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The Abstract of the Doctoral Thesis

Theoretical Development of the Internal Evaluation System in the Romanian Public Procurement System

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Chapter 1 - Transdisciplinarity in Political Science and Anthropogenic Systems

Anthropogenic represents the new geological era marked by the significant impact of human activities on the Earth's natural systems, including climate change and land use change. Scientific studies approach these problems from transdisciplinary perspectives, calling for a reconfiguration of our relationship with the environment and the recognition of the significant impact we have on the planet, traditional disciplinary boundaries have to be extended to be able to analyze possible solutions to complex problems, not always complicated.

History of transdisciplinarity

The concept of transdisciplinarity was discussed for the first time at the international workshop "Interdisciplinarity - Teaching and Research Issues in Universities", organized by the OECD in collaboration with the French Ministry of National Education and the University of Nice.

The pioneers of transdisciplinarity - Piaget was convinced that reality is far too complex to be understood through a single disciplinary lens. Erich Jantsch and André Lichnerowicz were also pioneers of transdisciplinarity, developing theories on social planning and development, emphasizing the importance of a holistic and interconnected perspective on knowledge and action, or arguing in favor of overcoming disciplinary barriers.

Transdisciplinary approach in policy evaluation

The UN and OECD support the transdisciplinary approach in research, highlighting the need to integrate knowledge from different disciplines to address complex societal challenges. However, the implementation of transdisciplinary methodologies faces numerous challenges, including the complexity of studies and the need to integrate knowledge from multiple fields.

Contingency theory and adaptive governance - there is no universally valid method in governance; effectiveness depends on the specific context.

In this sub-chapter we have shown that many scientists believe that all assessments need to integrate multiple perspectives to ensure that procurement decisions are made transparently and efficiently, achieving the proposed objectives and minimizing the negative impact on other systems.

A brief history regarding the interest in the field the reasons for choosing the research topic and the approaches to improving knowledge

Starting with the explanation of the "skin in the game" concept that emphasizes the role of evaluators in influencing and transforming systems through their practice, I explained my interest in public policy evaluation. I believe that to improve professional capacity and adequately respond to the challenges of the public procurement system, it is essential to continue professional development through continuous education and participation in advanced training programs. Thus, evaluators can be better prepared to implement and evaluate effective public policies, adapted to the specific needs and dynamic contexts of contemporary society

Relevance and importance of the study

In the current global context, plausible answers to questions related to crisis management, restoring trust in public institutions, and rethinking governance and management are difficult to give. Business purpose, government strategies, and relations with society are all governed by public policies applied in a dynamic environment. The transdisciplinary and systemic approach to these problems is an option

to understand and analyze the behavior of complex systems, formed by interconnected parts and influenced by external factors, which may exhibit nonlinear behavior and emergent properties, of crisis dynamics, providing strategies for addressing and mitigating challenges. Thus, systemic evaluations include the analysis of interactions and feedback loops between the various parts of the system, as well as the identification of potential intervention points and the long-term consequences of actions and decisions.

Public procurement, defined as the cornerstone of strategic governance, plays a major role in promoting public sector efficiency and achieving public policy objectives, swallowing up a significant part of the government budget, with the decisions of governments and public administrations on the purchase of goods and services having a significant impact on the economy, and can shape market dynamics. Sustainability in public procurement, especially for IT equipment and vehicles, involves integrating environmental criteria to minimize negative environmental impacts and promote energy efficiency and resource reuse.

But in addition to the economic impact, public procurement contributes to achieving broader policy objectives, such as promoting sustainability, supporting local businesses, and promoting social and economic inclusion.

Review and update of the databases for the systematic analysis of the literature and the opinions of experts in the field of evaluation.

