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### Article

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Administrative Sciences

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*Suggested Citation:* Moric Milovanovic, Bojan; Cvjetkovic, Matea; Masovic, Jasmina (2025) : Public sector entrepreneurship: Present state and research avenues for the future, Administrative Sciences, ISSN 2076-3387, MDPI, Basel, Vol. 15, Iss. 3, pp. 1-28, <https://doi.org/10.3390/admsci15030071>

This Version is available at:

<https://hdl.handle.net/10419/321215>

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Review

# Public Sector Entrepreneurship: Present State and Research Avenues for the Future

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**Abstract:** Public sector entrepreneurship (PSE) is a growing area of knowledge that studies the application of innovative activities and processes to enhance public service quality. This can ultimately affect the public organization's performance and the country's economic success and growth. Even though PSE has been studied through the lenses of several academic disciplines, its assumptions are often based on the insights derived from research on entrepreneurship in the private sector. The theories of public entrepreneurship are scattered throughout the literature, while empirical research is still scarce. There exists a need to build a conceptual characterization that distinguishes its unique indicative dimensions. This paper aims to collect and summarize some of the definitions, theories, dimensions, and determinants of public sector entrepreneurship and propose avenues for future empirical research. It is a literature review using the PRISMA methodology to examine public sector entrepreneurship, systematically collecting and synthesizing previous research. This approach yielded 55 publications, which were used as sources for developing a comprehensive conceptualization of PSE. The paper's contribution is reflected in this review and analysis, as well as its suggestions for future research topics and empirical methods in this developing area of knowledge.

**Keywords:** public entrepreneurship; public sector; literature review



Received: 3 October 2024

Revised: 6 January 2025

Accepted: 12 February 2025

Published: 22 February 2025

**Citation:** Moric Milovanovic, B., Cvjetkovic, M., & Masovic, J. (2025). Public Sector Entrepreneurship: Present State and Research Avenues for the Future. *Administrative Sciences*, 15(3), 71. <https://doi.org/10.3390/admsci15030071>

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## 1. Introduction

Public entrepreneurship is generally defined as the use of formal and informal business practices aimed at creating innovative activities in already existing and established public sector organizations (Funko et al., 2023). These practices include enhancing the present or introducing new services, technologies, or administrative solutions to improve business strategies (Demircioglu & Chowdhury, 2021). While entrepreneurship is a common and well-understood term in the private sector, public sector entrepreneurship remains somewhat elusive due to the sectors' significantly different structure, management, and non-profit orientation. At the same time, public sector organizations operate in increasingly competitive environments and are expected to be agile in responding to users' changing needs and market shifts. The emerging research on public sector entrepreneurship aims to develop knowledge on how to equip and empower public sector organizations to engage in the entrepreneurial activities that have become expected in contemporary markets.

Although public entrepreneurship has been studied since the 1980s (Hayter et al., 2018), numerous researchers note that there is still a significant imbalance in the understanding of public sector entrepreneurial practices, calling for further contributions in this area (Demircioglu & Chowdhury, 2021; Liddle & McElwee, 2019; Najmaei & Sadeghinejad, 2016;

Tremml, 2019; Zampetakis & Moustakis, 2010). The research so far has prioritized describing the conditions under which entrepreneurship occurs in public organizations (Dhliwayo, 2017; Hayter et al., 2018; Magul & Pasqualetto, 2023; Tremml, 2019), with a focus on examining the similarities and differences between private and public sector entrepreneurs (Bartlett & Dibben, 2002; Bernier, 2014; Zampetakis & Moustakis, 2010). Other research is based on case studies of one or more organizations, whose results often remain applicable only within the observed organizational configurations (Hayter et al., 2018; Lindholst, 2021; Llewellyn & Jones, 2003; Zerbinati & Souitaris, 2005). Empirical research on public sector entrepreneurship remains underrepresented, stalling the field's development (Al-Dhaafri & Alosani, 2020; Liddle & McElwee, 2019; Strow & Strow, 2018; Zhang et al., 2022). In the theoretical agenda of public entrepreneurship, authors elaborated conceptual frameworks or business models applicable to the public sector (Kearney et al., 2008; Kearney & Meynhardt, 2016; Kim, 2010; Meynhardt & Diefenbach, 2012; Najmaei & Sadeghinejad, 2016). Scholars also argue that the concept needs to be re-evaluated anew, considering the contemporary environment in which public organizations operate (Liddle & McElwee, 2019; Tremml, 2019; Funko et al., 2023; Vivona et al., 2024; Olumekor, 2024). Thus, there is a holdover from early conceptualizations of public sector entrepreneurship as in relation to or comparison with private sector entrepreneurship, and an anachronism in today's theoretical treatment of the concept. Compounding the issue is a lack of robust empirical research to further our understanding of PSE. These ongoing imbalances in the literature underline the necessity of additional contributions to the field, with scholars advocating for a comprehensive and contemporary exploration of PSE's definitions, dimensions, factors, and outcomes (Demircioglu & Chowdhury, 2021; Funko et al., 2023; Liddle & McElwee, 2019; Najmaei & Sadeghinejad, 2016; Tremml, 2019; Vivona et al., 2024; Zampetakis & Moustakis, 2010). It is a call for a thorough synthesis of the available knowledge, with the aim of providing theoretical groundwork and suggestions for future empirical research in the field.

In furthering this aim, the present paper makes two significant contributions to both theoretical and practical applications. Firstly, it organizes and presents the existing knowledge on the public sector entrepreneurship's dimensions, theories, and determinants. It also presents the current and future trends that require further examination, consideration, and exploration, particularly addressing gaps in understanding and applying concepts and strategies in public sector practices and entrepreneurship. Many traditional bibliometric analyses often focus predominantly on quantitative metrics such as citation counts, co-authorship networks, or publication trends (e.g., Olumekor, 2022; Pradana et al., 2022; Robertson et al., 2020); however, this contribution seeks to move beyond descriptive metrics. Recent works, such as those by Funko et al. (2023), highlight the need for a more integrative approach to explore deeper theoretical foundations and implications. Thus, this review focuses on a more detailed conceptual exploration. It aligns with recent systematic literature reviews, such as those by Vivona et al. (2024) and Mu and Wang (2022), which also aim to bridge the gap between descriptive bibliometric techniques and more analytical, theory-driven insights. However, it expands their findings and extracts from the existing literature on the PSE definitions, characteristics, theories, and determinants, and systematizes suggestions for further empirical research.

The paper consists of six sections. After the introduction, the second chapter explains the methodology of the study. The third chapter presents the concept of public entrepreneurship with its basic definitions, dimensions, and theories, while the fourth points out the internal and external determinants of public entrepreneurship. A future public sector agenda follows, which presents new trends that are expected to shape public

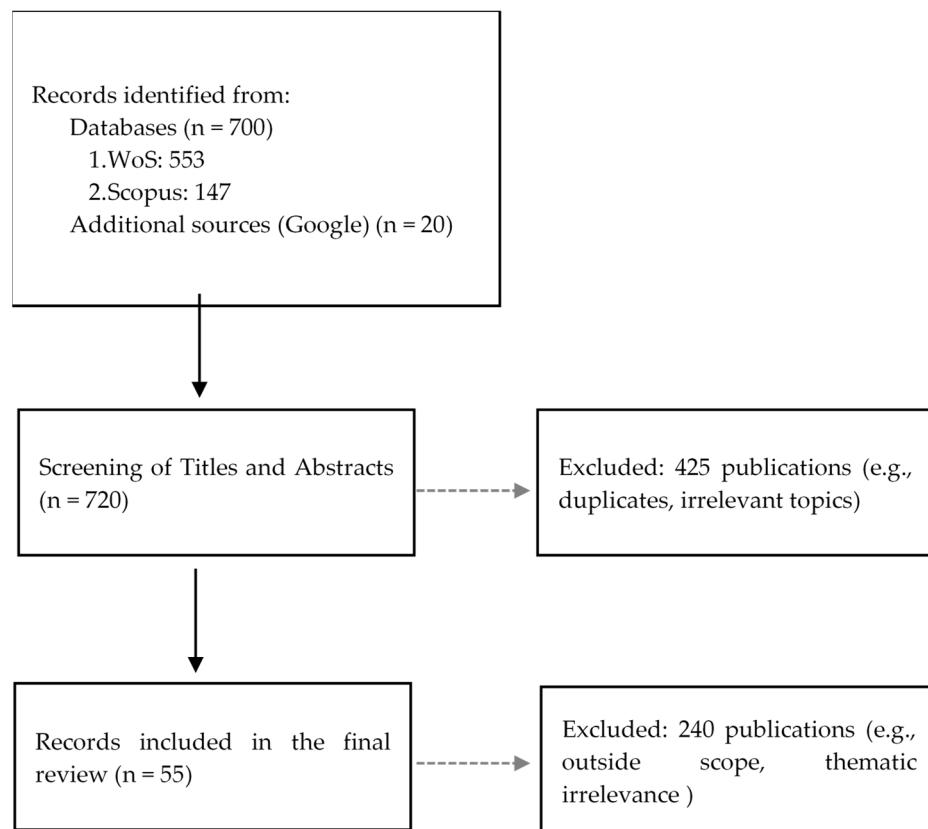
sector entrepreneurship and provides recommendations for additional studies of PSE. The conclusion summarizes the paper.

