SICAP: SMART INNOVATIONS
FOR PROCUREMENT PROCESSES
IN THE PUBLIC SECTOR

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Abstract *In the context of continuous technological evolution, the public sector faces challenges and opportunities regarding procurement processes. Traditional systems are often burdened by bureaucracy and inefficiency, leading to delays and inefficiencies in the use of public resources. To address these issues, digital solutions such as SICAP have emerged, offering modern and innovative tools for optimizing public procurement.*

However, the widespread implementation and adoption of these systems are not without challenges. Significant investment in digital infrastructure and staff training is required to ensure a smooth transition to using these platforms. Additionally, attention must be paid to data security to protect sensitive information within these systems.

In conclusion, SICAP represents intelligent innovations with the potential to revolutionize procurement processes in the public sector. By eliminating bureaucracy, promoting transparency, and using data intelligently, these platforms contribute to streamlining the spending of public funds and improving services provided to citizens. With proper implementation and continuous support, these digital solutions could represent the future of public procurement.

Keywords: *SICAP, technological evolution, public sector, public procurement, public funds JEL*
Classification: *M41*

Introduction

The public procurement system represents the framework in which rules regarding the use of funds from the state budget and local budgets are established and enforced. It facilitates the matching of procurement requests for products, services, or works from various contracting authorities with proposals from various economic operators. The rules are set by the national regulatory authority and are presented in the form of applicable norms for conducting contract award procedures and framework agreements.

The purpose of the public procurement system in Romania is to contribute to the development of Romanian society through transparent and non-discriminatory spending of public funds. Globally,

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public procurement systems are a crucial intersection between the economy and the public administration of each state, representing an important tool for achieving governmental objectives.

Through public procurement systems, governments purchase products, services, and works, making investments that contribute to stimulating and supporting the economy. Well-designed and properly functioning systems can contribute to achieving political objectives such as creating new jobs, supporting small and medium enterprises, protecting the environment, and promoting research and innovation.

In the era of accelerated technological development, the adaptation of information technology in all aspects of life has become a major topic of interest. This paper explores not only how this adaptation can improve the efficiency and transparency of public procurement processes but also its impact on the effectiveness of public services and citizen satisfaction.

We will analyze the conceptual and methodological foundation of research in this field, highlighting the importance of a scientific and rigorous approach. The epistemological framework of this research involves the use of principles such as objectivity, generalization, and reproducibility. We will explore the ways in which we conducted systematic observations and collected empirical data to understand the integration and adoption of information technology in public procurement processes. Additionally, we will investigate the process of hypothesis testing, development of explanatory theories, and interpretation of results, aiming to contribute to the development of practices and policies in the field of public procurement.

Modernizing and streamlining public procurement procedures within public interest organizations through the adaptation of Information and Communication Technology (ICT) is an essential process. The use of ICT in this context can bring numerous benefits, such as increased transparency, enhanced efficiency, reduced bureaucracy, and attracting a greater number of bidders.

Specialized electronic platforms for public procurement represent a significant step in adopting ICT. These platforms facilitate the publication of procurement notices, submission of electronic bids, evaluation thereof, and management of the entire process efficiently and transparently. The implementation of electronic signatures simplifies the document signing process, reducing costs and speeding up procedures associated with handling printed documents. Additionally, ICT can be used to automate certain stages of the public procurement process, including checking compliance with technical requirements or automatically evaluating and comparing bids from a financial perspective.

After implementing ICT solutions, it is important for organizations to conduct periodic evaluations to identify potential issues and continuously improve processes. Feedback from all participants in the procurement process can be essential for optimizing procedures.

By efficiently using ICT in the public procurement process, public interest organizations can more effectively manage resources, enhance transparency, and actively involve bidders and citizens in decision-making processes.

In Romania, public procurement is carried out through SICAP, which is managed by the Romanian Digital Agenda Agency, directly subordinate and coordinated by the Prime Minister of Romania. This institution has responsibilities regarding the operation of national-level information systems used for e-governance.

SICAP (Centralized Information System for Public Procurement) aims to facilitate and optimize public procurement processes, both in Romania and in other countries. Their primary goal is to ensure compliance, transparency, and efficiency in conducting public procurement.

