

A NEW TOOL FOR ANALYSING THE PERFORMANCE OF INSTITUTIONS REGARDING PUBLIC PROCUREMENT PROCESSES

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Abstract: Public procurement is one of the ways in which authorities contribute to the welfare of citizens through investment and services. Articles in the literature have done relatively limited work on analysing the performance of the public procurement system and the factors that influence this performance in comparison with procurement and the way these processes are organised in private companies. The aim of this paper is to propose a new tool for analysing the factors influencing the performance of public procurement structures in Romanian government institutions. Based on the literature and the author's more than 15 years of experience in the field of public procurement, the present framework was developed. Several dimensions have been taken into account in the development of the tool, thus the following were taken into account: the organisation of the institution, the degree of specialisation of the staff involved in the procurement process, the degree of recognition of the procurement function within the institution. This questionnaire can be used in any analysis of factors leading to the performance of institutions in Romania in terms of the duration of public procurement processes. These analyses will contribute to the development of strategies in the field of optimising staffing requirements and improving the performance of procurement structures in public institutions.

Keywords: procurement; performance; time; tool

JEL Classification: H57, H41

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Introduction

The public procurement system is used by all public institutions wishing to procure goods, services and works for internal use or for the benefit of citizens. Often, the time between when a need is identified and when it is met is too long for the beneficiaries of these processes. The literature has dealt relatively lightly the factors that influence the performance of public institutions in terms of the duration of a procurement process. In order to be able to analyse why certain institutions perform better, it is necessary on the one hand to have a complex tool for analysing the factors influencing performance in terms of the duration of a procurement process and on the other hand to establish reference values for certain indicators. In the preliminary analysis it was taken into account that the activity of public institutions differs between the areas of activity of public institutions. Although

some internal needs are common, most of them are different depending on the field of activity in which they operate. In order to be relevant, benchmarks must be set at the level of the domain of activity of the public institution under analysis. The existence of different results per activity domain has been highlighted in the article "Romanian public procurement - an overview" (Ungureanu, 2023b). In this regard, a preliminary analysis of the information on these institutions is necessary. Some of the necessary data can be obtained directly from the Electronic Public Procurement System (EPPS) or from the centralised data published by the Authority for the Digitisation of Romania (Authority for the Digitisation of Romania - Authority, 2023) which ensures the functioning of the EPPS, without the need to contact the contracting authorities. The data are published by the Authority on <https://data.gov.ro> (Romanian Government, 2023). For other data, it has been considered introducing some questions in the questionnaire to obtain this information. Also, part of the data obtained from the questionnaire could be validated with the public data from the EPPS (Authority, 2023) or corroborated with them for the analysis. The data obtained from the questionnaire will be used to provide the necessary information for the analysis. The duration of public procurement processes is recognized in the literature as an indicator of the performance of public institutions in terms of these processes (Guccio et al, 2014) (Patrucco et al, 2019) (Patrucco et al, 2016). The rest of the paper is organized as follows: Section 2 will present the scope of this instrument, the hypotheses on which it is based and the proposed questions. Section 3 presents the limitations of this study and section 4 presents the conclusions.

Objective and hypotheses

Scope

The aim of this paper is to propose a questionnaire that allows the analysis of differentiators between public institutions in Romania, especially those in higher education in terms of factors that lead to better performance for some of them in terms of duration of public procurement processes. As a secondary objective we aimed the collection of data for the calculation of an additional number of performance indicators of the institution under analysis.

Research hypotheses

The hypotheses on which this questionnaire is based are:

H1. There are differences in the way procurement activity is organised in contracting authorities.

H2. There are differences in terms of procurement staff between contracting authorities, their level of responsibility and their level of knowledge.

H3. There are differences between contracting authorities in the recognition given to the procurement function.

H4. There are differences in the degree of standardisation of technical specifications, of the internal bureaucracy of the institution, as well as in the forms used for the products/services procured in public institutions in Romania.

H5. There are differences between the time of submission of the reports of necessity and opportunity for procurement in Contracting Authorities.

H6. There are differences between public institutions in terms of the structure that draws up the specifications for a procurement procedure and in terms of the structure that ensures contract management.

In structuring the questions and the data to be collected and analysed, the literature and the author's experience in the field of public procurement were taken into account.