We linked studies on organizations, systems, and public procurement, resulting in 24,981 indexed articles published between 2017 and 2022, and found that very few studies contained and analyzed data on public procurement, applying contingency theory and the transdisciplinary approach in systems evaluation. Throughout 2022-2024, we have added academic articles, books, and recommended studies to the professional platforms of the American Evaluation Association and the European Evaluation Society, through international conferences and webinars. We have included works by authors with significant impact in the field, such as Michael Quinn Patton, David Fetterman, Andy Rowe, Patricia Rogers, Otto Potluka, Scott Chaplowe, Burt Perrin, and others, who use various research methods. To identify systems research gaps, we have added criteria for interdisciplinary use of works in the complex public policy environment. We analyzed the methodologies used by other researchers in the fields of Political Science, International Relations, Dynamic Systems, Policy Evaluation, Public Administration, Law, Foresight, Economics, and Environment.

Results of the systematic review of the literature

In this sub-chapter, I have proposed to focus my analysis on the existing theories necessary for understanding the dynamics of the systems and sub-systems in which the Romanian Public Procurement System operates and I have discovered how old patterns of thinking, based on a non-systemic or mechanistic approach, can mislead evaluators. A relevant example is given by the studies carried out immediately after Romania acceded to the EU, where the system was limited to the network of internal organizations and departments in the legislative context of the time.

Also relevant is the negative connotation given to the term "system" in the media in recent years, similar to the one present in social networks, where "parallel state" is a frequently used term.

The following subchapters were dedicated to the synthesis of the answers found following the systematic analysis of the literature.

What are systems and their evaluation? Systems thinking in a complex world

In this subchapter I have shown that numerous studies define evaluation from various perspectives and approaches, it being framed according to the methodology used in various generations and paradigms and the activities it entails to "make value judgments on results" in the short, medium and long term or to inform decision-makers and beneficiaries in the decision-making and planning process, and that learning is one of the main functions of evaluation, along with establishing responsibilities and giving credit in the control process.

The second main function of evaluation is the control function, which provides information on the added value of interventions, thus helping to establish the effectiveness and impact of the policies or programs implemented.

Using the perspective of systems thinking in the neo-institutional economy, the role of evaluation in organizations is emphasized to identify the main obstacles to the use of evaluation and to foster organizational learning and empowerment. Evaluation thus becomes a catalyst for change and continuous improvement, promoting more effective and accountable governance.

1.6 Development of Evaluation Capacity

The study's hypothesis stipulates that the development of a public policy evaluation system that allows systemic evaluations is a priority, and the Public Procurement System, analyzed as the backbone of public administration, is the optimal starting point. The evaluation of individual programs or projects is not enough to explain the complexity of the systems, a necessary and urgent first step for the development of the internal evaluation capacity is the standardization of the evaluation and professionalization of the evaluation profession, by including it in the International Occupations Standard.

We have shown why the development of evaluation capacity is essential for the effective implementation of public policies and for achieving the Sustainable Development Goals.

1.7 Ontology and epistemology in systemic transformative evaluation

In systemic evaluation, ontology involves assumptions about the nature of systemic problems in public administration, while epistemology refers to the sources and methods of data collection and analysis used to obtain the necessary knowledge. Thus, ontology focuses on understanding the nature of the evaluated systems, and epistemology on the methods of data collection and analysis. These concepts help to understand the interactions and relationships within the systems, to assess their performance and sustainability.

Chapter 2 - Research Design

2.1 The users of the systemic evaluation of the Romanian Public Procurement System have been defined, noting that the evaluators are the first users of the systemic evaluation processes. Other users have been defined as internal actors in central and local public administration, including policymakers, managers, and civil servants, which are another important segment of users. They are closest to citizens' needs and play a key role in creating sustainable and resilient policies. Representatives of the private sector and actors from non-governmental organizations constitute other

segments of users. Lawyers and parliamentarians are also important users, having a role in adapting the legal framework necessary for systemic evaluation.

Finally, citizens, as users of products and services obtained through public procurement and as beneficiaries of a healthy living environment, are the most important users.

In sub-chapter 2.2 "Context" I concluded that "although Romania has had attempts to develop a national system for evaluating public policies, additional measures are needed to strengthen it, following the example of Spain, which has promulgated a law to institutionalize the evaluation of public policies", and AMEPIP needs to expand its capacity to carry out substantial evaluations and clarify its responsibilities to avoid overlapping responsibilities with The Court of Accounts. Alignment with international standards would facilitate better compliance with corporate governance requirements, increasing transparency and accountability in public administration.

