

THE EFFICIENCY OF THE PUBLIC PROCUREMENT SYSTEM AND ITS IMPLICATIONS ON PUBLIC BUDGETS

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Abstract: Public procurement is a crucial function of governments, accounting for a significant part of their expenditure. As such, ensuring the efficiency, sustainability, and integrity of public procurement processes is key to optimizing the use of public funds. This literature review examines existing research on public procurement, focusing on its impact on budgets, efficiency, and sustainability. The review highlights the importance of legislation and public policy in shaping procurement practices and identifies corruption as a significant challenge to achieving efficiency, sustainability, and budgetary impact. The examination also highlights various elements that can enhance the effectiveness of public procurement procedures, such as electronic procurement systems, involvement of stakeholders, and the incorporation of sustainability criteria. Overall, this literature review provides insight into the complexity of public procurement and makes recommendations for improving its efficiency, sustainability, and budgetary impact. The findings suggest that strengthening legislation, promoting transparency, and incorporating sustainability criteria into public procurement processes are essential to optimize the use of public funds and to ensure that public procurement is a tool for sustainable development.

Keywords: budgetary impact; corruption; efficiency; legislation; literature review; public policy; public procurement; sustainability.

JEL Classification: H57, H11, H61.

Introduction

The method by which the state effectively and openly handles public funds is public procurement. As the main overseer of the EU mechanisms facilitating the unrestricted flow of goods and services, the public procurement system holds pivotal significance in the functioning of the EU internal market. The overall procedure of acquiring goods, works, and services on a public entity's behalf is called public procurement (Hilse, T., 1996). Thus, public policy is anticipated to ensure accountability, oversee the efficient execution of public procurement (proper management of public funds), and promote social, environmental, and various economic and political objectives. Their complexity raises the question of whether more complex regulations aid or impede the efficient use of public funds. Public procurement, which helps to build economic and social infrastructure, provide public services, and boost trust in government institutions, is one of the governments of Romania's top priorities. Given that public procurement entails the utilization of public resources and demands transparency towards taxpayers concerning how public funds are utilized, contracting authorities are obligated to exercise caution when granting contracts (Roos, R., 2012).

Goals and objectives for the study

This essay aims to identify the elements influencing the efficiency of the public procurement system and explore its impact on the allocation of public funds. In addition, I suggest finding ways to manage public procurement procedures more effectively, in close connection with the spending of public funds as their primary impact on the state budget, to identify ways to make public procurement procedures in Romania more efficient, that is, to carry them out in conditions of economy, efficiency, and effectiveness, by reducing costs and risks of non-compliance with public procurement legislation.

The necessity of conducting public procurement procedures within conditions of economy, efficiency, and effectiveness—the three crucial elements directly affecting the use and administration of budgetary funds designated for public procurement—highlights the topic's relevance and significance. The sustainability of public spending, according to the European Commission (2020), is a significant concern for many EU Member States and becomes even more significant in light of the current coronavirus outbreak. The proposed research issue is quite current and unique in the literature because ideas like process-based procurement, value-based purchasing, and value-based investment processes have recently gained widespread attention. Also, the collection of metrics measuring performance and efficiency in public procurement does not employ institutional indicators (such as fraud or corruption) (Fazekas & Kocsis, 2017). Considering the substantial share of public procurement expenditures in the total budget outlays, the primary objective is to assess the impact of a proficient procurement system on the durability of public budgets. A secondary objective involves examining the factors that influence the efficacy of the public procurement system. Institutional variables not studied in the literature, such as public procurement fraud or corruption, will receive special consideration.

Public budgets and the influence of public procurement - Motivation

Governments use procurement systems to make investments, buy goods and services, and support and boost the economy through the contracting authority. Fulfilling the requirements of the public interest stands as the ultimate objective of public procurement. An efficient procurement procedure ensures the receipt of goods, works, or services by contractual obligations, meeting the appropriate quantity, quality, and timing criteria, and sourcing from the most suitable and acceptable provider, under favourable terms (Transparency International, 2014). To effectively support policy goals including generating new employment, assisting small and medium-sized businesses, safeguarding the environment, and promoting research and innovation, public procurement procedures must be well-designed. Due to the global surge in public procurement triggered by the COVID-19 pandemic in 2019, Romania also experienced a significant increase in the value of public procurement, reaching a record of 49 billion euros. This figure was five times higher than the value in 2009. Moreover, the total value of goods works, and services acquired using public funds constituted 13.3% of Romania's GDP in 2013. Specifically, 9.46% (€14,250 million) originated from the state budget, while approximately 3.87% (€5,491 million) came from EU funds and other financing sources.

