



# Article Enablers and Barriers of Sustainability for Small Public Purchases

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Abstract: This study examines the sustainability of small public purchases, a largely overlooked area despite its substantial aggregate volume and legal flexibility compared to large purchases. We aim to understand if the sustainability potential in small public purchases is utilized and how it can be leveraged, providing insights into the dynamics of small purchases and offering practical guidance for policy and organizational change. Through case studies of five Dutch water authorities, incorporating interviews and document analyses, we examine internal and external factors that may inhibit or promote sustainability in small purchases. The findings indicate that sustainability currently plays a limited role in small purchases. Contrary to previous research, external factors do not drive sustainability in small purchases, as the focus remains on large purchases. All internal factors studied are perceived as barriers to achieving sustainable small purchases. We discuss that the external factor of "legal requirements" holds the most untapped potential to become a driver for sustainable small purchases. Additionally, we highlight "accountability" as an important internal factor, suggesting that improved accountability could lead to greater resources, higher risk tolerance, and increased organizational attention. Finally, we suggest that promoting sustainability in small purchases requires addressing underlying challenges, including its limited visibility.

Keywords: sustainable public procurement; small purchases; barriers; enablers

## 1. Introduction

The public sector increasingly recognizes the need to become more sustainable [1]. In this context, public procurement emerges as an important instrument for embedding sustainability [2]. The financial impact of public procurement is substantial, accounting for 14% of the EU's average GDP [3], and research provides indications that this percentage aligns with the EU's mineral usage and CO<sub>2</sub> emissions [4,5]. This means that there is a substantial potential impact of sustainable public procurement (SPP), which aims to minimize the societal and environmental burden throughout the entire lifecycle of purchases [6]. EU citizens also prefer that governments engage in sustainable procurement rather than traditional procurement [7]. Furthermore, an increased awareness of social value, local climate shifts, climate agreements, and findings from the Intergovernmental Panel on Climate Change (IPCC) emphasize the significance of SPP.

In the EU, sustainability in procurement has mainly been integrated into large purchases that exceed the EU thresholds for public procurement [1]. However, most government spending in the EU, at least 60% [8] and possibly up to 80% [9], concerns smaller purchases below the thresholds. This accounts for at least EUR 1200 billion annually, potentially up to EUR 2000 billion, depending on the total size of the public procurement market, which is not precisely known. Despite research addressing internal and external barriers and enablers for SPP in general [1,10,11], there is still limited understanding of how sustainability practices are applied to smaller purchases.



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**Copyright:** © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). The purpose of this study is to address this gap, which holds significance not only because of the sustainable impact of SPP but also due to the specific dynamics that might come into play for smaller purchases. On the one hand, these purchases carry lower risks, face fewer legal restrictions (such as the absence of prescribed procurement procedures in the EU directives for public procurement below the EU thresholds), and offer more flexibility for direct awards and limiting participation to a subset of (less sustainable) suppliers. The previous literature has highlighted this legal flexibility as an important enabler for SPP [12,13]. On the other hand, however, purchasers involved in smaller purchases may have less experience, fewer resources, and less training. They may also face reduced oversight, and non-procurement staff often lead the purchases. These dynamics may differ from larger purchases, which have been studied more extensively in the literature.

The current study, therefore, explores the internal and external enablers and barriers to integrating sustainability into smaller purchases. Using a qualitative approach based on Thai's [14] public procurement system model, it employs an embedded case study to investigate the following research question: What internal and external barriers and enablers influence the integration of sustainability in public procurement for smaller purchases? Through interviews and document analyses for each case, the study identifies the level of SPP for smaller purchases, and it identifies various barriers and enablers that affect sustainability in smaller purchases.

We conducted case studies across five regional water authorities in the water-rich Netherlands, a country largely below sea level. The water authorities are public organizations, structured similarly to Dutch municipalities. They manage a wide range of procurement activities, from infrastructure projects to service contracts. Public procurement plays an important role for water authorities, as it enables them to secure the goods, services, and works needed to fulfill their responsibilities, such as maintaining water quality, managing water levels, and ensuring flood protection. Through procurement, water authorities can influence market behavior by integrating sustainability into their purchases. While larger purchases are prominent, a large number of smaller purchases also have the potential to drive sustainability.

This article targets scholars, policymakers, professionals, and environmental advocates involved in public procurement or sustainability, especially within the EU. It provides new insights for scholars by highlighting the barriers and enablers for implementing sustainability in smaller public purchases while also emphasizing the importance of these purchases for sustainability efforts. Policymakers may find it useful for gaining a clearer understanding of how sustainability is integrated into public procurement practices, particularly in smaller purchases, and the associated challenges. The article may also serve as an eyeopener, as we argue that the sustainability potential of smaller purchases is underutilized. Public procurement practitioners can relate to the practical challenges discussed, such as internal evaluations that could focus more on the number of completed projects rather than their sustainability impact. Additionally, environmental advocates may be interested in the article's focus on the environmental impact of public procurement decisions and the often-overlooked significance of smaller purchases.

