

NATIONAL SCHOOL OF POLITICAL AND ADMINISTRATIVE STUDIES
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FIELD OF ADMINISTRATIVE SCIENCES

DOCTORAL THESIS
SUMMARY

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Bucharest

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**INNOVATION STRATEGIES AND
MECHANISMS FOR THE PUBLIC SECTOR**

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ABSTRACT OF DOCTORAL THESIS

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ARGUMENT

This paper is entitled "Innovation strategies and mechanisms for the public sector" and the topicality of the subject derives from the fact that public administrations are constantly changing, seeking to become as innovative as possible in order to satisfy as many citizens as possible. At the same time, it is very important for a state to innovate, as this is how competitive advantage is created and maintained. The issue is also topical because of the discussions on innovation that are taking place on national, European and even international levels, as innovation is the 'key' to a country's survival.

Key terms in this paper include innovation, public-sector, public-sector innovation, social innovation, public administration, innovation strategies, innovation mechanisms. The defining of these terms is necessary in order to create an overview of the subject of the paper. This paper is structured in chapters and sub-chapters, with each chapter touching on different aspects and the last chapter being the practical part of the paper.

THEORETICAL BACKGROUND

The literature reveals a large number of papers in the field of innovation. Searching some relevant databases, I found that this subject has been addressed, directly or indirectly, in the period 2020-2024, in more than 18,000 titles in Google Scholar, 40,500 titles in ssrn.com and almost 20,000 titles in SpringerLink (of which 13,643 chapters and more than 6,376 articles), and in order to highlight valuable sources in the field of innovation, a brief review of the literature is presented below.

In *Open Strategies for the Public Sector* (Jo Lee, 2017), the focus is on exploring the different strategies used in the public sector while examining the mechanisms and context that influence their success. This paper is an important source for the innovation process as it looks at the analysis of different strategies related to public sector innovation. At the same time, the paper examines the innovation efforts of EU Member States (but also refers to the innovation efforts of the US states). This paper attempts to illustrate the factors behind innovation, how organizations understand the concept of a collaborative organization, how governments are trying to access different tacit inputs from different users, and how to leverage innovative solutions. Here, it is noted that public sector open data strategies should continue to evolve and increase their effectiveness,

impact and social value in order to grow the public sector. At the same time, it is mentioned that some strategies are readily accepted and implemented, while others are not so readily accepted, as cities face challenges in adapting organizational processes.

The approach on innovation strategies and mechanisms used in the Romanian public sector in order to optimize them can be found in *EU Innovation Strategies and Mechanisms Applied on National Level* (Apostol, 2022). Here the modalities of innovation in the public sector are highlighted, with a focus on innovation strategies and mechanisms used to achieve the intended purpose. The paper is based on a bibliographical search of literature focusing on innovation, especially in the public sector, which reinforces the importance of the concept of innovation. The results of this paper show that the importance of using innovation strategies and mechanisms at the national level must be understood, as it is with the help of innovation that the demands of a state's citizens can be met.

A paper that identifies the strategies needed to bring innovation to public sector organizations and presents different ideas on how and when a strategy should be implemented, is *Understanding and Applying Innovation Strategies in the Public Sector* (Cohen & Eimicke, 1996). In this paper the authors refer to the concept of innovation in management and then a set of the most common innovation techniques, which are experimented in the public sector, are discussed, such as: strategic planning, team management, re-engineering, benchmarking, total quality management and other techniques.

Another valuable resource related to this paper is *Innovation readiness in public sector service delivery: An exploration* (Ojiako, et.al., 2022) which explores innovation readiness in public service delivery and the managerial mechanisms that foster readiness for the innovation process. This paper identifies that governments need to innovate in public service delivery. While for some governments this need is quite obvious, for others it is not so obvious, because there is no argument that innovation in services leads not only to economic growth but also to social welfare.

The report *Public Sector Innovation: Towards a New Architecture* (European Commission, 2013) addresses innovation in the public sector and discusses the need for persistent and cumulative strategic change in the public sector to promote collaboration and innovation. As time goes by, governments are facing more and more long-term challenges related to outdated public service infrastructures, ageing societies, rising costs for social security and healthcare, high youth unemployment, etc. This report illustrates key principles, approaches, policies, opportunities and barriers to innovation in the public sector on EU and Member State level.

In *Public Sector Innovation: A Strategy for Innovation in Local Government* (Intraprenor Nation, 2024) the discussion turns to innovation strategies in local government and the main driving forces behind their importance. Thus, the focus is on innovation in the public sector which faces specific challenges that differentiate it from the private sector. At the same time, it is mentioned that in the public sector, there is a greater responsibility to use public funds, which can lead to the idea of not using these funds in order to not be accountable for their use.