In the sub-chapter "2.3 Evaluating - What is a Public Procurement System?" starting from the definitions and characteristics of public procurement systems, given international organizations such as the UN or the OECD, we analyzed the systemic limits and connections of SAP in Romania, using a transdisciplinary approach to understand its dynamism and complexity, the organizational component of SAP, interactions, and emergencies, to establish the role of evaluation in this axis-system of public administration, whose leaders are politicians and have the role of authorizing officers.

In the sub-chapter **2.4 Research Methodology** - I opted for the application of mixed research methods, characteristic of the seventh generation of evaluation. This methodology emphasizes the importance of context and the use of a transdisciplinary lens, integrating academic and professional diversity for effective and innovative public governance. The research respects ethical considerations, and ensures the integrity of the data and the impartiality of the results, reducing the risk of bias, the analysis of secondary and tertiary data, being only used adjacently for clarification or highlighting some connections. The evaluation of public interventions begins with the establishment of formal policy objectives, which form the basis of the evaluation criteria. We have also shown that the principles are essential in evaluation because they constitute the basis of evaluative judgment, then I have developed new indicators and scales to be used in the comparative analysis between various regions of Romania and between the organizations in the system, including those of the European Commission, included in the analysis grid according to the established criteria, to draw relevant and substantiated conclusions.

Chapter 3: Case study - Negative effects of lock-in in public procurement on systemic sustainability

The methodology for system dynamics, which includes instantaneous and cumulative cause-and-effect relationships, feedback loops, nonlinearities, and delays, is also used in this chapter to analyze change and resistance to change in SAP. Evaluators require knowledge from various fields to address transdisciplinary problems, analyze, and make actionable recommendations. The circular economy is seen as a solution to problems of global importance, and SAP actors can use this type of assessment to formulate and test alternative policies, being a vital sub-system for the functioning of the public administration, not only in the implementation of projects but also in its daily activity: we think of all the utilities and tools used.

We have shown that, to overcome the negative effects of the lock-in phenomenon, it is necessary to diversify suppliers, review contractual terms, and promote innovation, steps that cannot be taken before carrying out robust system assessments, giving up the idea of trying to repair deficiencies when they occur, repairs that create major negative events in the medium and long term. Therefore, the development of internal evaluation units and integrated systemic evaluation can transform the way public administration fulfills its missions and serves the public interest. The usefulness of existing data, their relevance, consistency, and security significantly influence the evaluability of systems. Ensuring the accuracy and availability of data is very important for obtaining robust and valid results in the evaluation.

The assessment indicators are organized into six criteria: complexity, transparency, financial sustainability, systemic sustainability, use of assessment, and agility. Each criterion is detailed with evaluation questions and sub-indicators, measuring variables such as the number of systemic connections, the degree of impairment of beneficiaries, the correct use of CPV classes and codes, and adaptation to disruptive changes.

In the study, the research methodology combines primary and secondary data, including questionnaires, interviews, and web scraping, to ensure a comprehensive analysis. The importance of transparency and accuracy of data is stressed, as well as the use of technologies to improve the quality of the evaluation process. The conclusion is that the proposed indicators can guide the evaluation of SAP in Romania and can be adapted to other systems and contexts, promoting transparency and accountability in the management of public resources.

In sub-chapter 3.4 we have detailed the process of data collection and analysis in the systemic evaluation of the Public Procurement System (SAP) in Romania, proposing a framework that can be used in many other analyses, in different systems and sub-systems, focusing on a holistic analysis of the entire system, identifying strengths and weaknesses and providing an overview of overall performance. It integrates feedback from various sources to adjust and improve processes, reflecting the interconnectedness and complexity of SAP, in a process of mirrored cross-referencing of the perception and perspective of each actor in the system.