## 2. Methodology

This paper employs a systematic literature review approach to investigate previous publications on public sector entrepreneurship using the PRISMA checklist (Page et al., 2021). The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta Analyses) approach is a reliable systematic literature review framework which ensures replicability and transparency (Page et al., 2021). Such literature reviews systematically collect, evaluate, and synthesize existing research to identify key concepts, dimensions, manifestations, and gaps within the field (Criado et al., 2023). It can effectively capture the complex implications of public sector entrepreneurship by examining relevant studies, frameworks, policy papers, guidelines, and case examples (Mu & Wang, 2022). By synthesizing findings from a body of literature, the systematic literature review can provide an overview of the current state of a field and highlight areas where further research is needed. This approach can ultimately contribute to the development of a more coherent and robust theoretical framework for public sector entrepreneurship, guiding future studies and even policy initiatives. To ensure a high-quality review of the literature on public sector entrepreneurship, a structured process of searching, selecting, and analyzing articles was applied, consisting of the following steps (Page et al., 2021; Akomea-Frimpong et al., 2022): (1) Searching in academic and specialized databases, (2) filtering and selecting relevant papers, and (3) content analysis. When filtering and selecting the literature, six eligibility criteria were taken into account (Mu & Wang, 2022) as follows:

1. Field: The research was limited to the public sector, which relates to the part of the economy in state ownership (Lienert, 2009). Within the public sector, this paper focused on entrepreneurial practices of the market-facing part of the public sector that engages in commercial or service-oriented activities. These include, for example, state-owned enterprises, public enterprises, and utility providers, focusing less on tax-funded organizations not substantially exposed to the market. However, many authors in the field do not specify which types of public service organizations are being theorized (Ali et al., 2019; Funko et al., 2023; Mohammed et al., 2021).
2. Topics: Publications considered for the review had to use the subject term and discuss public sector entrepreneurship. However, related concepts were also considered in the search, such as institutional entrepreneurship, bureaucratic entrepreneurship, and corporate entrepreneurship in the public sector, as these concepts share thematic links with the core subject. Corporate entrepreneurship in the public sector is a precursor concept for public sector entrepreneurship and has been used interchangeably in the literature. Institutional entrepreneurship and bureaucratic entrepreneurship are added search terms based on their contextual fit and central topics of the study. Public sector organizations operate in highly institutionalized and bureaucratic environments, which makes such concepts key to understanding the dimensions and factors of PSE (Vivona et al., 2024; Mu & Wang, 2022; Ali et al., 2019).
3. The selected articles were organized around several key themes: The concept of public sector entrepreneurship, the exploration of foundational definitions, frameworks, theories, and the dynamics of entrepreneurial actions within public organizations. Another relevant topic was the analysis of elements that enable or restrict entrepreneurial activities in the public sector. Notably, potential future directions for public sector entrepreneurship were considered, also addressing new challenges and opportunities in areas such as sustainability, digitalization, or data-driven research, highlighting emerging trends and areas for further research.

4. Study design: Empirical and theoretical studies were included in the review, even though empirical studies were more limited in number. Following this, and considering that the aim of the study is to elaborate on the definitions, dimensions, and factors affecting the concept, the theoretical studies gave us an analytical advantage.
5. Language: Although the keyword search and screening were open for other languages, the final literature sample contained no publications in languages other than English.
6. Publication year: Papers published from any year up to the present were considered. The review includes studies from all prior years to ensure a comprehensive understanding of the public sector entrepreneurship's evolution and current state. In terms of future avenues, newer publications were taken into account due to their reflection of the most current advancements, emerging trends, and innovative methodologies in the field.
7. Publication Type: In the first phase, the search was conducted in Scopus and Web of Science databases to ensure that only peer-reviewed journals were included and that the concepts presented were in high-quality, credible academic research outlets. When the core concepts and keywords were established, the search included other publications (books and articles) found in Google Scholar, as well as documents published by EU institutions, such as official reports, working papers, and policy briefs—if they conformed to the inclusion criteria. These steps are systemized in the flow diagram for this systematic review in Figure 1.



**Figure 1.** PRISMA flowchart. Source: authors, based on [Criado et al. \(2023\)](#).

The initial search was conducted in Scopus and Web of Science (WoS) databases (including Web of Science Core Collection, BIOSIS Citation Index, Current Contents Connect, Data Citation Index, Derwent Innovations Index, Grants Index, KCI—Korean Journal Database, Preprint Citation Index, ProQuest Dissertations and Thesis Citation Index, and SciELO Citation Index). These databases were selected due to their extensive coverage

of scholarly works and advanced filtering and downloading features essential for systematic reviews. The keywords related to public sector entrepreneurship included the terms: “public sector entrepreneurship”, “institutional entrepreneurship”, “bureaucratic entrepreneurship”, and “corporate entrepreneurship in the public sector”. An initial search in the WoS database resulted in 553 papers, and in Scopus returned 147 papers. In the second step, a detailed inclusion and exclusion process was undertaken to ensure relevance. The papers were examined based on thematic relevance and qualitative assessments by the authors. Articles outside the study scope and duplicates were excluded. Many of the excluded documents discussed social entrepreneurship, environmental entrepreneurship, public policy to promote SME entrepreneurship, education of entrepreneurs, immigrant entrepreneurship, public interest, sports entrepreneurship, female entrepreneurship, rural entrepreneurship, or academic entrepreneurship. The preliminary search initially identified 295 articles, which were transferred into an excel sheet. In the last step, analysis was performed based on the title and keywords. The analysis finally included papers which specifically and directly discussed the definitions of PSE, its inhibitors, enhancers, theories, innovation and public value creation, and dimensions. This resulted in 42 papers.

The top contributors to the field of public sector entrepreneurship, based on citations from Web of Science, include prominent authors and their influential works. [Klein et al. \(2010\)](#) stand out with their seminal paper, “Toward a Theory of Public Entrepreneurship” (240 citations), followed by [Bernier and Hafsi \(2007\)](#) with “The Changing Nature of Public Entrepreneurship” (159 citations), and [Klein et al. \(2013\)](#) with “Capabilities and Strategic Entrepreneurship in Public Organizations” (136 citations). In Scopus, the most cited authors are again [Klein et al. \(2010\)](#) with 249 citations. They are followed by [Bartlett and Dibben \(2002\)](#) with “Public Sector Innovation and Entrepreneurship: Case Studies from Local Government” (134 citations) and [Hjorth \(2013\)](#) with “Public Entrepreneurship: Desiring Social Change, Creating Sociality” (85 citations). Other significant contributions come from [Bernier \(2014\)](#) with “Public Enterprises as Policy Instruments: The Importance of Public Entrepreneurship”, [Zampetakis and Moustakis \(2007\)](#) with “Entrepreneurial Behaviour in the Greek Public Sector”, [Mack et al. \(2008\)](#) with “Innovation and Implementation in the Public Sector: An Examination of Public Entrepreneurship”, [Zampetakis and Moustakis \(2010\)](#) with “An Exploratory Research on the Factors Stimulating Corporate Entrepreneurship in the Greek Public Sector”, and [Zerbinati \(2012\)](#) with “Multi-level Governance and EU Structural Funds: An Entrepreneurial Local Government Perspective”. These works collectively provide a strong foundation for advancing research in public sector entrepreneurship.

Additional independent searches for these terms were made in Google Scholar and Google to find any articles which might have been potentially overlooked, resulting in an additional 13 publications. Thus, the final number of publications considered for this study was 55, which is deemed sufficient to provide a comprehensive overview of the field. This aligns with similar literature reviews, such as those by [Mohammed et al. \(2021\)](#) and [Akomea-Frimpong et al. \(2022\)](#), where comparable sample sizes were used to effectively capture the scope of their respective topics.

In order to analyze the publications, we examined them using a three-step content analysis. Firstly, a preliminary analysis was conducted on the abstracts and keywords of each article. This was performed through a spreadsheet analysis of abstracts and keywords of 295 articles, in which we searched by the inclusion criteria described earlier as follows: peer-reviewed, and within the topics, fields, and themes. In practice, this meant the publications would mention the definitions of PSE, its inhibitors, enhancers, theories, innovation and public value creation, and dimensions. This resulted in 42 papers, to which an additional 13 peer-reviewed articles in English found on Google Scholar were added. Although the Google Scholar search of keywords (see above) also yielded “grey” literature,

reports and working papers, and results in languages other than English, these were read for context but, as with many others from the latter source, were excluded from further analysis for not conforming to the peer-reviewed criterion. The resulting sample thus included only peer-reviewed literature on PSE which directly engaged and/or promised to elaborate in considerable detail the study's main concepts. The exclusion criteria were studies with a limited focus on these concepts and topics. This, for example, excluded many single case studies, book reviews, or single-concept analyses that were not of interest, i.e., those outside the scope or those thematically irrelevant to the aim of this paper.

