

UDC 334.72.012.63/.64.073.53:004.738.5(497.7)

Original scientific paper

ZORAN JANEVSKI¹

ELENA DAVITKOVSKA²

VLADIMIR PETKOVSKI³

THE CONSTRAINTS OF SMEs IN THE REPUBLIC OF MACEDONIA IN THE PROCESS OF PUBLIC E-PROCUREMENT

Abstract

The public procurement process can be recognized as one of the crucial processes in developing countries. The most vital issues that need to be addressed with public procurement are the competitiveness, transparency and, accountability. With the developing trends of the digital economy, the process of public procurement also has developed into more efficient electronic procurement process. This paper addresses the impact of obligatory public e-procurement on small and medium enterprises in Republic of Macedonia. The main goal of this research is to indicate the advantages and constraints of public e-procurement process for the SMEs in Republic of Macedonia through the presentation of case study that is part of the process itself.

Key words: Public procurement, SMEs, electronic procurement, public e-procurement

JEL Classification: L81, H57

¹ PhD, “Ss. Cyril and Methodius” University in Skopje, Institute of Economics – Skopje, Republic of Macedonia, e-mail: zoran.janevski@ek-inst.ukim.edu.mk

² PhD, “Ss. Cyril and Methodius” University in Skopje, Institute of Economics – Skopje, Republic of Macedonia, e-mail: elena@ek-inst.ukim.edu.mk

³ PhD, “Ss. Cyril and Methodius” University in Skopje, Institute of Economics – Skopje, Republic of Macedonia, e-mail: vladimir@ek-inst.ukim.edu.mk

Introduction

Electronic commerce typically refers to selling goods and services via electronic channels such as the Internet, virtually everywhere on earth [1]. Other authors, however, define electronic commerce as automation of commercial transactions using computers and network communication technologies [2]. However, perhaps the most comprehensive definition of e-commerce is the one that says it is a process of purchase, sale, transfer or exchange of products, services and/or information via computer networks, including the Internet [3]. Regarding this definition, we can define different types of electronic commerce on the basis of different business models which e-commerce allows, and probably one of the most interesting and most used is the electronic procurement (e-procurement).

When organizations use information technology in conducting tendering or other forms of procuring products or services, they perform a process of e-procurement [4], [5]. It means the use of electronic methods through Internet for realization of the procurement functions such as: identification of requirement, payment and contract management [6]. In the last two decades, such e-procurement processes have brought greater efficiency, cost-savings and transparency, thus becoming extremely popular, especially with the fact that governments themselves are using them for public procurement [7].

Nevertheless, dealing with the e-procurement process itself takes special skills and training in the contemporary technology, as well as clear guidelines available to the users. Namely, small and medium sized enterprises (SMEs), though representing a crucial role in employment and the whole economy [8], may find it difficult to become suppliers in public procurement [9], [10]. Particularly this is the case with SMEs in Republic of Macedonia where 99.7% of all active businesses are SMEs [11].

The purpose of this study is to analyze the use of e-procurement by the SMEs and to assess the effects of the e-procurement on their business activities. The main goal is to answer to the following questions:

What are the long-term effects of the mandatory electronic auctions in the processes of the e-procurements on the SMEs in the Republic of Macedonia?

What are the most recent amendments to the Law on Public Procurement of Republic of Macedonia, or more precisely, what are their

effects on the activities of economic operators submitting their proposals, especially on SMEs?

1. LITERATURE REVIEW

The public procurements are activities of the public institutions in which they buy goods and services. The statistics says that these procurements represents, from one third of GDP in the developed countries, up to 50% of GDP in the developing countries [12]. It is obvious that public procurement plays vital role for SMEs and their survival, at the same time they attract great interest by the other stakeholders in the national economy on their transparency, implementation, effects, etc. This fact puts great importance on the procurements, additionally because public procurement means spending public assets, which implicates great focus on control and observation [13]. E-procurements increase the efficiency of managing public assets. They are differently organised in every economy. In some countries it only means using a web location as bulletin board for initiation of public business contracts [12]. In other economies for example, e-procurements are much more sophisticated and they have several phases, such as Requirement definition, Sourcing, Solicitation, Evaluation, Contracting and Contract Management [14].