The remainder of this article is structured as follows. Section 2 reviews the relevant literature on SPP. Section 3 presents the research methodology, including the case study design and data collection methods. In Section 4, we discuss the findings from the case studies, identifying the key internal and external enablers and barriers to integrating sustainability into smaller purchases. Finally, Sections 5 and 6 discuss the findings, provide implications for practice, offer suggestions for future research, and present our conclusions.

## 2. Literature Review

In this section, we discuss the most important literature related to our research question. Section 2.1 introduces the theoretical foundation. Section 2.2 further explains what we mean by small purchases below the EU thresholds. Sections 2.3 and 2.4 delve into the relevant literature on external and internal barriers and enablers for SPP.

#### 2.1. Theoretical Foundation Based on a Systems View

The theoretical foundation of this research is based on the systems view of Thai [14] for public procurement. The system consists of the following elements: policy-making and management, procurement law and regulations, authorization and appropriations, procurement functions in operations, and feedback loops. The public procurement system's ability to change and accomplish goals is determined by internal and external factors in the environment. Thai [14] categorized these factors into internal forces and external forces (see Figure 1 for an overview), which we will discuss in more detail in the next subsections.

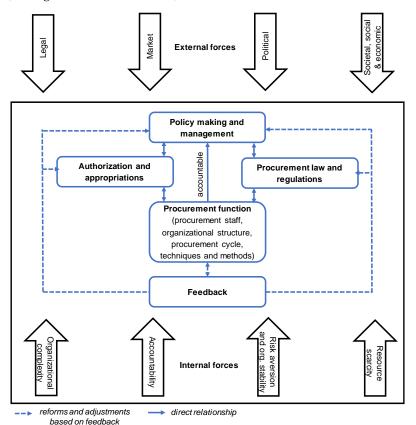


Figure 1. Systems view of public procurement (adapted from [14]).

In the following section, we will discuss the (un)sustainability of small public purchases below the EU thresholds. Next, we will introduce the internal and external factors that influence the uptake of sustainability for these small purchases in the public procurement system.

## 2.2. Small Public Purchases Below the EU Thresholds

Below-threshold purchases for supplies and services encompass all such purchases that fall below the 2024–2025 threshold amounts specified for European tenders. For goods and services, the EU thresholds vary between EUR 143,000 for central contracting authorities, EUR 221,000 for decentral contracting authorities, and EUR 443,000 for defense and utility sector contracting authorities. For construction and infrastructure and for concessions, the threshold is the same for all contracting authorities: EUR 5,538,000 [15]. For social and other specific services, the threshold is EUR 750,000 for local contracting authorities and EUR 1,000,000 for the special sector [15]. Purchases below these thresholds are not subject to the full range of EU public procurement rules and regulations. However, member states or contracting authorities have additional national laws or policies that usually require a light form of competition above certain below-threshold values (e.g., EUR 20,000, EUR 30,000, or EUR 50,000) [16]. Otherwise, basically, only the fundamental principles of procurement apply, including the principles of non-discrimination, proportionality, transparency, and objectivity [17].

While small purchases below these thresholds significantly impact an organization's economic and sustainability goals [18], they remain less visible and hence tend to escape compliance with mandatory sustainability requirements, relying on the voluntary adoption of sustainable procurement practices. In the realm of public procurement, there appears to be limited emphasis on incorporating sustainability in smaller purchases [1].

## 2.3. External Factors Influencing the Uptake of SPP in the Literature

The adoption of SPP is influenced by various internal and external factors. Several scholars assert that external factors, more so than internal ones, are significant drivers for the sustainability of public purchases. This is especially true for organizations in the early development phases of SPP [19]. External factors can be analyzed using the framework developed by Thai [14]. In this framework, four types of external factors are distinguished: "Legal forces", "Political forces", "Market forces", and "Social and economic forces". Contemporary developments regarding the influence of individuals and groups are not easily incorporated into these factors. For this purpose, we identify "Society" as an additional force for sustainable development. We have included this factor under "Social and economic forces". The four forces can be enablers but also barriers to SPP. More specifically, the factors affect the uptake of SPP as discussed below:

- Legal-related factors: Legal and regulatory aspects related to sustainability, such as environmental regulations and social standards, can influence SPP adoption [20,21]. Legal forces can be a strong driver for SPP, especially when organizations take a proactive and innovative approach to regulatory compliance (based on [20]). However, they can also impede the uptake of SPP, for instance, in cases where legislation slows down frontrunning contracting authorities [20–22].
- Political-related factors: Political considerations can also affect the uptake of SPP [23].
  For instance, top-level support, government policies, strategic SPP-related goals, and political involvement can shape procurement decisions to align with broader political goals and sustainable objectives [24–29]. Other political forces, such as the voluntary adoption by politicians of green deals, certifications, and political statements about SPP, are also likely to have an effect [21].
- Market-related factors: Market factors involve aspects such as supply and demand conditions and market competition. Market factors increasingly influence the availability of sustainable goods and services [19]. For instance, the complexity and possibilities of the supply chain, including its geographical scope and the number of suppliers, can impact the feasibility of integrating sustainable practices [20]. It is also possible that suppliers are not interested in small, sustainable purchases and that a larger scale is required [30]. Furthermore, suppliers can affect the uptake of SPP by lobbying behavior either in favor or against SPP [31], which can be performed on European or national political levels but also more specifically during market consultations for purchases and during the purchases themselves.
- Societal-, social-, and economic-related factors: Societal, social, and economic factors include social and environmental responsibility, public perception, and economic development goals. An example of a societal factor is an NGO pressuring governments to include social and environmental aspects in public procurement (e.g., [7,19]).

#### 2.4. Internal Factors Influencing the Uptake of SPP in the Literature

Important internal factors that either hinder or promote SPP can be found in several studies [2,20,32]. For the assessment of internal factors, we categorize earlier research into organizational complexity, risk tolerance and organizational stability, resource scarcity, and accountability-related factors. The latter two were also identified by [14], and the other themes were chosen as they seem to be especially relevant in the context of public organizations (based on [33,34]) and link to internal factors related to the adoption of SPP as we explain below:

- Organizational complexity-related factors: The degree of organizational complexity affects the practical application of SPP. As public organizations are characterized by diverse stakeholders, divergent budgets, bureaucracy, and conflicting goals [20,23,34,35]), integrating SPP can be challenging. Furthermore, SPP may necessitate new financing models, requiring complex modifications to existing budget schemes. The increased complexity of sustainable purchases and the presence of more potentially conflicting goals compared to traditional procurement also demand more from decision-making processes.
- Risk tolerance and organizational stability-related factors: Public organizations often exhibit risk-averse tendencies [12], resisting change [19], rooted in a need for stability and predictability. These tendencies can be at odds with the essence of SPP, which often involves innovation and change [36]. Beyond its innovative nature, SPP adoption may require behaviors perceived as risky. Hence, it is important for public organizations aiming to enhance sustainability in their procurement to find a middle ground between maintaining stability and taking calculated risks.
- Resource availability-related factors: The availability of resources plays a pivotal role in realizing successful public procurement in general [14] and SPP in particular [18]. A lack of sufficient budget and pressures on cost reduction could put pressure on procurement officers to choose the lowest-cost option [27]. It is also important to acknowledge that small purchases often proceed without the procurement department's involvement (based on [37]), relegating SPP to a secondary position. Non-purchasers might not be aware of the impact of SPP [38] and might not have the required knowledge, competencies, and resources needed for SPP [23,28,39,40].
- Accountability-related factors: Accountability, spanning legal, financial, transparency, and performance dimensions [14,34,35,41,42], are preconditions of organizational governance in the public sector. However, the inclusion of sustainability in this list remains a relatively unexplored domain. While top management is an important driver for SPP [37,43,44], top management, and also accountants, primarily concentrate on legal compliance and financial metrics. Sustainability via SPP often occupies a marginal role, perhaps partly due to difficulties with measuring the effects of SPP (based on [36]) and making them transparent.

In summary, previous research has provided substantial knowledge about the factors that may influence the adoption of SPP. We also have some understanding of the factors that affect the adoption of SPP for large purchases. However, we know little about the relative importance of each factor and how they interact [19]. While external factors are likely more significant in the early development phases of SPP [19], we do not know which factors promote or hinder the use of SPP for small purchases. It is important, though, to gain more insight into this due to the large procurement volume involved and the significant contextual differences between small and large purchases, such as greater legal flexibility. Utilizing Thai's system framework [14], exploration and description of factors categorized under the four internal and four external themes identified above will enhance our understanding of the possibilities and limitations for the uptake of SPP in small purchases.

## 3. Material and Methods

In this section, we describe the case study context (Section 3.1), the data collection (Section 3.2), and how we analyzed the data (Section 3.3).

## 3.1. Case Study Context

To investigate the research question, a case study approach was employed using multiple sub-cases. These sub-cases are conducive to exploring the research question, allowing for enhanced replication and cross-case analysis. Drawing on Yin's framework [45], the research seeks to conduct an in-depth examination of a contemporary phenomenon within its natural context. The case studies were conducted within the Dutch water management sector. The 21 Regional Water Authorities (RWAs) collectively account for an annual procurement expenditure of approximately EUR 2 billion. The sub-cases pertain to how the decentralized RWAs address sustainability aspects in their small purchases.

