The role and impact of environmental sustainability measures in Public Sector Organizations – A systematic literature review

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Abstract

Sustainability is increasingly present in public policy agendas worldwide, yet environmental practices in this sector remain less studied than in the private sector. Public sector organizations face specific challenges, such as political cycles, bureaucracy, and lack of competition, which influence the implementation of sustainability practices. This study fills this gap in the literature by conducting a systematic literature review to identify environmental practices adopted in the public sector, their level of implementation, and key drivers and barriers. Results highlight practices adapted to the public context and reveal critical barriers, including technological limitations, lack of training, financial constraints, and bureaucratic obstacles.

Keywords: Environmental Sustainability, Public Sector, Systematic Literature Review

Introduction

Public Sector Organizations (PSO) play a critical role in promoting sustainable development, not only as service providers and significant employers but also as entities that consume substantial resources and influence societal behaviors. Through the policies and strategies they define and implement, PSO are in a privileged position to lead by example and foster sustainable practices across different sectors (Rita et al., 2018; Bisogno, Cuadrado-Ballesteros, Rossi, & Peña-Miguel, 2023). Public policies aim at improving collective welfare, addressing challenges such as education, healthcare, or environmental protection (Mahardhani, 2023), which reinforces the importance of sustainability efforts within PSOs themselves.

In recent years, environmental sustainability in particular has gained increasing importance on the global policy agenda, driven by the growing recognition of the negative impacts of human activity on the environment (IPCC, 2023). International climate agreements have raised national ambitions for climate action, while public awareness and

pressure for environmentally responsible practices have intensified. However, PSO face specific challenges when adopting sustainability measures that differ from those found in the private sector. Factors such as political cycles, bureaucratic processes, lack of competition, or operating in sectors unattractive to private investment create unique barriers to sustainability in the public context (Grafström, Aasma, 2021).

These specificities thus justify the need for environmentally-sustainable practices tailored for the particular case of the public sector. Although a wide body of research have been developed aiming to identify such practices in the private sector (see the examples in (Çifçi, 2011; Warshawsky, 2016; Zimek & Baumgartner, 2017; Hacking, 2019), a much less developed literature exists considering the particular case of PSO. In fact, a number of studies exist focusing on the analysis of green practices and policies in the public sector for PSO in particular (e.g., Nogueiro & Ramos, 2014; Rita et al., 2018; Giacomo et al., 2019;), but to the authors knowledge there is still missing a comprehensive study that presents a global outlook about key practices and policies applied in this particular sector. Furthermore, although a few authors have developed efforts in the identification of environmentally-sustainable policies' and practices' impacts in the public sector (e.g., Lodhia, Jacobs, & Park, 2012; de Vries, Bekkers, & Tummers, 2015), as well as on their drivers and barriers (e.g., Walker, Di Sisto, & McBain, 2008; Kozioł-Nadolna & Beyer, 2021; Regina, 2023), no study was identified presenting a global comparison of those practices in terms of their impacts, drivers and barriers. Such a global overview and comparison is considered critical for guiding PSO in the selection of the most adequate green practice(s) for their particular context.

The present study aims to fill this gap in the literature by proposing a systematic literature review developed with the purpose to provide answers to the following research questions:

- ✓ Research Question 1: Which are the environmentally-sustainable practices and policies more frequently studied and applied in the public sector?
- ✓ Research Question 2: What are the key barriers and drivers for the implementation of environmentally-sustainable policies and practices in the public sector?

This study thus contributes to the literature i) by developing a comprehensive analysis of the most frequent and successful green practices and policies applied in the public sector in general, and ii) by comparing those practices in terms of their impact, and also based on the barriers and drivers that impact their implementation.

The remainder of this article is organized as follows. Section 2 presents the theoretical background that justifies the relevance of the present study. Section 3 presents the adopted methodology. The results obtained are detailed in Section 4, with key conclusions and lines for future research being presented in Section 5.

Theoretical background

Organizations today adopt environmental practices due to growing concerns about their long-term environmental impact, influenced by both internal and external factors (Kraja, 2015). In an era in which the competitive advantage of organizations is measured, among other factors, by the impact of their activity on the environment in which they operate (whether economic, social or environmental), a slight advantage in one of these fields could mean the success of one organization to the detriment of another. As such, the environmental component of operations has been gaining more and more relevance, not only demonstrated by the global consensus measured by all the international or regional meetings between countries, but also by the greater interest shown by academic studies in this topic, and it is becoming increasingly important within organizations. However, for public organizations, traditional competitive measures don't apply as easily, making

it harder to assess their environmental performance with the same metrics as private organizations.