The public e-procurement can be implemented following these three models:

1. The public model. Here, all tasks, including the investment and the risks in building the portal, are taken by the government upon itself.
2. The private model. Here, all tasks are taken by private entities that assumes the investment risks of the project.
3. The mixed model (Public-Private Partnership).

Regardless of the model used, public e-procurements have some general advantages [15]:

- Tangible or quantitative - easily quantifiable, as costs (order cost, administrative cost, lead-time order cost and opportunity cost of capital) and time savings that translate into improved effectiveness and efficiency of organization, as well as revenue increase resulting from access to new markets or new business opportunities; and

- Intangible or qualitative – for example, better integration of business processes, improved customer satisfaction, and better communication with other businesses that improve business relationships and so on, which are not so easily quantifiable.

However, despite the advantages of the e-procurements, there are some challenges which SMEs are facing while using public e-procurement. One type of challenges has external origin (technology, infrastructure and legislation, environment) and the other type has internal origin (resource constraints such as financial and human capital along with organizational and management characteristics such as organizational culture, decision maker's perception of risk and benefits of e-procurement system, company size, business type, organization structure and others) [16].

The exceptional importance of the e-procurements results with conducting institutional and practical measures in direction of rounding the whole process of e-procurements and all its elements. The European Union in its agenda for 2016 plan to introduce so called end-to-end model of public e-procurement. This model implies using ICT to cover the complete process of procurement, which starts with electronic publication of notices, and ends up with the electronic payment for the procured goods and services [17].

European Union has also envisaged publication of notices and tender documentation (e-notification) to become mandatory till March 2016, electronic submission of offers should become mandatory up to March 2017 (for contract notices published by governmental institutions on national level), i.e. up to September 2018 (for contract notices published by all contracting authorities); while electronic payments should become the predominant method of payment of obligations of public procurement procedures up to 2020. In spite of these deadlines for all member states for the mandatory introduction of the stages of the procurement process, a good portion of the countries so far have already implemented these four elements of the e-procurement (e-notification, e-access, e-submission and e-invoice).

Macedonian public procurements are implemented in accordance with the following basic principles outlined in the Law on Public Procurement: 1) competitiveness among economic operators; 2) equal treatment and non-discrimination of economic operators; 3) transparency and integrity in awarding public contracts; 4) rational and efficient use of funds in the award of public procurement, or the well-known concept of "best value for money" [18].

The first version of the e-Procurement system in Republic of Macedonia was officially launched in April 2006. Primarily, the e-Procurement system was envisaged and functioned as a system with limited capabilities. Today, the e-Procurement system has grown into a single computerised system, available on the internet (<https://e-nabavki.gov.mk>), which is used to enable greater efficiency and cost-effectiveness in the field of public procurements. The system actually is publicly accessible web site managed by the Public Procurement Bureau that offers the possibility to completely treat the tender via the web site. Since 2008, it belongs to the stage 4 of online availability (which is the maximum for this type of services). It means that: case handling, decision and delivery of a standard procedure to tender can be treated completely via the web. So, since then, no other formal procedure is necessary for the applicant via “paperwork”. In other words, the online sophistication for the e-Procurement application is a hundred percent (100%) [19].

The electronic system for public procurement – ESPP in Macedonia, in 2014 was used by 1,390 contracting authorities and more than 4,800 active economic operators. There were 15,738 contract notices of different type and 22,022 contract award notices of different type published in 2014, and the total number of published tender documents was 15,684, and 29,477 e-auctions carried out, which is more than 112 e-auctions daily in average. 21,938 public contracts were awarded in 2014, amounting to 60.4 billion MKD or more than 980 million EUR, which is around 34% of the Budget and 12% of GDP, and compared to the previous year (year 2013) the total value is increased by 15%. The distribution of the number and the value of the concluded contracts over categories shows that most of the contracts in 2014 (15,652 contracts) belong to the category of SMEs – 48%. In facts, value share of the large companies accounts for 35% (3,241 contracts), while micro companies account for the least – 5% of the total value of the public procurements (2,967 contracts concluded), keeping in mind most of them fall in the simplified competitive procedur limited to 5,000 EUR [20].