SICAP has been developed in accordance with Romania's public procurement legislation and aims to provide a centralized platform for the electronic management of the entire public procurement process. This system allows for the publication of participation notices, submission of electronic bids, evaluation thereof, and contract awarding.

The use of SICAP significantly contributes to compliance with current legislation and increasing transparency in public procurement. These systems allow for the electronic submission and management of documents, reducing the risk of human errors and ensuring compliance with all stages according to legal norms.

Through these platforms, procurement processes become more efficient, and access to information related to procurement procedures is facilitated for both contracting authorities and suppliers. SICAP undergo continuous updates and improvements to respond to new legislative requirements and optimize functionalities, according to user feedback.

By implementing these systems, the aim is to modernize and streamline public procurement processes, reduce bureaucracy, and prevent corrupt practices, contributing to a more responsible administration of public funds.

The main purpose of this paper is to investigate and analyze the influence of information technologies on public procurement in public interest organizations. By assessing the effective use of these technologies, the paper aims to examine their impact on public procurement processes, as well as on efficiency, transparency, and adaptability to new requirements and technologies. The goal is to provide a deeper understanding of how information technology can optimize and improve public procurement processes in public interest organizations, thereby contributing to organizational objectives and the effectiveness and efficiency of these processes.

The central hypothesis of the paper is that the efficient and strategic use of information technologies in public procurement processes in public interest organizations has a significant impact on efficiency, transparency, and accountability in this field. This contributes to optimizing the use of public resources and improving public procurement processes, having a positive effect on fund management and organizational goal achievement.

Research methodology

To validate the hypothesis, a scientific research based on a questionnaire consisting of 12 questions was conducted, addressed to a sample of 160 individuals consisting of specialists in the relevant field from 30 public entities in 4 counties of the South Muntenia region, namely: Dâmbovița, Argeș, Prahova, and Ialomița.

Following the established objective of the scientific research and the hypothesis formulated, a survey based on interviews containing 12 questions was conducted, with the sample size of 160 individuals. The questionnaire was distributed over a period of 30 days. A total of 148 individuals responded correctly and completely.

The structuring of the questions aimed at investigating and analyzing the impact of information technologies on public procurement in public interest organizations primarily aimed at

evaluating the perceptions and experiences of procurement professionals in the context of digital evolution.

To obtain a comprehensive picture, demographic data about the study participants were collected, including age, tenure in the organization, level of education, position held within the organization, gender, and background. This information was considered essential for better understanding the context and individual perspectives of the respondents regarding the use of information technologies in public procurement processes.

The developed questionnaire served as an essential tool for measuring aspects that are not directly observable, providing significant and valuable results.

Based on the responses received to the first question, we have a percentage of 45% where the adoption of information technology has improved the organization's performance in terms of public procurement, as shown in Figure 1.

