

# ADAPTING GREEN PUBLIC PROCUREMENT FOR A CIRCULAR ECONOMY: CHALLENGES, PROCESSES, AND POLICIES IN PORTUGAL

**DANIELA SERRA CASTILHOS**

*Polytechnic University of Leiria*

*Leiria, Portugal*

*daniela.castilhos@ipleiria.pt*

## **Abstract**

*Green public procurement (GPP) is a strategic approach that enables government entities to acquire goods and services while prioritizing sustainability and minimizing environmental impact. By integrating environmental and social criteria into procurement processes, GPP fosters responsible consumption and production patterns, essential for advancing a circular economy.*

*This paper examines the evolution and implementation of GPP in Portugal, analyzing the extent to which environmental criteria are embedded in procurement strategies. It explores the key challenges and opportunities associated with the transition to a circular economy through public procurement, identifying gaps and potential improvements in policy and practice. A critical assessment of current legislation and policy frameworks is provided, evaluating their effectiveness in driving sustainability, resource efficiency, and waste reduction.*

*The study offers an overview of the current state of GPP in Portugal and its long-term implications for circular economy objectives. It concludes with policy recommendations to enhance the effectiveness of green procurement practices, ensuring they contribute to a more resource-efficient and consumer-friendly circular economy.*

**Keywords:** *Green Public Procurement; Public Administration; Portugal; Policy*

**JEL Classification:** K32

## **1. INTRODUCTION**

Green public procurement refers to practices and policies for the acquisition of goods and services by government entities with a focus on sustainability and reducing environmental impact. This approach aims to integrate environmental and social criteria into public procurement processes, promoting more sustainable and responsible practices. Considering the importance of the topic described, this paper examines the evolution and implementation of green public procurement in Portugal in the legal context, analyzing how government entities in Portugal are integrating environmental criteria into the processes of acquiring goods and services, highlighting the implications, challenges and associated opportunities.

The main elements associated with green public procurement include the integration of environmental criteria in the supplier selection and evaluation processes, considering the life cycle of products or services. Furthermore, it encourages preference for environmentally certified products and services, demonstrating the commitment to sustainable practices. Prioritizing energy efficiency when choosing products and services aims to reduce the consumption of natural resources. Green public procurement also stimulates sustainable innovation, favoring products and services with a lower environmental impact.

Additionally, social responsibility is incorporated, including responsible social practices in the selection of suppliers, with special attention to working conditions and respect for human rights. We intend to analyze the current legislation and policies that guide green public procurement in Portugal, evaluating their impact on promoting sustainability and mitigating environmental impact. This study aims to provide a comprehensive overview of the current state of green public procurement in Portugal and its implications for long-term sustainability. Finally, recommendations are presented to improve the effectiveness of green public procurement policies and practices in Portugal as a means of resolving complex political challenges.

## **2. METHODOLOGY**

To conduct this research, the methodology employed uses a mixed approach that combines documentary research, content analysis, and case studies.

Documentary Research includes a Literature Review covering the search for existing academic literature on green public procurement, sustainability in public procurement, and social responsibility practices. It also involves the analysis of Legislation and Policies, where laws, regulations, and policies guiding green public procurement in Portugal were collected and examined, including government documents, official reports, and guidelines from regulatory bodies.

