

# The Situation in the Public Procurement Market in Post-Communist Countries: The Case of the Czech Republic

Jan Pavel

**Abstract**—Public procurement is one of the most important areas in the public sector that introduces a possibility for a corruption. Due to the volume of the funds that are allocated through this institution (in the EU countries it is between 10 – 15% of GDP), it has very serious implications for the efficiency of public expenditures and the overall economic efficiency as well. Indicators that are usually used for the measurement of the corruption (such as Corruption Perceptions Index - CPI) show that the worst situation is in the post-communist countries and Mediterranean countries.

The presented paper uses the Czech Republic as an example of a post-communist country and analyses the factors which influence the scope of corruption in public procurement. Moreover, the paper discusses indicators that could point at the public procurement market inefficiency. The presented results show that post-communist states use the institute of public contracts significantly more than the old member countries of the continental Europe. It has a very important implication because it gives more space for corruption. Furthermore, it appears that the inefficient functioning of public procurement market is clearly manifested in the low number of bids, low level of market transparency and an ineffective control system. Some of the observed indicators are statistically significantly correlated with the CPI.

**Keywords**—Czech Republic, Corruption, Public Procurement, Post-Communist Countries

## I. INTRODUCTION

PUBLIC procurement is one of the areas which are very susceptible to corruption. Due to the volume of funds that are allocated through this institution (in EU countries it is between 10-15% of GDP), it has very serious implications for the efficiency of public expenditures and the overall economic efficiency as well<sup>2</sup>. The indicators which are usually used for the measurement of corruption (such as CPI) show that the worst situation is in the post-communist countries and Mediterranean countries. The main aim of this paper is to analyse on the example of the Czech Republic factors that affect the scope of a corruption in the public procurement, and to discuss indicators that could indicate the public procurement market inefficiency.

<sup>1</sup> Jan Pavel, University of Economics, Prague, Faculty of Finance and Accounting, Department of Public Finance, e-mail: pavelj@vse.cz.

<sup>2</sup> This can be clearly demonstrated on the example of the Czech Republic. The increase the efficiency of the public procurement by 10% would mean the reduction of the structural public finance deficit by 50 %.

The article also partially responds to the criticisms of the CPI indicator, which relevance is very often questioned<sup>3</sup>.

The paper is divided into five sections. The first part discusses the relationship between the opportunities for a corruption and the size and structure of public expenditures in the EU member states. The following three sub-chapters analyse symptoms of inefficient functioning of the public procurement market, which are low competition on the supply side, low level of market transparency and the inefficiency of control mechanisms. The final chapter summarizes the results of the presented research and brings several economic-policy recommendations.

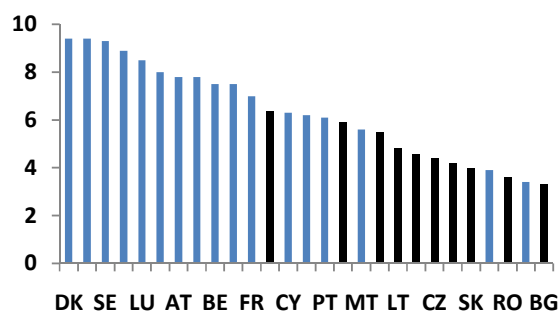


Fig. 1 The level of corruption in the EU states measured by CPI, 2010

Explanatory notes: AT - Austria, BE - Belgium, BG - Bulgaria, CZ - Czech Republic, CY - Cyprus, DE - Germany, DK - Denmark, EE - Estonia, ES - Spain, FI - Finland, FR - France, GR - Greece, HU - Hungary, IE - Ireland, IT - Italy, LU - Luxembourg, LT - Lithuania, LV - Latvia, MT - Malta, NL - Netherlands, PL - Poland, PT - Portugal, RO - Romania, SE - Sweden, SK - Slovakia, SL - Slovenia, UK - United Kingdom

Note: The black-marked are post-communist states.