In the Netherlands, water authorities are organized quite similarly compared to municipalities. For instance, they have a dike warden, analogous to a mayor, an executive board, and their own taxation system. A distinction is that a water authority is tasked solely with certain (statutory) water-related responsibilities (clean, sufficient, and safe water). Water authorities are public organizations and are subject to public procurement law.

At the central level (Union of Water Authorities), a strategy of SPP is being promoted. The Union of Water Authorities has formulated an SPP strategy aimed at achieving 100% circularity by 2050 and a 55% reduction in greenhouse gas emissions by 2030 compared to 1990. The water authorities' aspirations are also to become energy-neutral by 2025 and completely climate-neutral by 2030. Given these commitments, the RWAs provide an intriguing domain for SPP-related research. It is pertinent to question to what extent SPP plays a role in small purchases despite the evident ambitions.

The approach to water management in the Netherlands differs from that of most other countries. The Netherlands' system is quite uniquely organized, with its emphasis on localized governance and direct taxation for water management, and is considered one of the best globally (e.g., [46]). The organization in the Netherlands contrasts with the more centralized approaches found in many other countries [46]. However, this unique structure is largely separate from the procurement processes relevant to our research. In both the Netherlands and many other countries, we expect the vast majority of purchases to be relatively small compared to larger purchases, which often receive more attention.

#### 3.2. Data Collection

The five examined RWAs share sector-wide similarities. All of these RWAs have annual budgets exceeding EUR 100 million, with a staff of more than 500 employees. Given the task-oriented nature and organizational structure of the focus organizations, they share similar procurement needs.

Respondents were selected based on their direct or indirect involvement in applying, implementing, or assessing smaller purchases within their own RWA. Semi-structured interviews were conducted with representatives from the five selected RWAs (see Table 1). Variations among these individuals encompassed factors such as seniority, tenure, and intrinsic engagement with sustainability.

Table 1. Overview respondents.

Respondents	RWA1	RWA2	RWA3	RWA4	RWA5
Procurement specialists or advisors (senior, mid-level, or junior)	Х	XX	Х	Х	Х
Legal expert specialists or generalists	Х			Х	Х
Managers (cluster head, department head, or team leader)				Х	
Sustainability advisors	Х		Х	Х	Х
Contract managers		Х	Х		

Notes: X means one respondent. XX means two respondents.

The individuals were chosen due to their functional or direct connection to the subject matter, as well as their hierarchical influence on applying sustainability in (small) purchases. The interviews were recorded, transcribed, and validated by the respondents. The interview questions can be found in Appendix A. The interviews were conducted between 4 October 2022 and 24 February 2023.

For the document analysis, we have chosen as a selection criterion to review the most important documents and, where possible, specific sections of documents that could influence the sustainability of smaller purchases. To this end, we consulted various policy documents, reports, and the websites of the selected RWAs.

management and sustainability. Additionally, specific information related to sustainability was sought on the RWAs' websites, and the sustainability sections in the annual reports of the five RWAs were examined. On the websites of the case organizations, we had to make choices about what we could review and, therefore, specifically searched for terms like sustainability and procurement. We were interested to see if there were, for example, best practices, announcements of sustainable small purchases, or other texts relevant to sustainable procurement. We reviewed the annual reports, as we expected to find indications there regarding the procurement practices used in the respective year.

intend to implement together during their term of office, covering topics such as water

## 3.3. Data-Analysis

For our data analysis, we employed a deductive approach [45], following internal and external factors as found in the literature review. This involved comparing the research's expectations from the literature with our empirical observations. Parts of the data, particularly illustrative quotes, are incorporated into the results section.

Multiple cases with multiple respondents and documents were systematically compared to identify patterns. This process involved cross-case analysis, wherein data from various cases were juxtaposed, similarities and differences were identified, and recurring themes or patterns were recognized. We did this by initially assigning the data analysis to one researcher. Subsequently, the other scholars carried out the same process sequentially, building upon the earlier analyses and making corrections as necessary. Following this initial round, we repeated the procedure a second time using the same step-by-step approach. By synthesizing the experiences across the five cases, the research aimed to uncover overarching themes. The comparative approach allowed for the exploration of commonalities, discrepancies, and variations, ultimately facilitating the extraction of generalizable findings and contributing to a better understanding of SPP below the EU thresholds for public procurement.

## 4. Results

In this section, we sequentially describe the four external factors (Section 4.1) and the four internal factors (Section 4.2) that we have investigated. Both subsections begin with a brief introduction, followed by more detailed descriptions of the findings related to the factors.

## 4.1. External Factors Influencing the Uptake of SPP

In general, little to no pressure is perceived from external factors to implement sustainability in small purchases, according to the respondents. The pressure to apply SPP remains largely on EU tenders and construction purchases rather than on small purchases below the EU thresholds (RWA1, RWA5). While some individuals consider certain external factors to be either stimulating or inhibiting, the majority of the respondents currently view external factors as neutral with regard to encouraging SPP for small purchases. The remainder of this section delves deeper into each of the four factors.