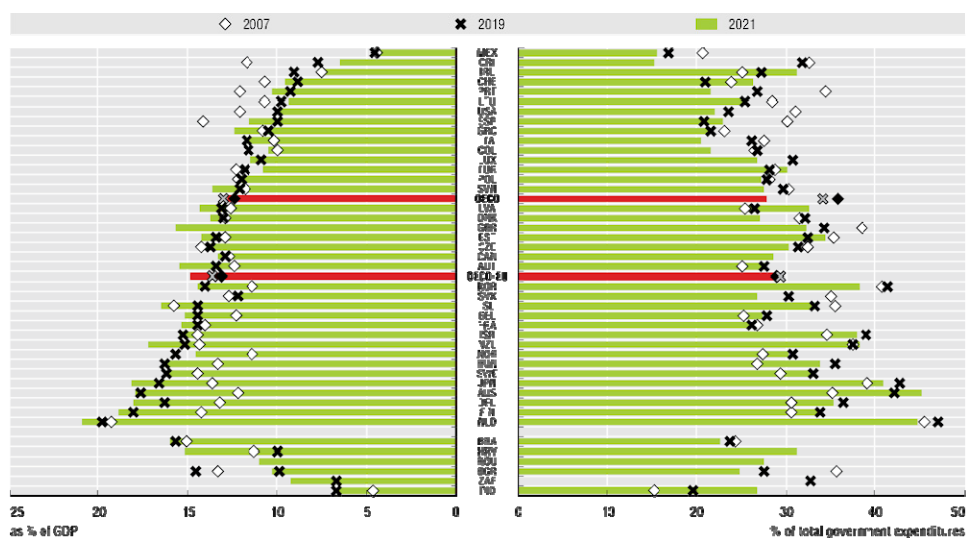
Content analysis was based on the evaluation of environmental and social criteria, analyzing how these criteria can be integrated into green public procurement processes in Portugal. This analysis includes the review of tender documents and procurement contracts published on the Portal Base.

Regarding case studies, this will be further explored in subsequent research. It aims to select representative cases by choosing various government entities that have implemented green public procurement practices for detailed study. In the future, interviews and questionnaires are planned to gain insights into practical implementation, challenges, and opportunities.

### 3. THE SIZE OF PUBLIC PROCUREMENT

The results are analyzed in 3 parts, namely: the size of public procurement, evolution of the legal framework for public procurement in Portugal, and the lowest price.

Over the past decade, public procurement spending as a percentage of GDP has risen notably across the OECD, going from 11.8% in 2007 to 12.9% in 2021. In recent years, there has been an additional increase in public procurement's GDP share. Specifically, in OECD-EU countries, it grew from 13.7% in 2019 to 14.8% in 2021, largely attributed to the Recovery and Resilience Facility (RRF), a key element of Europe's recovery strategy that has stimulated public investment (OCDE 2023).



Source: OECD National Accounts Statistics (database). StatLink <https://stat.link/gq15r6>

**Figure 1.** General government procurement spending as a percentage of GDP and total government expenditures, 2007, 2019 and 2021

States and public administrations are consumer organizations of varied goods and services and they are at a European level among the entities with more purchase power. European Union (EU) estimates that public authorities expend annually about 16% of the Gross Domestic Product (GDP) purchasing goods and services, a situation that besides the financial costs also involves environmental costs (Mira 2011). Reconsidering contracting authority as a means to direct that purchasing power for the acquisition of ecological products and services, which will contribute to reduce the environmental impact and to a sustainable economic development has been a major concern of the EU. Besides the general aim of

reducing the environmental impact resulting from the consumption of public services, contracting authority has also an important role in the European Union Strategy for Sustainable Development (Mira 2011).

Green public procurement is the public purchasing of products and services that are less environmentally damaging when taking into account their whole life cycle. Countries increasingly use GPP to achieve secondary policy objectives in the area of environmental protection. The OECD has been a forerunner in encouraging the development of Green public purchasing policies (OCDE 2019).

Public procurement is used across all spending functions, from health to environmental protection, public order and economic affairs. As in previous years, Portugal spends more on Health and Economics affairs while spends only 4,3% in Environmental protection.