Fig. 1.
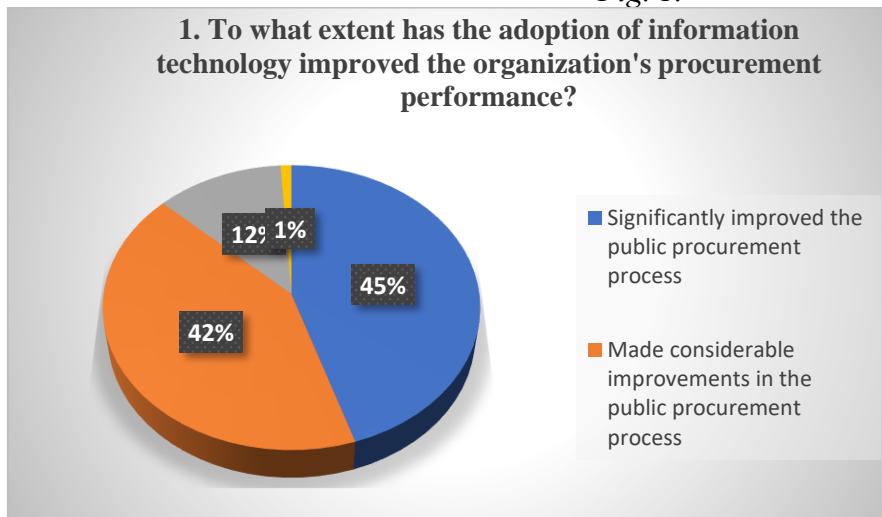
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For the second question, "Do you use the main IT systems for public or private procurement?" we have a percentage of 56%, indicating those who use IT systems for public procurement, as shown in Figure 2.
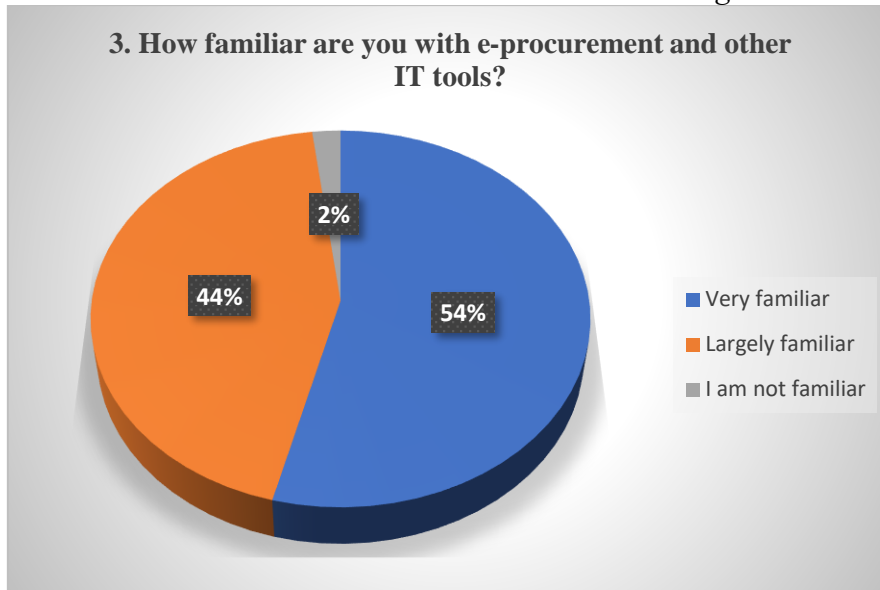
Fig.2
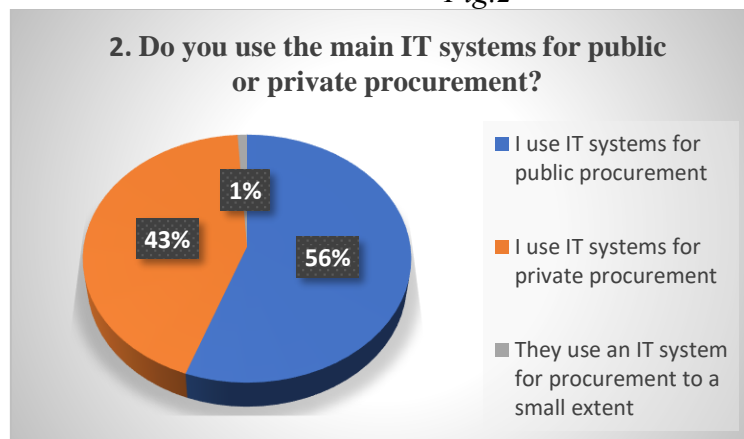
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For the third question, "How familiar are you with electronic procurement and other IT tools?" we have a percentage of 54%, indicating those who are very familiar, as shown in Figure 3.
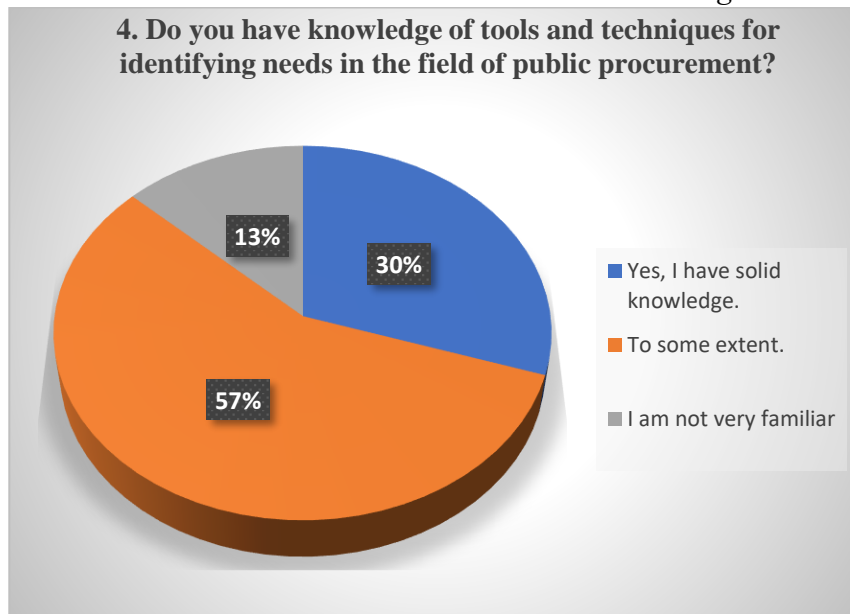
Fig.3