The Sustainability Concept

The concept of sustainability is based on the definition given by the United Nations (UN) to sustainable development: "*Sustainable development requires an integrated approach that takes into consideration environmental concerns along with economic development*" (United Nations, 2024). Over the last few decades, the concept of sustainability has undergone several updates, but in 1987, the UN Brudtland Commission defined as "*meeting the needs of the present without compromising the ability of future generations to meet their own needs*" (United Nations, 2024). Sustainable development requires an integrated approach on a triangular component that deals with environmental, social and economic concerns, making the three main pillars of this construct which are summarized as follows (Purvis, 2019):

- ✓ Social Sustainability – promotion of equality and respect for individual rights, combating exclusion and discrimination;
- ✓ Economic sustainability - promotion of responsible and balanced economic growth;
- ✓ Environmental sustainability- promotion of actions that focus on the protection of natural resources and the environment.

In 2015, the UN member States adopted the 2030 Agenda for Sustainable Development which established the 17 Sustainable Development Goals (SDG) as a global partnership translating into a "strong commitment" by all countries to among other goals, tackle the climate change(Wurster et al., 2021). The SDGs must be taken into account when defining actions and measures to be taken by any organization. If this action can be framed within an SDG, then it is sustainable and can be framed within one of the three pillars discussed above. However, the definition of each organization's strategies and actions is influenced by various factors which, in the light of institutional theory, can be summed up by three major forces.

Institutional theory

The antecedents of sustainability reporting in PSO are different from those applied in the private sector due different value systems, organizational models and operational characteristics (Uyar, Kuzey, & Kilic, 2021b). Both of these institutions work as open systems which are currently more pressured form the outside than inside, namely external stakeholders, to engage on sustainable practices (Nsiah-Sarfo et al., 2023). The adoption of these sustainable policies and practices are more dependent on the external pressures and expectations from public opinion and views of important constituents (moral compliance) (Meyer, & Rowan, 1977), on the desire to copy successful and best practices that are perceived to be favorable in the same field of action (mimetic forces), and on the threats of withdrawal of critical resources or sanctions from regulatory or supervisory bodies (coercive forces) (Williams & Lodhia, 2021). These kinds of forces can boost organizations to gain or keep legitimacy when compared to others because if the actions are perceived as acceptable practices, they can receive more support and acceptance from their stakeholders. The public perception is one of the main forces that guide a company's strategy after the economic rewards (main motivation), and sustainable practices are increasingly perceived by the public which demonstrate preference on those organizations (specifically social and environmental) (Trujillo-barrera & Pennings, 2016).

Sustainability in the public sector

Both public and private organizations need to address the issue of sustainability in their operations, but despite this fact, only a "*small number of studies have investigated the role of public sector in the development of sustainability initiatives*" (Gelderman, Semeijn, & Vluggen, 2017; pp. 1). In the last few years, PSO are adding environmental and social aspects in their agendas (Gelderman, Semeijn, & Vluggen, 2017), with a much more limited focus on the economic pillar, and with the majority of the studies targeted to the private sector (Giunipero, Hooker, & Denslow, 2012). Gelderman, Semeijn & Bourna (2015) conducted a study on this topic, and identified a limited number of studies (6) which have investigated the role of the public sector in the development of sustainability initiatives. Also, more recently Borrás et al. (2024) stated that the conceptualization of the PSO transformative capacity into sustainability transition is no deeply covered. And recognizing this lack of research specifically applied to the public sector reality, Ramos et al. (2021) have shown that PSO have adapted private-oriented models to assess their sustainability performance, "*but the majority of them are for the private sector and are often not supported by stakeholder involvement"* (pp. 1).

Conclusions

Based on the studies presented above, it is possible to conclude that there is a field of research yet to be explored with regard to sustainability practices within and created by public organizations, in line with the goals proposed in the previous chapter.

Method

A systematic literature review (SLR) following the Prisma approach (PRISMA, 2025) was adopted to present an overview of the existing literature on green practices and policies applied in the public sector, as well as on key barriers and drivers for their implementation. This approach was followed due to its prep-planned route to enable the most important literature to be chosen. The prospection of the articles was done through the *Web of Science* database. The following two set of keywords were used together to obtain a holistic view of what is already studied in this field:

- *"sustainability" OR "green practices" OR "green supply practices" OR "sustainable practices" OR "environmental concerns" OR "green measures" OR "sustainable actions" OR "green transition" OR "sustainable transition";*
- *"Public sector" OR "Public admin*".*

These keywords were searched either on Title, Abstract and in keywords section. Due to the permanent evolution on these topics, it was considered a period of 10 years: between 2013 and 2023. And the searched articles were imposed to be written either in Portuguese or English.