**Table 1.** General government procurement spending by function as percentage of total procurement spending, 2021

| Country               | General public services | Justice     | Public order and safety | Economic affairs | Environmental protection | Housing and community amenity | Health      | Research, science and technology | Education   | Social protection |
|-----------------------|-------------------------|-------------|-------------------------|------------------|--------------------------|-------------------------------|-------------|----------------------------------|-------------|-------------------|
| Austria               | 11.5                    | 1.3         | 2.6                     | 20.7             | 1.2                      | 0.6                           | 40.7        | 3.4                              | 8.1         | 10.0              |
| <b>Belgium</b>        | <b>11.8</b>             | <b>2.1</b>  | <b>2.1</b>              | <b>12.6</b>      | <b>2.5</b>               | <b>1.1</b>                    | <b>47.8</b> | <b>2.6</b>                       | <b>6.5</b>  | <b>10.5</b>       |
| Costa Rica            | 4.6                     | 0.3         | 7.6                     | 12.2             | 3.5                      | 3.6                           | 39.5        | 1.2                              | 17.0        | 10.4              |
| <b>Czech Republic</b> | <b>9.9</b>              | <b>3.1</b>  | <b>4.1</b>              | <b>22.3</b>      | <b>5.1</b>               | <b>3.0</b>                    | <b>36.7</b> | <b>4.6</b>                       | <b>9.0</b>  | <b>4.1</b>        |
| Denmark               | 14.4                    | 5.1         | 2.7                     | 9.0              | 1.2                      | 0.6                           | 36.5        | 4.7                              | 10.9        | 14.6              |
| <b>Estonia</b>        | <b>8.6</b>              | <b>6.7</b>  | <b>4.2</b>              | <b>18.9</b>      | <b>3.4</b>               | <b>2.6</b>                    | <b>27.5</b> | <b>6.3</b>                       | <b>14.3</b> | <b>4.7</b>        |
| Finland               | 22.2                    | 3.3         | 2.0                     | 12.2             | 0.6                      | 1.4                           | 24.7        | 3.6                              | 11.3        | 18.2              |
| <b>France</b>         | <b>7.2</b>              | <b>5.3</b>  | <b>2.6</b>              | <b>12.5</b>      | <b>4.1</b>               | <b>3.4</b>                    | <b>41.9</b> | <b>4.1</b>                       | <b>5.9</b>  | <b>12.5</b>       |
| Germany               | 11.2                    | 3.9         | 3.1                     | 9.1              | 1.5                      | 1.0                           | 42.9        | 3.2                              | 6.5         | 17.1              |
| Greece                | 19.1                    | 6.7         | 1.6                     | 16.1             | 4.4                      | 1.7                           | 36.4        | 3.8                              | 7.1         | 4.6               |
| Hungary               | 15.0                    | 4.2         | 2.8                     | 29.7             | 3.5                      | 2.3                           | 20.5        | 8.2                              | 10.5        | 3.4               |
| <b>Iceland</b>        | <b>19.0</b>             | <b>6.3</b>  | <b>4.0</b>              | <b>16.8</b>      | <b>2.6</b>               | <b>2.2</b>                    | <b>27.3</b> | <b>9.0</b>                       | <b>18.0</b> | <b>7.8</b>        |
| Ireland               | 4.6                     | 0.3         | 4.0                     | 13.4             | 2.3                      | 5.1                           | 39.1        | 3.5                              | 8.5         | 18.6              |
| <b>Israel</b>         | <b>5.6</b>              | <b>18.4</b> | <b>2.9</b>              | <b>11.1</b>      | <b>2.6</b>               | <b>2.0</b>                    | <b>28.3</b> | <b>4.2</b>                       | <b>13.7</b> | <b>11.6</b>       |
| Italy                 | 12.4                    | 4.2         | 3.5                     | 13.4             | 6.8                      | 2.6                           | 43.7        | 3.9                              | 4.3         | 5.2               |
| <b>Japan</b>          | <b>6.5</b>              | <b>3.9</b>  | <b>1.6</b>              | <b>13.2</b>      | <b>5.2</b>               | <b>1.8</b>                    | <b>49.1</b> | <b>1.4</b>                       | <b>8.5</b>  | <b>13.2</b>       |
| Korea                 | 3.6                     | 11.1        | 2.9                     | 15.3             | 4.0                      | 6.3                           | 39.2        | 2.8                              | 12.9        | 6.6               |
