
The Endeavor to Develop the Public Administration: Innovation as an Alternative Approach for Future Advancements

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Abstract

Public administration innovation is multifaceted and complex process and requires theoretical and empirical research. Institutional change for innovation involves a relation between human capital development and the innovation process, as the core idea of having a different mindset to deal with existing methodologies and obstacles. This article consists of qualitative research based on in-depth interviews on a panel of governmental representatives regarding the situation of innovation in the public administration in Romania. It explores the multifaceted nature of change and innovation, particularly within public administration in a broader societal context. The research objectives pursue to uncover a general perspective on the public administration innovation process; to cluster the main barriers in chasing innovation in public administration in Romania; and to identify possible solutions to innovate the public administration. The research underscores the critical role of human capital development and digital infrastructure in fostering adaptable societies. Effective integration necessitates equipping citizens with digital competencies and strategically managing human resources. The paper advocates for the need for active engagement of stakeholders, for less fragmented legislative frame and a better coordination between public policies and a more structured, cohesive approach to public administration innovation.

Keywords: Innovation process; public administration; human capital; government policy; Romania.

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1. Introduction

The concept of change is inherently intertwined with that of innovation, both of which can be examined and interpreted across various fields of activity. From a broad perspective, progress encompasses the pursuit of implementing novel or unconventional methodologies, products, or services within a societal framework or a specific social construct. This notion is particularly relevant to institutional development, where a degree of flexibility, comparable to that observed in the private sector, is essential. Institutions that demonstrate greater adaptability (an aspect of innovation) are often better positioned to navigate complex challenges and overcome structural barriers than their counterparts in the public sector.

Public institutions, agencies, and other governmental bodies are well aware of the significant resistance to change that some of them encounter. This resistance may stem from various factors, including reluctance among human capital, financial constraints, bureaucratic impediments, and a lack of political support. Nonetheless, any attempt at change inevitably yields both advantages and disadvantages (OECD, 2018; Luhmann, 2012; Gil-Garcia et al.,

2014). The primary function of public institutions within a given state remains the preservation of stability and administrative uniformity, ensuring the consistent delivery of services and the fulfillment of internal (e.g., procedures, documentation, and protocols) and external (e.g., public relations, formal partnerships, diplomatic communications, and institutional discourse) responsibilities. Integrating innovation into the public administration may necessitate partial or systemic transformations, a process that is often highly complex, if not unfeasible. However, historical evidence suggests that public institutions exhibit greater flexibility during periods of crisis than in times of stability and routine operations (Kutnjak, 2021).

In this context, several pertinent questions arise: under what conditions and why do public institutions demonstrate greater adaptability? Why is the private sector generally more flexible than its public counterpart? What accounts for the varying degrees of change across different spheres? Potential insights into these questions can be drawn from historical developments, such as the Industrial Revolution, as well as from international frameworks and trends (e.g., those of the European Union and the OECD). Additionally, human capital development (Marginson, 2019) emerges as a crucial determinant in fostering innovation. The evolution of institutional structures is often influenced by distinct cognitive and strategic approaches that encourage the adoption of novel solutions and methodologies. Human capital development (HCD), as reflected in existing theoretical frameworks, fundamentally pertains to the advancement and enrichment of human potential, which, in turn, drives societal progress. Given the complex interplay of factors influencing public sector innovation, research into this domain—alongside an analysis of the barriers impeding such efforts—presents considerable methodological challenges due to the multitude of variables involved. Nevertheless, the process of innovation within public institutions constitutes a critical component of societal transformation, underscoring its broader significance in shaping the dynamics of change.

2. Literature Review

From a broad theoretical perspective, societies can be understood as complex social constructs shaped by continuous processes of "socialization" among individuals. These processes encompass both formal and informal agreements, which inherently give rise to distinct relationships and facilitate the organization and coordination of various actions aimed at achieving specific outcomes and objectives (Hurrelmann & Bauer, 2018; Luhmann, 2012). This perspective underscores the notion that societies emerge and evolve through the interactions, relationships, cognitive frameworks (or intellectual approaches), and available resources of individuals. These elements collectively define and reinforce the social construct within a given historical and contextual framework.