Based on the research hypotheses mentioned above, the following questions were established:

2.2.1 With regard to the differences between the various approaches to procurement activity in Contracting Authorities, the following models have been found in the literature (Patrucco et al, 2019) (Glock and Broens, 2011)

All procurement is carried out centrally by the internal structure specialized in procurement (centralized model)

The structures of the institution can carry out small value purchases independently of the internal specialised procurement structure (hybrid model)

In order to check which of these two models I find in the institution under analysis, I introduced the following question:

Regarding your institution, please read carefully the questions below and give us your answer using a scale from 1 - completely disagree to 5 - completely agree

- The structures of the institution are involved in the procurement process.
- The structures of the institution have the right to carry out small value purchases independently of the internal structure specialised in procurement
- All purchases are carried out centrally by the specialised internal structure

2.2.2 With regard to how the procurement process is carried out, the following models have been found in practice and in the literature (Glock and Broens, 2011) (Patrucco et al, 2019):

A single person carries out the procurement activity from the request of quotation to the payment of the purchased product/service

The procurement activity is split between several structures in the institution according to the stages of a procurement, with a division of labour.

The procurement activity is carried out in several departments within the internal structure specialized in the field of public procurement, with one department dealing only with procurement through direct purchases and another dealing only with tender procedures.

In order to identify which of these models applies, we included the following question in the questionnaire:

Regarding your institution, please read carefully the questions below and give us your answer using a scale from 1 - completely disagree to 5 - completely agree

- Procurement activity is carried out from the time the request of quotation is drawn up to the time the order for payment is drawn up by the same person.
- Procurement activity is split between different structures in the institution, depending on certain stages of the procurement process
- Procurement activity is carried out by several departments within the internal structure specialised in the field of procurement, depending on the type of procurement method: direct purchase or tendering procedure

2.2.3 One of the factors that directly influences the conduct of a procurement process, and therefore its outcome, is personnel. This factor is mentioned in several articles analysing public procurement processes (Patrucco et al, 2019) (Glock and Broens, 2011) (Ungureanu, 2023a) (Plaček, 2019) (Abraham and Tarekegn, 2020).

This factor is analysed in this questionnaire under several aspects:

- Number of Full Time Equivalent persons performing procurement activities.
- the level of studies of the staff involved in procurement processes
- the level of specialisation in the field of procurement of the persons in the internal structure specialised in the field of procurement
- the level of specialisation of the persons in the internal structure specialised in the field of procurement on certain stages of the procurement process
- experience of staff involved in procurement activities
- the level of workload of the staff in the internal structure specialised in the field of procurement in relation to the staff fluctuations within it
- the degree of involvement of persons from the technical structures of the institution in the various stages of the procurement process

In order to analyse and obtain data to be analysed in correlation with other variables, we have included the following questions:

Regarding your institution, please read the questions below carefully and provide us with your answer using a scale from 1 - strongly disagree to 5 - strongly agree

- The internal structure specialising in procurement has experienced staff fluctuations over the last 12 months
- Staff in the internal procurement specialist structure regularly raise the issue of overload
- Each procurement is assigned according to the knowledge of the person who will carry out the procurement
- Tasks arising in the course of an tender procedure are carried out by the same employees
- The internal procurement staff use the EPPS Portal without problems
- The commission for the evaluation of tenders in the tender procedure is usually composed of staff from the internal procurement structure
- The commission for the evaluation of tenders in the award procedure is usually composed of staff from the structure requesting the procurement
- The commission for the evaluation of tenders in the award procedure is usually composed of staff from several departments and structures and is composed of persons with experience and/or expertise in the field of procurement.
- The commission for the evaluation of tenders in the tender procedure is usually composed of 3 members
- The commission for the evaluation of tenders in the award procedure is usually composed of 5 members
- The commission for the evaluation of tenders in the award procedure is usually composed of 7 or more members
- The number of members of the evaluating commission has an impact on the duration of an award procedure
- The award criterion "Most advantageous tender" requires specialised staff to evaluate bids
- An evaluation commission composed of staff from the structure requesting the procurement runs an award procedure in a short time.
- An evaluation commission composed of staff from the internal structure specialised in the field of procurement carries out an award procedure in a short time.

- An evaluation commission composed of persons with experience and/or expertise in the field of procurement from several departments and structures carries out an award procedure in a short time.