#### 4.1.1. Legal-Related Factors

The current Dutch legislation, without an obligation for RWAs to apply SPP for small purchases, is mostly not regarded as a stimulating or inhibiting factor for SPP below the EU thresholds (RWA1-RWA5). The only pressure experienced originates from sustainability-related agreements with the Union of Water Boards, the Climate Agreement, and covenants (RWA1, RWA2, RWA4). However, the document analysis shows that these are not specifically aimed at small purchases. In cases RWA4 and RWA5, some legal pressure is perceived from specific non-procurement-related legislation, but it has little impact on small purchases of services and supplies. This overall absence of pressure for small purchases is emphasized by the following quote given by one of the respondents:

"It's not required, so why invest much time in it?". (Contract Manager, RWA3)

According to the respondents, legal-related factors could have much potential in making SPP the "standard" for below-threshold purchases.

## 4.1.2. Political-Related Factors

On a general level, politics encompasses sustainability policy without distinction between thresholds (RWA1), which is also evident from the document analysis (RWA1-RWA5). Direct political pressure for SPP is not immediately experienced unless certain board members pay attention to it (RWA3):

"In the board, there's an enthusiastic member who drives sustainability and leaves their mark on it. We're fortunate to have this board member". (Sustainability Advisor, RWA3)

Political pressure mostly seems irrelevant for small purchases, though. There is less interest and priority from politics for smaller purchases (RWA2, RWA3, RWA4, RWA5).

#### 4.1.3. Market-Related Factors

No pressure is perceived from suppliers for small purchases (RWA1-RWA5). More often, such purchases involve SMEs that may not have the means to exert pressure. Large suppliers are also interested in small contracts, but they primarily exert pressure on large purchases, according to the respondents. Some suppliers are also concerned that they may not be asked anymore if they exert pressure:

*"It's the smaller companies that opt for the easier way out and don't stand up against a water authority".* (Procurement Advisor, RWA3)

"The market parties that serve us also think: 'If they're not asking for it, why would I ask for it?' So, there's no stimulation from the market parties". (Contract Manager, RWA3)

For small purchases, the experience is that satisfaction with purchases is even higher when sustainability is not included. As corroborated by respondents across cases, the incorporation or execution of SPP can entail disproportionate transaction costs from suppliers. While it is possible to implement SPP without these high costs, it requires market interaction and clear communication with suppliers about the benefits of adopting sustainable practices. However, for small purchases, this is not expected to happen quickly due to the small scale per tender (RWA4).

## 4.1.4. Societal-, Social-, and Economic-Related Factors

No societal, social, or economic pressure is experienced for small purchases (RWA1-RWA5), except occasionally and indirectly through specific interest groups (RWA3). Expectations from residents and businesses do promote sustainability in general (RWA2), but overall, there is little public interest in RWAs, resulting in minimal pressure from residents and most businesses. Additionally, the lack of disclosure or publication for small purchases in the Netherlands does not facilitate exerting pressure, as there is no easy way to gain knowledge about them.

#### 4.2. Internal Factors Influencing the Uptake of SPP

Internal factors appear to exert more influence than external factors on the adoption of SPP below the EU thresholds. Almost all respondents indicated that all internal factors studied are barriers to SPP for small purchases. A lack of available resources and accountability for SPP is even perceived to be a barrier by almost all respondents. The remainder of this section delves deeper into each of the four inhibiting factors.

#### 4.2.1. Organizational Complexity-Related Factors

It is currently difficult to orchestrate the integration of SPP for small purchases across the entire organization (RWA4). The complex bureaucratic organizational structure does not foster a counterproductive culture (RWA4) but encompasses a myriad of decision-making layers, consequently contributing to a sluggish decision-making process (RWA2). There is also an absence of concrete targets for SPP for small purchases, which compounds the challenge of incorporating sustainability in small purchases (RWA2). Allocating supplementary resources for sustainable practices also requires more time due to the bureaucratic decisionmaking procedure (RWA4). Similarly, the application of sustainability can induce delays since it introduces a novel approach, necessitating support and thereby causing slowdowns:

"The sluggishness of change processes and the desire to involve all stakeholders intensively protracts proceedings". (Contract Manager RWA3)

However, the respondents perceive the effects of such complexities to be similar for above- and below-threshold purchases.

#### 4.2.2. Risk Tolerance and Organizational Stability-Related Factors

Within the context of RWA1, it is observed that the organization maintains a stable workforce, which proves beneficial for knowledge retention. However, this stability can simultaneously impede the introduction of "fresh external perspectives" (Procurement Advisor, RWA1). Stability can also result in diverting attention away from market exploration and the sustainable opportunities that suppliers can present. This is confirmed by a quote from one of the respondents characterizing its organization as "somewhat conservative and task-oriented" (Sustainability Advisor, RWA1). Although there is flexibility within individual projects (RWA4), it appears insufficient to fully capitalize on SPP potential for small purchases.