According to *Strategy for innovation in the public sector* (Røttingen, 2020) new tools for innovation in the public sector are presented, encouraging development-oriented research, experimentation, network building and sharing of different knowledge. Interest in innovation in the public sector is significant and growing, reflected in the large number of academic papers and studies.

TOPICALITY OF THE SUBJECT

This subject is topical and offers many opportunities for research and practical application in various government contexts, as is evident from the brief presentations of some of the papers adjacent to our research topic. All these papers, to which others can be added, also describe a possible agenda for expanding innovation research in the public sector. Thus, in these:

- Strategies for introducing innovation in public sector organizations are identified and ideas on how and when to implement them are developed (Cohen & Eimicke, 1996);
- Innovation in the public sector and various reform strategies is examined (European Commission, 2013);
- An extensive review of the academic, professional and government literature on public sector innovation is undertaken (Australian National Audit Office, 2009);
- A systematic review of 181 articles on academic empirical research on innovation in the public sector is conducted (de Vries, et. al., 2015);
- There is increased focus on public sector innovation by both researchers and practitioners (Pratama, 2019);
- The empirical underpinning of the knowledge presented in academic literature on public sector innovation is explored (de Vries, et. al., 2014);
- Measuring innovation in the public sector based on a recent pilot study in the Nordic countries is discussed (Bloch & Bugge, 2013);

- Academic literature on innovation readiness in public service delivery is reviewed (Ojiako, et. al., 2022);
- A framework for measuring public sector innovation through representative surveys is provided to guide policies to support innovation (Arundel, et. al., 2019);
- A comparative study on public sector innovation in several countries is being conducted (Cinar, et. al., 2022);

All these considerations and arguments on the timeliness and appropriateness of the present study can be summarized as follows:

- **Increased relevance:** In a changing world, innovation in the public sector is essential to adapt to new challenges and demands of society. Whether it's digitization, improving public services, or tackling global issues such as climate change, innovation is crucial to government efficiency and effectiveness.
- **Improving public services:** Innovation can improve public services by using modern technologies, optimizing processes and reducing bureaucracy. This not only improves citizens' experience but also administrative efficiency.
- **Transparency and accountability:** Innovative strategies can increase transparency and accountability in the public sector by implementing digital solutions that make it easier for citizens to access information and get involved in decision-making.
- **Public-private partnerships:** Promoting innovation can facilitate collaboration between the public and private sectors, paving the way for innovative solutions and mutually beneficial partnerships.
- **Adaptability:** In a dynamic global environment, the ability of governments to adapt quickly to change is essential. Innovation plays a crucial role in this adaptation, allowing public administrations to be more proactive.

RESEARCH METHODOLOGY

The research methodology used is both bibliographical reviews, since it was chosen to study the works of authors who are specialists in the field concerned by this research, in Romania and abroad, and empirical, carried out through the practical part of the last chapter.

To begin with, in order to determine the current state of the literature, I turned to an electronic search using Google Academic as well as the Research Gate portal. Google Academic illustrated nearly 3,340,000 results in response to the phrase *public sector*. A more refined search

using the words *innovation in the public sector* illustrated a total of 2,580,000 papers, and 18,200 studies and papers were illustrated for the words *mechanisms and strategies for achieving innovation in the public sector*. Searching on Research Gate for the words: *innovation in the public sector* I received a number of approximately 100 articles related to this search. Of these, a quarter were consistent with the theme of the paper.

The next step was to study the abstracts to see if they were compatible with the research objectives of the paper. After all this, I turned to Google Books to see the works relevant to the field of innovation, i.e. to the topic of the paper. Thus, by searching for "*innovation in the public sector*", I found some books with specifics on innovation. Here I selected only the book format and the period of publication- 21st century. In addition to the mentioned electronic sources, I also used various works in physical format (treatises, books, manuals, etc.).

The research methodology continues with the use of systematic bibliographic research which will have three roots: relevant EU and OECD documents and studies and, separately, the Oslo Manual. From these three sources, a complex set of extensive research has been developed, using resources that draw on, complement and detail the concepts, mechanisms and strategies arising from the three roots.

The research approach of the practical part involves a qualitative as well as a quantitative approach, as it is based on the data of three questionnaires, which aim to investigate the endogenous and exogenous perception of innovation, as well as the perception of the academic and specialized environment, on: the level of innovation in the Romanian public sector, the level of innovation regarding specific innovation strategies and mechanisms, as well as the level of evaluation of the quality and efficiency of innovative public services. The qualitative part of the research is the fact that the preparation and implementation of the study is based on different interpretations, different explanations, and the quantitative part is explained with the help of quantifications as well as numerical expressions of the phenomena to be studied.

