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# Green Public Procurement: A Neglected Tool in the European Green Deal Toolbox?

Public procurement amounts to around 14% of European Union GDP and, given this size, could well represent an important tool to foster the green transition. However, green public procurement continues to be underutilised in Europe, as several barriers to its application persist. A new EU regulatory action in this field could unlock the potential of green public procurement and add an important element to the European Green Deal toolbox.

The purchase of goods, services and works by governments and public bodies makes up a major part of the European economy, accounting for over 14% of European Union GDP (European Commission, 2022a). The figure varies from as little as 4% in Portugal to around 18% in Finland (see Figure 1). These differences reflect variations in public procurement structures and public service portfolios – for instance, whether healthcare is provided by private or public bodies (European Commission, 2022b).

Given this situation, an important question is whether public procurement could and should be used more by governments to help achieve one of the top EU policy goals: decarbonisation.

In principle, public procurement can contribute to the greening of the economy through two channels: by changing consumption patterns and by changing production patterns.

Public procurement can reduce greenhouse gas emissions directly if the public sector substitutes its purchases of polluting goods and services with more environmentally friendly alternatives, i.e. changing public *consumption* behaviour.

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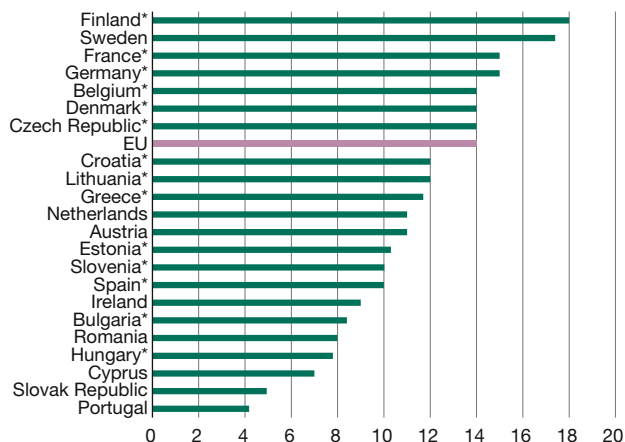
Meanwhile, by actively promoting and using green public procurement (GPP),<sup>1</sup> public authorities can push industry to develop green technologies and products (Joint Research Centre, 2019). This can lead to a spillover effect that increases demand for greener goods and services across the whole market, as a result of the creation of lead markets, innovation and example setting. For instance, the purchasing decisions of public authorities can strongly encourage (green) innovation by giving start-ups access to economies of scale (Mazzucato, 2013). This is especially true for sectors in which public purchasers make up a large share of the market, including public transport, construction, health services and education. Thus, public procurement can change *production* patterns.

## How green is public procurement in Europe?

Only a limited amount of data is available on the extent of green public procurement in EU countries. The Tenders Electronic Daily (TED) database registers all tenders above EU thresholds, including whether environmental considerations have been taken into account. However, because of many missing values and the absence of a standard format, the numbers remain estimates.<sup>2</sup> Figure 2 shows an estimate for the average proportion of green public procurement relative to all public procurement from 2006 to 2017, based on the TED database.<sup>3</sup> It is apparent that there are major differences be-

- 1 Green public procurement is defined by the European Commission (2008) as “a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured”.
- 2 Other problems with estimating the size of green public procurement using this data source are: an estimated 25% of data is missing, misfiling and the fact that there is only mandatory reporting above EU thresholds.
- 3 Rosell (2021) categorised public procurement as green when the selection criteria include the keywords “environment” or “sustainable” and their variations in all the official languages of the EU countries. This omits other green concepts (e.g. life cycle assessment, emission standards, carbon footprint) and technical tender clauses. Additionally, sustainable procurement differs from green procurement as it goes beyond taking the environmental impact into account (European Commission, 2022c).

**Figure 1**  
Public procurement expenditure as percentage of GDP, 2019



Note: \*Data is from 2018 instead of 2019. Data for Italy, Latvia, Luxembourg, Malta and Poland is missing.

Source: Bruegel based on The World Bank (2022).

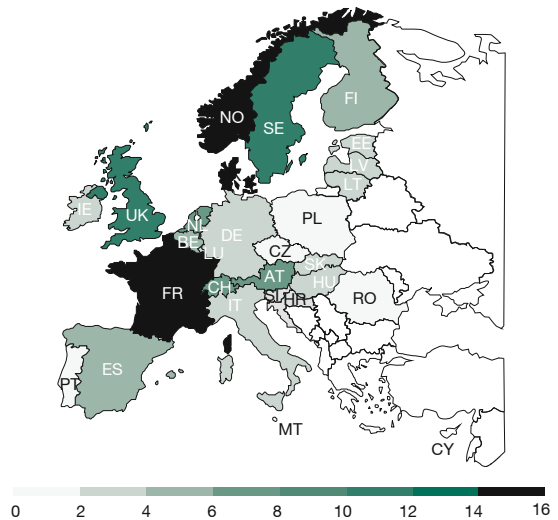
tween countries, with the proportion ranging from less than 0.5% in Malta to more than 15% in Denmark and France. Moreover, most countries only apply GPP to procure less than 5% of their contracts.