I have also included the following questions:

Q.4. What is the total number of people (Full time equivalent - FTE) who carry out purchases in your institution? (open text, numeric)

Q.5. What is the total number of employees in the internal structure specialised in public procurement (open text, numeric)

Q.6. What is the percentage of people with higher education in the internal structure specialized in procurement (open text, numeric)?

Q.7. What is the average number of public procurement training courses attended by persons in the internal structure specialised in procurement: a) 1 course attended ; b) 2-4 courses attended; c) 5 or more courses attended

Q.8. What is, on average, the experience of the persons in the internal structure specialised in the field of public procurement in carrying out procurement processes? a) Less than 1 year; b) 1-3 years; c) 3-5 years; d) 5-10 years; e) More than 10 years

Q.9. What is the annual average number of award procedures carried out by each employee in the internal procurement structure that carries out award procedures? (open text, numeric)

Q.10. What is the number of award procedures that were carried out outside EPPS in the previous calendar year in your institution? (open text, numeric)

Q.11. What is the number of direct purchases that were carried out in the previous calendar year in your institution? (open text, numeric)

These questions will allow us to calculate the number of award procedures carried out by an employee in the internal structure specialised in the field of procurement in public institutions where employees have staff fluctuations and raise the issue of overload compared to public institutions at the opposite side.

Q.12. a) Out of the total number of award procedures carried out in the previous year, how many were the award documents subject to appeal? (open text, numeric) b) Out of the total number of appeals submitted against the Tender Documentation, how many were won by the Contracting Authority? (open text, numeric) c) Out of the total number of award procedures carried out in the previous year, in how many was the result of the procedure appealed? (open text, numeric) d) Out of the total number of appeals against the result of the procedure, how many were won by the Contracting Authority? (open text, numeric) e) Out of the total number of tender procedures carried out in the previous year, in how many of them were requests for clarification made at the stage of submission of bids? (open text, numeric) f) Out of the total number of tender procedures carried out in the previous year, how many were cancelled totally or more than 50% of the number of lots? (open text, numeric)

This question will allow us to assess the quality of the work at the planning stage of the tender procedures and at the evaluation stage of the tenders submitted. Also, the staff workload can be reduced by using the exceptions included in Law 98/2016.

We will analyse this aspect by asking:

Q13. For your institution, please read carefully the questions below and provide us with your answer using a scale from 1 - never to 5 - almost always

- In your institution as a rule the right to purchase on the basis of a single offer is used if the estimated value of the purchase is less than or equal to the value thresholds specified by Law 98/2016.

- In the institution the right to pay directly, on the basis of a legal agreement, without prior acceptance of an offer, is usually used if the estimated value of the purchase is less than the value thresholds specified in Law 98/2016

2.2.4 Central procurement units, according to previous studies by Ungureanu (2023a), Dameri et al (2012) or Abraham (2020), often bring benefits to the institution by relieving staff from the internal structure specialized in procurement from carrying out certain award procedures. We will analyse this aspect by the following question:

Q14. Regarding your institution, please read the questions below carefully and provide us with your answer using a scale from 1 - strongly disagree to 5 - strongly agree

- Did the framework agreements organised by the Central Purchasing Unit in which you took part provided benefits to the institution.

- Did the framework agreements organised by the Central Purchasing Unit in which you took part provided benefits for the employees of the internal procurement structure?

2.2.5 The procurement function receives greater recognition in some Contracting Authorities than in others. The literature has found differences in the performance of the internal structure according to the degree of recognition of this function (Patrucco et al, 2019). Therefore, the closer the internal structure specialized in procurement is in terms of subordination to the first level of management, the higher the degree of recognition of the importance of this function and the higher the performance of this structure will be. In order to analyse this aspect, we included the following question in the questionnaire:

Q.15. In your institution, the internal structure specialised in procurement is subordinated to: a) The first level of management b) A person at the second level of management c) A person at the third level of management d) A person at the fourth level of management and above

2.2.6 Previous studies (Ungureanu C., 2023a) and literature (Patrucco et al, 2019) have revealed that greater standardization of technical specifications and forms used in tendering procedures implicitly leads to a shorter time for the conduct of a tender procedure. We will analyse these aspects in the questionnaire through the following question:

Q16. Regarding your institution, please read carefully the questions below and give us your answer using a scale from 1 - completely disagree to 5 - completely agree

- Technical specifications for purchased goods are standardised within the institution

- Technical specifications for purchased services are standardised within the institution

- The formalities used in the procedures are usually the same

- The formalities used in the procedures are different only according to the type of contract awarded.