| <b>Latvia</b>         | <b>6.4</b>              | <b>12.2</b> | <b>4.9</b>              | <b>26.7</b>      | <b>2.4</b>               | <b>5.2</b>                    | <b>26.1</b> | <b>4.5</b>                       | <b>13.3</b> | <b>4.2</b>        |
| Lithuania             | 7.0                     | 8.4         | 3.5                     | 18.3             | 3.5                      | 4.3                           | 32.1        | 5.6                              | 11.5        | 5.9               |
| <b>Luxembourg</b>     | <b>13.2</b>             | <b>1.4</b>  | <b>2.9</b>              | <b>21.4</b>      | <b>4.6</b>               | <b>2.2</b>                    | <b>23.5</b> | <b>5.0</b>                       | <b>7.8</b>  | <b>17.9</b>       |
| Netherlands           | 5.5                     | 3.9         | 3.5                     | 11.3             | 4.6                      | 1.4                           | 35.3        | 3.2                              | 8.3         | 23.7              |
| <b>Norway</b>         | <b>16.9</b>             | <b>7.4</b>  | <b>2.6</b>              | <b>21.9</b>      | <b>3.8</b>               | <b>3.7</b>                    | <b>27.4</b> | <b>4.8</b>                       | <b>9.4</b>  | <b>8.5</b>        |
| Poland                | 5.3                     | 5.7         | 4.6                     | 26.7             | 2.7                      | 3.6                           | 32.1        | 5.6                              | 10.0        | 3.7               |
| <b>Portugal</b>       | <b>1.9</b>              | <b>2.4</b>  | <b>3.1</b>              | <b>26.2</b>      | <b>4.3</b>               | <b>4.0</b>                    | <b>37.3</b> | <b>4.8</b>                       | <b>6.3</b>  | <b>4.6</b>        |
| Slovak Republic       | 9.4                     | 4.6         | 3.9                     | 23.2             | 4.0                      | 2.7                           | 39.5        | 3.4                              | 7.1         | 2.1               |
| <b>Slovenia</b>       | <b>16.8</b>             | <b>3.9</b>  | <b>3.3</b>              | <b>20.3</b>      | <b>3.1</b>               | <b>8.6</b>                    | <b>32.7</b> | <b>6.8</b>                       | <b>10.4</b> | <b>4.7</b>        |
| Spain                 | 9.7                     | 3.5         | 2.8                     | 16.1             | 6.4                      | 2.8                           | 33.7        | 5.1                              | 10.9        | 9.0               |
| <b>Sweden</b>         | <b>12.7</b>             | <b>6.2</b>  | <b>3.9</b>              | <b>13.5</b>      | <b>2.2</b>               | <b>2.7</b>                    | <b>23.7</b> | <b>3.8</b>                       | <b>15.3</b> | <b>13.2</b>       |
| Switzerland           | 21.4                    | 5.5         | 5.5                     | 14.0             | 3.9                      | 1.5                           | 6.7         | 2.0                              | 16.2        | 19.7              |
| <b>United Kingdom</b> | <b>3.1</b>              | <b>9.7</b>  | <b>6.2</b>              | <b>11.6</b>      | <b>3.6</b>               | <b>2.6</b>                    | <b>37.9</b> | <b>2.2</b>                       | <b>9.2</b>  | <b>13.6</b>       |
| United States         | 10.7                    | 20.2        | 6.4                     | 21.9             | 0.0                      | 2.4                           | 16.3        | 1.6                              | 16.4        | 4.1               |
| <b>OECD</b>           | <b>8.9</b>              | <b>9.9</b>  | <b>4.7</b>              | <b>18.4</b>      | <b>2.7</b>               | <b>2.4</b>                    | <b>31.3</b> | <b>2.7</b>                       | <b>10.7</b> | <b>9.2</b>        |
| <b>OECD-EU</b>        | <b>10.2</b>             | <b>4.2</b>  | <b>3.1</b>              | <b>13.7</b>      | <b>3.6</b>               | <b>2.2</b>                    | <b>39.0</b> | <b>3.9</b>                       | <b>7.6</b>  | <b>12.5</b>       |
| <b>Portugal e</b>     | <b>7.3</b>              | <b>7.2</b>  | <b>4.0</b>              | <b>13.8</b>      | <b>6.7</b>               | <b>4.4</b>                    | <b>37.4</b> | <b>2.8</b>                       | <b>10.8</b> | <b>2.6</b>        |
| Croatia               | 8.9                     | 2.5         | 5.2                     | 23.5             | 3.7                      | 4.5                           | 33.5        | 4.7                              | 9.8         | 3.7               |
| <b>Romania</b>        | <b>9.1</b>              | <b>5.1</b>  | <b>2.8</b>              | <b>29.5</b>      | <b>4.5</b>               | <b>8.3</b>                    | <b>27.5</b> | <b>4.0</b>                       | <b>8.1</b>  | <b>3.4</b>        |