The proportion of public procurement to GDP has risen from 8% in both 2009 and 2010 to 22% in 2019. In 2020, public purchases constituted approximately 17% of GDP. According to a report from the World Bank, countries with unstable democratic institutions tend to have a low share of public procurement in GDP, indicating limited government capacity to

deliver high-quality services to the population. Contrastingly, stable OECD (Organisation for Economic Co-operation and Development) nations, like Switzerland with 25% and the Netherlands with 20%, exhibit higher percentages. The fragility of the state system is exemplified by Romania's public procurement percentage of 8% of GDP in 2009.

An analysis by the World Bank indicates that the limited share of public procurement in GDP in nations with fragile democratic institutions reflects the government's diminished ability to deliver high-quality services to its citizens. In contrast, OECD (Organisation for Economic Co-operation and Development) nations with exceptionally stable governments, such as Switzerland with 25% and the Netherlands with 20%, exhibit higher percentages. The Institute for Public Policy's Public Procurement 2019-2020 report (IPP) emphasizes the vulnerability of the state system, illustrated by Romania's public procurement percentage of 8% of GDP in 2009. However, the Romanian indicator has since increased to 22%, signifying a convergence with OECD nations in this aspect.

Table 1. Changes in the proportion of public procurement as a percentage of GDP in Romania from 2009 to 2020

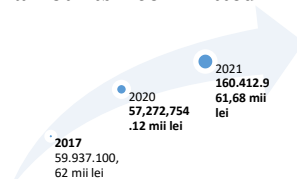
YEAR	TOT-EUR VALUE	GDP	PERCENTAGE OF GDP (%)
2009	9.601.309.995	118.000.000.000	8
2010	10.205.243.992	124.100.000.000	8
2012	14.965.714.300	133.900.000.000	11
2019	49.108.107.920	223.000.000.000	22
2020	36.561.371.14	217.000.000.000	17

Source: INSSE; NBR

As per the European Union Council's statement on June 17, 2022, today's public procurement markets constitute 15% to 20% of the global GDP. The entire framework governing the utilization of funds from the state or local budget is encapsulated within the public procurement system. This system ensures that requests for the acquisition of goods, services, or works from diverse contracting authorities are addressed through proposals submitted by various economic operators. By Article 7 of Law 98/2016, the fundamental principles guiding the awarding of public procurement contracts and the management of competitive bids include: a) nondiscrimination; b) equal treatment; c) mutual recognition; d) transparency; e) proportionality; and f) assumption of responsibility.

The public procurement system aims to encourage the expansion of businesses by employing public resources in a manner that is non-discriminatory, transparent, and efficient.

Figure 1. Evolution of financial amounts committed in public procurement procedures



Source: ANAP Efficiency-monitoring-indicators 2017-2021

Efficiency-monitoring-indicators 2017–2021, ANAP A total of 29,324 public procurement contracts were completed by Romania's contracting authorities/entities in 2021, with the

granted value coming to 16.412.961,68 thousand lei, an increase of roughly 180% from the previous year.

The national procurement system's legal setting

The public procurement system in our nation is set up similarly to the public procurement systems in the other EU Member States, and national law has recently been updated to reflect European public procurement legislation. The legal framework for public procurement comprises three categories of legislation: primary legislation, encompassing laws enacted by the Romanian Parliament; secondary legislation, including emergency ordinances and decisions issued by the Romanian Government; and tertiary legislation, comprising directives and orders issued by the National Agency for Public Procurement (ANAP).