In the case of an executive, task-oriented entity like RWA5, a predisposition towards stability and risk mitigation is evident. As a consequence, the organization may exhibit reluctance to explore alternative or innovative procurement methods for achieving sustainable goals (RWA5). Conversely, SPP necessitates a greater willingness to embrace risk and a more innovation-centric approach. For sustainability, it is important to periodically reassess whether an alternative procurement approach is necessary, as the current, more traditional procurement approaches may no longer suffice. However, it is noted that this shift is not yet widespread.

## 4.2.3. Resource Availability-Related Factors

RWAs are generally favorable towards SPP, as evidenced by both the document analysis and the interviews. However, this sentiment is not necessarily shared at the level of individual employees. Among them, there is no resistance to the implementation of SPP per se, but rather to the uncertainty and required resources (RWA2, RWA3), and that below the thresholds, there is more often the easy option of direct procurement without a tender procedure. This is illustrated by the following quote:

If it's below the thresholds and they can continue with a party they've been doing business with for years, that's the safe and easy choice. That doesn't mean they can't make agreements where sustainability plays a role. But if you don't tender it, the likelihood of doing something sustainable or innovative is lower". (Legal expert, RWA2)

The underlying inhibiting factor is the ambiguity in vision, strategy, and policy combined with an emphasis on quantitative aspects, a lack of resources, high work pressure, and intrinsic motivations. This is illustrated by respondents of RWA4 and RWA5: "As an example of resistance to change, I think of a colleague who wanted to engage more in SPP but didn't have the time for it. Because regular projects also need to be executed. That was a reason for that colleague to look elsewhere in the organization where there was more attention for it. No one has an aversion to sustainability. It's just not the top priority due to the combination of work pressure, numerous projects, and the various considerations you have to take into account". (Manager, RWA4)

"Whether SPP is adopted for smaller amounts significantly depends on colleagues' intrinsic motivation". (Sustainability Advisor, RWA5)

Insufficient knowledge to implement sustainability is also pointed out as a reason for not embracing SPP (RWA3). While individuals are generally willing, there is a lack of understanding on how to proceed.

#### 4.2.4. Accountability-Related Factors

Accountability could potentially have a stimulating effect, but it does not do this yet (RWA1). This is illustrated by the following quote from RWA5 as well:

"Smaller projects still revolve around time, money, and capacity. As long as project leaders are evaluated based on the number of projects per year rather than sustainability, our intentions won't translate into action [...]".

The audit statement ensures the legality and financial correctness of the procurement processes. However, it does not have this effect for sustainability:

"There are no guidelines dictating that, for instance, a certain percentage of the budget must be allocated to sustainability. There's a certain element of discretion involved. Everything revolves around whether you can deliver the result within the planning and budget, and sustainability is usually not a priority". (Procurement Advisor, RWA4)

Monitoring and record-keeping efforts are increasing, but the focus remains on other matters (RWA2), and when SPP is monitored, it usually refers to larger purchases, as shown by the document analysis (RWA1, RWA3, RWA5). However, the SPP areas that are monitored do have an impact: politicians are responsive to sustainability reports (RWA2). If accountability is considered, it does not typically involve purchases below the thresholds (RWA5). The planning and control cycle within the RWAs aims to be financially and legally compliant, but sustainability is not prioritized. When it comes down to what the organization is ultimately judged on, it is believed that efficiency and effectiveness issues take precedence over evaluating the organization's sustainability efforts (RWA5).

## 5. Discussion

The majority of public procurement, perhaps up to 80% of the total market value within the EU, falls below the EU public procurement thresholds [9]. The financial and sustainable impact of these purchases is therefore significant. However, our study reveals that this impact is not fully utilized. The focus tends to be on the 20% involving large purchases, which fall under a much stricter legal public procurement regime than smaller purchases. Remarkably, there is little attention in the academic literature on below-threshold purchases and sustainability [1], and we do not fully understand why such small purchases are underutilized for sustainability.

Our study, therefore, aims to identify the internal and external factors that explain why there is relatively little attention paid to SPP for small purchases in practice. We find that the internal factors appear to be the most important barriers to small purchases, as discussed in more detail in Section 5.1. In contrast to earlier findings in the literature (e.g., [19]), we find that external factors do not seem to drive SPP for small purchases, which we will subsequently discuss in Section 5.2. We close the discussion with some reflections on the framework used (Section 5.3) and provide limitations and suggestions for further research (Section 5.4).