In this work I used both quantitative (questionnaire) and qualitative methods (focus group, internet media analysis, online investigation of an institution's level of innovation).

OBJECTIVES AND ASSUMPTIONS

This paper aims to achieve general and specific objectives.

➤ **The general objectives** of the work are:

GO1: To describe the status on innovation in the public sector based on the identification of innovation strategies and mechanisms used in Europe and Romania;

GO2: To establish current innovation trends leading to the identification of the specificity of innovation in our country;

➤ **The specific objectives** of the work derive from the general objectives and are represented by:

SO 1: Description of the evolution of the concept of innovation in Romania;

SO 2: Literature review;

SO 3: Research the concept of innovation and establish the fundamentals of innovation;

SO 4: Identify innovation mechanisms and strategies in Romania;

RESEARCH HYPOTHESIS

RH.1: There is a specificity of innovation in the public sector;

RH.2: Innovation processes in the public sector have their own strategies and mechanisms;

RH.3: Innovation strategies and mechanisms are operationalized on European, national, regional and local level, as well as the methods and tools for evaluating innovation.

RESEARCH QUESTIONS

A very important aspect in setting the objectives of the paper is the mention of the research questions. Thus, this paper is shaped by the question: ***what are the current trends in public sector innovation?***

In addition to this primary question, the following expert questions arise: **What is the current state of innovation on both the national and EU level? What is the specificity of innovation in Romania? How are the concepts of innovation strategy and innovation mechanism evolving in Romania?**

In addition to answering these questions, this paper will provide answers on the types of innovation that exist, the objectives of innovation, and the factors that influence the innovation

process in the public sector. It is well known that innovation takes place in several areas, and with the help of the expert questions one can see which type of innovation is most commonly used in Romania. Also, by identifying the type of innovation most often used one will be able to deduce in which area citizens show interest and make their demands.

The aim of this PhD thesis is to identify innovation strategies and mechanisms on the level of the Romanian public sector, thus establishing the current trends in innovation in our country.

THESIS STRUCTURE

This paper is structured in chapters and sub-chapters, and there are four chapters, the last chapter being an empirical study.

INTRODUCTION

The first part of the paper is the introductory part which contains information on the research objectives, the research questions, the structure of the PhD thesis, and information on the research methodology.

CHAPTER I-INNOVATION: CURRENT DEVELOPMENTS AND TRENDS

The aim of this chapter is to illustrate different theoretical concepts related to innovation in the public sector. As the term innovation is a topical term, several definitions have been attributed to it over time, so that there are now several meanings of the concept of innovation. In this chapter different meanings are mentioned, as well as a brief history of innovation and the importance and classification of the concept of innovation. Also included here are different approaches of the European Union, the Organization for Cooperation and Development and the Oslo Manual on Innovation. Even if at first glance these sources appear to be different, a closer look shows that they share a common interest in the innovation process. Thus, the European Union and the Organization for Cooperation and Development have developed several points of interest for conducting and monitoring the innovation process, while all editions of the Oslo Manual aim to classify innovations into four categories. The interest of the handbook is to illustrate the following concepts: product innovation; process innovation; marketing innovation; organizational innovation. The handbook distinguishes between *technological product innovation* and *process innovation* (these two

categories are abbreviated to TPP innovation). With regard to the concept of innovation on a national and regional level, Research-Development-Innovation activity occupies a central place in all of Romania's development strategies, but it is poorly developed, and its impact is limited. At the same time, looking at Romania's position in terms of innovation on a European level, it can be identified that our country is not at the top of the innovation rankings.

CHAPTER II: STRATEGIC AND OPERATIONAL TOOLS FOR INNOVATION IN THE PUBLIC SECTOR

The purpose of this chapter is to illustrate which innovation strategies and mechanisms are used on a European level and which innovation strategies and mechanisms are used in our country. This chapter starts by defining the concepts of public sector, strategy, strategy in the public sector as well as defining the concept of mechanism. The reason for starting with these definitions is that in order to be able to identify innovation strategies and mechanisms in the public sector, it is first necessary to know the meaning of these keywords. Thus, the public sector is a necessity for any state economy. The economic activity of a state is carried out through the actions of economic agents in various markets and performs the following functions: the allocation function, the income distribution function and the stabilization function.

There are a large number of interpretations of the term strategy in the literature, and there is no universally accepted definition, but they all share common aspects. After presenting these aspects, the second chapter continues with the identification of innovation strategies on a European and national level, as well as the identification of innovation mechanisms used in European and national strategies. After the presentation of innovation strategies on a European level, this chapter highlights the innovation strategies applied in our country.