An alternative perspective can be derived from the distinctions observed across the various phases of the Industrial Revolution, particularly in how societies functioned in relation to their prevailing infrastructure and modes of production. The underlying infrastructures—along with the products and production methods—serve as critical indicators for understanding societal operations. Notably, different societies have exhibited distinct approaches to comprehending the world, culture, education, priorities, and broader aspirations. Furthermore, individuals have been organized around diverse economic and industrial objectives, which have, in turn, driven multiple facets of societal innovation.

As Ghobakhloo (2020) observed, the evolution of the Industrial Revolution has followed a discernible trajectory, with societies adhering—at least to some extent—to established

economic patterns and developmental trends. Davis (2016) provides a succinct overview of the key characteristics defining each phase of the Industrial Revolution. The first phase was marked by the advent of steam- and water-powered technologies, as well as the initial mechanization of production. The second phase saw the widespread adoption of electricity as the primary energy source, leading to mass production and the systematic division of labor. The third phase introduced electronics, information technology, and automated production systems. Finally, the fourth phase, often referred to as Industry 4.0, is characterized by the integration of cyber-physical systems, which facilitate the convergence of physical and virtual realities (Davis, 2016).

Despite its transformative potential, the fourth Industrial Revolution remains in a relatively nascent stage of digital development, contributing to a degree of uncertainty regarding its long-term trajectory. A significant aspect of Industry 4.0, as highlighted by Ghobakhloo (2020), is the concept of Cyber-Physical Systems (CPS), which underscores the role of high-speed internet and technological advancements in accelerating digital transformation across industries. From a broader perspective, the evolution of industrial systems oscillates around the notion of continuous innovation, with each phase introducing novel technological paradigms that reshape both industry and society.

In the context of future industrial revolutions and the evolving paradigms of production, Deguchi et al. (2020) propose the concept of "Society 5.0" as a framework for the futuristic development of societies. This concept reflects a growing academic and policy-oriented discourse concerning the preparation of future generations, particularly in relation to human capital development and the advancement of infrastructural frameworks. The objective is to establish a foundation for innovative and, in some cases, unconventional societal models. Consequently, the methodologies and strategies developed to mentally prepare societies for such transformations may serve as global references, influencing general trends among developed nations.

"Society 5.0" (Deguchi et al., 2020) is not only a theoretical construct but also a strategic guideline, particularly within the Japanese government's national and international policy agenda. The Japanese government envisions future societies aligning with the principles of "Society 5.0" and has thus initiated multiple policies, strategies, and frameworks to accelerate societal development in this direction (Integrated Innovation Strategy, 2022). Within this framework, Deguchi et al. (2020) identify two fundamental relationships: (1) the interaction between technology and society and (2) the relationship between individuals and society, mediated through technology. The conceptual structure of "Society 5.0" envisions a system in which real-world data is collected, processed through computational technologies—ranging from simple algorithms to advanced artificial intelligence—and subsequently applied back into society. The authors emphasize that while the concept itself is not entirely novel, it builds upon the foundation of the "information society," defined as a societal model in which systems continuously collect, process, and implement data-driven insights within real-world contexts.

A distinguishing feature of "Society 5.0" is its capacity to function across multiple societal domains through interconnected cyber-physical systems (Deguchi et al., 2020). This framework envisions enhanced intercommunication between digital devices, enabling more comprehensive and efficient analyses of real-world data. One key innovation within this model is the potential transformation of routine activities, wherein digital technologies would optimize everyday processes through seamless technological integration. However, the realization of such a model presents significant challenges, particularly in establishing a fully integrated digital infrastructure.

From a technical perspective, Deguchi et al. (2020) outline a fundamental prerequisite for merging cyberspace with physical space: real-world data must be collected, analyzed, and digitally replicated with high fidelity. Once this synchronization is achieved, computational systems can further process and interpret the data to enhance efficiency in daily activities (e.g., transportation, commerce, household tasks), mitigate risks (e.g., predictive safety measures, automated notifications, and preventive strategies), and assist individuals across various domains, including both domestic and professional environments.

