institutions using the price, almost 65% of them use the open purchases (and we were working mostly with open purchases). Another interesting comparison was made in the work of Skuhrovec and Soudek (2015). Based on their findings we can say that the price as the only criterion is being used mainly in countries from Eastern Europe (see **Graph 9** on the next page).

Graph 9: The price as the only evaluation criterion in European countries



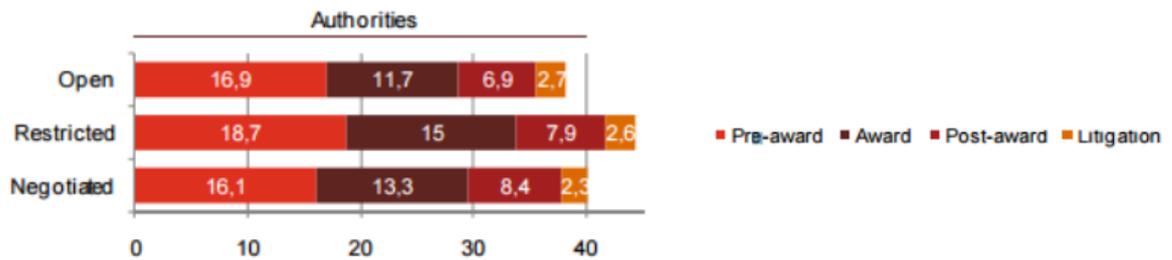
Source: Centre of Applied Economics

Then we examined the length and time-consumption of the procurement process. The maximal average length of the process occurred within the ministries and their subordinate organizations (3,8 – 7,76 months), the minimal within the cities and other land units (2,15 – 5,08 months). If we take into consideration the man-days, our results correspond with the whole length of the process because the procurement requires more than 34 days on average within ministries and their subordinate organizations and only above 24 man-days within the cities and other land units.

All respondents agreed that the identification of the requirements, creation of the procurement documentation and evaluation of the bids belong between the most difficult and the most time-consuming phases of the procurement process. On the other hand publicizing the requirements and signing the contract is considered the easiest. In the PwC study (2011) they examined the time-consumption in three different stages of public procurement – pre-award, award, post-award and litigation. They claim that the most costly (and most time-consuming) phase for authorities is the pre-award one with around 17 man-days necessary to complete. It is followed by the award phase, post-award phase and litigation (see **Graph 10** on the next page). Based on our data, we can include identification of the requirements and creation of the procurement documentation into the pre-award stage; publication, receiving and evaluating the bids together with possible negotiations and signing the contract into the award stage;

implementation of the incurred good or service into the post-award stage. According to this distribution our results correspond with the PwC study (2011) – also in our case the pre-award stage has the highest demands for time and labor.

Graph 10: Time – consumption in different stages of public procurement



Source: The PwC study (2011), p. 80

In the end we introduced some additional information most of the respondents agreed on – that the price of the inquired good is fixed, the procurement documentation is usually changed only under special circumstances and the changes do not have direct impact on the final product.

The results we obtained are summarized in following **Table 5** on the next page.

Table 5: Presenting the results

	MINISTRIES	CITIES	ICI
Number of respondents	17	13	15
Use of external help	1. none	1. none	1. none
	2. consultant + legal adv.	2. consultant	2. consultant + legal adv.
The evaluation criteria	1. price	1. price	1. both
	2. EA	2. both	2. price
The most important criteria while using MEAT	1. price	1. price	1. price
	2. quality	2. quality	2. quality
The least important criteria while using MEAT	1. additional costs	1. other	1. customer service
	2. references	2. additional costs	2. references
The average range of the whole procurement process	3,82 – 7,76 months	2 – 4,91 months	2,58 – 5,83 months
Average number of man-days	34,15	24,36	30,25
Most time-consuming stages of the procurement process	1. creating p. documentation	1. creating p. documentation	1. creating p. documentation
	2. evaluating bids	2. evaluating bids	2. identification of the requirements
Least time-consuming stages of the procurement process	1. signing the contract	1. signing the contract	1. signing the contract
	2. publishing	2. receiving the bids	2. receiving the bids

Source: own construction – the evaluation of the data

5 CONCLUSION

In this work we focused on public procurement in the Czech Republic, specifically on the public procurement regarding to information technologies – new software solutions. We were interested in comparison of preferences and time-consumption of partial steps taken during the procurement process on the side of different public and private contracting authorities but because of the lack of data from private companies, we examined different groups of public contracting entities.

We used questionnaires to perform our research together with the official application based on the Law on Free Access to Information. We have obtained 47 questionnaires and we used them for our analysis. We divided those public institutions into three groups according to their areas of competence to Ministries and their subordinate organizations, Cities and other land units and Indirectly controlled institutions (including universities and medical units). We have shown that the Ministries and their subordinate organizations have the most time-consuming procurement process, they focus mostly on the lowest price when choosing the best bid and while using outsourced help, they prefer consultants and legal advisory over external administrators. This might be caused by the most complicated structure of those institutions and also by the size and complexity of inquired software solutions. The least time-consuming procurement processes take place at Cities and other land units who focus also mainly on the price and while using outsourced help, they prefer to use the help of consultants. All of the respondents agreed that the most difficult part of the procurement process is creating the procurement documentation. They stated that if they use MEAT as the evaluation criterion, they focus mainly on the price and quality of inquired product. Also they claim that they change the procurement documentation only in very special cases and when they do, the changes are only partial.

Even though this thesis includes relatively small number of public contracting authorities, it gives us a good idea of how the public procurement in the Czech Republic works. It might be useful to extend this research to more public institutions and see if our sample was sufficiently representative. Also an additional research could be carried out – collecting the data from private sector companies and comparing them with our results to see the differences between private and public procurement.