In the second step, the resulting sample of 55 publications were read in their entirety. The data was extracted using pre-set categorizations following the review aims: definitions, theories, dimensions, determinants, and avenues for future empirical research. Each researcher mined the data independently, and their findings were brought into co-researcher meetings, where they were further flagged as "comprehensive" and "clear" or not based on their practical applicability to the topic. All categorizations and classifications were discussed and justified within the research team by a two-third majority. A systematic extraction table was developed to ensure replicability and assign sources.

In the third step, the team conducted a thematic content analysis using qualitative interpretations to synthesize the findings, similar to [Akomea-Frimpong et al. \(2022\)](#), [Olumekor \(2024\)](#), and [Vivona et al. \(2024\)](#). An example is the synthesis of theories, with a side set of "other key frameworks" that were found in the literature sample. Typically, if a theory were mentioned in more than three articles, we would consider it relevant, whereas the other key frameworks were chosen for their strong relevance and if sufficiently elaborated in some publications. The dimensions, factors, and outcomes were aggregated, and suggestions were made for further research. Discrepancies in their interpretation were resolved through team discussions, and the proposed choices were compared to existing definitions and concepts based on the data thus accumulated. Finally, with the results of this iterative process, we arrived at concept syntheses aimed at achieving refined and clarified concepts to ensure the practical relevance of the findings. These are presented in the following sections of the paper.

### 3. Understanding Public Sector Entrepreneurship: Definitions, Dimensions, and Theoretical Foundations

The public sector plays an important role globally, serving as a major employer, provider of essential services, promoter of social equity, and overseer of infrastructure and governance ([Thijs & Hammerschmid, 2018](#)). The services it provides are of immense importance for the daily lives of citizens and the operations of many private enterprises. As a result, the quality of the performance of public sector institutions is a key driving factor of the country's development, economic growth, and social well-being ([Leite, 2022](#); [Thijs & Hammerschmid, 2018](#)). Thus, public entrepreneurship is recognized as an essential process that creates value for citizens by using public resources and seizing new business opportunities ([Dhliliwayo, 2017](#); [Magul & Pasqualotto, 2023](#); [Tremml, 2019](#)). The value created can be economic or non-economic, but its purpose should always be aimed at meeting the needs of citizens.

Public sector entrepreneurship as a concept has been studied more intensively since the 1980s, primarily through three fields: political science, public administration, and management ([Zerbinati & Souitaris, 2005](#)). Different understandings of public entrepreneurship have emerged through these perspectives, resulting in many definitions available in the literature. From the review of the selected literature, key definitions have been identified that most comprehensively describe the concept of public sector entrepreneurship. These aggregated definitions, ordered by year of publication, provide a foundational understand-

ing of the concept, highlighting its multidimensional nature as explored through various perspectives in the academic field. Some of these definitions are listed in Table 1.

**Table 1.** Definitions of public sector entrepreneurship and entrepreneur. Sources: authors, based on the literature review.

Authors	Definitions
Vivona et al. (2024)	Public sector entrepreneurship A multi-dimensional phenomenon shaped by context-specific mixtures of proactivity, innovation, and risk-taking, which drives change and renewal, creates resilient organizations, and effectively seizes the opportunities for creating public value, ultimately aiming for positive societal and environmental outcomes.
Leite (2022)	Public entrepreneurship is reflected through changes that public entrepreneurs bring to the public sector by establishing and implementing new organizations or activities despite facing legal, regulatory, and institutional barriers.
Bernier (2014)	Public entrepreneurship (PE) is the process of using entrepreneurial concepts and strategies to expand society's capacity by addressing the complex relationships between economy and sociality. This approach moves beyond traditional entrepreneurial roles such as consumers, competitors, and employees, positioning the citizen as an active and open participant.
Hjorth (2013)	Public entrepreneurship operates by nurturing the potential for transformation and change, actualizing possibilities within collaborative structures such as projects, teams, and networks. This process of entrepreneurial creation involves storytelling, improvisation, and the art of persuasion to visualize and articulate new opportunities.
Kim (2010)	The concept of entrepreneurial government is presented as a way to implement market-driven practices that enhance service delivery. Integrating certain effective entrepreneurial strategies into the public sector can be a viable solution for meeting citizens' demands for more efficient, responsive, and cost-effective government services.
Klein et al. (2010)	Public entrepreneurship can be defined as a management phenomenon in which entrepreneurial ideas are framed, developed, undertaken, institutionalized, and endorsed. These processes are analogous to, and often intertwined with, private sector entrepreneurship. Successfully channeling creative energy to serve the public interest demands a sophisticated approach to managing innovation within the public sector.
Kearney et al. (2007)	Public sector entrepreneurship occurs when an individual or group implements a change to adapt to the environment, initiate innovation, or mitigate potential risks. Personal goals are less important than the success of the organization.

**Table 1.** *Cont.*

Authors	Definitions
Bernier and Hafsi (2007)	Public sector entrepreneurship refers to the phenomenon where individual entrepreneurs within public sector organizations seize favorable opportunities to drive change and innovation, often in challenging or confrontational circumstances—to enhance their organization's capabilities. Even in unfavorable conditions and antagonistic relationships between the government and public sector entities, entrepreneurial efforts can thrive.
Shockley et al. (2006)	Public sector entrepreneurship occurs whenever a political actor is mindful of the revenue potential and seeks to exploit it.
Zerbinati and Souitaris (2005)	Public sector entrepreneurship is the process of identifying and utilizing valuable opportunities (not limited to profit-making ones), with no actual control of the necessary resources.
Bartlett and Dibben (2002)	Public sector entrepreneurship positions the public sector entrepreneur as essential to the successful implementation of policy initiatives. It involves the generation, development, implementation, and consolidation of innovative solutions within public organizations, highlighting the inseparable relationship between entrepreneurship and innovation in the public sector.
Morris and Jones (1999)	Public sector entrepreneurship aims to create value for citizens by using a unique combination of resources to improve social opportunities.
D. Osborne and Gaebler (1993)	Public entrepreneurship refers to the use of resources in new ways to increase the productivity and efficiency of public organizations.
Roberts (1992)	Public entrepreneurship is defined as the creation of new or innovative ideas that are implemented in the practice of the public sector.
Roberts and King (1991)	Public entrepreneurship is the process of introducing innovations into public sector practices.
Leite (2022)	Public sector entrepreneur Individuals who identify unmet needs and seek to address them by leveraging opportunities for innovation. They engage in risk-taking and coordinate networks of people and organizations in contexts (political or institutional) outside their control.
Demircioglu and Chowdhury (2021)	A public sector entrepreneur is a manager who tries to achieve the public organization's goal by doing more than what is expected.
Dhliwayo (2017)	A public entrepreneur does not run for office, but instead focuses on handling challenges by offering alternative perspectives and ideas, ultimately aiming to reshape public opinion and influence societal progress.
Bernier and Hafsi (2007)	A public entrepreneur increases the capacity of public organizations, improves their services, and creates value for citizens.

**Table 1.** *Cont.*

Authors	Definitions
Bellone and Goerl (1992)	Public administrators, as entrepreneurs, aim to identify new sources of revenue beyond traditional taxes to find additional revenue streams, all while maintaining assigned political interests. In doing so, they need to align the following: autonomy, vision, confidentiality, and risk-taking, with the values of responsibility, citizen contribution, open decision-making procedures, and care for public well-being.
Roberts (1992)	Individuals who create, plan, and implement innovative ideas in the public domain.
Ramamurti (1986)	A public entrepreneur undertakes bold actions to initiate, sustain, or expand public sector organizations.

Based on these definitions extracted from the reviewed literature, a concept synthesis is suggested as follows: public sector entrepreneurship can be defined as the use of entrepreneurial behaviors and practices to drive innovation, change, and value creation within public organizations through proactive, resourceful, and collaborative efforts, often overcoming legal, regulatory, and institutional barriers to enhance societal and organizational outcomes. This is an aggregate definition of the most straightforward definitions extracted from the literature review and listed in the table; however, any of the extracted definitions are equally well suited to represent what PSE is.

### 3.1. Dimensions of Public Sector Entrepreneurship

In the examined papers, authors offer diverse perspectives on the dimensions of public sector entrepreneurship, showcasing a range of interpretations and emphases within the field. Most recently, Vivona et al. (2024) described public sector entrepreneurship through three key dimensions: renewal, resilience, and resourcefulness. Further dimensions include innovativeness, risk-taking, and proactiveness (Arnold, 2019; Diefenbach, 2011; Kim, 2010; Vivona et al., 2024), new ventures (Hisrich & Al-Dabbagh, 2012), autonomy, vision, future orientation, secrecy (Bellone & Goerl, 1992), collaboration (Funko et al., 2023), and leadership (Zerbinati & Souitaris, 2005). Additional dimensions include flexibility, adaptability (Urban & Nkhumishe, 2019), and public value creation (Bernier & Hafsi, 2007). These dimensions, reflecting the multifaceted nature of public sector entrepreneurship, will be described in detail in the following segments.