Another approach to estimating the size of GPP is to look at the award criteria used in public procurement tenders. Figure 3 shows the proportion of procedures awarded following the most economically advantageous tender (MEAT) principle, which allows contracting authorities to award the contract to bidders based on criteria, including green criteria,<sup>4</sup> beyond only price (OECD, 2011). Other procedures are awarded to the bidder that meets pre-specified technical requirements at the lowest price. Using the lowest-price criterion means, for example, the life cycle cost of purchased goods is not taken into account, limiting the opportunity for green procurement. In this case, a good that is low priced but has high energy consumption would be chosen over a good that might be more expensive up front but would be preferred on sustainability grounds because it consumes less energy. Thus, taking into account the life cycle cost would create a preference for more environmentally friendly goods.

Figure 3 shows clearly that there are big differences among countries in the use of the MEAT principle, and there is ample room for increasing the uptake of GPP. Croatia, France and the Netherlands make the most use of the MEAT prin-

4 Note that the use of the MEAT principle does not necessary imply that green criteria have been used. A non-exhaustive list of other criteria: quality, price, technical merit, aesthetic and functional characteristics, running cost, cost-effectiveness, after-sales service and technical assistance, delivery date and delivery period.

**Figure 2**  
Green public procurement as percentage of all public procurement by country, 2006-2017



Source: Rosell (2021).

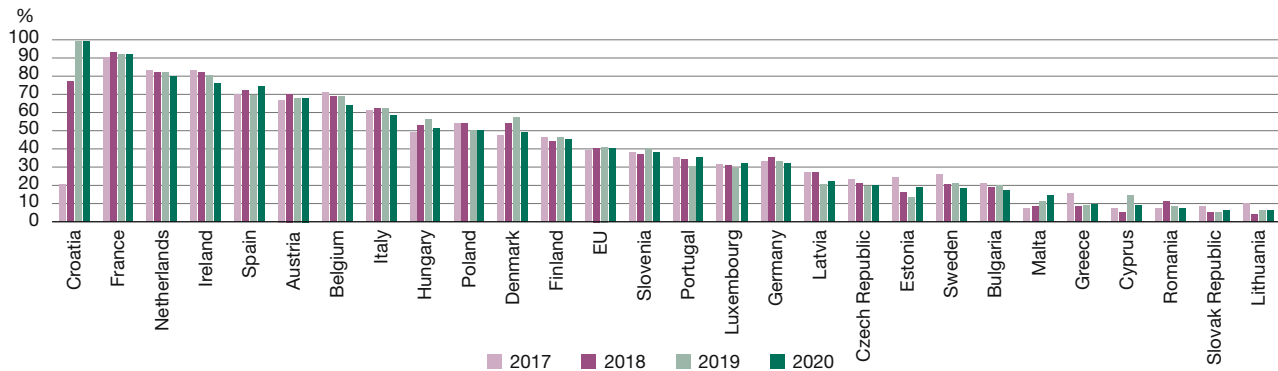
ciple, while Slovakia, Lithuania and Romania all use the lowest-price criterion in more than 90% of procedures. Additionally, there does not seem to be a general trend observable over time.

The European Commission (2022d) provides a list of GPP good practices, including the use of the MEAT criterion. For example, the Department of Public Works in the Dutch Ministry of Infrastructure and the Environment uses two methods to monetise the environmental impact of infrastructure projects in the award criteria (European Commission, 2013). First, bidders are required to make use of an environmental assessment tool, DuboCalc, which calculates the environmental impact of proposals by applying a life cycle assessment. The total impact is then converted to an environmental cost indicator which reduces the quote of the bidder (the lower the environmental impact, the bigger the quote reduction). In short, the negative externality is internalised. Second, bidders' efforts to reduce carbon emissions caused by the project are taken into account in the "CO<sub>2</sub> performance ladder". Depending on the chosen level of ambition, the quote is further reduced by 1% to 5%. Projects are awarded to bidders with the lowest adjusted quoted price. It is important to note that the materials proposed in the DuboCalc tool and the chosen level of ambition in the CO<sub>2</sub> performance ladder both become contract performance requirements.

The application of these award criteria has resulted in, for example, reduced concrete use, increased green electricity and more recycled and reused materials. Alongside this direct consumption effect, there is likely to be a strong production effect because of the Department of Public Works' consid-

Figure 3

## Proportion of procedures awarded using the most economically advantageous tender principle, 2017-2020



Note: EU average is unweighted.