Source: OECD National Accounts Statistics (database); Eurostat Government Finance Statistics (database). StatLink <https://stat.link/lptwg7>

#### 4. THE EVOLUTION OF THE LEGAL FRAMEWORK FOR PUBLIC PROCUREMENT IN PORTUGAL

The Portuguese initiatives are based on European Directives. It started in 2007, as a guide, until becoming mandatory criteria.

The National Strategy for Ecological Public Procurement, approved by Resolution of the Council of Ministers no. 65/2007, of May 7, for the period 2008-2010, constituted a relevant guiding instrument, with a significant impact on the national purchasing system (SNCP), in the integration of environmental criteria in framework agreements for transversal categories of goods and services and,

consequently, in the contracting processes triggered by public entities (PRESIDÊNCIA DO CONSELHO DE MINISTROS 2023).

In 2016, the National Strategy for Ecological Public Procurement 2020 (ENCPE 2020) was defined, approved by Resolution of the Council of Ministers no. 38/2016, of July 29, which now has a more comprehensive and effective impact, covering a greater number of acquisition procedures and enhancing their application to entities under direct and indirect administration of the State, the State's business sector and, also, on a voluntary basis, the autonomous administration and other legal entities governed by public law.

One of the main tasks of ENCPE 2020 was the adaptation to the national context of the manuals referring to the priority products and services covered by this strategy, through the constitution of thematic and interdisciplinary working groups created for this purpose, which constituted the bases for the introduction of criteria ecological in public acquisitions of products, services and public works contracts, operationalizing ecological public contracting (CPE) within the scope of the activity carried out by public administration.

More recently, in the amendment to the public procurement law promoted by Law no. 30/2021, of May 21, a greater and more adequate integration of environmental considerations into public procurement procedures was introduced.

Specifically, the changes envisaged in the most relevant Portuguese public procurement law ensured the provision of conditions for the execution of contracts and factors for evaluating proposals in line with the fundamental concerns of the CPE and which go further than previously established, namely in subject of:

- a) Environmental sustainability, in particular with regard to transport time and availability of the product or service, especially in the case of perishable products;
- b) Energy efficiency, in particular, energy supply;
- c) Promotion of the circular economy and short distribution circuits, ensuring efficiency in the use of materials and the reduction of environmental impacts;
- d) Use of products from organic production.

## **5. THE LOWEST PRICE**

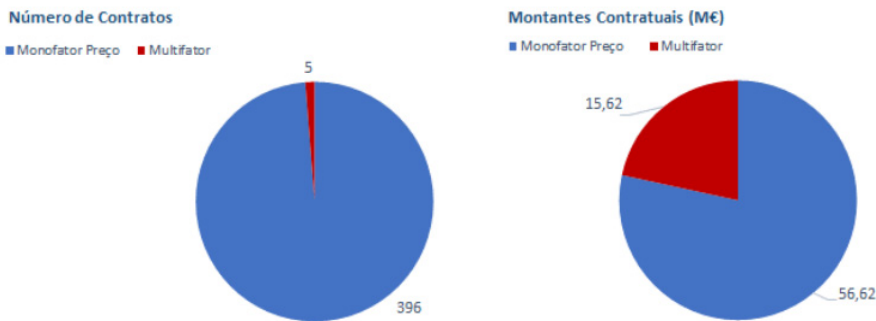
Various stages of the public procurement and the implementation procedure can become more ecological (Gomes & Caldeira, 2017):