*Renewal* is defined as the organization's ability to sustain itself over time and balance its operations (Hisrich & Al-Dabbagh, 2012; Vivona et al., 2024) while simultaneously seeking new business opportunities and implementing changes (Colabi & Khajeheian, 2018). Through the renewal process, the organization redefines its relationship with its competitors in the market. Accordingly, it modifies its capacity to face technological, political, and economic changes, aiming for future growth and development (Weiss & Kanbach, 2023). However, public institutions and enterprises often require more profound organizational modifications than modern private enterprises (Wilkins, 2014). This often involves creating an open and networked environment that includes citizens and other partners (including the private sector) to shape new organizational practices and services. It also calls for investing in a capable, confident, and productive workforce ready to adopt innovative changes.

*Resilience* is the ability to persist and overcome unpredictable conditions while maintaining steadiness in achieving organizational goals (Vivona et al., 2024). Unlike the private sector, because it aims to create public value, the public sector may have diverse and

ambiguous goals, making resilience more complex. Public sector resilience is crucial for ensuring stability in providing public services, especially during disruptions. [Vivona et al. \(2024\)](#) also claim *resourcefulness* as a dimension that involves creatively managing and leveraging resources to achieve a maximum impact, even with limited resources. Public sector resourcefulness often relies on strategic collaboration with external stakeholders and partnerships to overcome structural and procedural constraints. It enables public organizations to deliver high-quality services despite the challenges posed by limited budgets and rigid organizational process frameworks.

*Innovation* in the public sector involves introducing a new service, a new administrative process, or implementing a new technology ([Cinar et al., 2024](#)). Innovative activities in the public sector are often slow, fragmented, and asynchronous and are typically limited by political mandates and changes in leadership ([Maqdiyan & Setiawan, 2023](#)). However, innovation is regarded as an essential determinant of many entrepreneurial activities in the public sector as it enables it to meet growing and changing social needs ([Kim, 2010](#)).

*Risk-taking* refers to the organization's willingness to engage in risky ventures with uncertain outcomes ([Wach et al., 2023](#)). Risk-taking occurs in unpredictable situations in which the organization seizes market opportunities while investing significant resources without fully knowing the outcome ([Akbar et al., 2020](#)). Although risk-taking is an important characteristic of entrepreneurial behavior, in the public sector, it depends on the institution itself ([Kearney et al., 2007](#)) and the organization's goals and decision-making processes ([Kim, 2010](#)). Risk-taking in the public sector may be subject to greater scrutiny than in the private sector and may be less desirable due to the high visibility of key figures in public organizations. Thus, risk-taking in the public sector is most often reflected in investment or strategic decision-making within the context of uncertain environments and political obstacles ([Kearney et al., 2007](#)), and such activities can positively contribute to creating additional value in response to citizen demands ([Kim, 2010](#)).

*Proactivity* implies the organization's ability to respond to entrepreneurial opportunities in a dynamic and turbulent environment ([Wach et al., 2023](#)). In the public sector, this often refers to the attitudes and reactions of the public and relies on the extent to which these organizations aim for market leadership in their key competencies ([Antoncic & Hisrich, 2001](#)). Proactive public management focuses on anticipating and preventing problems, communicating with internal and external stakeholders, and successfully responding to their potential demands ([Kim, 2010](#)). It also involves taking the initiative to implement changes and swiftly reacting to exploit new opportunities, using resources reasonably. This dimension includes high commitment, perseverance, flexibility, adaptability, and a readiness to take responsibility for failure ([Wach et al., 2023](#)). *Collaboration* is another important determinant of PSE, as it fosters the exchange of ideas and resources between public organizations and other stakeholders (private sector and civil society) ([Funko et al., 2023](#)). This type of cooperation can help in overcoming complex problems by integrating different perspectives and expertise, which can foster creativity and encourage the development of innovative practices ([Hartley et al., 2013](#)). Importantly, collaboration is not about achieving a unanimous agreement but rather managing differences constructively to define common goals and develop joint solutions, often across sectors.

*New ventures* result in the creation of new forms of business within an existing organization, typically with a new vision and purpose. This is achieved by reshaping products or services ([Antoncic & Hisrich, 2001](#)), by implementing new key ideas, redefining the organization's mission, or creating internal structures that encourage innovation and change ([Hisrich & Al-Dabbagh, 2012](#)). New ventures are characterized by their focus on growth, differentiation, and exploiting new market opportunities.

*Leadership* is the ability to guide others in effectively achieving goals while supporting individual and group efforts to accomplish shared objectives (Demircioglu & Chowdhury, 2021). Managers, as leaders in public organizations, focus on solving problems and co-ordinating multiple processes to achieve organizational plans and goals (Ostrom, 2005). However, the complexity of bureaucratic systems and the competing operational priorities bring challenges to public sector leadership. It is further characterized by the idea that administrative leadership should be limited, is influenced by technocratic views, and the emphasis is often on strict democratic control (Van Wart, 1996). Public sector leaders must balance the democratic values of accountability, citizen participation, and transparency (Bellone & Goerl, 1992).

Leadership is closely related to three other dimensions: *autonomy, vision, and secrecy* (Bellone & Goerl, 1992). Autonomy allows public entrepreneurs the discretion to handle complex challenges, such as finding innovative revenue sources, but it can be in conflict with the need for democratic oversight. Similarly, entrepreneurial vision, while essential for innovation, may clash with democracy's emphasis on citizen input, as innovative entrepreneurs often pursue ideas that are unconventional or unaligned with public opinion. Finally, the need for secrecy in entrepreneurial initiatives can undermine the democratic principle of openness, which requires public participation and transparency in policymaking (Bellone & Goerl, 1992). Reconciling these dimensions with democratic values is key to ensuring that public entrepreneurship remains legitimate and aligned with long-term public interests.

*Flexibility and adaptability* are also important dimensions of public sector entrepreneurship, as they help overcome the challenges posed by centralized hierarchies and formal structures often found in public sector organizations (Urban & Nkhumishe, 2019). Adopting a more entrepreneurial culture that reduces the red tape can help cultivate entrepreneurial orientation (Kearney et al., 2009). Flexibility allows organizations to foster consistency in their entrepreneurial culture across departments, ensuring all employees internalize it.

### 3.2. Theories of Public Sector Entrepreneurship

Public sector entrepreneurship is grounded in several key theories that help explain its dynamics and impact. Early on, Lewis (1980) developed an *Evolutionary process theory*, which explains how public entrepreneurs navigate imperfect institutional settings by identifying opportunities and using their skills to secure autonomy and resource allocation. *Stakeholder Theory (ST)*, introduced by Freeman in 1984 (Freeman, 2011), also provides a valuable framework for understanding public sector entrepreneurship. The theory includes three main components. Firstly, the normative core emphasizes the moral obligation of managers to address the legitimate interests of a wide range of stakeholders. Secondly, the descriptive aspect involves identifying stakeholders and understanding their interests and relationships within an organization. Finally, the instrumental element examines how stakeholder management influences organizational outcomes, linking effective engagement with better performance and results. This theory is particularly relevant for public sector organizations, where balancing the interests of diverse stakeholders is critical to achieving public value and promoting entrepreneurship.

Also, relatively early in the field's theorizations, *Bureaucratic Theory* suggests that public sector systems work best when rules and objectives are clear (Bozeman, 1989). The theory introduces the concept of "publicness"—the degree to which an organization is influenced or accountable to the public as a relevant factor. While the theory lies heavy on the notion that rules are necessary, Bozeman also acknowledges that poorly designed regulations may lead to inefficiency and that public managers should be granted enough discretion to adapt to the changing environments. *The Theory of Dynamic Capabilities* is

still very popular in economics and, as explained by Klein et al. (2013), emphasizes the importance of an organization's capabilities, built from its human and non-human resources, in driving entrepreneurial behavior and performance. Dynamic capabilities are defined as the ability to develop and adapt internal and external competencies to react successfully to changes in the external environment (Piening, 2013). They are seen as the critical element to achieving competitive advantage and organizational performance. As public sector organizations face different market challenges from the private sector (for example, hasty political decisions or frequent policy changes), the dynamics of their capabilities become even more important to adapt to their stakeholders' requirements (Klein et al., 2013). Key questions include the uniqueness and alignment of public resources with public or private interests and under what conditions public entrepreneurship creates value.