## 5.1. Internal Factors

Our study reveals that all internal factors we investigated (organizational complexity, risk tolerance and organizational stability, resource availability, and accountability) are perceived as barriers to SPP for small purchases. Although organizational complexity is mostly perceived as a barrier, it is not perceived as more or less complex for purchases above or below the EU thresholds. The same applies to risk tolerance and stability, where theoretically, there could be more risk tolerance for small purchases due to the lower impact per tender. Therefore, these factors are important and confirm previous research (e.g., [20,23,36]) but do not provide particularly new insights for small purchases. We do observe important differences between small and large purchases in resource availability and accountability, as we explain below.

While earlier research stresses the importance of being a change agent [47], several of our respondents indicated that the lack of SPP for small purchases should not necessarily be labeled as resistance to change but rather as a lack of resources and knowledge and unfamiliarity or uncertainty about expectations and contributions. Resources and knowledge for SPP are not readily available and are scattered over the organization, and there is limited awareness of the possibilities and impact of SPP for small purchases.

Moreover, sustainable accountability is lower compared to above-threshold purchases, leading to a primary focus on legal and financial accountability below the thresholds. The significance of accountability that we find is akin to the findings of other studies [1,48]. While the challenges in measuring SPP (based on [36]) and associated transaction costs are drawbacks that should be considered, it appears that greater accountability, resources, and knowledge could yield meaningful impact below the thresholds. In particular, accountability was seen as a potential stimulant for SPP for small purchases under the condition that obligations are attached to it.

#### 5.2. External Factors

The external factors (legal, political, market, societal, social, and economic) are all acknowledged by the respondents, confirming the importance of these factors, as indicated by [14,20]. However, these external factors are not currently serving as enablers or barriers for SPP below the thresholds in the cases studied.

Legal pressures with concrete obligations for SPP could potentially be stimulating, according to the respondents, but they do not currently have that effect. According to the respondents, more legal obligations have the potential to substantially impact small purchases. Regular updates to the procurement policy of an organization could also expedite responsiveness to current dynamics.

The other external factors may have more impact on purchases above the thresholds but less so for below-threshold purchases. For instance, political gains are less likely below the thresholds, there are no specific strategic political goals aimed at SPP below the thresholds, there is less market proactivity, and NGOs focus more on more visible purchases above the thresholds. This partly differs from previous research, which emphasizes the importance of strategic goals and structural alignment [26]. This discrepancy may be due to the difficulty of adequately organizing all required internal conditions identified by [26], such as sufficient resources and a fitting organizational structure, for smaller purchases. Respondents expect that strategic goals alone are not enough and that more legal pressure is needed. Increased legal pressure could potentially bring about the necessary internal changes, such as more resources and greater attention from accountability mechanisms.

## 5.3. Framework

The internal and external factors studied, primarily based on Thai's public procurement framework [14], could be effectively used to explain the (un)sustainable behavior of public procurement functions. Although the internal factors of Thai's model needed some adjustments, including the addition of two internal factors, namely organizational complexity and risk-averse behavior, and the need for stability, the external factors proved to be still applicable to our research. In addition, no additional significant categories emerged from the interviews, although we consistently inquired with the respondents about any other relevant factors. This suggests that the examined internal and external factors can provide a comprehensive understanding of resistance to change or factors that can stimulate change in the context of public procurement, specifically SPP.

### 5.4. Limitations and Further Research

The research also comes with certain limitations. Despite selecting five Dutch RWAs based on size, scale, and geographical distribution, a degree of similarity exists in the responses from the participants and the analysis of organizations. Similar words and terms were used to describe the usage and characterization of sustainability in general and below-threshold purchases when answering questions about the factors. Results could differ for other public organizations, such as municipalities. While we do not anticipate major differences, further research will be needed to confirm this. Furthermore, as the study focuses on Dutch public organizations, results might be different for public organizations in other countries with different views and legal treatments with respect to small public procurement contracts (cf. [49]). However, since most public procurement legislation focuses on large purchases, and there is generally more discretion for small purchases in other countries as well, we anticipate similar findings in other contexts.

Further research possibilities include experimenting with the effects of the interventions we suggest. For example, what are the implications of more obligations for SPP below the thresholds? Will more resources be allocated to smaller purchases? Can sustainable and innovative SMEs be better found by governments? What effects could below-threshold SPP policies and more monitoring have? Furthermore, further research could explore comparative studies across different countries and sectors, examining how local contexts affect SPP practices for small purchases. For example, is there a correlation between the level of central coordination and the attention given to smaller purchases? Are there observable differences in SPP practices among organizations with varying degrees of political involvement? Lastly, conducting large-scale quantitative research on the correlation between internal factors, a coercive external factor, and the uptake of SPP could be valuable. This could shed light on which factors will have the most significant impact on effective SPP. For instance, when there is a stronger coercive force present, is there subsequently a single factor, such as more resources, that should be addressed first, or is it necessary to tackle multiple factors simultaneously?