The ANAP is a governmental structure whose primary responsibilities include developing at the conceptual level, promoting, and implementing public procurement policies, setting up and implementing a system of verification and control of the uniform application of legal and procedural requirements in the field of public procurement, and keeping an eye on the system's effective operation. The main legal regulations currently outlining the structure for conducting public procurement of works, goods, or services comprise Law No. 98/2016 on Public Procurement, subject to subsequent amendments and supplements. Accompanying these, Government Decision No. 395/2016 has been enacted to endorse the Methodological Rules for the practical application of the provisions concerning the granting of public procurement contracts/framework agreements specified in Law No. 98/2016 on Public Procurement, as revised and complemented. Furthermore, Law No. 101/2016 addresses issues related to remedies and appeals concerning the award of public procurement contracts, sectoral contracts, as well as works concession and service concession contracts. This law also oversees the organization and operations of the National Council for the Settlement of Disputes, subject to amendments and supplements. By creating integrated/common measures at the level of the entire administrative system, integrating central institutions in the regulatory and monitoring element as well as in the control and dispute resolution components, the public procurement legislation package is implemented.

Review of the literature on the efficiency of the public procurement system and the implications for the sustainability of public procurement

For this paper, the methodology chosen is a rigorous and systematic review of the literature on public procurement. Public procurement represents a significant portion of government expenditures, prompting fiscal theorists and practitioners worldwide to conduct studies and analyses over the years. Their focus has been on the efficient and effective utilization of public funds allocated to public procurement, with a particular concern for the potential bypassing of budgets through corruption a phenomenon observed globally, as indicated in the literature. In this analysis, a sample of 50 articles from the literature was employed to identify those pertinent to the research scope. Following a preliminary assessment of the abstracts of the identified articles, those not aligning with the research question were excluded, resulting in a final sample of 28 articles (Figure no 3).

The content analysis can be divided into several general categories: Efficiency of the public procurement system (11 articles); Corruption in public procurement - the main factor of

state budget evasion (3 articles); Sustainability of public finances - direct impact on budget balance (14 articles).

Increasing the effectiveness of the public procurement system

As per Milosavljevic et al. (2016), the entities responsible for procurement in the European Union represent approximately one-third of total government spending and contribute merely 10% to 15% to the overall gross domestic product. In response to persistent constraints on public budgets, legislators across the continent have put forth various performance criteria aimed at ensuring value for money in the efficient procurement of goods, works, and services.

A key flaw of the single market dashboard, according to Milosavljevi et al. (2019), is the subjective application of weights to various return indicators, which results in a wide range of ranking biases. While none of the metrics currently being examined can provide a thorough, consistent, and impartial evaluation of the efficiency of public procurement, both academic researchers and practitioners are actively seeking avenues for enhancement. In the year 2021, Milosavljevic et al. conducted a study using a set of public procurement indicators based on the TOPSIS technique. This methodology enabled them to evaluate the efficiency and effectiveness of public procurement systems in 28 European countries. The objective of the study was to rank European countries based on their performance in public procurement. This was achieved by estimating the weights of the criteria using the TOPSIS preference learning method. The results were then compared with the rankings provided by the EU Single Market Scoreboard.

The proficient utilization of public funds and the accomplished execution of contract awards are directly impacted by the decision-making management, as highlighted in a study conducted by Prier E. et al. (2020). This research evaluated the speed of decision-making as a performance metric in the public procurement system within the European single market. Recent scholarly discussions, as noted by Trammell et al. (2019), emphasize the heightened accountability of governments for the efficiency of public procurement. The realm of public procurement has evolved from a domain where specialists conducted routine procedures for the provision of goods and services to one that now carries significant governance and policy implications.

Egan (2010) points out in his research that the EU Single Market Scoreboard, designed as a mechanism to promote mutual influence and improve compliance, stands out as a significant outcome of the European Single Market. According to Flynn (2018), this specific component of the overall Scoreboard was first implemented in 2014, providing key information on the effectiveness of public procurement at the national level. The Scoreboard uses twelve weighted performance measures to rank EEA countries into three tiers each year. Its purpose is to evaluate various facets of value for money and other essential performance indicators related to public procurement, with a particular focus on competitiveness, bureaucracy, and transparency. Hanak & Serrat (2018) argue that, in the absence of competition, there is no guarantee that the lowest price offered will be fair and realistic. Therefore, it is widely recognized that competition typically results in lowering costs. As outlined by Broms et al. (2019), engaging in single tendering cultivates an unfavorable association between well-established political parties and particular corporations, thereby heightening the potential for elite collusion. Having multiple bidders has been identified as a strong indicator of open competition. Unfortunately, many

European countries still witness the participation of multiple bidders in various tenders. For instance, in 2018, only two Central and Eastern European (CEE) nations, namely Sweden and Iceland, surpassed this norm, with 10% or less of the Request for Proposals (RFPs) receiving only one offer.