In the systematic literature review of this article, we find a significant amount of literature which are early theoretizations of the concept. For example, Ramamurti (1986) introduces the concept of the public entrepreneur and Roberts and King (1991) and Roberts (1992) elaborate on policy entrepreneurs and public entrepreneurship theoretically and in general. Morris and Jones (1999) and Sadler (2000) make some of the first efforts to theoretically distinguish between public and private sector entrepreneurship, and somewhat later as the field develops, Kearney et al. (2007) and Bernier and Hafsi (2007) suggest new models and conceptualizations of PSE.

Building on these theoretical foundations and the developing literatures, we find a number of literature reviews of PSE theories, such as Shockley et al. (2006), Klein et al. (2010), Liddle (2016) and Liddle and McElwee (2019). These, and systematic literature reviews of PSE literature, most notably those of Mu and Wang (2022), Funko et al. (2023) and Vivona et al. (2024), formed the backbone of the following section. These authors present the most comprehensive, evidence-based reviews of the literature most commonly used in PSE literature. This analysis summarizes their findings and adds examinations of the papers in this review. The most prominent theories in the examined papers are PE Theory (Demircioglu & Chowdhury, 2021; Funko et al., 2023; Klein et al., 2010; Vivona et al., 2024), Agency Theory (Dhliwayo, 2017; Funko et al., 2023; Klein et al., 2010; Van Thiel et al., 2020; Zerbinati & Souitaris, 2005), Resource-Based Theory (Funko et al., 2023; Klein et al., 2010; Meynhardt & Diefenbach, 2012; Najmaei & Sadeghinejad, 2016; Urban & Nkhumishe, 2019), and Institutional Theory (Bernier, 2014; Bernier & Hafsi, 2007; Casady et al., 2020; Funko et al., 2023; Klein et al., 2010; Najmaei & Sadeghinejad, 2016; Powell & Bromley, 2015). Moreover, other concepts and paradigms, such as New Public Management (NPM), Public Value (PV), and New Public Governance (NPG), are explored as emerging frameworks that complement and extend the understanding of the manifestations of public sector entrepreneurship (Arnold, 2019; Bernier, 2014; Bernier & Hafsi, 2007; Casady et al., 2020; Meynhardt & Diefenbach, 2012; D. Osborne & Gaebler, 1993; Shockley et al., 2006; Tremml, 2019). Findings from the literature suggest that these paradigms offer additional insights into the role of entrepreneurship in public organizations, focusing on efficiency, accountability, and creating value for citizens in the public sphere.

### 3.2.1. Public Entrepreneurship Theory

Public entrepreneurship (PE) theory describes the application of entrepreneurial principles and practices within the public sector to drive innovation, improve efficiency, create value for the society, and solve complex societal challenges (Klein et al., 2010). While built upon the private sector practices, the approach cultivates the idea of a unique approach to entrepreneurship tailored to public sector organizations. However, public entrepreneurship is different from its private counterpart as it does not use personal profit or private financial gains as a way to measure success. Instead, it focuses on broader societal benefits and

public value as the main indicators of achievement (Vivona et al., 2024). Innovation may, therefore, not be oriented towards creating a competitive advantage or efficiency but may instead be oriented towards long-term sustainability or implementing public programs. While stressing the differences between private and public sector entrepreneurs, the theory largely aims to translate the existing knowledge from the private sector to the public. Thus, for example, Demircioglu and Chowdhury (2021) translate the concept of leadership from private sector entrepreneurship to the public, and Zerbinati and Souitaris (2005) present ten case studies of entrepreneurial roles in the public sector, bridging the theories. The issues remain on how to address the unique constraints that public entrepreneurs meet, such as the bureaucratic structures, political influences, and the balancing of public value and profit. Looking at public sector entrepreneurship through a specific lens helps in understanding how entrepreneurship works in the public sector and how the public sector shapes entrepreneurial efforts. It also recognizes that the boundaries of what defines a “sector” can shift, requiring a deeper understanding of how entrepreneurship and public sector dynamics interact and evolve together (Vivona et al., 2024).

### 3.2.2. Agency Theory

Agency Theory studies the issues that arise from the separation of ownership and control over a company (Solomon et al., 2021), i.e., when the owner of the company (the principal) is not the same person managing the operational activities (the agent) (Linder & Foss, 2013). In the public sector context, it is often used to explain the weak performance of public institutions and enterprises (Van Thiel et al., 2020). The concept can be viewed from two perspectives: the relationship between citizens (principals) and politicians (agents), and the relationship between politicians (principals) and public managers (agents) (Crnković et al., 2011). In this complex relationship, politicians often present the most significant challenge to successful operations, as their primary goal is not profit but the realization of private political interests, which are found all too common in public enterprises.

When considering the principal–agent relationship, theorists debate which approach is most suitable for preserving public value (Funko et al., 2023), emphasizing the need to create an adequate governance context for public enterprises that prevents excessive political interference (Dhliwayo, 2017; Zerbinati & Souitaris, 2005). Such a strategy should motivate public managers to work toward achieving successful operations without political interference. Agency Theory is also used in research on public sector reforms, as it helps explain the adoption of specific reforms, their implementation, and the analysis of their success or failure (Zerbinati, 2012; Van Thiel, 2016). Another approach, these authors argue, is to teach PS management how to navigate the political spheres as entrepreneurial agents (Zerbinati & Souitaris, 2005). However, applying this theory to the public sector has also received criticism. Similarly to PE theory, since it originates from economic models developed for the market needs of private enterprises, it does not always fit into the tradition and typical characteristics of the public domain and the organization of the public sector (Miller, 2005). There is an echo to develop models tailored to the complexities of the public domain, as transparency, equity, and the differences in success benchmarks significantly affect their operations, even if the principal–agent relationships are comparable.

### 3.2.3. Resource-Based Theory

Another theory often applied to the interpretation of public sector entrepreneurship is Resource-based Theory, which emphasizes that organizational success lies within the organization itself—specifically, in its human and technological resources, which are rare, valuable, and difficult to imitate, and which enable it to achieve a sustainable competitive

advantage (Helfat et al., 2023). It is related to the dynamic capabilities theory mentioned earlier. The development of a resource-based perspective is closely connected to the growing dynamism of the environment in which public enterprises operate, as unpredictable environments and resources do not provide a stable foundation for generating effective public service delivery strategies (Wu, 2010). Thus, the theory turns to the internal factors of the organization (i.e., its resources and capabilities) as a way to influence its success (Utami & Alamanos, 2022). It has been shown that there is a positive relationship between the use of internal resources (such as managerial abilities and human capital) and the performance of public organizations (Carmeli & Tishler, 2004).

Although the Resource-based Theory also originates in the private sector, it was shown it is applicable as a theoretical basis for studying public organizations. While the outward orientations of public and private organizations are very different, the internal resources and capabilities may be more comparable. How to use tangible and intangible assets and organizational capabilities can be fruitfully translated between the sectors (Meynhardt & Diefenbach, 2012), but there are also untransferable elements between the sectors, such as the rewards systems (Urban & Nkhumishe, 2019). Since the theory is derived from economic models developed for private enterprises, it does not always align with the value measurements, resource allocation, or risk propensity of the public domain and public sector organizations (Miller, 2005; Waterman & Meier, 1998). For example, the theory narrowly defines concepts such as building the competitive advantage of public organizations, which does not fully encompass the complex structures of the public sector and its diverse markets (Frączkiewicz-Wronka & Szymaniec, 2012). According to the theory, public organizations' strategies should be based on identifying the needs and expectations of stakeholders for whom resources are developed or enhanced to create the greatest possible value. However, public organizations often serve several different stakeholders with sometimes conflicting expectations, which can complicate the development of their business strategies as well. The way to translate a resource-based view to the PSE field is perhaps best presented by Klein et al. (2010) and Najmaei and Sadeghinejad (2016) who merge multiple theories of PSE with a sensitivity for the importance of (different kinds of) resources for successful operations and service delivery.

### 3.2.4. Institutional Theory

As Bernier (2014) described, Institutional Theory focuses on how organizations secure legitimacy by conforming to institutional norms and rules. It observes how institutional environments shape entrepreneurial opportunities and the survival of organizations, with some institutional settings being more conducive to entrepreneurship than others. This theory has gained prominence due to the incompleteness of organizational efficiency-focused theories and the recognition that institutions can both enable and constrain entrepreneurial actions. Additionally, Institutional Theory examines organizational dynamics and behavior at the macro level through broader contexts that shape organizations (Aksom & Vakulenko, 2024). It is very often used to explain the adoption of innovations by "institutionalized organizations" (Tsamenyi et al., 2006). According to the theory, institutions form and direct organizational behavior through rules, practices, and processes (Aksom & Vakulenko, 2024). In mature and highly institutionalized environments such as public sector organizations, internal structures, practices, and behaviors reflect prevailing norms, values, and understandings that define how success, efficiency, and progress are perceived. Although such social expectations in PSE may not be linked to actual economic benefits, organizations that adapt to institutional demands gain legitimacy through support and approval (Tsamenyi et al., 2006). Legitimacy is, in fact, a vital value orientation of public sector activities and

entrepreneurship. Thus, it is quite suited to studying work outcomes in the public sector as it stresses the difference in goals between private and public sector activities.