The effects of the public e-procurement system in Republic of Macedonia are considered as both positive and negative at the same time. Some think that they are the easement cure to painless public procurement, but the ones who were really unprepared for these changes were the small and medium sized enterprises, and especially the micro enterprises.

2. RESEARCH

2.1. Methodology

Case study methodology that reinforces the theoretical knowledge on electronic public procurement and the problems faced by SMEs in the Republic of Macedonia is used in this study. The case study is based on the Prima, the company based in Skopje, Republic of Macedonia. Interviews were conducted with the Chief Operating Officer and with the financial director of the company (on 04.07.2015) and with the direct participants in public procurement - employees in the company who prepare offers for participation in public procurement contracts (on 04.08.2015), for collecting information for this case study. Additional information was gathered by reviewing a large number of documents, financial reports, analyses and reviews that have been prepared by employees of the enterprise, which are focused on the various aspects of company's operations.

2.2. Analysis and interpretation of the results

Prima was founded in 1999 and has main activity in sale and servicing of equipment for clinical and industrial use, supply of reagents and consumables in the field of biochemistry, immunology, microbiology, chemistry, and sales of pharmaceutical products, laboratory appliances etc.

It is a small company with 26 employees (in December, 2014), with an annual turnover of 4,084,748 Euros and the value of the balance sheet of 3,702,375 Euros. The number of employees is changing in the last fifteen years as it is shown in Table 1.

Table 1 – Number of employees in Prima Company (1999 - 2014)

| Year | Number of employees |
|------|---------------------|
| 1999 | 4 |
| 2004 | 7 |
| 2005 | 10 |
| 2007 | 14 |
| 2010 | 17 |
| 2011 | 21 |
| 2012 | 21 |
| 2013 | 24 |
| 2014 | 26 |

Source: Own research

Prima collaborates primarily with state institutions in the field of health care: health centers, public health centers, hospitals, clinics, etc. This means that participation in procedures for the grant of public contracts is the most common and most important business of this company. Table 2 shows the number of submitted offers (bids) for the procedures of awarding public procurement by the company for the period from January 2009 to December 2014.

Table 2- Number of offers submitted by Prima in procedures for awarding public procurement (2009 - 2014)

| 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|------|------|------|------|------|------|
| 289 | 274 | 221 | 371 | 444 | 368 |

Source: Own research

From Table 2 we can noticed the increased number of offers for awarding a public procurement in 2013, when a total of 444 offers were submitted, compared to all other analysed years, which is caused by the fact that at the end of 2013 the Law on Amending the Law on Public Procurement has passed [21], according to which, crucial changes in the public procurement process in Macedonia, especially in the health sector were made. As a result of that so many contracting authorities rapidly reported their tenders before the changes provided by this Law came into force.

Prima's income comes from sale of products and services to healthcare organizations via public procurement procedures, so the mandatory introduction of electronic auctions which represents a iterative process of negative bidding of the participants in the electronic public procurement (auction bidders), contributes to reducing the originally submitted offers and consequently to reduced earnings of the participating companies. Also, with the introduction of lowest price as the single criterion for selecting the best offer, the situation for SMEs deteriorated further, because the quality no longer plays a major role in this type of procurement and the bidders strive to reduce the quality of the offered products in order to reduce their prices.

Despite the changes, Prima still offers the products with premium quality to its customers, although there are a large percentage of lost sales of certain products and also lower income, because of the decrease in the prices caused by huge competition through the electronic auctions. Table 3 shows a reduction in prices of certain commodities which are seen in the participation of Prima electronic auctions in the last three years.