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For the fourth question, "Do you have knowledge about the tools and techniques for identifying needs in the field of public procurement?" we have a percentage of 57%, to some extent, as shown in Figure 4.
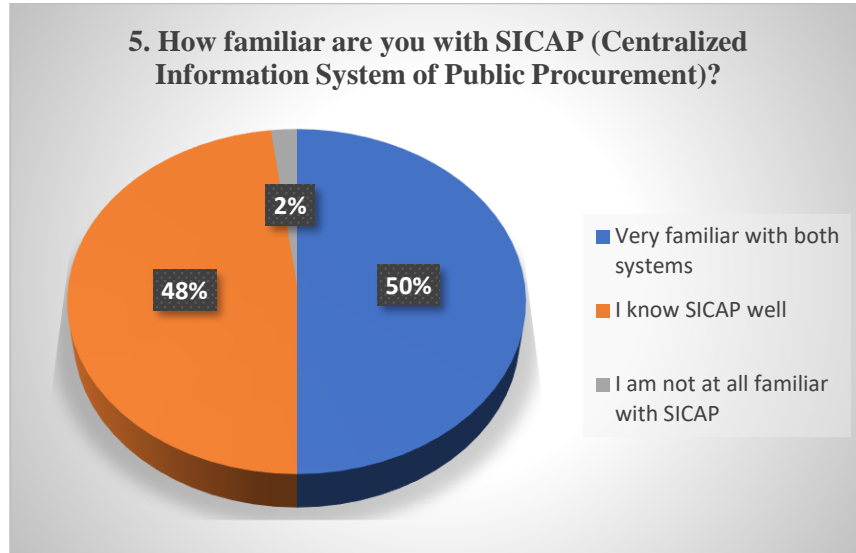
Fig.4

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For the fifth question, "How familiar are you with SICAP (Centralized Information System for Public Procurement)?" we have a percentage of 50%, very familiar, as shown in Figure 5.
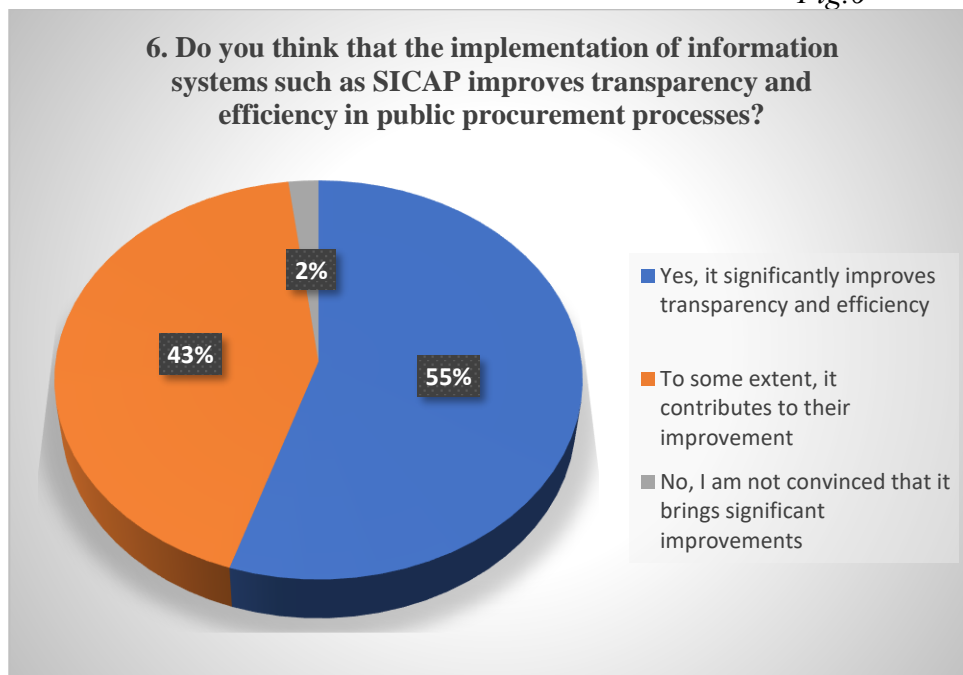
Fig.5