After examining various EU public procurement procedures, Beke M. et al. (2013) identified several criteria, including Efficiency in the procurement process, Value for Money, Integrity, Accountability, Equal Opportunities and Treatment of Suppliers, Fair Treatment of Suppliers, Effective Implementation of Industrial, Social, and Environmental Objectives, and Access for International Trade in Public Markets. The first two requirements, efficiency, and effectiveness, are particularly crucial. These criteria are met through the quality/price ratio, ensuring that products are in optimal condition and comply with specifications. The majority of public procurement procedures in EU Member States are grounded in the principle of value for money.

VFM, as indicated by Dekel O. (2008), represents an endeavor to strike a balance between effectiveness, economy, and quality. Ensuring economic efficiency in public procurement requires a comprehensive approach to evaluating utility, going beyond a sole focus on price considerations. In this context, the public tendering mechanism is designed to achieve three objectives: (1) ensure integrity in contract awards, preventing distortion through favoritism, conflicts of interest, or corruption; (2) involve the government in economically efficient contracting practices; and (3) guarantee equal opportunity for all members of society to compete for the financial benefits associated with conducting business with state institutions.

Corruption in public procurement - the main factor of evasion of the state budget

The literature, through studies, confirms that the fact of corruption is directly involved in public procurement procedures and the award of contracts. Since 1999, the European Commission has prioritized and addressed the combat against corruption in public procurement. This commitment led to the establishment of the Group of States against Corruption (GRECO), and subsequently, a range of effective instruments has been developed to counteract corruption. According to Beke M. et al. (2013), the goal of upholding integrity throughout the procurement process is to prevent corruption. The procurement system is susceptible to corruption in a variety of ways and at various points in the process. He explains how closely the other goals are tied to integrity. Bribery, for instance, can hinder governments from hiring the finest supplier, undercutting the goal of getting the most value for your money. Integrity must be strengthened to assure fairness and equality of treatment, as corruption may make it impossible for suppliers to participate in the tendering process. A functioning government and the public's trust in it depend on the integrity of the procurement process.

The article concludes that public procurement serves as a vital mechanism for the functioning of the EU's internal market and is a fundamental contributor to the Union's operations, particularly in terms of the free movement of goods and services. Corruption in public procurement poses a threat to the integrity of the internal market. Corruption diminishes the legitimacy of public institutions, leading to a decline in governance quality. The article emphasizes that various factors, such as market dynamics, legal and socioeconomic considerations, and the political environment, influence the capacity of a public procurement system to combat corruption and achieve its objectives. Stakeholders

endeavor to reform public procurement regulations and their implementation through legislative processes. Additionally, these actors seek to influence state budget spending, resulting in negotiations and compromises among political figures, procurement officials, and private economic entities. According to Lyrio et al. (2018) and the bibliometric analysis, accountability and corruption are closely correlated with public sector transparency. According to Bauhr et al. (2019), horizontal monitoring may be a major factor in how much corruption risks are reduced overall by tender openness. According to Transparency International (2014), the European Commission estimates that Member States lose about €120 billion annually to corruption, which is just slightly less than the total yearly budget of the European Union.

Moreover, as per data from the OECD (2013), approximately 20% to 25% of the annual US\$2 trillion budget allocated for public procurement experiences losses due to corruption. It wasn't until 2011 that the Ministry of Public Finance (M.F.P.) and the National Integrity Agency (A.N.I.) in Romania established a cooperation treaty, leading to the implementation of procedures for examining and reporting conflicts of interest and incompatibilities detected by observers (UCVAP). The development of the current IT system, integrated into the SEAP platform and managed by ANI, resulted from the personal experiences of individuals involved in public procurement processes. This system serves as a tool for preventing and identifying potential conflicts of interest. This implies a substantial financial loss directly linked to or closely associated with corruption within public budgets. Consequently, experts in the field have focused on devising methods to assess and mitigate this phenomenon. These methods are subsequently applied through specific legislation to establish an environment that safeguards the integrity of the public procurement system.