Table 3 - Prices of the products held in electronic auctions for awarding a public procurement of a general hospital in Macedonia

| # | Name of the product | 2012 | 2013 | 2014 | % decrease of the prices (2012-2014) |
|----|-------------------------------|--|-------------|---------------|--------------------------------------|
| | | *The prices are given per milliliter, in MKD | | | |
| 1 | CHOLESTEROL | <u>2.87</u> | <u>2.79</u> | <u>2.22</u> | 22.6 |
| 2 | TRIGLICERIDI | <u>3.15</u> | 3.02 | <u>2.42</u> | 23.2 |
| 3 | VAKUM EPRUVETI SEDI-MENTACIJA | 6.78 | 6.05 | <u>5.50</u> | 18.9 |
| 4 | VAKUM VILES SERUM | 4.82 | 4.53 | <u>3.30</u> | 31.5 |
| 5 | VAKUM VILES K EDTA | 5.00 | 4.45 | <u>3.30</u> | 34.0 |
| 6 | CALCIUM | <u>0.70</u> | 1.26 | <u>1.26</u> | (-80.0) |
| 7 | PHOSPHOR | <u>1.44</u> | 1.28 | <u>0.98</u> | 31.9 |
| 8 | MAGNESIUM | <u>1.43</u> | 1.60 | <u>1.26</u> | 11.2 |
| | | * The prices are given per liter, in MKD | | | |
| 9 | SULFURIC ACID 95-97% | 500.00 | 351.54 | <u>262.23</u> | 47.6 |
| 10 | METIL ALKOHOL | 300.00 | 264.74 | <u>259.47</u> | 13.5 |
| 11 | GLUCOZA ANHIDRID | 1,100.00 | 807.24 | <u>795.15</u> | 27.7 |
| 12 | ORTOFOSFORNA K-NA | 1,000.00 | 699.61 | <u>682.99</u> | 31.7 |
| 13 | HCL CONCENTRATED | 400.00 | 308.14 | <u>301.32</u> | 24.7 |
| | | * The prices are given per test, in MKD | | | |
| 14 | Immunological tests ASO | <u>5.69</u> | <u>5.35</u> | <u>5.00</u> | 12.1 |
| 15 | Immunological tests CRP | <u>4.26</u> | <u>3.92</u> | <u>3.62</u> | 15.0 |
| 16 | Immunological tests RF | <u>3.65</u> | <u>3.42</u> | <u>3.11</u> | 14.8 |

Source: Own research

Prices given in Table 3 were last offered prices from Prima Company. Reduction in the prices from 2012 to 2014 is evident in the all presented products. It is important to stress that prices marked in red (bold and underlined) are products that Prima has lost in the proceedings for awarding a public contract or through electronic auction, while other items are those which Prima was granted the contract for their procurement. In all of the marked products fall in prices in 2014 compared to the price of these products in 2012 is noted, except for the item under number 6, who shows price growth in 2014 relative to the price in 2012 by 80%. The reduction in the prices of the products ranges from 11.2% (for item under number 8), to 47.6% (the item under number 9). Five of the 16 products from the list have their prices decreased by 30% or more.

During the interview with the Chief Operating Officer of the Prima, it was stated that the enormous price reductions by other bidders (the competition on the e- auctions) is a result of lack of practice of valuing quality standard for suppliers (bidders) in Republic of Macedonia, and because there are suppliers who have inadequate warehouses for storage of the products, inadequate transport vehicles, and hence arises the possibility of these suppliers to reduce the prices, since they don't face real costs for all economic and business parameters, as is the case with the company Prima. This is especially important to emphasize because with this type of products (chemicals, reagents, etc.) a special treatment for storage, warehousing and transportation to the final consumer is required.

For the same period for which the prices of the products sold in the auction are analyzed, prices in foreign markets, i.e. prices from foreign suppliers of those products are increasing every year. This further complicates the situation in the Republic of Macedonia for the companies that sell the same products in public institutions through public e-procurement. All this, together with increasing of the other operating costs of the enterprises (including customs, transportation, etc.), determines the decline of the profits in the sector.