Source: Transparency International.

## II. PUBLIC EXPENDITURE AND PUBLIC PROCUREMENT

From the corruption point of view, the money expended through public procurement market are one of the most endangered parts of public expenditures, about which speak number of studies and analyses (see e.g. [2] -[4]). The probability that there will be a corruption is in this case significantly higher than in the case of wages for public servants and social transfers. The scope for a corruption is

<sup>3</sup> See for example [1].

strongly influenced by the setting of public budgets by two parameters. The first one is the total value of public expenditures measured by % of GDP and the second one is the public sector willingness to prefer the external production over the internal production (so-called in-house), thus the mix of the production. The following graph shows the situation in the EU from the perspective of the relationship between the size of the public procurement market and the mix of internal and external production in the public sector. It is expressed as a proportion of expenditures on the public procurement and public sector wages<sup>4</sup>. It turns out that the post-communist states except Slovenia choose a slightly different mix than the old continental EU countries and are rather closer to the Anglo-Saxon countries, namely the Great Britain and Ireland. The share of public expenditures in % of GDP with the exception of the Czech Republic and Hungary is lower than the EU average, which is the result of a lower level of social expenditures. On the other hand, the importance of external production (public procurement) is substantially higher than in the continental EU countries. In many countries the funds allocated through the institute of a public procurement are greater than the volume of wage costs.

A considerable amount of funds spent on a public procurement is also supported by a high range of public investments, which post-communist countries expend in an effort to close the infrastructure gap (especially in the highway network, railroads, and modern wastewater treatment plants). These investments are mainly realised through public procurements. A typical case in this area is currently the Czech Republic, where the volume of public investments in the last five years reaches on average 4.6% of GDP, while the average for old EU member countries is only 2.6%<sup>5</sup>. Positive correlation between the corruption and the size of public investments has been already demonstrated in [4].

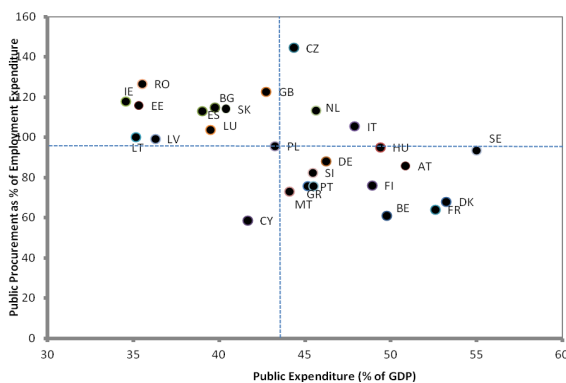


Fig. 2 The size of public expenditures and the proportion of public procurement expenditures on public sector wages<sup>4</sup> expenditures in EU countries

Note: The presented values are averages for the years 2000-2008; dashed lines indicate the EU average.

Source: Eurostat, own calculations.

<sup>4</sup> The calculation of the size of public procurement market is based on the OECD methodology, [5]. It has not been worked with the data for sub-sector Social security funds, since the allocation of this money in the case of external production is different from public procurement procedures.

<sup>5</sup> Eurostat.

The presented data suggest that the mix of internal and external production, which post-communist countries have chosen, generates probably greater opportunities for a corruption than in the continental old member states. The reason for the preference of external production, as have already been mentioned, is the need for closing the infrastructure gap and a general distrust of the efficiency of public sector institutions. The second reason is the result of the historical experience with the central planning that contributes to relatively high level of the external production in normal activities, [6].

### III. THE INTENSITY OF COMPETITION ON THE SUPPLY SIDE

The basic prerequisite for the effective use of public procurement is a sufficient intensity of competition on the supply side. The rate of it may be measured by the number of bids. Justification of this assumption is given by the existence of a so-called "competitive effect", which is inversely proportional relationship between the number of bids and tendered price. Its existence has been demonstrated in a number of empirical studies in developed countries (e.g. [7]-[9]). A growing number of bids brings two positive effects. The first one is an increase in the likelihood of identifying the most efficient company on the supply side (i.e. the company that is able to carry out the contract at the lowest possible price). The second one is the reduction of the likelihood of establishing the collusive cartel (If there are more actors on the supply side, it is more difficult to agree. In addition, the cartels with a high number of participants are generally less stable).