Klein et al. (2010), Bernier (2014) and Funko et al. (2023) advocate for and elaborate the value of institutional theory for understanding PSE. Bernier (2014) explains that institutional theory is concerned primarily with the survival and legitimacy of organizations, and is a counterpoint to theories concerned with efficiency, a clear value for public sector organizations that do not focus on profit. Klein et al. (2010) differentiate public sector entrepreneurship precisely by its concern with the public interest, and describe, within that framework, the different relationships that a public entrepreneur may have with the institutional environment. Bernier and Hafsi (2007), Casady et al. (2020), and Najmaei and Sadeghinejad (2016) take advantage of this theory and integrate it with other theories of PSE to propose new understandings of PSE. Powell and Bromley (2015) discuss how within this theory, the social environment defines socially acceptable behavior patterns. Actors make socially acceptable decisions that align with this environment, although they may not necessarily be economically rational. These types of concepts can help explain how it happens that new policies might get adopted in the public sector, but subsequent implementation and oversight processes often fail or are carried out purely mechanically because they are mandated by strict procedures (Powell & Bromley, 2015).

### 3.2.5. Other Key Frameworks

New Public Management places efficiency and performance in public services at the front. It supports decentralization and flexible governance structures, which fosters agility and active approaches to policy, funding, and service delivery. It also promotes market-driven approaches, emphasizing the need for networking between governments and non-state actors to deliver innovative public services. The fundamental philosophy and objectives of New Public Management activities include the following: (1) improving the efficiency of the public sector, (2) strengthening the accountability of public institutions to citizens or users of public services, (3) creating public value through the prudent use of public funds, and (4) increasing the autonomy of public organization management (Hinšt, 2021; Ružić et al., 2014). However, very often, this approach is understood as a “recipe for success”, i.e., as a list of specific practices that must be followed and can be easily transferred from one culture or political system to another, which is not the case in reality, and has been a persistent criticism of this approach since its conception (Mathiasen, 1999). However, even though it may be context- and culture-specific, this theory is helpful in pointing to the specific elements that can help public institutions obtain their entrepreneurial goals (Lapuente & Van De Walle, 2020).

Present-day debates on public sector entrepreneurship are the loudest within the New Public Management (NPM) movement, arguing that public enterprises’ bureaucratic complexity is unsuitable for solving contemporary problems (Bernier, 2014; Arnold, 2019; Casady et al., 2020; Tremml, 2019). Despite the issues of this cross-fertilization discussed in previous theories, supporters of this approach still advocate for “injecting” managerial qualities, governance structures, and approaches from the private sector into the public sphere (Bernier & Hafsi, 2007; Arnold, 2019; Casady et al., 2020; Tremml, 2019). Accordingly, solutions to the inertia common in the public sector lie in adopting and integrating practices established in the private sector, such as bonuses and reward systems, prioritizing customer satisfaction, increased employee autonomy, etc. (Bernier, 2014; Kearney et al., 2009; Najmaei & Sadeghinejad, 2016). The movement is rooted in public sector management in the United States, where the emphasis was placed on efficiently solving critical problems with the most favorable ratio of resources invested to outcomes achieved (Bernier, 2014). While previous theories have been criticized for trying to fit the insights from private sector

entrepreneurship into the public sector environment, this approach fully endorses the idea that public sector organizations should be operated by the principles of private sector management (Bozeman, 1989; Hisrich & Al-Dabbagh, 2012; Najmaei & Sadeghinejad, 2016).

As an alternative, Casady et al. (2020) discuss New Public Governance (NPG) as a new approach that goes beyond the clear-cut emphasis on the contrast between "administration and management" and offers a more comprehensive and unified approach to all the manifestations of public sector entrepreneurship. According to them, New Public Governance better captures the plural nature of the contemporary state and its multiple actors working together to ameliorate public services and policymaking systems. This paradigm prioritizes service processes, stakeholder interdependence, and specifying outcomes rather than merely managing inputs or outputs. The basic idea is that market forces were introduced to address the weaknesses of traditional hierarchies (Osborne, 2006). However, when markets also showed their own limitations, the concepts of networks and New Public Governance (NPG) emerged as a way to tackle these issues. For this reason, the NPG paradigm has become an important framework for implementing public policies and delivering services. It elaborates on the creation of sustainable public policies, quality public services, and managing inter-organizational relationships (Casady et al., 2020).

The emphasis on sustainable public policies and effective inter-organizational management aligns with the broader focus of PSE on creating public value. Rooted in Moore's Public Value concept (Moore, 2015), this approach highlights the pivotal role of public managers in driving innovation and achieving outcomes that benefit society. This concept has arisen due to the perceived diminishing importance of government and public managers during a generation focused on individual economic interests and market competition (Bryson et al., 2014). According to Moore (Moore, 2015), public value is created through a combination of practices of public sector organizations. Those are (1) public administrations that deliver first-rate, service-focused performance, (2) public organizations that are competent and effective in achieving intended social outcomes, and (3) public organizations that operate fairly and unbiasedly in providing just conditions in society as a whole. To achieve these outcomes, managers should use the "strategic triangle". This means that their strategy should (1) create something valuable for the public, (2) be supported politically and socially, and (3) be practical and achievable within the organization. In fact, public value is central in driving the entrepreneurial orientation and strategy in PSE and is even in the very definition of public sector entrepreneurship (Dhliwayo, 2017; Kearney & Meynhardt, 2016; Meynhardt & Diefenbach, 2012; Zampetakis & Moustakis, 2010). Thus, it is mentioned across the literature on PSE (Bernier, 2014; Fennimore & Sementelli, 2016; Kearney et al., 2009; Kearney & Meynhardt, 2016; Klein et al., 2013; Lindholst, 2021; Meynhardt & Diefenbach, 2012) Meynhardt and Diefenbach (2012), Klein et al. (2013), Kearney and Meynhardt (2016), and Liddle and McElwee (2019) which illustrates the centrality of the concept in empirical studies, and critically examines its relevance in practice.

#### 4. Determinants of Public Sector Entrepreneurship

In the globalized and turbulent environment involving many stakeholders, several determinants affect the profile of public sector entrepreneurship. Vivona et al. (2024) identify them as "shaping factors" as they impact the development and the appeal of PSE. Moreover, they are beyond individual public entrepreneurs' control and can be categorized as regulatory, political, institutional, and environmental factors. Reviewed authors generally describe them as external and internal (Kearney et al., 2007; Kearney & Meynhardt, 2016). External factors include political context, complexity, dynamism, munificence (Kearney et al., 2007), hostility, and embeddedness (Kearney & Meynhardt, 2016). The internal environment is observed through internal structures, decision-making,

control, and rewards/motivation (Kearney et al., 2007), but also through top management support, time availability, and organizational boundaries (Kearney & Meynhardt, 2016).

#### 4.1. External Determinants of Public Sector Entrepreneurship

*The political environment* is a central factor of the external environment. Although it significantly impacts private companies, in the public sector, it represents one of the main determinants of success (Nutt, 2006). Various political constraints, frequent policy changes, contradictory views of leaders and politicians, and the manipulations of various interest groups lead to difficulties in managing public sector enterprises (Olumekor, 2024). This is why long-term planning is complex for public initiatives and can limit entrepreneurial activities. Due to frequent changes in governing parties, public enterprises are under constant pressure to achieve fast results (Bozeman & Johnson, 2015). On the other hand, when policies encourage innovation, flexibility, and sustainability, public institutions are better prepared to address long-term societal challenges and contribute to sustainable development (2023 OECD Digital Government Index, 2024).

*The complexity* of the environment is reflected in its turbulence or the numerous changes resulting from technological advancements, social circumstances, etc. (Kearney et al., 2009). These changes and many other challenges encourage enterprises to seek innovative solutions (Olumekor, 2024) to stay agile and responsive to meet the citizens' expectations. Such an increased *dynamism* in the environment is also considered favorable for entrepreneurial activities because it pushes institutions to innovate continually to create new business opportunities in the market (Lapuente & Van De Walle, 2020). As customer demands increase in diversity, organizations must adapt to a broad range of shifting needs that change across different demographics. This diversity requires organizations to constantly adapt and innovate, which creates new opportunities for entrepreneurial initiatives.

*Hostility* refers to conditions that create threats for organizations, often stemming from scarce resources, intense competition, or unfavorable political and social environments (Kearney & Meynhardt, 2016). In the public sector, hostility is broader, including not just economic conditions but also external constraints like government policies and societal demands. These challenges drive organizations to adopt entrepreneurial strategies as a means to navigate resource scarcity and adapt to competitive pressures (Walker et al., 2015).