Another amendment to the Public Procurement Act of 2013 makes additional difficulties of enterprises that deal with the sale of medical products and equipment. Namely, the amendment directs for the mandatory use of the principle of "one item - one part" in order to allow maximum competition between economic operators in procurement of medicines, medical devices and medical supplies. Therefore, in 2013 (with entry into force 1.1.2014 year) when this change in the law was introduced, the number of auctions (due to

a huge increase in the number of products exposed to individual e-auctions) dramatically increased (Table 4).

Table 4 – Total number of e-auctions in which the Prima Company participated (year 2011 till 2014)

| Year | 2011 | 2012 | 2013 | 2014 | Total |
|---|------|------|------|------|-------|
| Number of e-auctions in which the company participated | / | 1960 | 3666 | 6383 | 12009 |

Source: Own research

From Table 4, a significant increase in the number of electronic auctions in 2014 compared to previous years can be seen. This is a result of the introduction of the amendment in the Act which refers to the principle of “one item - one part”. This increase in the number of electronic auctions for company Prima reflects the need for additional resources in the context of a more sophisticated and faster IT equipment required for uninterrupted monitoring of e-auctions, because simultaneously 5-6 e-auctions can be held and that presents a significant need for additional human resources, because sometimes 60 e-auctions are held daily. On the other hand, this amendment for tender separation of this kind, for Prima and other enterprises operating in this sector, presents an opportunity for participation of many procedures and overcome the problem of “lockout” specifications, as for one item, that the company does not have its range of products, could not take part in the whole proceedings (lockout).

The current state of the participation in public e-procurement, and also in the overall business performance of the enterprise is furthermore complicated by debts held by contracting authorities to the company Prima. In this enterprise almost 90% of invoices are not paid on time from the contracting authorities, in public procurement procedures. With the entry into force of the Law for financial discipline, which now applies only to private sector enterprises, (public organizations will start to apply from January 1, 2016), the situation with unpaid debts of private institutions is significantly improved. But because a large proportion, almost 70% of the work of Prima happens with public organizations as contracting authorities, this problem is still much articulated.

Prima Company has developed a strategy for debt management with contracting authorities which tends to collect some of the unpaid debts before taking serious actions to these debts. The main action is to make constant contact through telephone calls and written correspondence claiming for debts and signing agreements for payment of debts on time. If none of these measures work or helps to settle the unpaid debts, Prima appeals to the contracting authorities. Thus, from January 2014 to of December 2014, Prima has filed 11 lawsuits for recovery of their claims by the state institutions of the health sector. All these claims are payable, i.e. Prima possesses all evidence that the goods and services are received and signed by the recipient. In 50% of the lawsuits, the institutions that are being sued do not dispute the debt; in such cases the debts are resolved more quickly. But in the other half of cases, the contracting authorities dispute the debt, after which a trial must be held that may last for several months, and often even years. It is inevitable that in these cases the debt will ever be paid, but this process is considerably slower and contributes to generating additional costs in terms of time and resources committed by the company. Out of the 11 lawsuits filed in 2014, all of them ended in judgment in favor of Prima, but the recovery of the debt is still not completed in all cases.

All this leads to additional negative effects on the Prima's business operations. The company needs to take commercial loans and to pay the interest, to be able to procure goods offered and implemented in other procurement procedures. Also, additional issue is the engagement of people dealing with the recovery of unpaid debts.

Conclusion

The findings point out that SMEs in Republic of Macedonia facing difficulties with the public procurement procedures. Partly, because they are small and medium and thus lacking resources, i.e. people, equipment, funds, support, and partly because of the procurement system itself. The introduction of lowest price as the only criterion for awarding the contract causes enormous dropping in prices. This threatens the existence of the SMEs, its growth and the quality of products and services sold through the public procurement procedure. The end effect of this kind of procurement has twofold projection: the "positive" one regarding saving of public money

(taking into consideration the entire expenditure, this can be quite disputable), and the negative one, i.e. disabling SMEs to make decent profits which could be a solid base for the growth of their businesses.

Having a healthy and sustainable public procurement system means redesigning (put the focus on economically most advantageous tender criteria instead of lowest price criteria for awarding the contract), reinventing the system (ease of access and use) and make the Law for financial discipline obligatory for private and public organizations.