Source: European Single Market Scoreboard (European Commission, 2022a) based on Tenders Electronic Daily data.

erable annual budget of €3.5 billion and the subsequent increased demand for green goods and services.

### The current EU regulatory framework for (green) public procurement

Public procurement in EU countries is only covered by EU procurement rules when the value of tenders exceeds a certain threshold, and when tenders are presumed to be of cross-border interest (European Commission, 2022e). The threshold value differs depending on the sector and type of procuring authority. For below-threshold tenders, national procurement legislation applies, within the general EU regulation framework. Regardless of whether EU or national procurement legislation applies, public procurement by public bodies must respect World Trade Organization rules contained in the Government Procurement Agreement.

The EU Public Procurement Directive (2014/24/EU) recognises the need “to enable procurers to make better use of public procurement in support of common societal goals” (European Parliament and the Council, 2014). The Directive permits the inclusion of environmental considerations at various stages of the public procurement procedure, such as in technical specifications, contract awards (MEAT) and the performance stage (Pouikli, 2021). But ultimately, it is up to EU countries and contracting authorities to decide if and when environmental considerations are actually included.

Only rarely does the EU set binding GPP requirements. Examples are the recently amended Clean Vehicles Directive, which includes a binding minimum target for clean vehicles as a percentage of total concerned vehicles procured for each EU country; the Energy Performance of Buildings Directive; and the Energy Efficiency Directive. Nonetheless, the EU plays a strong role in facilitating GPP by, for example, developing green criteria, training and sharing best practices.

Because of the lack of comprehensive mandatory targets at the EU level, the amount of GPP taking place in Europe largely depends on decisions by EU countries and their public bodies. A summary of national action plans in this field indicates stark differences. Some countries set no target at all or have no national GPP plan,<sup>5</sup> while others aim for a certain share of all public procurement contracts to include green criteria (European Commission, 2021). This share is 100% in the Netherlands. Such differences in national regulation, together with differences in the size and structure of the public sector and barriers to GPP (see next section), largely explain the cross-country differences observed in Figures 2 and 3 (Rosell, 2021).

### Barriers to green public procurement in Europe

The optional nature of GPP severely limits its uptake. For example, an impact assessment (European Commission, 2017) of the original Clean Vehicles Directive of 2009 concluded that because of the absence of clear minimum quantitative criteria for procurement of clean vehicles, among other reasons, a similar outcome might have been achieved by market participants even in the absence of the Directive (Blažo, 2020).

Green public procurement is influenced by how contracting authorities manage their budgets. Research indicates that if sustainability is part of an organisation’s overall strategy, the implementation of sustainable public procurement<sup>6</sup> increases (Andhov et al., 2020). Consequently, politics plays a role, as heads of public contracting agencies can be political appointments. In addition, because of the short-term bias of politics,

<sup>5</sup> Estonia, Hungary, Luxembourg and Romania.

<sup>6</sup> Sustainable public procurement is defined as “a process by which public authorities seek to achieve the appropriate balance between the three pillars of sustainable development – economic, social and environmental – when procuring goods, services or works at all stages of the project” (European Commission, 2022c). Thus, green public procurement is a subset of sustainable public procurement.

less expensive but less environmentally friendly products may be preferred over more expensive and greener alternatives that might be more cost-effective over the long term.

Public authorities face significant uncertainty when trying to implement GPP because of the legal complexity stemming from EU public procurement directives. A first source of uncertainty goes back to the fact that public procurement legislation in the EU was intended as an instrument to ensure the integrity of the internal market in public contracts. As a result, public authorities cannot discriminate between domestic and other EU products. Including green criteria throughout the procurement process can unintentionally lead to discrimination as a consequence of, for example, differences in environmental standards or the environmental impact of transport (Mélou, 2020). Although, there is a proportionality requirement, it can be difficult to estimate for public authorities. Secondly, the requirement to have a link to subject matter when setting award criteria beyond price, is included in almost all procurement stages in the EU directives. This requirement limits the contracting authorities' discretionary power to insert environmental considerations into the public procurement setting, as it makes it difficult to implement hard-to-verify award criteria, such as environmental criteria relating to the supplier or further along in the product life cycle (Pouikli, 2020). For this reason, Andhov et al. (2020) advocate the removal of the link to the subject matter concept and its replacement by the life-cycle concept.

Purchasers require knowledge and skills in order to green their procurement. In addition to mastering the legal framework, purchasers often need sufficient knowledge about the relevant goods or service market. They need to be able to calculate the total cost of ownership or the life-cycle cost, which requires specific tools. Thus, implementing GPP requires investment in training of the employees of contracting agencies.