The protocol described resulted in the identification of the first set of scientific articles, book chapters and conference proceedings, reaching a total number of 2397 documents . The Journal Impact Factor (JIF) which is "*used to measure the importance of a journal by calculating the number of times selected articles are cited within last few years*" (Elsevier, 2024) was afterwards used as an additional exclusion criterion. Once applied, this quality filter resulted in a total number of 1018 documents, with all of them being ranked as Q1 and Q2. These 1018 documents were then analyzed – first in terms of the title, then in terms of the abstract, and finally in terms of the abstract –, and a final number of 83 studies were obtained for final analysis as shown in the next points:

- Identification phase (n=2397)
    - Records (articles, book chapters and conference proceedings) identified from Database (Web of Science-Clarivate)

- Screening phase (n=1018; exclusion of 1379 documents)
    - Years of study: 2013-2023
    - JIF: Q1 or Q2
    - Language: English or Portuguese
- Selection of articles manually, based on title and subtitle (n=80; exclusion of 938 documents)
- *Snowballing effect* (based on references of the articles selected previously: n=3)
- Full reading (n=83)

A qualitative analysis was done using MaxQDA in order to help with the process of reading and summarizing the most important issues of the articles selected and to give another important insight presented in the next chapter.

Discussion of Results

The results obtained based on the analysis of the 83 studies are presented below. Particularly, sustainability policies and practices applied in the Public Administration are presented, as well as associated barriers and drivers.

RQ1: Which are the environmentally-sustainable practices and policies more frequently studied and applied in the public sector?

By analyzing the selected articles, it was possible to observe a certain standardization of current practices in the pursuit of environmental sustainability objectives applied in public administration. These practices are recurrently used in the context of local government, particularly in developed countries. Numerous programs have already been created and developed in the local sector (11 articles deal with specific cases in the local administration) and the reasons for this high level of implementation are due to the greater scrutiny placed by the public on their direct political interlocutors. There is also a greater capacity for this type of administration to respond to the concrete problems of their populations, acting as a key player in regulating land use, providing public transport, carrying out proper waste management, etc. It is, in fact, an important sub-sector in terms of meeting SDG-11 through the need to "*make cities and human settlements inclusive safe, resilient, and sustainable*" (United Nations, 2024).

Concerning the specific policies and practices found in the reviewed studies, there is a high focus on the efficient management of energy and resource use (through the use of various Key Performance Indicators [KPI]), a cooperative relationship with other entities (central to achieving common goals despite the departmentalization of organizations, namely through the use of information-sharing platforms), waste management, sustainable mobility and sustainable public procurement.

Table 1- Policies and Practices identified

Policies and Practices	Studies	Total
Use of Renewable Energy	(Romodina & Silin, 2015); (Gallo et al, 2016); (Meidutė-Kavaliauskienė, Dudzevičiūtė & Maknickienė, 2020); (Klein, Ramos, & Deutz, 2022); (Singh et al, 2024)	5
Circular Economy implementation	(Droege & Raggi, 2021); (Rainville, 2021); (Cramer, 2022); (Klein & Deutz, 2022); (Klein, Ramos, & Deutz, 2022); (Rask, 2022); (Nsiah-Sarfo et al., 2023)	7
Encouraging the practice of Sustainable Agriculture	(Mazzi et al., 2017); (Tregear et al., 2022)	2
Corporate Sustainability Strategies	(Domingues et al., 2017); (Nsiah-Sarfo et al., 2023)	2