Ultimately, the core premise of "Society 5.0" underscores the necessity of substantial efforts to address key societal and technological challenges. The process of identifying effective solutions to these challenges is as critical as the technological advancements themselves, ensuring that future societies can successfully integrate innovation while maintaining functional and ethical stability.

An essential factor in ensuring the effective relationship between public administration, technological advancement, and citizen engagement is the ability to simultaneously develop digital infrastructure and human capital. Governments worldwide exhibit a growing tendency to digitize public services, a process that has increasingly become a strategic approach aimed at equipping citizens with digital competencies. In this regard, the successful development of a technological ecosystem is contingent on the efficient management of Information Technology (IT) infrastructure, as well as the education and preparation of individuals to navigate digital services. Consequently, public sector administrations require professionals with expertise in both administrative procedures and digital competencies, ensuring that technological advancements are effectively integrated for public benefit and societal progress (Sarwar et al., 2023; Alvarenga et al., 2020).

Societies demonstrate varying degrees of adaptability to change, largely influenced by their citizens. Individuals play a fundamental role in transforming society, initially through their own personal and professional development. This perspective aligns with a broader understanding of Human Capital Theory (HCT), which underscores the role of individuals in shaping societal progress. Given the diverse motivations, constraints, and technological advancements that shape individual behavior, societal adaptation is inherently influenced by factors such as education, cultural norms, institutional protocols, and other intrinsic dynamics. Furthermore, as societies adopt and integrate innovative developmental methodologies, individuals concurrently advance in their own human capital development, reinforcing the notion that human beings constitute the most vital assets of any civilization (Marginson, 2019).

A complementary concept to HCT is Talent Management (TM), which focuses on the strategic placement of highly skilled individuals in key positions within organizations and institutions. This approach is designed to enhance societal and economic development by ensuring that experts are allocated efficiently to roles where their skills and expertise can yield the greatest impact. Beyond their formal qualifications, professionals often possess valuable tacit knowledge or "know-how" within their respective fields. This experiential knowledge enables them to refine and enhance existing infrastructures, contributing to structural and operational improvements within their domains (Al Jawali et al., 2022).

The interplay between digital transformation, public administration, and human capital development is crucial for fostering a resilient and innovative society. Effective management of technological infrastructure, combined with strategic human resource allocation, serves as a foundation for societal progress, ensuring that both individuals and institutions are equipped to navigate and benefit from an increasingly digitalized world.

Innovation within a given society can be analyzed from multiple disciplinary perspectives, encompassing various domains and fields of activity. Several key approaches illustrate the complexity of this process:

- **Political Approaches:** Decision-making actors play a crucial role in fostering and endorsing innovation, particularly in the context of digital transformation. Policymakers must collectively support strategies aimed at integrating digital technologies into society, provided that there is no significant resistance from citizens. A notable example is Japan's proactive efforts to promote innovative strategies, which contrast with the more cautious approaches adopted by other states (Holroyd, 2008; Carraz & Harayama, 2018).
- **Economic Approaches:** Economic development strategies may prioritize the private sector as a driver of technological advancement and innovation at the national level. This approach entails encouraging private enterprises to invest in emerging technologies and assume calculated risks associated with innovative economic ventures (Scholten, 2015).
- **Sociological and Psychological Approaches:** Societal acceptance of digital transformation is contingent on individuals' awareness and willingness to engage with digital environments. Citizens must weigh the advantages and disadvantages of technological integration, including concerns related to data privacy and security. Public sentiment may range from skepticism to strong support for digital initiatives, influencing the success of innovation policies (Musik & Bogner, 2019).
- **Sustainability Approaches:** Environmental considerations must not be overlooked in the digital transformation process. The European Union's **dual transition approach**, which simultaneously emphasizes both digital and green transitions, exemplifies the necessity of sustainable innovation (Dekeyrel & Fessler, 2024).