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Based on the responses received to the sixth question, "Do you believe that implementing information systems such as SICAP improves transparency and efficiency in public procurement processes?" we have a percentage of 55%, indicating "Yes, it significantly improves transparency and efficiency," as shown in Figure 6.
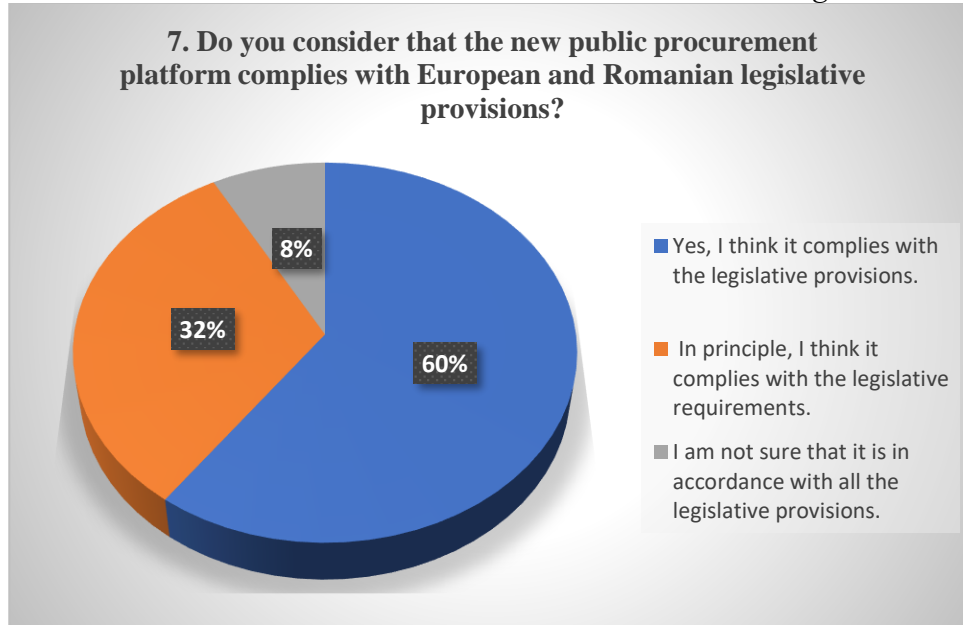
Fig.6

Own source

Based on the responses received to the seventh question, "Do you consider that the new public procurement platform complies with European and Romanian legislative provisions?" we have a percentage of 60% indicating "Yes, I consider it complies with legislative provisions," as shown in Figure 7.
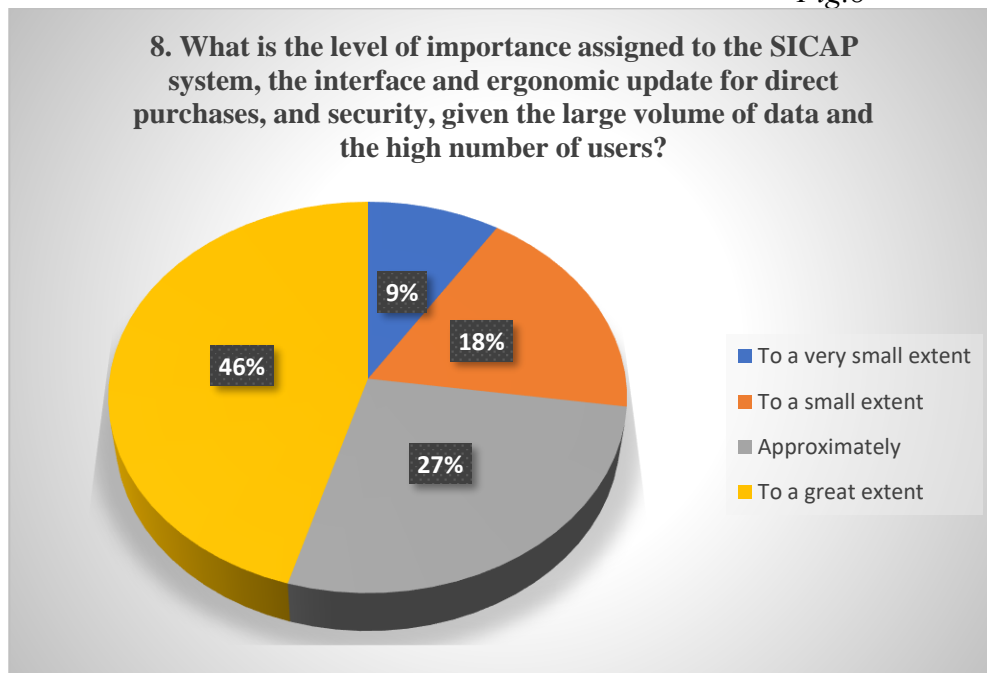
Fig.7