The methodology includes a multi-level analysis that examines phenomena at the individual, group, organizational, and societal levels. At the individual level, the behavior and decisions of civil servants influence the efficiency and transparency of procurement. At the group level, team dynamics and cooperation affect project management. At the organizational level, the structure and culture of public institutions contribute to the efficiency of procurement processes. At the societal level, government policies and regulations affect the efficiency and equity of resource distribution, and public opinion and civic engagement influence the accountability of public institutions.

For illustration, the analysis used data from the SEAP platform, assessing IT and consumables spending, highlighting resource allocation, and procurement policies for sustainability and efficiency. The interviews and documents analyzed highlight the importance of integrating sustainability criteria into public procurement. The sustainability assessment is essential to substantiate the decisions of authorizing officers. The ANOVA analysis assessed the influence of politics on the values of sustainability indicators, revealing that, although the elements of environmental sustainability, green procurement, and care for large systems exist in the rhetoric (including in the responses assumed as authorizers) and in the political discourse, there are no relevant actions to support its statements in its activity or most of the organizations led, does not significantly influence the implementation of

sustainability measures. However, near-significant values suggest linear factors that could influence systemic sustainability scores, hence the need for clear and effective policies, educating the public and officials about sustainability, regularly monitoring and evaluating the performance of public institutions, collaboration between government, the private sector, and non-governmental organizations being necessary for the success of sustainability initiatives.

Chapter 4. Discussions

Each actor in this ecosystem has a unique and often biased perspective on evaluation, shaped by their roles, goals, and practical constraints. Recognizing these diverse perspectives and finding methods that can be applied by actors to understand why and how they can find better solutions is key to developing a balanced approach with benefits for all interconnected components.

Finally, we can say that the effectiveness of green procurement depends on the availability of green products, the ability of suppliers to meet sustainability criteria and regulatory and policy frameworks. SAP players, in turn, can transform the market by creating demand for sustainable products and services and encouraging suppliers to adopt greener practices. Romania is taking important steps in this direction, but smaller steps in building real impact assessment systems, currently the evaluation of initiatives is stuck in bureaucratic methods and frameworks similar to auditing.

Chapter 5. Conclusions and limitations

As society evolves and interactions between sectors become increasingly interdependent, it is very important to adopt integrated perspectives that allow for a holistic understanding of emerging challenges and opportunities, in transdisciplinary studies and systemic assessments to respond to the complexity and dynamics of current systems, such as public administrations, and for the understanding and management of policy systems.

The goal of transdisciplinary research in public systems is to understand the complexity of issues, consider diverse perspectives, link abstract and case-specific knowledge, and develop knowledge and practices that promote the common good. Because public policies significantly influence the well-being and future of societies, seen both as a result and as a place of confluence of many economic, social, and environmental dimensions, and, as we have shown, the public procurement system is an essential mechanism through which government policies are translated into concrete actions and recognizing the importance of potential users, whom we have actively involved from the earliest stages, To build the evaluation objective of determining merit, value and significance, we were able to confirm the hypothesis and emphasize the need for increased evaluation capacity.

The policy implications of the study underline the role of evaluation in ensuring sustainable practices, transparency, and resilience principles in public procurement. The empirical evidence supporting this perspective has allowed a nuanced analysis of the impact of public procurement on economic development, environment, social inclusion, and the complexity characteristic of the public administration scene, in state and private organizations, both at the central and local levels.

The most important lesson for this "skin in the game" was: social learning is an important aspect of transdisciplinary research, as it involves the interaction and exchange of knowledge between experts from different disciplines and perspectives, which was found in all the conferences I attended and in all the working groups, including COST and EES - the European Evaluation Society. The

development of transdisciplinary research requires building stakeholder engagement, facilitating learning processes, and capitalizing on different stakeholder epistemological engagements.

Thus, the immediate contribution of the study consists in the development of an optimal design applicable to public administration in Romania, with a focus on the Public Procurement System. This design has been detailed and applied in the current context. Looking ahead, future foresight studies in this area could deepen the systemic connections between public procurement and emerging areas.