Once this is done, based on the same criterion, this chapter discusses the different innovation mechanisms applied to achieve innovation strategies. Here, different mechanisms on a European level have been identified, such as: the loan mechanism, the equity mechanism and the innovative mechanism of dialogue with national parliaments. On a national level, these are represented by: the Euratom loan mechanism, the mechanisms for stimulating new research directions, the strategic guidance mechanism, the mechanism for co-financing research-innovation, as well as the various bench-marketing and bench-doing and bench-learning mechanisms.

CHAPTER III: SCOREBOARD–INSTRUMENT FOR PROMOTING INNOVATION IN THE PUBLIC SECTOR

In Chapter III the focus is on the Innovation Scoreboard. This part starts by mentioning the European Innovation Scoreboard (EIS), which is part of the strategy to create an 'Innovation Union', a strategy that aims to help entrepreneurs turn innovative ideas into different products and services. It analyses the innovation performance of all EU Member States, looking at their year-on-year development. As an EU Member State, Romania is also part of this scoreboard. Thus, it has been identified that our country is in the category of emerging innovators, a category that is at the end of the graph analyzing innovation. This scoreboard is not only carried out on the European level, but also on the global level in order to observe the innovative capacity of the European Union compared to countries on the global level, but it can also be applied on the level of the organization. In order to be able to carry out this scoreboard on the level of a public organization, certain aspects such as the establishment of resources, organizational culture, strategy and management are needed. Once these have been established, it is necessary to determine the timeframe for the realization and implementation of the innovation intention, the identification of key capabilities and values that need to be assessed.

Taking into account these aspects and the objectives of the National Strategy for Research, Innovation and Smart Specialization 2022-2027, an outline of the innovation scoreboard in relation to this strategy was drawn up, identifying all the aspects necessary to achieve it.

CHAPTER IV: EMPIRICAL STUDY. THE IMPACT OF INNOVATION IN THE PUBLIC SECTOR

The aim of this chapter is to find an answer to the innovation trends in the Romanian public sector. The research approach involves a qualitative as well as a quantitative approach, since it is based on data from three questionnaires: **the first questionnaire** aims to illustrate the exogenous perception of innovation in the public sector, **the second one** refers to the endogenous perception, and **the third one** refers to the perception of the academic and specialized environment on: the level of innovation in the Romanian public sector, specific innovation strategies and mechanisms, as well as the evaluation of the quality and efficiency of innovative public services.

At the same time, I also used the focus group method to establish objectives, results and identify the most popular innovation strategies and mechanisms used in the public sector. Also here,

a press analysis was used in order to carry out a comparative study based on media and internet information in our country and media and internet information in another EU country, from a certain time frame. Following this, an online investigation of innovation in a Romanian public institution was also carried out.

RESEARCH METHODOLOGY

In order to have a more comprehensive picture of this work, it is necessary to mention that the research methodology used is both **bibliographic reviews**, because it was chosen to study the works of authors specializing in the field covered by this research, in Romania and abroad, and **empirical**, carried out through the practical part of the last chapter.

To begin with, in order to establish the current state of the literature, I turned to an electronic search using Google Academic as well as the Research Gate portal. Google Academic illustrated nearly 3,340,000 results in response to the phrase *public sector*. A more refined search using the words *innovation* in the public sector illustrated a total of 2,580,000 papers, and 18,200 studies and papers were illustrated for the words *mechanisms and strategies for achieving innovation in the public sector*. Searching on Research Gate for the words: *innovation in the public sector* I received a number of approximately 100 articles related to this search. Of these, a quarter were consistent with the theme of the paper. The next step was to study the abstracts for compatibility with the research objectives of the paper. After all this, I turned to Google Books to see works relevant to the field of innovation, i.e. to the topic of the paper. Thus, searching for "*innovation in the public sector*", I found some books with specific focus on innovation. Here, I selected only the book format and the time of publication- 21st century. In addition to the mentioned electronic sources, I also used various works in physical format (treatises, books, manuals, etc.).

The research methodology continues with the use of **systematic bibliographic research** which will have three roots: relevant EU and OECD documents and studies and, separately, the Oslo Manual. From these three sources, a complex set of extensive research has been developed, using resources that draw on, complement and detail the concepts, mechanisms and strategies arising from the three roots.

The relevant sections within each guidance source were then read and re-read in order to determine the key methodological steps. Methodological steps were identified and defined. These were reviewed to identify agreements and unique areas of guidance amongst guidance documents.

Consensus across multiple guidance documents was used to inform the selection of the most important steps in the literature search process. Based on these, certain steps specifically related to literature searching in systematic reviews were established. These were: who and for what purpose should search the literature, then the literature search stage, preparing and setting the search strategy, searching databases and further searching as well as managing references and reporting the search process. For the strategies and mechanisms identified as relevant to the research approach, complementarity analysis was carried out to support the coherence and complexity of the documents underpinning and directing public sector innovation.