## 6. Conclusions

We conclude that the sustainability potential of small purchases remains underutilized, even though sustainability themes are just as relevant as for large purchases. Notably, the cumulative impact of small purchases may actually surpass that of larger, more regulated purchases above the EU thresholds for public procurement due to their sheer volume. The flexibility inherent in smaller below-threshold purchases, which are not bound by the stricter procedural legislation as larger purchases, presents an opportunity for more tailored, dialogue-based procurement. This flexibility for smaller purchases could be particularly beneficial for engaging with SMEs, as well as sustainable and innovative startups and scaleups, which may struggle under traditional, paper-based, and more rigid procurement techniques. However, this potential seems underutilized. This is in contrast to SPP becoming a more common practice for large purchases in several countries worldwide.

While earlier research asserts that external factors are often seen as key drivers for the sustainability of public purchases, we find that external factors have little influence when it comes to small purchases in the cases studied. In the present situation, the external factors do not drive or inhibit SPP. As it is unlikely that political, market, societal, social, and economic factors will drive SPP for smaller below-threshold purchases, we argue that the external factor, "the absence of binding legal obligations", has the most untapped potential to become a driver for SPP. Implementing binding legal frameworks could thus be a key driver in promoting sustainability in small purchases. We believe these insights to be important for SPP for small purchases and, to our knowledge, have not been previously discussed in the literature.

Our research also underscores the important role of internal factors in shaping the sustainability of small purchases. All examined internal factors are perceived as barriers in our study to realizing sustainability in smaller purchases. Organizational complexity, risk-averse behavior, the need for stability, and especially a lack of resources and knowledge about SPP throughout the organization may limit attention to SPP for small purchases. Accountability also emerges as an important constraining factor. If the organization is not formally held accountable for the sustainability of small purchases, the application depends largely on the intrinsic motivation of public officers. Of the internal factors, organizational complexity and risk-averse behavior, and the need for stability do not seem to differ substantially in influence for below-threshold purchases compared to above-threshold ones.

We emphasize that enhancing the capacity of public organizations to address sustainability in small purchases requires an investment in resources and knowledge. However, given the likely difficulty in securing additional resources for SPP for small purchases, we anticipate that increasing accountability could be a more important internal factor to focus on. This was identified as a significant barrier, and enhanced accountability could consequently lead to greater resources, increased risk tolerance, and more organizational attention.

More SPP accountability could potentially be achieved through more rigorous reporting, monitoring frameworks, and accountability mechanisms. This could lead to better resource allocation, greater organizational commitment to sustainability, and an increased willingness to take calculated risks in small purchases. Accountability has already played an important role in ensuring legal compliance and could similarly be leveraged to drive sustainability.

This research reveals that the implementation of SPP for small purchases faces specific challenges. A root cause could be the limited visibility of the substantial cumulative impact of SPP for small purchases. Consequently, for policymakers and practitioners, we advocate for increased visibility of such purchases. This can be achieved through better measurement of the sustainability of small purchases, more attention to the topic in SPP policies, and sharing more best practices of small sustainable procurement. Additionally, increased legislation and accountability might be essential to ensure that the sustainability potential of these smaller purchases is realized.

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## Appendix A Interview Questions

A. Sustainable procurement policy

1. What are the main points and key goals of the SPP policy of your water board?

- 2. How much priority is given to sustainability within your organization? Could you elaborate on that?
- 3. How are the following themes applied? Environment, Climate, Circular, Chain Responsibility, Diversity and Inclusion, Social Return, SMEs, Innovation.

B. Sub-threshold purchases and sustainability

- 4. Can you provide an example of a project involving sub-threshold purchases? What supplies and services are we talking about?
- 5. How were these purchases handled? What procurement guidelines/procedures were given? Were they adhered to?
- 6. Were criteria (specifications) related to sustainability established for these purchases? If yes, which ones, and when are they applied? If not, why not?
- 7. Who decides or determines the procurement procedure when sustainability needs to be applied? Are the standard procedures (single and multiple) followed?

C. Questions about internal and external factors:

For all internal factors:

- 8. How would you describe the situation at hand for this factor?
- 9. How do you experience this?
- 10. Can you provide a concrete example of this?
- 11. In your opinion, is this a stimulating or inhibiting factor in applying sustainability to sub-threshold purchases?

For all external factors:

- 12. How would you describe the situation at hand for this factor?
- 13. To what extent have you experienced this factor to apply sustainability to subthreshold purchases?
- 14. In what way(s) was this factor executed? What did it manifest as, and what were the consequences of that pressure?
- 15. By whom was this pressure executed, and on whom was this pressure exerted?
- 16. In your opinion, is this a stimulating or inhibiting factor in applying sustainability to sub-threshold purchases?

D. Questions overall:

- 17. Which factor(s) do you consider the most stimulating or inhibiting in applying sustainability themes/aspects to sub-threshold purchases of supplies and services? Is there an explanation for this?
- 18. What have I not covered yet?

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