Each of these approaches contributes to a broader understanding of innovation within both society and the public administration, offering multiple avenues for research. For example, investigating public sector innovation requires a preliminary assessment of the existing administrative infrastructure. Additionally, research may focus on the role of key societal actors, the technological advancements currently in use, and strategies for managing change effectively. Theoretical and empirical research aimed at bridging knowledge gaps in the study of change remains a crucial area of inquiry (Kuipers et al., 2014).

In this context, public sector innovation is inherently multifaceted, necessitating comprehensive analysis to evaluate the current state of Romanian public administration and to identify the most effective pathways for progress.

3. Research Aims and Methodology

Examining the relationship between innovation, human capital, and institutional development presents significant challenges due to the complexity of barriers identified within public administration. In Romania, the Central Government, as the highest-level public authority, is actively engaged in efforts to integrate innovative elements within the public sector. These efforts encompass a wide range of initiatives, including: preparing society through intellectual and educational strategies; implementing internal procedural reforms; strengthening and

establishing institutional partnerships; identifying and addressing key challenges and obstacles; promoting best practices and knowledge-sharing

In this context, conducting direct interviews with responsible actors within the Romanian Central Government provides a valuable opportunity to gain deeper insights into the current national landscape regarding public sector innovation. Such an approach facilitates a better understanding of the reasons behind the lack of innovation within Romanian institutions and the obstacles that have hindered progress in this area.

Given the complexity of the subject matter, a qualitative research approach, utilizing in-depth interviews, has been identified as the most suitable methodological framework for this study (Adeoye-Olatunde & Olenik, 2021; Snyder, 2019). This approach enables a comprehensive exploration of institutional dynamics, uncovering critical insights into the challenges and opportunities associated with fostering innovation in the Romanian public administration

The research's objectives consist of highlighting three frameworks relating to the process of innovation within the Romanian public administration, respectively: (1) *the general perspective (or status quo) of the public administration innovation process*; (2) *clustering the main barriers in pursuing innovation in public administration in Romania*; and (3) *pointing out possible solutions to innovate the public administration*.

Data were collected based on an interview guide between January and March 2024. The research sample consists of a governmental representatives panel (9 persons) who are directly involved with public administration innovation in Romania. During the interviews, the governmental representatives were informed about the scope and objectives of the research, which are purely for academic purposes. Interviews took 20-30 minutes and have been audio recorded.

Data have been analysed using on Thematic Analysis (TA) approach. According to this method, the author familiarized with the data, generated initial codes, grouped them to themes, named, reviewed and refined the themes and produced the interpretation (Braun & Clarke, 2017).

4. Results and Discussion

The concept of innovation serves as a critical indicator in understanding the development and evolution of societies, encompassing advancements in products, services, and even societal mindsets. According to the OECD, “an innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit’s previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)” (OECD, 2018).

Within the public administration, fostering innovation presents a particularly complex challenge due to the multifaceted nature of governance, the need to address pressing societal issues, and the necessity of coordinating efforts across institutions and departments. Achieving meaningful innovation requires not only risk minimization but also the active engagement of stakeholders, including representatives from various public institutions, in order to successfully implement change within government structures and, by extension, within society.

In the case of Romania, public administration innovation is hindered by numerous challenges, including the need to address urgent administrative concerns, manage institutional complexity,

and improve human capital development. The most recent European Innovation Scoreboard (2024), published by the European Commission, ranks Romania last among EU Member States in terms of innovation performance. This ranking underscores the urgent need for public sector transformation, as stagnation in administrative innovation may negatively impact the country's competitiveness at the international level.

To advance progress in this area, it is crucial to identify and analyze the barriers impeding innovation within Romania's public administration. A comprehensive understanding of these challenges will facilitate the development of targeted strategies aimed at fostering institutional modernization and ensuring greater alignment with European and global innovation standards.

As outlined in **Table 1**, the key findings from the conducted interviews have been consolidated to provide a structured overview of the following aspects:

- (1) The current state of the innovation process within the Romanian public administration.
- (2) The primary barriers hindering the innovation process of the public administration.
- (3) Potential solutions and opportunities to enhance or modernize the public administration.