The impact of public financial sustainability on the budget balance

The ability of a government to fund its present expenses, and maintain its taxation and related policies over the long term without endangering its solvency risking defaulting on some of its debts, or cutting back on some of its planned expenditures is known as fiscal-budgetary sustainability (EC 2017). Walker et al. (2012) characterizes sustainable public procurement (SPP) as the effort to attain objectives related to sustainable development by incorporating sustainability considerations into the procurement and supply chain procedures. Meehan and Bryde (2011) define sustainable public procurement (SPP) as the approach of procuring products and services in a way that minimizes negative impacts on both society and the environment throughout the product's life cycle. Finally, as outlined by the European Commission (EC) in 2020, Sustainable Public Procurement (SPP) involves public authorities aiming for a well-rounded approach encompassing the three dimensions of sustainable development—economic, social, and environmental—when acquiring goods, services, or works throughout all project phases. Grandia and Kruiyen (2020) emphasize that the European Commission's characterization of SPP includes the three "Ps" representing people (social), planet (environmental), and profit (economic), which collectively form the triple bottom line. As a result, SPP involves addressing economic, social, and environmental aspects. Silvestre and Tîrca (2019) argue that considering innovation's essential role in sustainability, innovative aspects of public procurement should be incorporated. Numerous studies have explored the implications of adopting the Most Economically Advantageous Tenders (MEAT) criteria as one of the

award criteria. In connection with this: Grandia and Kruijnen (2020) discovered, through a text mining analysis of over 140,000 public procurement notices in Belgium, that the use of MEAT criteria by contracting authorities wasn't obligatory for Sustainable Public Procurement (SPP). According to Bergman and Lundberg (2013), depending on a price-quality ratio scoring system is inadequate due to its opacity and susceptibility to strategic manipulation, given its reliance on less significant alternatives.

Nemec and Grega (2015) employed regression analysis to examine public procurement contract award notices in Slovakia. Their findings indicated that opting for the lowest price, as opposed to a specific criterion, leads to more substantial cost savings. In a study conducted in 2020, Dupka et al. investigated Contract Award Notices (CANs) within the Tenders Electronic Daily (TED) database from 2017 to 2018. The dataset consisted of over 700,000 CANs, submitted by contracting authorities in Slovakia, Poland, the Czech Republic, and Hungary to TED. Examination of the data reveals that, on average, savings for procurement types not oriented towards Sustainable Public Procurement (SPP) are 6.79%, whereas for SPP-oriented TEDs, the average savings amount to 8.6%. Savings for non-sustainable projects display a relatively typical distribution, with most cases clustered around an average of zero. In contrast, for Most Economically Advantageous Tenders (MEAT) focused on sustainability, the distribution exhibits two peaks, and the majority of savings fall within the range of 25% to 50%.

According to Thai et al. (2009), there must be at least four bids in a procurement process to realize significant savings. When only one bid is received, the situation can become disastrous, when three bids are submitted. The reason for this is that when there are four bidders, it is much harder to obtain anti-competitive agreements because the bidders are lowering their prices to win the process while the contracting body is also making significant savings. Hanak and Muchova (2015) used the formula $E = (EVP - FP) / EVP$ to calculate the savings realized (E), which is the ratio of the end price's (FP) relative drop to the procedure's (EVP) estimated value.

As per Loader & Norton (2015), public procurement extends beyond mere optimization of the contracting authority's price or quality. The European public procurement system is structured to function as a tool for executing diverse national, regional, and local sustainability policies, with a specific focus on promoting the development of Small and Medium-sized Enterprises (SMEs). Investigating the competitive aspect, Gupta (2002) studied a dataset comprising 1,937 highway construction tenders in the US state of Florida from 1981 to 1986. As per the author's discoveries, the highest level of competition (X) necessitated 6 to 8 bids. Any extra bids acquired beyond this threshold during the procurement process did not influence the ultimate cost.