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7 APPENDIX

Appendix 1 - Questionnaire for public institutions inquiring new software solutions

1. Jaká hodnotící kritéria používáte?
 - a. ekonomická výhodnost nabídky
 - b. nejnižší nabídková cena

2. Pokud používáte ekonomickou výhodnost nabídky, jaké faktory jsou pro Vás důležité?

Rozdělte prosím celkových 100% mezi následující kritéria:

 - a. nabídková cena
 - b. termín dodání
 - c. kvalita zpracování
 - d. dodatečné náklady (provoz, údržba, aktualizace apod.)
 - e. záruční a pozáruční servis
 - f. reference
 - g. jiné (prosím, upřesněte
_____)

3. Využíváte externích služeb při zadávání VZ?
 - a. ano, administrátora
 - b. ano, právní poradenství
 - c. ano, odborné konzultace
 - d. ano, jiné (prosím upřesněte
_____)
 - e. ne

4. Jaká je průměrná časová náročnost od přípravy zadávací dokumentace, realizace výběrového řízení až do samotného podpisu smlouvy?
 - a. nejdéle 1 měsíc
 - b. 1-3 měsíce
 - c. 3-6 měsíců
 - d. 6-12 měsíců
 - e. více jak 1 rok (prosím, upřesněte
_____)

5. Jak jsou časově náročné jednotlivé kroky při realizaci VZ?

Rozdělte prosím celkových 100% mezi jednotlivé fáze:

 - a. identifikace požadavků
 - b. vytváření zadávací dokumentace
 - c. zveřejnění zadání

- d. příjem nabídek
- e. zhodnocení nabídek
- f. další vyjednávání
- g. podpis smlouvy

6. Jaká je průměrná náročnost v man-days od přípravy zadávací dokumentace, realizace výběrového řízení až po samotný podpis smlouvy:

_____ man-days

(pozn. tzv. man-day udává standardní pracovní dobu = práci jednoho člověka za jeden den, tedy 8 hodin denně)

7. Měníte zadávací dokumentaci a zadávací podmínky na základě dotazů uchazečů?
- a. často
 - b. výjimečně
 - c. nikdy
8. Pokud měníte zadávací dokumentaci, v jaké míře obvykle změny probíhají?
- a. zásadně, v dokumentaci uchazečům chyběla podstatná informace
 - b. jen dílčí doplňky bez významného vlivu na výsledný produkt
9. Jak je vytvářena cena u Vámi vypsáných VZ?
- a. fixní cena specifikovaná ve smlouvě
 - b. variabilní cena měnící se při plnění zakázky

Appendix 2 – Questionnaire for private companies inquiring new software solutions

1. Jak je vytvářena cena při nakupování tohoto typu produktů ve Vaší společnosti?
 - a. fixní cena specifikovaná ve smlouvě
 - b. variabilní cena měnící se při plnění zakázky (např. cena za odpracované man-days apod.)

2. Zveřejňujete výběrové řízení na nákup hodnotných produktů v oblasti IT a software?
 - a. ano
 - b. ne

3. Umožňuje Vaše společnost účast v daném výběrovém řízení i přímo neosloveným uchazečům?
 - a. ano
 - b. ne

4. Jaké faktory jsou pro Vás důležité při výběru nejvhodnějšího kandidáta? Rozdělte prosím celkových 100% mezi následující kritéria, popř. prosím doplňte:
 - a. nabídková cena
 - b. termín dodání
 - c. kvalita zpracování
 - d. dodatečné náklady (provoz, údržba, aktualizace apod.)
 - e. záruční a pozáruční servis
 - f. reference
 - g. jiné (prosím, upřesněte
_____)

5. Využíváte externích služeb při nákupu takovýchto zakázek?
 - a. ano, administrátora
 - b. ano, právní poradenství
 - c. ano, odborné konzultace
 - d. ano, jiné (prosím upřesněte
_____)
 - e. ne

6. Je Vámi vypsání výběrové řízení jednokolové (s nabídkami vytvořenými na základě zadávací dokumentace) nebo probíhá ve více kolech?
 - a. jednokolové
 - b. více kol – průměrně _____ kol

7. Jaká je průměrná časová náročnost nákupu od jeho příprav až do samotné realizace?

- a. nejdéle 1 měsíc
- b. 1-3 měsíce
- c. 3-6 měsíců
- d. 6-12 měsíců
- e. více jak 1 rok (prosím, upřesněte

_____)

8. Jaká je průměrná časová náročnost v man-days od přípravy podmínek nákupu až po samotnou realizaci:

_____ man-days

(pozn. tzv. man-day udává standardní pracovní dobu = práci jednoho člověka za jeden den, tedy 8 hodin denně)

9. Jak jsou časově náročné jednotlivé kroky při nákupu hodnotných služeb v oblasti IT?

Rozdělte prosím celkových 100% mezi jednotlivé fáze, popř. prosím doplňte:

- a. identifikace požadavků
- b. vytváření zadávací dokumentace
- c. zveřejnění zadání
- d. příjem nabídek
- e. zhodnocení nabídek
- f. další vyjednávání
- g. podpis smlouvy

10. Měníte požadavky na daný produkt na základě dotazů, připomínek nebo nabídek uchazečů?

- a. často
- b. výjimečně
- c. nikdy

11. Pokud je Vaše odpověď na předchozí otázku kladná, v jaké míře obvykle změny probíhají?

- a. zásadně
- b. jen dílčí doplňky bez významného vlivu na výsledný produkt