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For the eighth question, "What is the level of importance attributed to the SICAP system, interface updates and ergonomics for direct acquisitions, and security, considering the large volume of data and high number of users?" we have a percentage of 46% responding "to a very large extent," as shown in Figure 8.
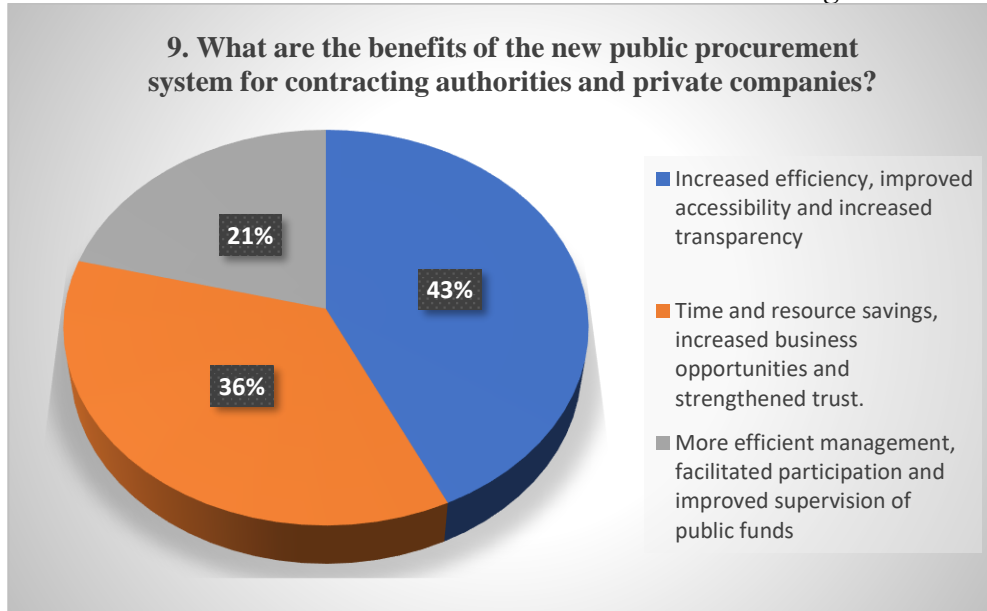
Fig.8