The research approach of the practical part of this paper involves a **qualitative as well as a quantitative approach**, since it is based on data from a questionnaire that aims to investigate the perception of the academic and specialized environment on: the level of innovation in the Romanian public sector, the level of innovation with regard to specific innovation strategies and mechanisms, as well as the level of evaluation of the quality and efficiency of innovative public services. The qualitative part of the research is represented by the fact that the preparation and implementation of the study is based on different interpretations, different explanations, and the quantitative part is explained with the help of quantifications as well as numerical expressions of the phenomena to be studied.

In this work I used both **quantitative** (questionnaire) and **qualitative methods** (focus group, internet media analysis, online investigation of an institution's level of innovation).

CONCLUSIONS

The content of the PhD thesis includes a description of the state of innovation, current trends and developments in the concept of innovation, which is compatible with the proposed general and specific objectives.

The four chapters of the thesis cover various aspects of innovation, from theoretical concepts to empirical studies, and are in line with the suggested structure and research concerns of the national and international academic and specialist community.

The present text is largely compatible with the proposed thematic agenda, addressing most of the key issues. However, in view of further research, it could be improved by including more detailed discussions on cross-sector collaboration, digital transformation and innovative procurement processes.

The Romanian administration needs to work harder in order to gain the interest and trust of the citizens, because in Romania it has been established that the population does not trust the state administration. These aspects are visible in most of the studies on innovation in the European Union countries, and even though the rankings have changed during the course of this work, Romania has not managed to achieve a major change, but it still falls in the ranking of emerging innovators, changing its position by a few percent more or less.

Regarding the objective based on the description of the state of innovation in the Romanian sector, it has been identified that innovation is present in our country, but most of the time it is deficient, not completely meeting the needs of citizens. At the level of our country, innovation has a specificity based on organizational and product innovation, so that it is much easier to make improvements at the organizational and product level, compared to achieving other types of innovation.

In this paper, the aim was to highlight the strategies and mechanisms used on a European level to achieve innovation and based on these, to illustrate the mechanisms and strategies used in Romania to achieve the innovation process. Here, some innovation strategies carried out at European level were illustrated and it was noted that our country has taken over some strategies in order to apply them on a national level. Among these strategies, the Europe 2020 Strategy, the Research-Innovation-Development Strategy, etc. were mentioned. At the same time, the European Union states are obliged to transpose into national legislation what the European Commission communicates. Thus, each Member State must have a national research, innovation and development strategy. It follows from this that they have similar characteristics, but we need to focus on the differences in order to be able to carry out a study of innovation.

In summary, the conclusions resulting from the PhD thesis can be grouped as follows:

➤ **Literature-based assessment of the timeliness and relevance of the PhD thesis in relation to the national, European and international research agenda**

History of the definition of innovation in the public sector: Innovation in the public sector was originally defined in the context of improving the efficiency and effectiveness of public administrations. Unlike technical innovation, which focuses on the development of new products

and technologies, public sector innovation aims to improve public services and administrative processes to meet citizens' needs.

Differentiation from technical innovation: Innovation in the public sector is differentiated by focusing on administrative processes and services rather than technological products. It often involves organizational and cultural changes to promote efficiency, transparency and accountability.

EU and OECD concerns: Both the European Union and the OECD have stressed the importance of innovation in the public sector to meet today's social and economic challenges. Conceptual ambiguities and the complexity of innovation processes are recognized as major challenges, along with the difficulty of assessing their impact.

Feasibility of the proposed research objectives

Feasibility of objectives: The objectives of the thesis, judged in the context of the extensive research on innovation in the public sector, can be considered realistic and achievable. They include describing the state of innovation in the Romanian public sector, identifying current trends and exploring specific mechanisms and strategies. The methodology used, including questionnaires and focus groups, is appropriate for collecting relevant data and achieving these objectives.

Adequacy of the research methodology to the research objectives of the thesis

Methodology: The thesis uses a combination of qualitative and quantitative methods, including questionnaires and focus groups. This allows for a comprehensive assessment of innovative perceptions and practices in the Romanian public sector, ensuring the relevance and accuracy of the data collected.

Appraisals of the logic of the research approach

Logic of the approach: The research approach was structured according to thematic, operational and strategic syntheses drawn from the literature, following a clear progression from problem identification to hypothesis formulation and empirical data collection. Each chapter contributes coherently to the development of the argument and the achievement of the research objectives.