In the Czech Republic, the competitive effect has been confirmed in many cases. For example, [10] presented the results of analysis of the contracts in the public transport infrastructure sector. Using regression analysis, he shows the influence of the number of bids to the final price of the contract. Each additional bid brought in the analysed period price fall by an average of 3.27 %. Other statistically significant factor, which was identified, is the use of restricted procedure (price growth of 11.56%). Moreover, the number of bids is greatly affected by the structure of the evaluation criteria, respectively by the weight of the price in it. With the reduction of its weight, the number of bidders decreases. The explanation of this relationship can be that the bidders are afraid of fairness of the competition. If the price has a weight of 100%, the possible manipulation with the result of the tender is very complicated. However, if the weight of the price is reduced because of other (often subjectively assessed) criteria, the manipulation is simpler. The companies restrict the participation in these tenders because they probably don't want waste their resources in preparing bids with an uncertain outcome.

The existence of a competitive effect was confirmed by the study prepared by EC [11] in almost all EU countries. A specific feature of post-communist countries in comparison with old member states is a very low average number of bids. This is clearly demonstrated by the following graph. The

average number of bids in the EU countries is around 5.4, while in the Czech Republic it is only 3.7. The higher level of competition can be found in the works (national average is 5.2), while in the case of supply and services is the situation worse (average of 2.7 respectively4).

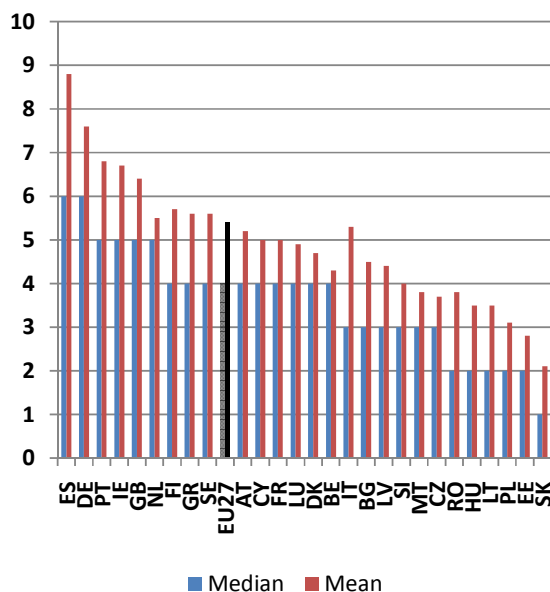


Fig. 3 Number of Bids per Country (median/mean)

Source: [11]

It is clearly evident from the presented graph that the low level of competition is characteristic to the new EU member states. The worst situation is in the Slovak Republic, where the average number of bids is only 2.1 and the median value is even only 1. It is necessary to point out that the average number of bids is not adversely affected by the size of the national market. This may be demonstrated on the examples of Portugal or Ireland. These two states are representatives of the smaller European countries and at the same time they have higher number of bids than the EU average.

Low average number of bids is partly associated with overuse of negotiated procedures without publication.

Comparison among countries provides the following graph, which clearly shows a considerable gap between the old member states (EU15) and post-communist states. While in the case of EU15 the negotiated procedures without publication create on average only 4.5 % of procurement procedures, in the Czech Republic it is 18 %.

The regulatory framework<sup>6</sup> and thus the scope for using this type of procedure is the same for all member countries.