Carbon Neutrality (investment in CO_2 reduction,)	(Chiarini, Opoku & Vagnonil, 2017); (Filho et al, 2019); (Tregear et al., 2022); (Galeotti & Vannucci, 2023); (Singh et al., 2024)	5
Sustainable Urban Development	(Zeemering, 2018); (Zaidi et al., 2019)	2
Water Saving initiatives	(Lalor & Hickey, 2014); (Mazzi et al., 2017); (Almeida et al., 2022)	3
Sustainable Mobility	(Young, Nagpal & Adams, 2015); (Gallo et al, 2016); (Pardo-bosch & Aguado, 2016); (Chiarini, Opoku & Vagnonil, 2017); (Zeemering, 2018); (Filho et al, 2019); (Ma et al, 2020); (Talebi & Rezania, 2020); (Tregear et al., 2022)	9
Waste management	(Rita et al., 2018); (Montesinos & Brusca, 2019); (Klein & Deutz, 2022); (Ershadi et al, 2021); (Tregear et al., 2022); (Pinz et al, 2018); (Meehan, 2015); (Chiarini, Opoku & Vagnoni, 2017)	8
Sustainable Public Procurement	(Rau et al, 2013); (Nogueiro & Ramos, 2014); (Lalor & Hickey, 2014); (Romodina & Silin, 2015); (Smith et al, 2015); (Meehan, 2015); (Young, Nagpal & Adams, 2015); (Stefano & Luzzini, 2016); (Haley, 2016); (Zurga, 2017); (Domingues et al., 2017); (Gelderman, Semeijn & Vluggen, 2017); (Ekiugbo & Papanagnou, 2017); (Aragão, 2017); (Chiarini, Opoku & Vagnoni, 2017); (Rita et al., 2018); (Pinz, Roudyani & Thaler, 2018); (Giacomo et al, 2019); (AlNuaimi & Khan, 2019); (Filho et al, 2019); (Zaidi et al., 2019); (Ma et al., 2020); (Olsson & Öjehag-pettersson, 2020); (Saunders et al, 2020); (Raj, Agrahari & Srivastava, 2020); (Wontner et al, 2020); (Lengnick-Hall et al, 2020); (Talebi & Rezania, 2020); (Al Nuaimi, Khan & Ajmal, 2020); (El Haddadi et al, 2021); (Ershadi et al., 2021); (Droege & Raggi, 2021); (Rosell, 2021); (Rainville, 2021); (Klein & Deutz, 2022); (Klein, Ramos & Deutz., 2022); (Johnson & Klassen, 2022); (Tregear et al., 2022); (Zhanbayev et al., 2023); (Nsiah-Sarfo, Ofori & Agyapong, 2023); (Singh et al., 2024)	41

Through the analysis of the articles in the systematic review, it was possible to realise that procurement arose as a key topic on the achievement of environmental sustainability, appearing in the overwhelming majority of the articles analysed, and can be denoted that the word "procurement" appears in 49,4% of the articles analysed, meaning that it is a valuable tool to achieve better efficiency at the same time that turns the public activity more sustainable. It allows to achieve the 12th SDG which emphasize to "ensure sustainable consumption and protection patterns". Table 1 above presents the details of this analysis. The qualitative analysis, gave important insights oh the most appeared words in the SLR, and after the word "sustainability", the word "procurement" appeared as the second most used word in the 83 articles selected, a total of 1811 times. The words' cloud of the 83 articles is showed in the next image:



Figure 1- Cloud of words using MaxQDA

RQ2: What are the key barriers and drivers for the implementation of environmentally-sustainable policies and practices in the public sector?

Barriers can be elements that make it impossible for organizations to embark on environmental initiatives while the drivers are considered as a boost to achieve a certain goal (Peters & Simaens, 2020).

The SLR allowed to verify a certain pattern in the identification of the biggest barriers and drivers in the application of sustainability policies and practices in public administration. The concept of sustainability has been introduced into our daily routine since at least the 1980s and it would not be expected that nowadays, some of the barriers identified would be based on a lack of knowledge or perception on the part of employees, or a lack of commitment on top management, but the table below shows us that this is still very much the case. It is also widely recognized that the biggest driver for implementing environmental sustainability practices is external pressure, particularly from the market, in line with the theory of institutions (mimetic and coercive forces, see "Institutional theory" chapter). Tables 2 and 3 below present a summary of the main barriers and drivers identified, respectively.