This structured approach enables a systematic evaluation of the existing challenges while identifying actionable pathways to drive public administration innovation in Romania.

Table 1. Insights and Status-quo regarding the (Romanian) public administration innovation

<i>Status-quo</i> of the innovation process in Romania	Barriers to the innovation	Solutions
1. Early stage to legislate the field of innovation; 2. Public administration representatives are (mostly) unaware and uninterested in innovating the administrative infrastructure; 3. Scattered (or fragmented) strategies, reforms, or public policies in the field of innovation – lack of a common perspective; 4. Lack of (innovation) capacity increase among public servants and dignitaries; 5. Limited budget, funds, and other resources (including Human Capital); 6. Legislative constraints, or challenging and demanding legislative amendments;	1. High level of unawareness within society; 2. Difficult and complex bureaucracy within public administration regarding change; 3. (Sometimes) Lack of political support; 4. High level of constraints and unwillingness to change within public administration;	1. Preparing and training civil servants, dignitaries, academia, and/or other interested individuals; 2. Developing and extending an ecosystem at the national level; 3. Increasing awareness about the domain of innovation and its benefits within society; 4. Commencing small projects to innovate the public administration; 5. Increasing expertise within the field of innovation; 6. Coordinating the existing/future national legislation.

Source: Author, based on interview data

The findings related to the first research question, which examines *the current state of innovation within public administration*, indicate that the concept of innovation is not fully comprehended in certain contexts. This lack of clarity has contributed to significant legislative fragmentation across various sectors at the national level, thereby increasing uncertainty among key stakeholders regarding any proposed changes.

Although innovation is not a new phenomenon at either the national or international level, efforts to introduce and implement innovative solutions within Romanian public institutions appear dispersed and uncoordinated, making the process particularly complex. Many innovation-related initiatives are integrated into internal projects, national strategies, or public policies. However, these efforts often face implementation challenges, particularly due to their lack of alignment with existing legislation. This fragmentation not only hampers the efficiency of innovation efforts but also increases the complexity and speed at which central public institutions undergo change.

At the institutional level, the process of introducing innovation in ministries, agencies, and other governmental bodies—particularly those with highly specialized functions (e.g., public procurement, digitalization, energy, culture, and transportation)—requires a tailored approach. Given the diverse nature of these institutions, innovation strategies must be sector-specific, addressing the unique requirements and operational frameworks of each entity to ensure effective and sustainable modernization.

Concerning the second research objective, which explores the main barriers to innovation in Romania's public administration, the findings indicate that the primary obstacles stem from the complex bureaucratic structure that underpins the public sector, as well as the lack of motivation to innovate among public servants. This lack of innovation is largely attributed to insufficient information about potential changes or the perceived enormity of the effort required to implement innovation.

More specifically, standardized bureaucratic procedures often require multiple interventions to address a single issue, further complicating the innovation process. Although these procedures are uniform across public institutions, many are extremely difficult to amend due to the rigorous approval processes involved. These processes necessitate consensus among multiple entities, often from different sectors, and in some cases require political support to facilitate change. This process demands substantial time, effort, and occasionally financial resources, as well as coordination and backing from all relevant parties, including political figures.

An additional challenge is that public institutions are often difficult to manage due to the short tenure of dignitaries, who are typically appointed for four-year terms. This short duration can result in a lack of sustained political support, making it harder to maintain momentum for long-term innovation initiatives. Moreover, public servants are generally unaware of the potential for innovation within the public administration. Many employees are also disengaged from the innovation process, as they are often preoccupied with other institutional priorities, leaving little room for proactive engagement with change initiatives.

With regard to the third pillar, which concerns possible solutions for innovating public administration, the strategies identified primarily focus on raising awareness about existing opportunities for innovation, as well as initiating small-scale projects designed to familiarize and mobilize key actors. While managing and implementing innovation within the public sector presents considerable challenges and complex obstacles, there have been notable advancements in efforts to transform the public administration.