*Embeddedness* relates to the ties organizations and their members form with stakeholders, partners, and the broader public (Kearney & Meynhardt, 2016). These connections help public sector organizations identify needs, explore opportunities, and create innovative solutions by utilizing social capital and networks. Embeddedness also enables public managers to engage in local contexts, fostering a sense of social responsibility and enhancing entrepreneurial orientation through collaboration and contextual awareness (Meynhardt & Diefenbach, 2012).

*The munificence* or the availability of key resources in the external environment also influences entrepreneurial activities in the public sector (Andrews & Boyne, 2008). In a munificent environment with positive growth trends, enterprises can create new resources while also having easier access to external resources. Munificence positively affects enterprises' survival, profitability, and growth (Tang, 2008). This can also lead to a better collaboration between public institutions and private enterprises, which can be a main driver of innovation in the public sector. By sharing resources, knowledge, and expertise, these partnerships create opportunities for sustainable business models that benefit society at large (Liddle & McElwee, 2019).

#### 4.2. Internal Determinants of Public Sector Entrepreneurship

As documented in the literature, the internal organization is critical in the successful development of public sector entrepreneurship and includes the organization's internal structure, decision-making processes, control mechanisms, and rewards or motivations system (Kearney et al., 2009). The *internal structure* of public enterprises is often hierarchical, centralized, and formalized (Baum & Wally, 2003). This means that processes, procedures, job roles, organizational charts, strategic and operational plans, and goals are explicitly articulated (Tremml, 2019). Public institutions embody almost all the features of a bureaucratic system, including specialization, centralization, explicitness, and an excessive emphasis on directives, roles, and the specific positions held by each employee in the organization (Maqdliyan & Setiawan, 2023). In those circumstances, strategic leadership is crucial in the public sector's engagement in entrepreneurial initiatives. Public managers who embrace agility and encourage innovation, even in inflexible structures, can effectively respond to dynamic political and economic environments, leading to more resilient and sustainable public services (Kearney et al., 2007). However, their leadership needs to be balanced with the complex internal procedures, which cause frequent operational delays, procedural holdups, and bottlenecks (Nutt, 2006). Another significant challenge for public managers is balancing unclear and often contradictory laws and conflicting goals of different stakeholders with the organization's motivation to achieve a more general public good (Eimicke et al., 2000; Van Wart, 1996).

Findings from the literature suggest *top management support* as an important internal determinant as well, as leaders supporting innovative ideas and providing resources can encourage entrepreneurial behavior. Public sector managers are more likely to act entrepreneurially when they perceive strong support from top management (Kearney & Meynhardt, 2016). This support is particularly critical when integrating entrepreneurial projects into the larger organization, as it helps unleash creative energy in pursuing public interest. *Time availability* is another critical factor, and it refers to the extent to which managers have sufficient time and work flexibility to focus on innovation and entrepreneurial opportunities (Kearney & Meynhardt, 2016). Releasing managers from rigid schedules allows them to identify and pursue innovative solutions that would otherwise be overlooked. In the public sector, granting adequate time and resources can help managers generate value for citizens and stakeholders by leveraging social opportunities effectively. This is also why flexible *organizational boundaries* facilitate the flow of information between the organization and its external environment, as well as among internal departments. These boundaries enable the effective use of innovation resources and support adaptability, essential for entrepreneurship (Kearney & Meynhardt, 2016).

The literature also points out as relevant the *decision-making processes* in an environment where more emphasis is often placed on following procedures instead of achieving goals (Özcan & Reichstein, 2009). Public sector organizations are subject to public oversight, so all their major decisions must be transparent, meaning entrepreneurs in such an environment are likelier to play it safe to avoid mistakes (Boselie et al., 2021; Jain & Patnayakuni, 2003). All decisions must be made in the best interest of citizens, even voters, while at the same time considering budgetary and political constraints. However, the way public interest is achieved through professional decision-making in political institutions is not fully articulated (Gianakis, 2004). Failures are punished, while rewards (if they exist) are not tied to success. At the same time, although decision-makers in the public sector do not have complete autonomy in decision-making, the responsibility for certain decisions is often attributed to a specific department or even an individual (Levy et al., 2021).

Related is another of public entrepreneurship determinants—*rewards and motivation*. An adequate reward system encourages and motivates employees to engage in

entrepreneurial activities (Hornsby et al., 2002). If an organization does not value good performance and does not recognize the efforts of its employees, their motivation, engagement, and development of creative ideas and solutions will gradually decrease (Kearney et al., 2007). An effective reward system, often lacking in public enterprises, encourages entrepreneurial activity and must consider goals and feedback, emphasize individual responsibility, and, most importantly, be based on agreed-upon results (Hornsby et al., 2002). It is thus necessary to include an effective rewards system that acknowledges the contributions of employees within the organization.

*Control mechanisms* are also emphasized as an important determinant of public sector entrepreneurship, and in public enterprises, they are so complex that they may lead to excessive bureaucracy and micro-management (Shih & Yong, 2001). Such strictly established control systems in many highly centralized institutions are, in fact, out of every control (Kearney et al., 2009). This is especially true in the financial domain, where managers have little room to maneuver, forcing them to seek short-term solutions to particular problems (Rana et al., 2019). These circumstances negatively affect other employees, who may work in conditions of reduced creativity and may lack the motivation to express new ideas (Shih & Yong, 2001).

## 5. Future Avenues of Research in Public Sector Entrepreneurship

Public sector entrepreneurship combines the traditional principles of public enterprises with the modern spirit of entrepreneurship. Many notice that these two notions are difficult to reconcile because free and creative entrepreneurial spirit may not be compatible with public sector organizations' rigid norms and procedures (Fennimore & Sementelli, 2016; Rhodes & Wanna, 2007). Furthermore, the concept of public entrepreneurship is constantly changing because public interests, which evolve, are sometimes difficult to identify (Klein et al., 2010). Unlike private companies, public sector institutions are driven by social and political goals, that are often numerous, diverse, and difficult to prioritize (Bernier, 2014; Olumekor, 2024). Due to the rapid advancements in technology, shifts in demography, rising citizen expectations, and the need for sustainable development and green innovation, it is suggested that entrepreneurship in the public sector will become of central importance to enable public organizations to flourish in a dynamic environment (Vassallo et al., 2023).

As mentioned, since the 1980s, public entrepreneurship has garnered increasing attention, but significant gaps remain in understanding its practices within the public sector. The existing research has largely focused on conditions for entrepreneurship and comparisons with private sector practices, often relying on limited case studies and outdated conceptual frameworks (Dhliwayo, 2017; Hayter et al., 2018; Meynhardt & Diefenbach, 2012). Scholars emphasize the need for updated empirical and theoretical studies to address the evolving challenges and dynamics of modern public organizations (Demircioglu & Chowdhury, 2021; Liddle & McElwee, 2019) as well as its determinants and dimensions (Demircioglu & Chowdhury, 2021; Klein et al., 2013; Tremml, 2019; Vassallo et al., 2023). Different research directions and approaches will allow a deeper understanding of the nature of public entrepreneurship which is expected to rise as a critical concept in the future.

The future research recommendations outlined in the examined papers suggest several potential directions to advance the Public Sector Entrepreneurship field. Based on the systematic literature review of recent publications, the following key clusters of recommendations for empirical research emerge as follows:

1. Data-Driven Research (Funko et al., 2023; Olumekor, 2024): A significant limitation in PSE research is the absence of consistent, objective data. Many studies rely on case studies based on subjective interpretations, which limits the ability to make generalizable conclusions. Moreover, there is a lack of standardized performance measurement tools

for both researchers and public sector entrepreneurs (Olumekor, 2024). Thus, future research should focus on creating robust methodologies and instruments to assess the performance of public sector entrepreneurs in line with the unique characteristics of public administration, including the goals, rewards, and institutional differences that distinguish the public and private sectors. This would suggest developing surveys, questionnaires, and interview methods tailored to public sector settings in order to provide objective data on PSE effectiveness.

**2. A Further Exploration of PSE Theories (Aksom & Vakulenko, 2024; Mendez et al., 2024):** As many PSE theories are derived from the private sector sphere, there is a need to explore further the postulates of the proposed theories strictly within the public contexts. For example, Aksom and Vakulenko (2024) emphasize that more empirical studies of institutional theory can provide a deeper understanding of PSE by analyzing the pressures, constraints, and inertia public organizations face. Research could also explore how institutional practices are adopted and adapted in the context of public sector entrepreneurial activities.