Table 2- Barriers identified

Barriers	Studies
Lack of Awareness and Knowledge/Resistance to change	(Rau & Luiz, 2013); (Royo, Yetano, & Acerete, 2013); (Meehan, 2015); (Smith et al, 2015); (Young, Nagpal & Adams, 2015); (Domingues et al., 2017); (Ekiugbo & Papanagnou, 2017); (Gelderman, Semeijn & Bourna, 2017); (Aragão, 2017); (Filho et al, 2019); (Giacomo et al, 2019); (Zaidi et al., 2019); (Al Nuaimi, Khan & Ajmal, 2020); (Raj, Agrahari & Srivastava, 2020); (Wontner et al, 2020); (El Haddadi et al., 2021); (Ershadi et al., 2021); (Williams, 2021); (Wurster et al., 2021); (Klein & Deutz, 2022); (Tregear et al., 2022)
Cost and financial constraints	(Lalor & Hickey, 2014); (Amann et al., 2014); (Young, Nagpal & Adams, 2015); (Gelderman, Semeijn & Bourna, 2017); (Ekiugbo & Papanagnou, 2017); (Giacomo et al, 2019); (Zaidi et al., 2019); (Filho et al, 2019); (Raj, Agrahari & Srivastava, 2020); (Wontner et al, 2020); (Olsson et al., 2020); (Manes-Rossi, Nicolò, & Argento, 2020); (Al Nuaimi, Khan & Ajmal, 2020); (Cramer, 2022); (Johnson & Klassen, 2022); (Klein, Ramos & Deutz, 2022)
Lack of management commitment	(Lalor & Hickey, 2014); (Young, Nagpal & Adams, 2015); (Aragão, 2017); (Gelderman, Semeijn & Bourna, 2017); (Zeemering, 2018); (Zaidi et al., 2019); (Filho et al, 2019); (Raj, Agrahari & Srivastava, 2020); (Williams, 2021); (Klein & Deutz, 2022)
Organizational culture (silo mentality)	(Lalor & Hickey, 2014); (Aragão, 2017); (Zaidi et al., 2019); (Al Nuaimi, Khan & Ajmal, 2020); (Cramer, 2022); (Klein & Deutz, 2022); (Klein, Ramos & Deutz, 2022); (Nsiah-Sarfo, Ofori & Agyapong, 2023)
Regulatory/Policy issues	(Meehan, 2015); (Smith et al, 2015); (Gelderman, Semeijn & Bourna, 2017); (Zeemering, 2018); (Giacomo et al, 2019); (Manes-Rossi, Nicolo & Argento, 2020); (Rosell, 2021); (Klein & Deutz, 2022); (Singh et al., 2024)

Table 3 - Main drivers identified

Drivers	Studies
Market Pressure (caused by demand)	(Lalor & Hickey, 2014); (Amann et al., 2014); (Meehan, 2015); (Chiarini, Opoku & Vagnoni, 2017); (Olsson et al., 2020); (Al Nuaimi, Khan & Ajmal, 2020); (Raj, Agrahari & Srivastava, 2020); (Wontner et al, 2020); (Cramer, 2022); (Klein & Deutz, 2022); (Johnson & Klassen, 2022); (Nsiah-Sarfo, Ofori & Agyapong, 2023); (Singh et al., 2024)
Creation of effective government policies and regulations	(Smith et al, 2015); (Meehan, 2015); (Young, Nagpal & Adams, 2015); (Haley, 2016); (Gelderman, Semeijn & Bourna, 2017); (Ma et al., 2020); (Uyar, Kuzey & Kilic, 2021b); (Ershadi et al., 2021); (Rosell, 2021); (Cramer, 2022); (Klein & Deutz, 2022); (Klein, Ramos & Deutz, 2022); (Nsiah-Sarfo, Ofori & Agyapong, 2023); (Singh et al., 2024)

Top management support/Environmental training	(Young, Nagpal & Adams, 2015); (Aragão, 2017); (Domingues et al., 2017); (Gelderman, Semeijn & Bourna, 2017); (Zaidi et al., 2019); (Al Nuaimi, Khan & Ajmal, 2020); (Rosell, 2021); (Ershadi et al., 2021); (Klein & Deutz, 2022); (Nsiah-Sarfo, Ofori & Agyapong, 2023); (Filho et al, 2019)
Stakeholder engagement/ Knowledge sharing/ Commitment to change	(Lalor & Hickey, 2014); (Domingues et al., 2017); (Ekiugbo & Papanagnou, 2017); (Zaidi et al., 2019); (Al Nuaimi, Khan & Ajmal, 2020); (Manes-Rossi, Nicolo & Argento, 2020); (AlNuaimi & Khan, 2019); (Rainville, 2021); (Uyar, Kuzey & Kilic, 2021a); (Uyar, Kuzey & Kilic, 2021b); (Droege & Raggi, 2021); (Klein, Ramos & Deutz, 2022); (Johnson & Klassen, 2022); (Sarturi, 2023); (Nsiah-Sarfo, Ofori & Agyapong, 2023); (Singh et al., 2024); (Chiba, Talbot, & Boiral, 2018); (Zeemering, 2018); (Wontner et al, 2020)
Financial support/Incentives	(Amann et al., 2014); (Young, Nagpal & Adams, 2015); (Zaidi et al., 2019); (Filho et al, 2019); (Rosell, 2021); (Cramer, 2022); (Klein & Deutz, 2022); (Singh et al., 2024)