➤ **Relevant conclusions on each chapter, with reference also to the contribution of each to the achievement of the proposed research objectives**

Introduction: Contextualizes the issue of innovation in the public sector and presents the research objectives and hypotheses. Thus, the following are highlighted:

- ***History of the definition of innovation in the public sector:*** The concept of innovation in the public sector has evolved significantly in recent decades, influenced by the need to streamline and improve public services. Initially, innovation was seen as similar to technical innovation, focusing on the introduction of new technologies and products. Over time, the focus has shifted to administrative processes and services that better meet the needs of citizens.
- ***Differentiation from technical innovation:*** Unlike technical innovation, which focuses on the development of new products and technologies, public sector innovation aims to improve services and administrative processes. It often involves organizational and cultural changes to promote efficiency, transparency and accountability in public services.

Chapter I-Innovation. Current Developments and trends: Provides a detailed analysis of the evolution of the concept of innovation and current trends, highlighting its importance for improving public services. Various theoretical models and international practices are discussed, highlighting the evolution from technical innovation to process and service innovation. In this context, emphasis is placed on:

- ***EU and OECD concerns:*** The European Union and the OECD have consistently stressed the importance of innovation in the public sector to meet today's social and economic challenges. Strategies such as the "Digital Agenda for Europe" and OECD initiatives on public innovation highlight the need for innovative practices in public administration.
- ***Conceptual ambiguities and complexity of innovation processes:*** Innovation in the public sector is characterized by conceptual ambiguities due to the diversity of the fields involved and local specificities. The innovation process is complex, involving multiple stakeholders and requiring inter-institutional coordination and collaboration.
- ***Difficulty of assessing the impact of innovation:*** Assessing the impact of innovation in the public sector is difficult due to the intangible nature of many outcomes and the lack of standardized performance indicators. This complicates measuring the effects of innovation on the efficiency and quality of public services.

Chapter II-Strategic and operational tools for innovation in the public sector: Details various innovation tools and strategies, highlighting their importance in the effective implementation of public policies. Examples of good practices from other countries are presented and the need to adapt these tools to the Romanian context is discussed. The most important conclusions concern:

- ***The role of strategies and mechanisms in driving and managing innovation processes in the public sector:*** Strategies and mechanisms are essential to drive and manage innovation in the public sector. They provide a structured framework for identifying needs, planning initiatives and assessing impact. Implementing effective strategies can improve transparency, efficiency and quality of public services, contributing to increased citizen satisfaction and economic development.
- ***History of the strategic approach to innovation in the EU and OECD:*** The strategic approach to innovation in the European Union and OECD has evolved over the decades, with an increasing emphasis on collaboration and cross-sector partnerships. Initiatives such as the Europe 2020 Strategy and the Horizon 2020 program have laid the foundations for creating an innovation-friendly environment by funding R&D and promoting knowledge transfer between the public and private sectors. The OECD has emphasized the importance of taking a systemic perspective on innovation, integrating policies and practices from different fields to support the necessary transformations in the public sector.
- ***Assessing the impact of innovation on public sector development:*** Assessing the impact of innovation is key to understanding the real effects of innovation initiatives on the public sector. This involves the use of specific performance indicators such as administrative efficiency, red tape reduction and citizen satisfaction. Despite the complexity and challenges associated with measuring impact, rigorous evaluation allows strategies to be adjusted and resources optimally allocated to maximize the benefits of innovation.
- ***The specificities of public innovation in South-East European countries:*** Innovation in the public sector in South-East European countries has specificities due to the specific economic and social context. These countries often face challenges related to limited resources, underdeveloped infrastructure and weak institutional capacities. However, innovation initiatives, often supported by European and international programs, have started to take shape, with the main objective of improving public services and increasing administrative efficiency. Pilot projects and cross-sector collaborations are frequently used to test and implement innovative solutions.

Chapter III - Scoreboard: Tool for promoting innovation in the public sector: presents a framework for assessing innovation, providing a practical tool for monitoring and improving innovation performance. This chapter is essential for understanding how innovation can be measured and evaluated in the public sector, given the following:

- ***History of Scoreboard use:*** The Scoreboard was initially used in the private sector for performance monitoring and strategic management of organizations. It was popularized by Kaplan and Norton in the 1990s as an essential tool in corporate governance for aligning day-to-day activities with long-term strategy. The use of the Scoreboard has gradually spread to the public sector, where it is used to monitor and evaluate the implementation of public strategies and policies.
- ***Monitoring of strategies:*** The Scoreboard allows continuous monitoring of progress against strategic objectives and rapid adjustment of actions according to the results achieved. It helps to identify problems early and implement corrective measures, thus ensuring efficient management of resources and faster achievement of objectives.
- ***Specificity of the Scoreboard in the public sector:*** In the public sector, the Scoreboard needs to be adapted to reflect the complexity and diversity of government objectives. Performance indicators should include not only financial measures, but also measures of efficiency, service quality, citizen satisfaction and transparency. Implementing a Scoreboard in the public sector requires close collaboration between different departments and a strong commitment from leadership to ensure its effective use.