<sup>6</sup> The regulatory framework in all Member States is based on two directives: Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors; Directive 2004/18/EC of the European Parliament and of the Council of 31

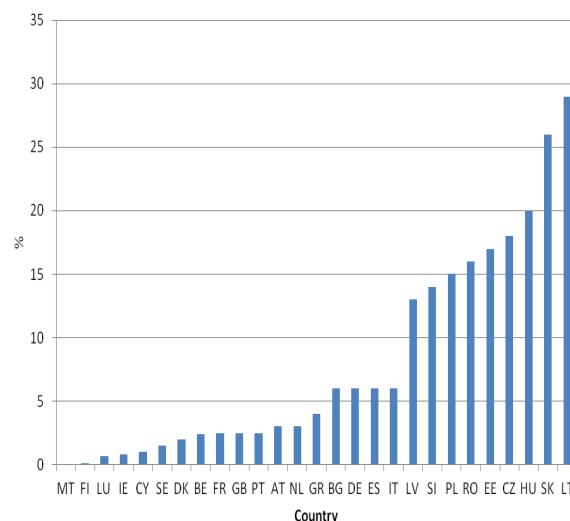


Fig. 4 Share of the public procurement market awarded in negotiated procedures without publication in the EU

Source: [11], own calculation

In the case of both presented indicators it is possible to identify statistically significant correlation between their values and CPI. In the first case (number of bids) the value of the correlation coefficient is 0.42; in the second case (percentage of negotiated procedure without publication) it is even -0.59.

#### IV. TRANSPARENCY OF THE MARKET

The intensity of a competition is greatly influenced by the overall transparency of the market. From this perspective, it would be most optimal to use the open procedures and seek to minimize the number of exemptions and other barriers to the competition (which has been also confirmed by results of the regression analyses in [10]). But the question is what percentage of the total market is actually allocated by the most efficient way. The author have developed in cooperation with the Czech branch of Transparency International two indicators of transparency of public procurement market for this purpose<sup>7</sup>.

The first is the "Index of public procurement market's transparency" (I1). Its value indicates the percentage of funds expended through the institute of the public procurement in the calendar year allocated through an open procedure. This procedure is the most transparent from the existing procurement methods. Index can be expressed as:

$$I1 = \frac{OPT}{TPP} * 100, \text{ where} \quad (1)$$

March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts.

<sup>7</sup> See more in [12].

*OPT is the volume of public contracts awarded in an open procedure and TPP is the total volume of public procurement market.*

The second index is the "Index of non-transparent procurement" (I2). Its value indicates the percentage of the total public procurement market allocated through non-transparent methods, i.e. small-scale contracts, negotiated procedures without publication, and other exemptions from the Public Procurement Act. In these methods it is possible to identify the minimal transparency and the absence of a free entry for the possible bidders. The mentioned exemptions from the Public Procurement Act are mostly military contracts that cannot be awarded publicly for security reasons. The index can be expressed as:

$$I2 = \frac{CPT}{TPP} * 100, \text{ where} \quad (2)$$

*CPT is the total volume of public procurement market reduced by the amount of public contracts awarded by all types of procurement procedures defined in the Act, except for contracts awarded under the negotiated procedure without publication, TPP is the total volume of public procurement market.*

The following graph shows the values of these two indicators for the Czech Republic in the years 2001–2010. The results show that in the year 2006 we can see a substantial improvement. However, after this improvement, the portion of open procedures did not exceed 50 % of the total market (except in 2008). Moreover, in the recent years there may be seen a decline, which is probably partly influenced by the reduction of public expenditures, implemented with the goal to reduce the public finance deficit. In contrast, the index of non-transparent public procurements, dominantly created by small scale contracts, is increasing and now stands at over 50 % of the total market.