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Based on the responses received to the ninth question, "What are the benefits brought by the new public procurement system for contracting authorities and private companies?" we have a percentage of 43% indicating "increased efficiency, improved accessibility, and enhanced transparency," as shown in Figure 9.
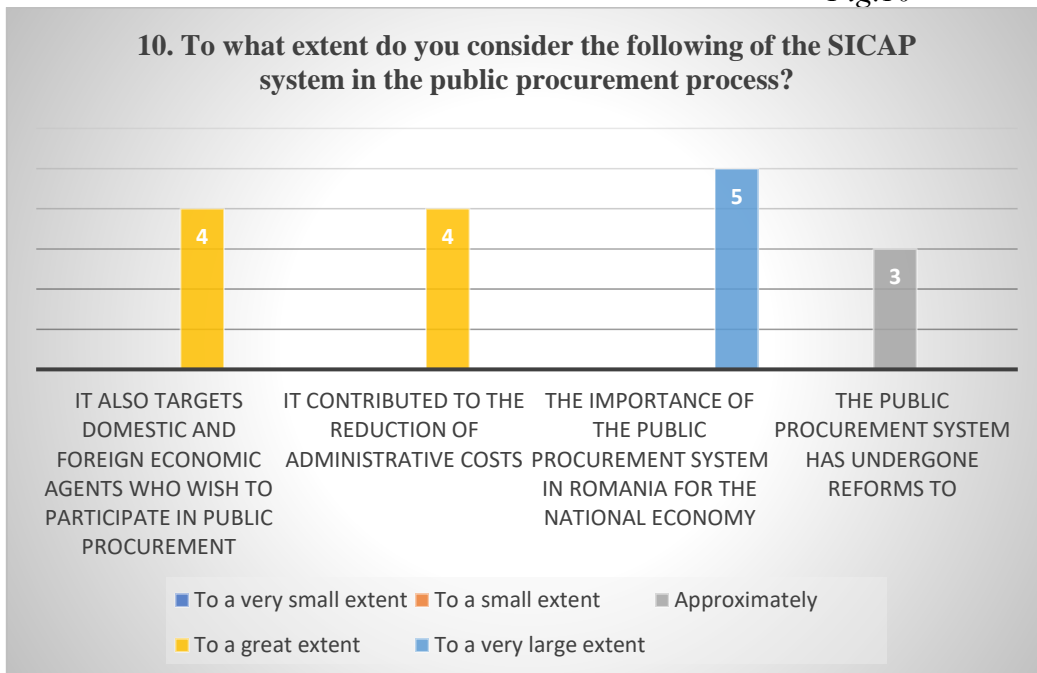
Fig.9

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For the tenth question, „To what extent do you consider the following features of the SICAP system in the public procurement process?" on a scale from 1 to 5 (where 1 is to a very small extent and 5 is to a very large extent), we have the following data, as shown in Figure 10
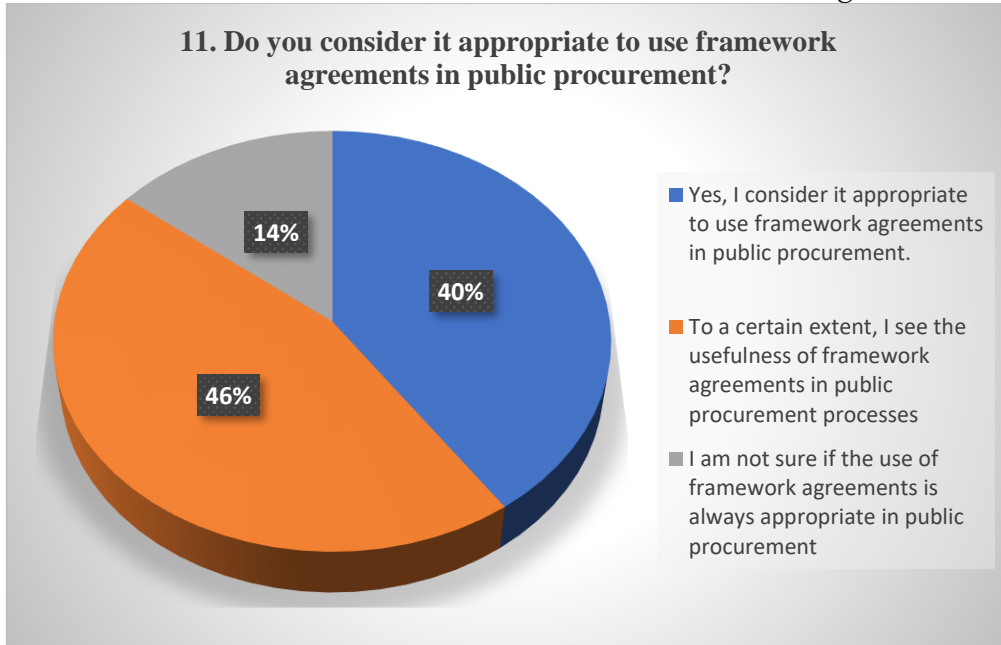
Fig.10

Own source

For the eleventh question, "Do you consider it appropriate to use framework agreements in public procurement?" we have a percentage of 46% responding "to some extent, see the utility of framework agreements in public procurement processes," as shown in Figure 11.