Chapter IV - Empirical study. The impact of innovation in the public sector: Provides a detailed analysis of data collected through questionnaires and focus groups, validating research hypotheses and offering practical recommendations. This chapter confirms the relevance and feasibility of the research objectives through empirical data.

- **Appraisals of the bibliographical basis of the content and approaches in the thesis, relevance, topicality and novelty of the bibliographical resources used**

Bibliographical substantiation: The thesis makes use of a varied and up-to-date bibliography, including reference works in the field of public innovation, EU policy documents and recent empirical studies. These sources provide a solid theoretical foundation and an adequate contextualization of the issue of innovation in the Romanian public sector.

➤ **Matching empirical research to the theoretical content of the thesis**

Adequacy of empirical research: The empirical research is well integrated into the theoretical content of the thesis, providing concrete evidence and examples that support the theoretical arguments presented. Results from questionnaires and focus groups are correlated with the theories and models discussed in the literature, ensuring rigorous validation of the research hypotheses.

Important ideas and contributions of the thesis to the development of research in administrative sciences

Contributions: The thesis makes significant contributions to the understanding and development of innovation in the Romanian public sector. It proposes models and strategies that can be applied to improve the efficiency and quality of public services. It also highlights the importance of cross-sector collaboration and digitization, providing a solid basis for future policy and research in public administration.

VALIDATION OF RESEARCH HYPOTHESES

The research hypotheses appear in the thesis through a process of logical flow from the described context, as follows:

- **Hypothesis I** is introduced and contextualized by discussing the importance of strategies and mechanisms in innovation.
- **Hypothesis II** is supported by highlighting the objective of improving the efficiency and quality of public services through innovation.
- **Hypothesis III** is addressed by stressing the need for innovation impact assessment.

In this logical view, the first chapter "**Innovation. Current developments and trends**" adds the following:

- Analysis of the evolution of the concept of innovation and current trends, providing a more detailed theoretical basis for strengthening hypotheses.
- Discussion over various theoretical models and international practices of innovation in the public sector.

Therewith:

- Hypothesis I is supported by the discussion of the evolution and trends of innovation strategies in the public sector.
- Hypothesis II is supported by examples of international practices that have led to improved public services.
- Hypothesis III is addressed by presenting methods for assessing the impact of innovation.

Analyzing from the perspective of hypothesis validation chapter II "**Strategic and operational tools for innovation in the public sector**" we deduce that:

- It details various innovation tools and strategies, highlighting their importance in the effective implementation of public policies.
- It provides a history of the strategic approach to innovation in the EU and OECD and the specifics of public innovation in South-East European countries.

Contributions to this chapter support that:

- **Hypothesis I** is directly validated by presenting the tools and strategies needed for innovation.
- **Hypothesis II** is supported by the discussion of the effective implementation of strategies and their impact on the quality of public services.
- **Hypothesis III** is addressed through concerns about assessing the impact of innovation and monitoring the results.

The research approach also includes Chapter III "**Scoreboard: a tool to promote innovation in the public sector**" where:

- It presents a framework for assessing innovation through the Scoreboard, providing a practical tool for monitoring and improving innovation performance.
- It details the history of Scoreboard use in the private and public sector and the specifics of this tool in the public sector.

Thus:

- **Hypothesis I** is supported by the use of the Scoreboard as a mechanism for monitoring and managing innovation.
- **Hypothesis II** is validated by illustrating how the Scoreboard can improve the efficiency and quality of public services.

- **Hypothesis III** is directly addressed by focusing on continuous performance evaluation and adjusting strategies according to results.

Finally, the fourth chapter "**Empirical study. The impact of innovation in the public sector**":

- Provides a detailed analysis of the data collected through questionnaires and focus groups, validating the research hypotheses.
- Presents the perceptions of civil servants and citizens on innovation in the Romanian public sector.

The empirical research, which is the subject of this chapter, contributes to the validation of the research hypotheses as follows:

- **Hypothesis I** is validated by identifying perceptions of the importance of innovation strategies and mechanisms.
- **Hypothesis II** is supported by empirical evidence showing improvements in efficiency and quality of public services due to innovation.
- **Hypothesis III** is addressed by assessing the impact of innovation based on feedback received from respondents and adjusting policy recommendations based on these results.

These analyses demonstrate how each chapter contributes to the validation of the thesis research hypotheses, providing a solid basis for the final conclusions and practical recommendations proposed in the thesis.