- (i) Decision to hire
- (ii) Method of contracting
- (iii) Object of the contract
- (iv) Type of pre-contractual procedure to be adopted
- (v) Characteristics of economic operators
- (vi) Technical specifications
- (vii) Analysis (and exclusion) of proposals

- (viii) Variant proposals
- (ix) Evaluation of proposals
- (x) Execution of the contract

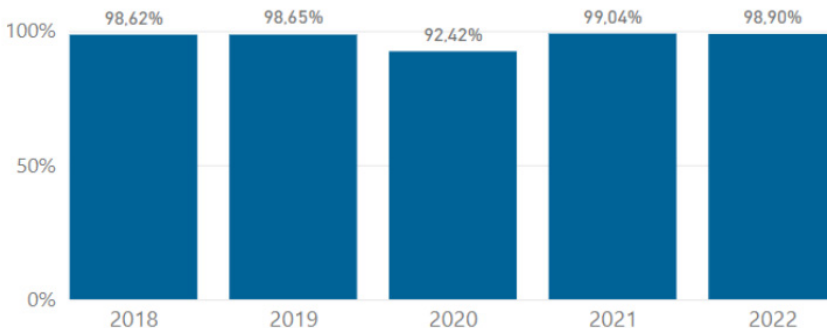
In this article we will only emphasize the aspect of evaluating proposals. The principle “best value for money” is fundamental. This increases the competition, but the most sustainable solutions are not the cheapest. The modalities of awarding criteria are two: single-factor and multifactor. The single-factor is the lowest price.

According to the report on public procurement in Portugal in 2022 (Instituto dos Mercados Públicos 2023). In a sample of tender procedures (based on the advertisement) and whose contracts were celebrated in 2022, it was found that 98.8% only had price as an evaluation factor in their awarding method. These contracts corresponded to 78.4% of contractual amounts.



Source: Portal Base (October 2023)

**Figure 2.** Type of award in open procedures (public and limited competitions)



Source: Portal Base (October 2023)

**Figure 3.** Percentage of the number of contracts in which the single factor price or cost had preponderance majority

In 2023, the trend observed in previous years continued, which points to timid representation in the use of the multifactor modality.

Even in a multifactor modality, the price factor is relevant. Comparing the procedures in which the proposal assessment factor was only price, with other procedures in which the price factor, was not the only assessment factor, the price represented more than half of the weighting. We conclude that in 98.9% of the tender procedures, price was the determining and majority weighting factor (Instituto dos Mercados Públicos 2023).

## 6. CONCLUSIONS

Public procurement has evolved into a strategic tool for governments seeking to achieve economic efficiency while promoting social and environmental well-being. It has become a critical instrument of administrative action to meet collective needs, significantly impacting national budgets.

Initially, public procurement was viewed with skepticism due to concerns about potential disruptions to the principles of competition and transparency enshrined in procurement law. However, the European Union's increasing commitment to combating global warming, with public authorities expected to lead by example, has made public procurement particularly receptive to the integration of eco-criteria throughout its various stages and implementation procedures.

The main obstacles that lead states not to exploit the full potential of these contracts were (Rodrigues 2014):

- Limited environmental criteria established for products/services – and when these exist, they are often insufficient for their dissemination;
- Insufficient information on calculating the cost of the entire product cycle and the relative costs of environmentally friendly products/services;
- Insufficient awareness of the benefits of environmentally friendly products and services;
- Uncertainty about the legal possibilities of including environmental criteria in specifications;
- Lack of political support and consequently limited resources for the implementation and promotion of green public procurement (especially better training);
- Lack of a coordinated exchange of best practices and information between regions and local authorities.

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