Fig.11

Own source

For the last question, "What is the level of importance at the regional level of significant risks, stimulating the growth of the number of companies registered in SICAP, and transforming electronic procurement into user-friendly software?" we have the response "to a very large extent stimulating the growth of the number of companies registered in SICAP and transforming electronic procurement into user-friendly software," as shown in Figure 12.

Fig.12
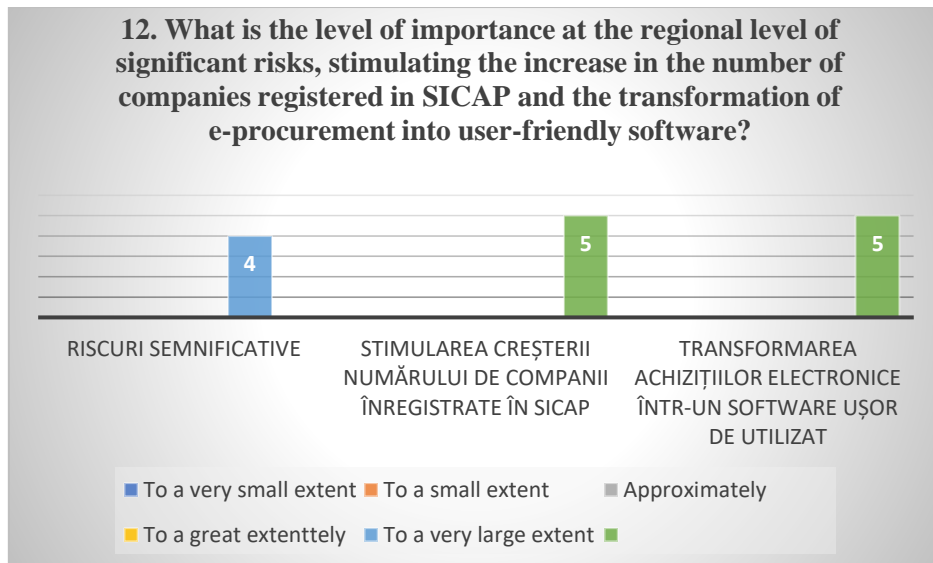
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The results of scientific research

The results obtained from the research support the premise that the success of centralizing public procurement is influenced by several critical factors. Among these factors is the adequate training of human resources, highlighted by the high level of education of employees in the field. Additionally, well-developed IT infrastructure, exemplified by the improvement of public procurement processes through SICAP, has been identified as another crucial element. Furthermore, effective communication and collaboration among various entities involved, including the use of framework agreements, have been considered essential aspects for the success of centralizing public procurement.

These findings suggest that organizations interested in implementing or improving the centralization of public procurement could significantly benefit from increased attention to human resource training, IT infrastructure development, and strengthening collaboration among entities to ensure the success of this complex process.

Conclusions

The impact of information technologies on public procurement within public interest entities is profound and positive, fundamentally changing the way these essential procedures are managed and conducted. The introduction and adoption of these technologies have brought about a series of significant improvements, contributing to increased transparency, efficiency, and integrity in the public procurement process.

Automation and simplification of procurement procedures represent one of the most evident changes, with specialized IT systems significantly reducing the volume of paperwork and the time required for their management. This automation has contributed to reducing the risk of errors and fraud, enhancing trust in the integrity and correctness of the procedures.

Information technologies have also facilitated greater transparency and accessibility of information related to public procurement, contributing to more efficient resource management and reducing administrative and operational costs associated with traditional procedures.

The utility of software applications in the field of public procurement has been a significant contribution to automating repetitive tasks and efficiently managing procurement-related data. SICAP has become an essential tool for streamlining and modernizing the public procurement process, providing robust digital infrastructures for transparent and efficient procurement.

Although Romania has made significant progress in modernizing and digitizing its public procurement system, efforts are still needed to improve transparency, efficiency, and integrity in procurement processes. Adopting a national strategy in public procurement for the period 2023-2027 is crucial for guiding and improving the system, ensuring alignment with national and European objectives.

Data security and confidentiality are fundamental aspects of the public procurement process, and implementing appropriate measures is essential to protect the interests and rights of all parties involved. By ensuring clear standards and adequate security measures, the risk of unauthorized access or misuse of sensitive data can be minimized.

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