The analysis of the results was divided into two sections: i) barriers and ii) drivers for the implementation of sustainable policies and practices in the PSO. It is worth noting that these two sections have been grouped according to the similarity into five areas for better interpretation and so as not to present an exhaustive list of the specificities of each one, avoiding repetition. The biggest challenges in the implementation of those practices and policies are related to lack of awareness and knowledge, resistance to change, organizational culture (silo mentality) and lack of management commitment. All these barriers mentioned above are related to the people/employees, thus internal concerns, making it easier to solve in theory. It is interesting to note that despite working for the same goals, the silo mentality is still an obstacle to the information sharing that could enhance important information (for example sharing information to better specify the prerequisites of a product/service to be hired).

Paradoxically, the most studied drivers in the academic field are related to external conditions, not only from the market pressure (caused by the public demand) but also from stakeholder engagement (as happens in the private-public partnerships) and the effective policies, leading to the institutional theory previously). Due to the specific nature of "green" products/services and the lack of supply chains that are completely geared towards the environmental component, it is still necessary to guarantee the appropriate support for the purchase of products with a lower environmental impact in order to encourage consumption and consequently greater production of these types of items so that they become more accessible both in quantity and in terms of selling price, having the central and local administration a leading role in achieving this goal.

Conclusions and Implications

There were two main aims of this study: i) developing a comprehensive analysis of the most frequent and successful green practices and policies applied in the public sector in general, and ii) comparing those practices in terms of their impact and also based on the barriers and drivers that impact their implementation. The study's findings reveal several environmental-sustainable policies and practices are proposed in PSO, but the majority geographically focused in the developed countries and administratively centered in the local public administration such as municipalities and regions. As a major provider of services and not so many products, the public administration operates in a particularly different context from private organizations that have a larger market segment in the provision of goods. As a result of this particularity, the main sustainability practices and policies are centered on the better allocation and management of resources, sustainable mobility and the acquisition of goods and services necessary for its operation in a more sustainable way, through procurement. Sustainable public procurement is not only the

topic most frequently addressed in the articles analyzed, but it is also the most unanimous in that it has a high impact on mitigating negative impacts on the environment. The inclusion of award criteria in tender specifications that allow bidders to do environmentally sustainable proposals is undoubtedly one of the most effective ways of ensuring that the modus operandi of public administration downstream is carried out in a more environmentally friendly way. The culture of lack of awareness/knowledge, resistance to change, lack of management commitment or financial constraints were identified as the biggest barriers on the implementation of environmental sustainable practices. These barriers should be attenuated internally by investing in training courses or activities that will help to mitigate these gaps, by creating effective policies and regulations or externally through the better engagement with external stakeholders or simply from the market pressure which will push public institutions on this "green track".

These findings are useful for academic world as it responds some of the future research opportunities identified previously, for the public sector institutions as it allows to delimit the scope of various initiatives related to the environmental sustainability component to those that are the most studied and applied in various contexts and the easiest to apply, as well as prioritize the drivers and correcting the barriers that are most common in this sector, and for society as a whole, due to the permanent interconnection that exists between the public sector and its stakeholders, be they the private sector or the general public.

Limitations and further research

Despite having several implications and opportunities of application in different contexts of the PSO, there are some limitations. A SLR relies on prior studies that are focused on answering specific questions to specific contexts and these findings are based on XX chosen studies. The most used methods were qualitative case studies with interviews or surveys which allowed the authors to reach their own conclusions. The benefit point is that the conclusions were done on base evidence of the studied facts, allowing us to gather and synthesize information on the present work. Despite that it is necessary to effectively test these policies and practices, namely the sustainable public procurement, in the specific case of other PSO contexts where are not investigated, namely defense or security; in what circumstances SPP (sustainable public procurement) can be applied; which criteria must be included in the specifications for the subsequent submission of tenders and how to evaluate and analyze the effectiveness of the implementation of these indicators.

We hope that this study will help create a novel perspective on environmental sustainability in PSO and reveal new opportunities to improve and reach this common goal of sustainable development.

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