2.2.7 Another factor impacting on the duration of an award procedure is a high level of internal bureaucracy of the Contracting Authority (Ungureanu C., 2023a) (Kolossova and Zilinskiene, 2021). In order to measure the existence or not of this high level, we introduced the following question:

Q17. Regarding your institution, please read carefully the questions below and give us your answer using a scale from 1 - completely disagree to 5 - completely agree

- There is an electronic document management system in place that includes components of the procurement process

- There are complaints from internal stakeholders regarding the high level of internal bureaucracy in the institution.

2.2.8 Previous studies (Ungureanu C., 2023a) have indicated that the length of the procedure and the quality of the outcome of an award procedure can be influenced by several factors, including better analysis at the planning phase and the level of knowledge of the people on the evaluation commission. Better analysis at the planning phase also influences the degree of workload of internal procurement staff.

Thus, we will check these aspects through the following questions:

Q18. Regarding your institution, please read carefully the questions below and give us your answer using a scale from 1 - strongly disagree to 5 - strongly agree

- An award procedure for which the planning phase is longer, has a shorter time for evaluation of tenders

- The quality of the analysis carried out and the decisions taken in the planning stage has an effect on the duration of an award procedure

- The quality of the analysis carried out and the decisions taken at the planning stage has an effect on the quality of the outcome of an award procedure

- The quality of the outcome of an award procedure depends on the level of knowledge of the person who draws up the specifications/technical specifications

- The quality of the outcome of an award procedure depends on the level of knowledge of the persons in the evaluation commission

Q.19. In your institution, the specifications for the purchase of products are usually drawn up by: a) Applicant; b) Internal structure specialised in public procurement; c) Internal structure specialised in the field of the purchased item; d) Other: (open text)

Q.20. In your institution, the specifications for the procurement of services are usually drawn up by: a) Applicant; b) Internal structure specialised in public procurement; c) Internal structure specialised in the field of the purchased item; d) Other: (open text)

Q.21. In your institution, management of the contract for the procurement of products is usually carried out by: a) Solicitor; b) Internal structure specialised in public procurement c) Internal structure specialised in the field of the purchased item; d) Internal structure specialised in procurement contract management; e) Other: (open text)

Q.22. In your institution, management of the contract for the procurement of services is usually carried out by: a) Solicitor; b) Internal structure specialized in public procurement c) Internal structure specialised in the field of the purchased item; d) Internal structure specialised in procurement contract management; e) Other: (open text)

Q.23. In your institution, management of the contract for works procurement is usually carried out by: a) Solicitor; b) Internal structure specialized in public procurement c) Internal structure specialised in the field of the purchased item d) Internal structure specialised in procurement contract management e) Other: (open text)

2.2.9 Previous experience has shown that the timing of the submission of the necessity and opportunity report has an effect on the duration of an award procedure, from the point of view of the stakeholders, so the following two questions have been introduced:

Q.24. In your institution, the reports of necessity and opportunity on the basis of which the award procedures are actually carried out are usually submitted: a) in the last quarter of the previous year for the entire following year b) quarterly in the year in which the purchase is made c) every six months in the year in which the contract is awarded d) immediately after

approval of the budget, within a period set by the management. e) at certain times/at certain intervals set by management f) at any time during the calendar year

Q.25. In your institution, the reports of necessity and opportunity on the basis of which direct purchases are actually made are usually submitted: a) in the last quarter of the previous year for the entire following year b) quarterly in the year in which the purchase is made c) every six months in the year in which the purchase is made d) immediately after approval of the budget, within a period set by the management. e) at certain times/at certain intervals set by management f) at any time during the calendar year

Additional indicators

As performance indicators complementary to the time in which an award procedure is carried out and that can be deduced from the resulting data I propose the following:

- Percentage of awarded procedures cancelled entirely or more than half of the lots out of the total number of procedures carried out in the calendar year.
- Percentage of appeals against the award documentation lost out of the total number of appeals filed against the award documentation
- Percentage of appeals filed against the report of the award procedure lost out of the total number of appeals filed against the report of the award procedure
- Percentage of award procedures for which clarifications were requested at the tender submission stage out of the total number of award procedures carried out in the calendar year.