References:

1. Award, E.M. (2007). *Electronic commerce: from vision to fulfillment*, Third Edition, Pearson Education Inc., p.8.
2. Adams, F.G. (2004). *The E-Business Revolution and the New Economy*, 1st Edition, Ohio, Thomson Learning, p.47.
3. Turban, E., King, D., McKay, J., Lee, J., Viehland, D. (2008) *Electronic commerce 2008 – A managerial perspective*, Pearson Education, Inc., Upper Saddle River, New Jersey, p.4.
4. Robinson, P., Wale, D., & Dickson, G. (2010). *Events management*. Cambridge, MA: CABI.
5. Rolstadas, A., Hetland, P.W., Jergeas, G.F., & Westney, R.E. (2011). *Risk navigation strategies for major capital projects: Beyond the myth of predictability*. London, NY: Springer.
6. Corsi, M. (2006). *E-Procurement Overview*. Università “La Sapienza” di Roma.
7. Rotich, G.K., & Okello, B. (2015). Analysis of Use of E-Procurement on Performance of the Procurement Functions of County Governments in Kenya. *International Journal of Economics, Commerce and Management*, 3(6), 1381-1398.
8. Doern, R. (2009). Investigating barriers to SME growth and development in transition environments: a critique and suggestions for developing the methodology, *International Small Business Journal*, 27(3), pp.275–305.
9. Fee R., Erridge, A., & Hennigan, S. (2002). SMEs and government purchasing in Northern Ireland: problems and opportunities, *European Business Review*, 14(5), pp.326–334.

10. Zheng, J., Walker, H. and Harland, C. (2006). *The role of SMEs in public procurement: a review of literature and research agenda*, in 15th Annual IPSERA Conference, “Creating and managing value in supply networks”, San Diego, USA.
11. State Statistical Office of Republic of Macedonia, (2015). *News Release No 6.1.15.14: Number of Active Business Entities, 2014*, Skopje: State Statistical Office.
12. World Bank Group. (2015). *Benchmarking Public Procurement 2016: Assessing Public Procurement Systems in 77 Economies*. Washington, DC: World Bank. p.1.
13. Mahmood, S. (2010). Public procurement and corruption in Bangladesh confronting the challenges and opportunities, *Journal Of Public Administration And Policy Research*, 2(6) 103-11.
14. United Nations, (2012). *UN Procurement Practitioner’s Handbook*, United Nations, New York.
15. Ronchi, S., Brun, A., Golini, R., & Fan, X. (2010). What is the Value of an IT e-Procurement System? *Journal of Purchasing & Supply Management*, 16, pp.131-140.
16. Khu, S.E., Husain, W., Mustaffa, N. (2012). Survey on benefit and barrier of E-Procurement: Malaysia SMEs perspective. *International Journal in advance Science Engineering Information Technology*, 2(60) 14-19.
17. European Commission (2013). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS: End-to-end e-procurement to modernize public administration (26.6.2013)*, COM (2013) 453 Final, Brussels, European Commission, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0453&from=EN>. (accessed 12.11.2015)
18. Public Procurement Law, (2014). Official Gazette of Republic of Macedonia, no. 136/2007, 130/2008, 97/2010, 53/2011, 185/2011, 15/2013, 148/2013, 160/2013, 28/2014, 43/2014 and 130/2014.
19. Janevski, Z. (2011). ‘e-Procurement in the former Yugoslav Republic of Macedonia: User Satisfaction’, ePractice Workshop “eProcurement in the Time of Economic Crisis”, 25 May 2011, EC, Directorate General for Informatics, Brussels, Belgium.

20. Public Procurement Bureau of Republic of Macedonia, (2015). *Report of the Activities of Public Procurement Bureau in Functioning of Public Procurement System in 2014*. Public Procurement Bureau of Republic of Macedonia, Skopje.
21. Law for Amendment of Public Procurement Law, (2013). Official Gazette of Republic of Macedonia no.148/2013.