OPEN ISSUES

This sub-chapter includes issues that shape new directions for research on innovation in the public sector. Thus, the following issues have been identified:

With reference to **public sector innovation strategies**, they take into account *cross-sector collaboration, digital transformation, organizational culture and various innovation-friendly policies and regulations*. Thus:

➤ **Cross-sector collaboration**, concerns:

- Public-private partnerships: these require additional resources and expertise for innovative projects.

Over time, many partnerships have been formed around the world. Some of them have lasted only a short time, and others are still operating today. Some partnerships focus on narrow local targets, while others try to coordinate broad policy areas in large regions where millions of

people live and work. (OECD, 2006). Partnerships are key tools of local governance as they provide a mechanism for local organizations in particular to work together and adapt their policies to better reflect people's needs. (Chesbrough, 2006).

- Involvement of civil society: it is about consulting and involving citizens and non-governmental organizations.

➤ **Digital transformation**, concerns:

- The adoption of emerging technologies: such as artificial intelligence, blockchain, IoT to improve efficiency and transparency;
- E-government: digital platforms for citizens' access to public services and cutting red tape.

➤ **Organizational culture**, concerns:

- The promotion of an innovative working environment: Encouraging creativity and critical thinking;
- The training and development programs: Investment in continuous staff training;

➤ **Innovation-friendly policies and regulations**:

- Simplifying administrative procedures: Reducing red tape and barriers to implement new ideas.
- Financial incentives: Grants, subsidies and other forms of financial support.

Regarding innovation mechanisms in the public sector, these include *innovation labs, innovative procurement processes, crowdsourcing and hackathons, as well as various pilot projects and controlled experiments*. Thus:

➤ **Innovation labs**: the role of innovation labs is that they are used to test and experiment with new solutions;

➤ **Innovative procurement processes**: Reforming procurement processes are designed to encourage the participation of small and medium-sized enterprises and the adoption of innovative solutions;

➤ **Crowdsourcing and hackathons aims** to organize various competitions and events to gather ideas and solutions from citizens and experts;

- **Pilot projects and controlled experiments:** Implementation of pilot projects to test the feasibility and effectiveness of initiatives before scaling them up.

SELECTIVE BIBLIOGRAPHY

- Apostol, M.-G. (2022). *EU Innovation Strategies and Mechanisms Applied on National Level*. Research Association for Interdisciplinary Studies (RAIS);
- Arundel, A., Bloch, C., & Ferguson, B. (2019). *Advancing innovation in the public sector: Aligning innovation measurement with policy goals*. *Research Policy*, 789-798;
- Australian National Audit Office (2009) *Innovation in the Public Sector: Enabling Better Performance, Driving New Directions*. Better Practice Guide. Australia;
- Bloch, C., & Bugge, M. M. (2013) *Public sector innovation-From theory to measurement*. *Structural Change and Economic Dynamics*;
- Chesbrough, H. (2006) *Open Innovation: The New Imperative for Creating and Profiting from Technology*, Grantham Book Orphans. Harvard;
- Cinar, E., Simms, C., Trott, P., & Demircioglu, M. A. (2022). *Public sector innovation in context: A comparative study of innovation types*. *Public Management Review*;
- Cohen, S., & Eimicke, W. (1996). *Understanding and Applying Innovation Strategies in the Public Sector*. Annual National Conference of the American Society for Public Administration;
- de Vries, H., Bekkers, V., & Tummers, L. (2014) *Innovations in the Public Sector: A Systematic Review and Future Research Agenda*. IRSPM conference. Ottawa;
- de Vries, H., Bekkers, V., & Tummers, L. (2015). *Innovation in the Public Sector: A Systematic Review and Future Research Agenda*. *Public Administration*;
- European Commission (2013) *Public Sector Innovation: Towards a New Architecture*. Research and Innovation. Brussels;
- Intraprenor Nation (2024). *Public Sector Innovation: A Strategy for Innovation in Local Government*. Accessed on 22.03.2024, available at: <https://intrapreneurnation.com/strategy/public-sector-innovation-strategy-local-government/>;
- OECD. (2006) *Successful partnerships - a guide*. *OECD LEED Forum for Partnerships*. Forum for Partnerships. Vienna;

- Ojiako, U., Hussain, E. J., Chipulu, M., Marshall, A., & Bashir, H. (2022). *Innovation readiness in public sector service delivery: An exploration*. Production Planning & Control. Glasgow;
- Pratama, A. B. (2019). *The landscape of public service innovation in Indonesia: A comprehensive analysis of its characteristic and trend*. Innovation & Management Review;
- Røttingen, J. A. (2020). *Strategy for innovation in the public sector*. The Research Council. Norway;