As an extension of such research, measurable indicators of public value provided by the organization could also be developed (Liveris, 2015; Meynhardt et al., 2017; Meynhardt & Bartholomes, 2011; Moore, 2015), so that the results may indicate their social impact. Improving entrepreneurial activities leads to a positive manifestation of public value, which can be measured through three key areas: (1) the cost-effective delivery of high-quality services, (2) achieving desired outcomes, and (3) building trust with citizens (Try & Radnor, 2007). Another recommendation for future research is to examine further the New Public Management paradigm and its effectiveness in managing public organizations (Colon & Guérin-Schneider, 2015; Meier & O'Toole, 2007), particularly given the different perspectives on its relevance and applicability in the public sector. In this sense, the effects of decentralization, service quality improvement, administrative efficiency, leadership roles, or the results-oriented culture on the success of public enterprises or institutions can be observed. Additionally, the roles of motivation, willingness to change, and knowledge sharing among managers and employees on the success of public sector entrepreneurship can be studied (Liddle, 2016) along with the role of strategic partnerships and networking (Considine et al., 2009). In a similar vein, studies can observe the prevalence and effectiveness of NPG-inspired reforms, changes, and innovations across different socio-political and administrative contexts (Krogh & Triantafillou, 2024), that is the quantitative and qualitative validation of NPG frameworks (Popeda & Hadasik, 2024).

**3. Collaboration Across Sectors:** Collaboration between public and private sectors, as well as among different public entities, is identified as a key driver of successful public sector entrepreneurship (Funko et al., 2023). Networks based on interaction and collaboration are also essential for achieving public sector resilience, as they enable the creation of strategic partnerships, information sharing, and resource allocation that can help respond to crises and build an equitable future (Deloitte Insights, 2024). Thus, future studies could explore the potential of multi-party collaborations and network-building, such as government agencies, private sector entities, non-profit organizations, and citizens, to co-create solutions and enhance entrepreneurial outcomes in the public sector. Moreover, studies could focus on identifying the best practices for public-private partnerships that drive the development of sustainable entrepreneurial ecosystems and foster economic resilience or observe the interplay between institutional support mechanisms—such as funding, infrastructure, and policy frameworks—and the entrepreneurial activities they seek to nurture (Robertson et al., 2020).

**4. Longitudinal and Comparative Studies:** There is a need for comparative studies of PSE across different countries and public sector institutions (Olumekor, 2024). This would enable a deeper understanding of how PSE is different in various cultural, politi-

ical, and economic contexts. Comparative studies could also examine how institutional, political, and economic environments influence the effectiveness and outcomes of public sector entrepreneurial activities. For example, it would be worthwhile to diagnose the entrepreneurial climate by conducting case studies on public sector companies or institutions in different countries (Kuratko et al., 1990; Vigoda-Gadot & Meiri, 2008). Assessing dimensions of the entrepreneurial climate and orientation can help public organizations identify areas for improvement to optimize their service delivery (McMurray et al., 2021).

Furthermore, authors could explore the concept of public sector innovation and study it more closely within country-specific contexts (2023 OECD Digital Government Index, 2024). Measuring innovation in the public sector can examine which approach to innovation or which type of innovation (organizational, product, process, communication, etc.) leads to specific outcomes and whether it affects entrepreneurial activities and the institution's overall success. Similarly, the impact of public sector innovation on overall economic growth can be examined.

Finally, as the political environment has been indicated to be important for the success of PSE, future research might explore the components of the political environment (through various factors such as corruption, the party system, political stability, etc.) and the barriers that could hinder the development of entrepreneurship in the public sector. Such studies could highlight problematic areas that need more attention at the institutional, social, and legislative levels (Tremml, 2019). Public entrepreneurship can also be studied across different industrial sectors to which organizations belong or even at the internal organizational levels, such as among different departments.

**5. Sustainable Practices within Public Sector Entrepreneurship:** Given the global emphasis on sustainability, future studies are encouraged to explore how public sector entrepreneurship contributes to achieving environmental goals (Olumekor, 2024; Criado et al., 2023). This could include examining how public sector managers (and employees) are driving sustainable practices through policy innovation, green infrastructure, and the development of environmentally friendly public services, especially in terms of renewable energy implementation. The role of PSE in advancing environmental sustainability, particularly in managing critical infrastructure like energy systems, presents an important area for future research (Deloitte Insights, 2024). The COVID-19 pandemic has also brought new perspectives on sustainable business growth. It demonstrated the importance of effective, responsive, proactive, and inclusive public institutions in developing innovative solutions to unforeseen events. This puts innovation and entrepreneurship at the heart of future public sector activities to ensure they can positively change society.

**6. The Impact of New Technologies and Digitalization:** The rise of new technologies, particularly AI and the digitalization of public administration processes, offers significant opportunities and challenges for public sector entrepreneurship (Farrell et al., 2023). These authors suggest that further research should focus on understanding how new technologies can enhance public sector innovation and service delivery and improve efficiency. Additionally, studies should investigate how public organizations can manage the risks associated with technology adoption, including issues of digital inequality, privacy concerns, and organizational readiness. Applying AI, machine learning, and digital infrastructures can significantly impact how public entrepreneurs create value, especially in streamlining administrative tasks, improving customer experiences, and addressing societal needs (Vivona et al., 2024). Research could also explore how digital technologies can foster transparency, facilitate public participation, and enhance resilience in public organizations (Deloitte Insights, 2024). For example, they can assist in making more prudent decisions while improving communication and engagement with the public (Walker et al., 2015). There are also challenges to integrating AI into the public entrepreneurship context, such as privacy

and security issues. There may also be a lack of infrastructure and expertise to handle AI systems effectively. The cost of technology and training can also be a problem, highlighting the need for public sector institutions to address these barriers effectively (Sousa et al., 2019). Collectively, these factors also require a greater attention in future research to observe and address the complexities of integrating AI into the public entrepreneurship context.

9. Pandemic Response and Future Resilience: The COVID-19 pandemic has accentuated the importance of innovation and entrepreneurship in ensuring resilient public institutions (Funko et al., 2023). Future research should explore how the public sector's response to crises can impact future entrepreneurial strategies, with a focus on creating sustainable business growth through innovation. Investigating the pandemic's impact on public sector entrepreneurship could provide insights into the preparedness of public institutions to handle unexpected challenges while continuing to create value for society.

## 6. Conclusions

The aim of this paper was to provide a better understanding of definitions, theories, dimensions, and determinants of public sector entrepreneurship, identify gaps in the literature, and propose avenues for future empirical research. By synthesizing the existing literature, this review offered a structured framework of the key theoretical concepts to guide future research. It examined how PSE has been defined and operationalized, identified key theories that underpin the field, and explored its dimensions such as innovation, risk-taking, and proactiveness. The paper also analyzed the determinants that foster or hinder entrepreneurial activity in public organizations, emphasizing organizational and environmental factors. Elaborating on these elements provides a foundational understanding of PSE and can serve as a valuable resource for scholars and practitioners aiming to enhance the entrepreneurial capacity of public organizations. Furthermore, it proposes avenues for future research to address identified gaps, such as the need for more integrative approaches to theory-building, exploring emerging trends like digital transformation and sustainability in public entrepreneurship, and applying cross-sectoral comparisons to enrich the field. Through this work, the paper contributes to advancing the discourse on PSE and its potential to drive innovation and value creation in the public sector.

This review has several limitations, the first being the scope and breadth of the literature coverage, as it could not comprehensively cover all relevant publications due to limitations in databases, language restrictions, or inclusion/exclusion criteria. As the key concepts were mainly taken from publications with the most citations or those that most intensely engaged with the topic, it could neglect other emerging theoretical perspectives that contrast these predominant paradigms. In suggestions for future studies, the review took insights from more recent studies, potentially neglecting older empirical studies that hold equal merit. Moreover, the topic only brushed upon the outcomes of PSE, such as public value creation, and this also serves as a recommendation for other future bibliometric analysis. Nevertheless, this article can serve as a good starting point for scholars and practitioners seeking to advance research and practice in public sector entrepreneurship.

The post-pandemic public sector finds itself at the interplay of change, innovation, workforce transformation, and regulatory challenges that affect its operations. In response to frequent crises, the public sector has recognized a need for more effective innovative practices to bring together the private sector, academia, and other stakeholders to handle large-scale challenges. During the pandemic, public institutions worldwide had to innovate rapidly, transforming internal processes and their interactions with their respective communities. Significant shifts were seen in collaborations with non-state actors to maintain service delivery, transparency, and accountability. These unique circumstances highlighted the critical importance of adaptability and resilience within public institutions, pushing

them to explore new models of operation and partnership. Innovative practices during this period not only ensured continuity but also laid the groundwork for reimagining public service delivery in a more dynamic and collaborative framework. Public sector entrepreneurship is suggested as a pathway to building on these innovations, with its ability to make fast changes and improvements, and share and reallocate resources in response to market needs. PSE is a promising and multifaceted topic with high research and practice potential. The entrepreneurial spirit can undoubtedly exist in the public sector, which, with the help of employees' creativity and innovation, can overcome potential barriers and enable public organizations to be more responsive, transparent, and efficient.

**Funding:** Funded by the European Union–NextGenerationEU. The views and opinions expressed are solely those of the authors and do not necessarily reflect the official views of the European Union or the European Commission. Neither the European Union nor the European Commission can be held responsible for them.

**Conflicts of Interest:** The authors declare no conflicts of interest.

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