Other barriers to GPP include perceived higher costs (Chiappinelli and Zipperer, 2017), limited established environmental criteria for goods or services, a lack of co-operation between authorities and a lack of practical tools. A study by Rosell (2021) provided a comprehensive overview of the determinants of GPP on macro and meso levels.

### Unlocking the potential of green public procurement in supporting the European Green Deal

The current public procurement directive has not been modified since 2014. Given the increased ambition of the EU in decarbonising the economy, it is time to update the directive to specifically address green public procurement and the associated (regulatory) barriers, since the Green Deal advocates for minimum mandatory green criteria or

targets for public procurement in sectorial initiatives. The list of sectors that should be prioritised or have a higher mandatory target should not only be decided on the basis of their contribution to greenhouse gas emissions, but also based on the relative weight of public procurement in each market, in order to create spillover effects to private industry. This requires improving the collection and harmonisation of data on GPP to better understand the current situation and develop a clear roadmap for the future. All these changes should be accompanied by sufficient investment in training of public authorities and monitoring of the uptake and performance of GPP.

### References

- Andhov, M., R. Caranta, T. Stoffel, J. Grandia, W. A. Janssen, R. Vornicu, J. J. Czarnecki, A. Gromnica, K. Tallbo, O. Martin-Ortega, L. Melon, Å. Edman, P. Göthberg, P. Nohrstedt and A. Wiesbrock (2020), Sustainability through public procurement: the way forward – Reform Proposals, University of Copenhagen.
- Blažo, O. (2020), Reform of the Clean Vehicles Directive – From Performance Criteria to Target Values, *Strani pravni život*, 63(4), 59-69.
- Chiappinelli, O. and V. Zipperer (2017), Using Public Procurement as a Decarbonisation Policy: A Look at Germany, *DIW Economic Bulletin*, 7(47), 523-532.
- European Commission (2008), Public procurement for a better environment, Communication from the Commission, COM(2008) 400 final.
- European Commission (2013), Using LCA and CO<sub>2</sub> performance to assess bidders, *GPP In practice*, 36.
- European Commission (2017), Impact Assessment accompanying the document Proposal for A Directive of the European Parliament and of the Council amending Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles, Commission Staff Working Document, SWD(2017) 366 final.
- European Commission (2021), GPP National Action Plans, [https://ec.europa.eu/environment/gpp/pdf/210406\\_GPP%20NAPs\\_April%202021.pdf](https://ec.europa.eu/environment/gpp/pdf/210406_GPP%20NAPs_April%202021.pdf) (14 February 2022).
- European Commission (2022a), Public Procurement and the Single Market, [https://single-market-scoreboard.ec.europa.eu/policy\\_areas/public-procurement\\_en](https://single-market-scoreboard.ec.europa.eu/policy_areas/public-procurement_en) (14 February 2022).
- European Commission (2022b), Public Procurement, [https://ec.europa.eu/growth/single-market/public-procurement\\_en](https://ec.europa.eu/growth/single-market/public-procurement_en) (14 February 2022).
- European Commission (2022c), Green and Sustainable Public Procurement, [https://ec.europa.eu/environment/gpp/versus\\_en.htm](https://ec.europa.eu/environment/gpp/versus_en.htm) (14 February 2022).
- European Commission (2022d), GPP Good Practice, [https://ec.europa.eu/environment/gpp/case\\_group\\_en.htm](https://ec.europa.eu/environment/gpp/case_group_en.htm) (14 February 2022).
- European Commission (2022e), Public procurement: Legal rules and implementation: Thresholds, [https://ec.europa.eu/growth/single-market/public-procurement/legal-rules-and-implementation/thresholds\\_en](https://ec.europa.eu/growth/single-market/public-procurement/legal-rules-and-implementation/thresholds_en) (14 February 2022).
- European Parliament and the Council (2014), Public procurement and repealing Directive 2004/18/EC, *Official Journal of the European Union*, 2014/24/EU.
- Joint Research Centre (2019), Revision of the EU Green Public Procurement Criteria for Transport, *JRC Science for Policy Report*.
- Mazzucato, M. (2013), *The Entrepreneurial State*, Anthem Press.
- Mélou, L. (2020), More Than a Nudge? Arguments and Tools for Mandating Green Public Procurement in the EU, *Sustainability*, 12(3), 988.
- OECD (2011), Setting the Award Criteria, *SIGMA Public Procurement Briefs*, 8.
- Pouikli, K. (2021), Towards mandatory Green Public Procurement (GPP) requirements under the EU Green Deal: reconsidering the role of public procurement as an environmental policy tool, *ERA Forum*, 21, 699-721.
- Rosell, J. (2021), Getting the green light on green public procurement: Macro and meso determinants, *Journal of Cleaner Production*, 279, 123710.
- The World Bank (2022), Global Public Procurement Database.