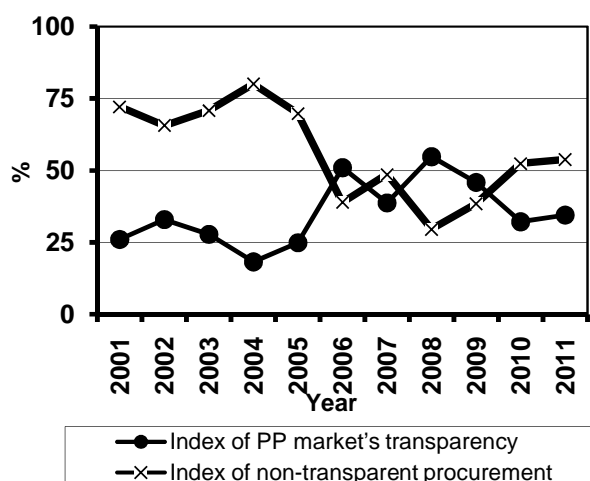


Fig. 5 Development of transparency in the public procurement market in years 2001-2010

Source: ISVZ, CZSO, own calculation

High values of the index of non-transparent public procurements are largely due to very high limits of small-scale contracts. These are contracts for which due to administrative reasons the contracting authority needs not to follow the procedures specified in the Act on Public Procurement. Currently, the limit of these contracts is set at CZK 2 million for supplies and services and at CZK 6 million for construction works. These values are abnormally high in the EU context (an average for supplies and services is CZK 394 thousand and for construction works CZK 374 thousand). Taking into account purchasing power parity, the Czech Republic has the third highest level (after the UK and the Netherlands) in the EU. This largely explains why such a high portion of the public procurement market does not go through market mechanisms.

#### V. LOW EFFECTIVENESS OF CONTROL MECHANISMS

Another symptom of a low efficiency of the public procurement is the limited effectiveness of control mechanisms. The Office for the Protection of Competition is responsible for the public procurement supervision in the Czech Republic. If this Office identifies a mistake before the award of a public contract, it may stop it. However, in most cases, the collision with the law is identified only after the signing of the contract. In this case the Office can impose a fine. Consequently, it is assumed that the penalty will be recovered from the employee responsible for the mistake.

How does this system work in the reality show results of two surveys carried out in 2008 and 2010. The punished subjects were asked, if they identified person responsible for the breaking of the law, if the sanction was transferred to it and if there were implemented corrective measures. Results of the queries summarize the following table.

TABLE I  
SUMMARY RESULTS OF THE QUERIES – ORGANISATIONS THAT VIOLATED THE PUBLIC PROCUREMENT LAW IN THE CZECH REPUBLIC IN 2006-2010

	Number of organisation 2006-2008	Number of organisation 2008-2010
Number of information obtained	21	33
Designated responsible person	8	11
%	38.1	33.3
Corrective measures	9	6
%	42.9	18.2
Penalty enforced or applied to any other penalty	7	9
%	33.3	27.3

Source: [13],[14], own calculation

Results of the surveys show that the control system is not working effectively and we cannot see the tendency for an improvement. Only about one third of subjects punished by the Office for the Protection of Competition identified the responsible person and enforced the penalty. The same situation is in the implementation of the corrective measurement. More than one half of organizations did not react on the results of the control. In this case, the control mechanism is largely losing its function. Imposing of penalties is than just a transfer of public money from one public organization to another, without significant impact on the functioning of the public procurement system.

A similar result may be also observed in an analogous survey, prepared in the Slovak Republic (for more, see [15]). Some post-communist states, e.g. Hungary, Romania, Lithuania and Estonia, tried to solve this failure of the control system in a way that the control office can punish directly the responsible person. However, it seems that this solution has not brought significant changes to the functioning of the public procurement system.

## VI. CONCLUSION

One of the impacts of a corruption is inefficient functioning of the public procurement market. This paper showed on the example of the Czech Republic that this problem can be fairly accurately demonstrated on a few simple indicators.

The most important of them are average number of bids, the proportion of the public procurement market allocated through non-competition procedures, and the intensity of a reaction of purchasers on the results of the control procedures.