Similar findings were made by Ilke et al. (2012), who examined a sample of 90,089 Turkish procurement processes and discovered that each additional offer received resulted in an average price reduction of 3.9%. Another noteworthy observation from the study was that higher-value processes attracted a greater number of bidders, implying that the estimated value of the procedure influenced the quantity of bids received. Sipos and Klatik (2013) found in Grega and Nemec (2015) that procedures with two bids received had larger savings than those with three to four bids. The scientists also discovered that prices were 5% lower in procedures where there was a final round of electronic tendering. Pavel (2010) came to a similar conclusion to Grega and Nemec (2015). The researcher analyzed the procurement procedures employed in the Czech Republic for highway and railroad

construction between 2004 and 2009. The findings indicated that each additional bid received resulted in an average cost savings of 3.275%. The author inferred that to preserve their market presence, the top five bidders in the industry reduced their prices and secured contracts.

Figure 3. - Sample articles selected for analysis

Author Full Names	Keywords ¹ Public Procurement			Article Title	Source Title
	Key E	Key C	Key S		
Bauhr, M., Czibik, Á., Licht, J., Fazekas, M. (2019)		X		Lights on the Shadows of Public Procurement: Transparency as an Antidote to Corruption	Governance
Beke M. et al. (2013)	X	X		Political and other forms of corruption in the attribution of public procurement contracts and allocation of EU funds: the extent of the phenomenon and overview of practices	Policy Department D: Budgetary Affairs European Parliament
Bergman, M.A.; Lundberg, S.(2013)			X	Tender evaluation and supplier selection methods in public procurement.	J.Purch. Supply Manag.
Brannman, L., Klein, J., D. & Weiss, L.W. (1987)			X	The Price Effects of Increased Competition in Auction Markets.	The Review of Economics and Statistics
Broms, R., Dahlström, C., Fazekas, M. (2019)	X			Political Competition and Public Procurement Outcomes	Comparative Political Studies
Dekel O. (2008)	X			The Legal Theory of Competitive Bidding for Government Contracts	Public Contract Law Journal
Džupka et al. (2020)			X	Sustainable Public Procurement in Central European Countries. Can It Also Bring Savings?	Sustainability
Egan, M. (2010)	X			The Single Market. In M. Cini, & N.-S. Borragán	European Union Politics (fifth edition) Oxford, UK: Oxford University Press
Flynn, A. (2018)	X			Measuring Procurement Performance in Europe.	Journal of Public Procurement
Gupta, S., (2002)			X	Competition and Collusion in a Government Procurement Auction Market	Atlantic Economic Journal
Grandia, J.; Kruiyen, P.M. (2020)			X	Assessing the implementation of sustainable public procurement using quantitative text-analysis tools: A large-scale analysis of Belgian public procurement notices.	J. Purch. Supply Manag
Grega, M.; Nemec, J. . (2015)			X	Factors Influencing Final Price of Public Procurement: Evidence from Slovakia	Procedia Econ
Gupta (2002)			X	Moving Procurement Systems to the Internet: The Adoption and Use of E-Procurement Technology Models	European Management Journal
Hanak and Muchova (2015),			X	Impact of Competition on Prices in Public Sector Procurement	Procedia Computer Science
Hanák & Serrat (2018)	X			Analysis of Construction Auctions Data in Slovak Public Procurement	Advances in Civil Engineering
Ilke, O., Rasim, O. & Bedri, K. (2012)			X	Public Procurement Auctions and Competition in Turkey	Review of Industrial Organization
Lyrio et al. (2018)		X		Thirty Years of Studies on Transparency, Accountability, and Corruption in the Public Sector: The State of the Art and Opportunities for Future Research	Public Integrity
Loader, K., Norton, S. (2015)			X	SME Access to Public Procurement: An Analysis of the Experiences of SMEs Supplying the Publicly Funded UK Heritage Sector	Journal of Purchasing and Supply Management
Meehan, J.; Bryde, D. (2011)			X	Sustainable procurement practice. Bus. Strat. Environ.	European Union. Green and Sustainable Public Procurement