Limits

This questionnaire cannot assess in detail the quality of the tender documents drawn up by the Contracting Authority nor the quality of the outcome of a tender procedure. Although some questions have been introduced in relation to these aspects, the quality of an award documentation would require a direct assessment from several points of view: clarity, degree of compliance with the legislation, whether or not the manner in which the requirements are formulated restricts competition, etc. In addition, this questionnaire requires a statistical analysis of the data on the procurement processes carried out by public institutions in the field of activity in question, in order to establish an average duration of the procurement processes carried out by them.

Conclusions

This tool aims to bring a new vision on how the performance of public institutions can be analysed in terms of the length of the procurement process. The immediate research direction is to use this questionnaire to determine the influences of the analysed factors on a sample of higher education institutions in Romania. This tool will allow a detailed analysis of the factors leading to success in terms of the duration of an award procedure. This tool aims to complete existing resources and to allow a comprehensive approach of the analysis.

References

1. Abraham, K., & Tarekegn, G. (2020). Factors affecting effectiveness of centralized public Procurement system: evidence from selected ethiopian Higher public education institutions. *International Journal of Commerce and Finance*, 6(2), pp. 92-103.
2. Authority for the Digitisation of Romania. (2023). Authority for the Digitisation of Romania. [online] Available at: <<https://www.adr.gov.ro/>> Accessed 01 May 2023
3. Authority for the Digitisation of Romania. (2023). Electronic Public Procurement System. [online] Available at: < <https://e-licitatie.ro/pub>> Accessed 01 April 2023
4. Christoph H. Glock & Michael G. Broens. (2011). The Organization of Purchasing at German Universities: An Empirical Investigation. *International Journal of Public Administration*, pp. 662-673. <http://dx.doi.org/10.1080/01900692.2011.583774>
5. Dameri, R., Benevolo, C., Rossignoli, C., Ricciardi, F., & De Marco, M. (2012). Centralization vs. Decentralization of Purchasing in the Public Sector: The Role of e-Procurement in the Italian Case. In V. Khachidze, T. Wang, S. Siddiqui, V. Liu, S. cappuccio, & A. Lim (Ed.), *Contemporary Research on E-business Technology and Strategy* (pp. 470-483). Tianjin: Springer Heidelberg Dordrecht London NewYork. Accessed 06 05, 2023 https://doi.org/10.1007/978-3-642-34447-3_41
6. Guccio, C., Pignataro, G., & Rizzo, I. (2014, June). Do local governments do it better? Analysis of time performance in the execution of public works. *European Journal of Political Economy*, 34, pp. 237-252. <https://doi.org/10.1016/j.ejpoleco.2014.01.010>
7. Kolosova, A., & Zilinskiene, I. (2021). Managing KM in the Public Sector: The Case of the Public Procurement Process. *European Conference on Knowledge Management* (pp. 431-439). Coventry: Academic Conferences International Limited, Reading, UK. <https://doi.org/10.34190/EKM.21.034>
8. Lupu, D., & Tiganasu, R. (2024). Does education influence COVID-19 vaccination? A global view. *Heliyon*, 10(3).
9. Patrucco A.S., Luzzini D., Ronchi S. (2016). Evaluating the Effectiveness of Public Procurement Performance Management Systems in Local Governments. *Local Government Studies*, pp. 739-761. <https://doi.org/10.1080/03003930.2016.1181059>
10. Patrucco A.S., Walker H., Luzzini D., Ronchi S. (2019). Which shape fits best? Designing the organizational form of local government procurement. *Journal of Purchasing and Supply Management*, 25(3), Article number 100504. <https://doi.org/10.1016/j.pursup.2018.06.003>
11. Plaček Michal, F. O. (2019). The factors causing delays in public procurement: the Czech Republic versus the UK. *Public Money & Management*. <https://doi.org/10.1080/09540962.2019.1651034>
12. Romanian Government. (2023). . [online] Available at: < <https://data.gov.ro/organization/datarequest/agentia-pentru-agenda-digitala-a-romaniei> > Accessed 01 March 2023
13. Ungureanu C. (2023a). Factors impacting the public procurement process. pp. 239-254. Retrieved from http://euconomics.uaic.ro/wp-content/uploads/2023/11/EUCONOMICS_Proceedings_2023.pdf
14. Ungureanu, C. (2023b). Romanian public procurement - an overview.



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