If the post-communist countries want to improve their public procurement market, it is necessary to focus on increasing the degree of the competition on the supply side. Because of the competitive effect, this will lead to a reduction of final prices and thus the efficiency of the public sector will increase. The way to achieve this is to reduce the amount of funds allocated through a negotiated procedure without publication, as well as to increase the involvement of electronic auctions. It is also necessary to reduce levels of small-scale contracts in the Czech Republic. Ignored must also not be the reform of control mechanisms.

The results of reform efforts in post-communist countries will be possible to simple monitor by the development of the indicator measuring the average number of bids. The increase will be a signal that more companies are beginning to believe in transparency and fairness of public contracts and are willing to expend their money for preparation the bids. If the average number of bids will remain low, it will mean that the fight against the corruption is not successful.

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## REFERENCES

- [1] Galtung, F. 2006. Measuring the Immeasurable: Boundaries and Functions of (Macro) Corruption Indices, in *Measuring Corruption*, Sampford, Ch., Shacklock, A., Connors, C. and Galtung, F. Eds. (Ashgate). Budapest : TIRI and Central European University.
- [2] Mauro, P. -IMF. 1997. *Why worry about corruption?* Washington, D.C. : International Monetary Fund.
- [3] OECD 2005. *Fighting Corruption and Promoting Integrity in Public Procurement*. Paris : OECD.
- [4] Tanzi, V. - Davoodi, H.R. 2000. Corruption, Growth, and Public Finances, *IMF Working Paper Series WP/00/182* (Washington: International Monetary Fund)
- [5] OECD 2001. *Government Procurement : a Synthesis Report*. Paris : OECD.
- [6] Nemec, J., Ochraňa, F., Sumpiková, M. 2008. Czech and Slovak lessons for public administration performance evaluation, management and finance. *Ekonomický časopis*. 56 (4):353-369.
- [7] Kuhlman, J.R., Johnson, S.R. 1983. The Number of Competitors and Bid Prices. *Southern Economic Journal*. 50 (1): 213-220.
- [8] Iimi A. 2006. Auction Reforms for Effective Official Development Assistance. *Review of Industrial Organization*. 28: 109-128.
- [9] Li T, Zheng X. 2006. *Entry and Competition Effects in First-Price Auctions: Theory and Evidence from Procurement Auctions*. Centre for Microdata Methods and Practice, Institute for Fiscal Studies. 69. Retrieved August 24, 2009, from <http://www.cemmap.ac.uk/wps/cwp1306.pdf>
- [10] Pavel, J. 2010. The Analysis of the Relationship between the Rate of Competition and the Prices of Large Transport Infrastructure Buildings. *Politická ekonomie*. 58 (3): 343-356.
- [11] EC 2011. *Public procurement in Europe: Cost and Effectiveness*. Brussels : European Commission. Retrieved Februar 2, 2012, from [http://ec.europa.eu/internal\\_market/publicprocurement/docs/modernising\\_rules/cost-effectiveness\\_en.pdf](http://ec.europa.eu/internal_market/publicprocurement/docs/modernising_rules/cost-effectiveness_en.pdf)
- [12] Pavel, J. – Sičáková-Beblavá, E. 2008. Transparency of public procurement market in the Czech Republic and Slovakia. *Ekonomický časopis*. 56 (2): 168-181.
- [13] Bachan, M. 2009. *Kontrola zadávání veřejných zakázek*. Praha : Vysoká škola ekonomická v Praze. (thesis)
- [14] Čechová, L. 2011. *Efektivnost kontrol ÚOHS a NKÚ v oblasti veřejných zakázek*. Praha : Vysoká škola ekonomická v Praze. (thesis)
- [15] Pavel, J. 2009. *Efektivnost fungování kontrolních systémů veřejného obstarávání a slovensku*. Bratislava : Transparency International – Slovensko. Retrieved Februar 2, 2012, from [http://backup.transparency.sk/obstaravanie/regres\\_web.pdf](http://backup.transparency.sk/obstaravanie/regres_web.pdf)