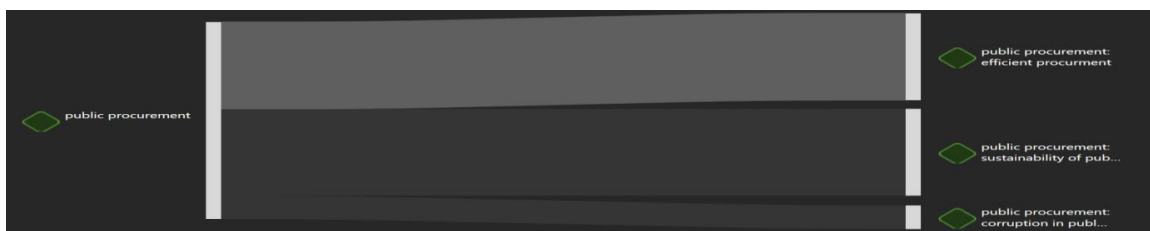
Milosavljevic, M., Milanović, N., Benković, S. (2016)	X	Policies and Public Procurement Efficiency	Journal of Local Self-Government
Milosavljević, M., Dobrota, M., Milanović (2019)	X	A New Approach to the Evaluation of Public Procurement Efficiency Among European Countries	European Review
Milos Milosavljevic, Sandro Radovanovic, Boris Delibasic (2021)	X	Evaluation of Public Procurement Efficiency of the EU Countries Using Preference Learning TOPSIS Method	Economic Computation and Economic Cybernetics Studies and Research
Pavel (2010)	X	The efficiency of the control systems of public procurement in Slovakia	Slovakia: Transparency International
Prior E, Clifford P. McCue, Csaba Csaki. (2020)	X	Evaluating Decision Speed as a Measure of Public Procurement Performance in the European Single Market	International Journal of Public Administration
Silvestre B.S., Tîrca D.M.(2019)	X	Innovations for sustainable development: Moving toward a sustainable future	Journal of Cleaner Production
Sipos and Klatik (2013)	X	Quality of public procurement in Slovakia in 2012	Transparency International Slovensko
Thai, K., V. et al. (2009)	X	International Handbook of Public Procurement,	Boca Raton, Florida, Ed. Taylor & Francis Group
Trammell, E., Abutabenjeh, S., Dimand, A.-M. (2019)	X	Review of Public Administration Research: Where Does Public Procurement Fit in?	International Journal of Public Administration
Walker, H.; Miemczyk, J.;Johnsen,T.;Spencer, R.	X	Sustainable procurement: Past, present, and future	Journal of Purchasing and Supply Management.

Source: Personal qualitative analysis of specific literature

Figure no 4. – Personal qualitative analysis of specific literature is in ATLAS.ti

	public procurement 28	public procurement: corruption... 3	public procurement: efficien... 11	public procurement: sustainability... 14
public pro... 28		3 (0,11)	11 (0,39)	13 (0,45)
public pro... 3		3 (0,11)		
public pro... 11		11 (0,39)		
public pro... 14		13 (0,45)		

Code Co-occurrence Analysis – Tabel



Code Co-occurrence Analysis – Sankey Diagram

Conclusion

The literature review presents a summary of current research on public procurement and its implications for budgets, efficiency, and sustainability. The study underscores the role of legislation and public policy in shaping procurement practices and identifies corruption as a notable obstacle to achieving efficiency, sustainability, and budgetary objectives. Several key factors are emphasized in the review as potential contributors to the success of public procurement processes, encompassing e-procurement systems, stakeholder engagement, and the incorporation of sustainability criteria. The analysis reveals that

strengthening legislation, promoting transparency, and incorporating sustainability criteria into public procurement processes are essential to optimizing the use of public funds and ensuring that public procurement is a tool for sustainable development. The study recommends that policymakers and procurement professionals should adopt a holistic approach to public procurement that balances the need for efficiency, sustainability, and transparency.

In conclusion, the literature review underscores the complexity of public procurement and the need for a multi-dimensional approach to optimize its efficiency, sustainability, and budgetary impact. The findings offer insights into the key challenges and opportunities associated with public procurement and provide recommendations for policymakers and practitioners to improve procurement practices.

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