The first solution centers on the promotion of awareness across multiple sectors, including public institutions, the private sector, academia, NGOs, and other national and international partners. This increased awareness is crucial for shifting mindsets and demonstrating that innovation within public administration is not only possible but necessary.

The second solution emphasizes enhancing the internal capacity of public servants, particularly by motivating them to drive innovation within their respective institutions. This approach involves identifying areas for change and gradually implementing innovative solutions at an internal level. This is particularly important for managing and innovating specialized public institutions, which require tailored strategies to address their unique challenges.

The third solution involves the need to coordinate legislation and public policies to overcome existing silos and establish a more structured, cohesive approach to public administration innovation. This effort is critical to developing a comprehensive strategy that aligns various reforms and innovations within the public sector. These three approaches represent the core areas that need attention, as highlighted by the interview findings.

Furthermore, given that Romania's public institutions are still in the early stages of profound innovation, with ongoing initiatives for developing further strategies, reforms, and public policies, there is ample opportunity to discover additional solutions throughout the innovation process. In this context, advancing the innovation of public administration is becoming increasingly essential, especially when considering the rapid evolution of public sector management, technological advancements, human capital development (HCD), and potential international competitiveness (Genschel, 2015). These considerations highlight the importance of innovation in both economic and political contexts, as they directly influence the efficiency and global standing of public administration systems.

5. Conclusions

The transformation of society, and by extension, the innovation process within public administration, involves more than just technological advancements. While these developments primarily focus on enhancing efficiency and driving progress, they also emphasize the preparation and guidance of individuals (or human capital) to adopt new approaches within existing infrastructures. In the context of public administration, innovation entails fundamentally altering existing methods to achieve the same or superior outcomes. Therefore, shifting the mindsets and perspectives of individuals becomes a critical factor in achieving this transformation.

Furthermore, in areas such as human capital development, labor market dynamics, economic growth, and other less frequently explored domains (e.g., advanced medical procedures or physical modifications), societal progress requires a foundational level of acceptance for change. This reiterates the importance of human capital development, which serves as a key aspect in facilitating broader societal shifts.

In addition, individuals in society may develop distinct perceptions and levels of acceptance regarding unfamiliar or innovative methods outside the workplace. Over time, individuals become accustomed to technological innovations that were once considered novel, such as smartphones, laptops, or other everyday objects now integrated into daily life. However, there can also be a degree of reluctance toward adopting new, unfamiliar, or innovative products.

Without a clear understanding of their potential benefits, these products or services may struggle to integrate into individuals' routines.

A pertinent example of this concept is reflected in the "Society 5.0" framework, which underscores the importance of raising awareness about innovation and its advantages among citizens. Without increased awareness and a clear demonstration of the tangible benefits of new technologies, resistance to change may remain high. This dynamic is equally applicable to public sector innovation, where citizens need to become more familiar with unconventional practices or products to embrace novel approaches (as seen in the Society 5.0 paradigm) (Deguchi et al., 2020).

In conclusion, individuals can either act as a strong catalyst or a significant barrier to societal development. If the general perception of new or unfamiliar innovations is negative, the transition process may be hindered, delaying or complicating implementation. Therefore, fostering positive perceptions and greater acceptance of innovative concepts is essential for ensuring successful societal and institutional change.

Study limitations and future research directions

This study has several limitations. As exploratory research, it does not encompass the full complexity of the public administration sector. Additionally, the term "public administration" is frequently used interchangeably with "public sector" throughout the study, which may lead to some degree of misunderstanding. However, since the research focuses on the perspectives of governmental representatives, this interchangeability aligns with their views. Given that the study was not designed to investigate terminological distinctions, future research could extend the analysis by exploring the specific differences between public administration and the broader public sector.

Moreover, further research could deepen the exploration of innovation within public administration, specifically by examining the challenges faced in rural versus urban areas, local versus central public administration. A potential limitation of this study is the possibility of bias in the interview responses, as individuals tend to be reluctant to provide negative feedback about their own institutions (mostly in the governmental area). Another limitation involves the role of political influence within public institutions, which could be a significant barrier to innovation. This aspect, however, could be explored in more detail in future studies.

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