



UNLOCKING
SUSTAINABLE PUBLIC
PROCUREMENT:
OVERCOMING
BARRIERS AND
ACCELERATING
PROGRESS TOWARDS
THE SDG 2030

Challenges, Opportunities,
and Entry Points in Pursuit of
SDG Target 12.7.

Sustainable Public Procurement Series

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UNLOCKING SUSTAINABLE PUBLIC PROCUREMENT: OVERCOMING BARRIERS AND ACCELERATING PROGRESS TOWARDS THE SDG 2030 AGENDA

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EXECUTIVE SUMMARY

As the deadline for achieving the 2030 Sustainable Development Goals (SDGs) approaches, the need to intensify our efforts towards environmental sustainability and addressing global social inequalities has become increasingly urgent. In particular, Goal 12 of the SDG 2030 Agenda offers an opportunity to connect public procurement practices with sustainable development outcomes, harmonizing public expenditures with the national development goals of governments and the broader international community.

This paper aims to contribute to SDG target 12.7 by examining the obstacles and favorable conditions for sustainable public procurement (SPP) through a comprehensive literature review, which includes recent studies on SPP experiences in low-income and middle-income countries (LMICs). We propose a conceptual framework that categorizes barriers and prerequisites across four dimensions: legal framework, implementing public organization, practitioner level, and national supply market readiness.

Our model offers insights into the conditions necessary for successful SPP implementation and identifies relevant stakeholders. The findings serve to enhance existing SPP implementation strategies by emphasizing the significance of organizational cultural change and buy-in, pinpointing specific practitioner-level capacity and resource challenges, and recognizing the influence of the SPP cost factor on public procurement decision-making processes. Additionally, our findings contribute to a more effective measurement of SDG Indicator 12.7.1 by providing a deeper understanding and evaluation of the comprehensiveness of country action plans for SPP implementation.

INTRODUCTION

SDG target 12.7 emphasizes the global commitment to promote sustainable public procurement practices in line with national policies and priorities. By adopting sustainable public procurement (SPP) principles, the multi-trillion-dollar public procurement budgets can be leveraged to support sustainable development (Walker & Brammer, 2012). With sustainability issues becoming more prominent in national agendas, meaningful sustainable procurement practices are essential for public procurement to be truly "fit

for purpose." It is time to awaken the trillion-dollar giant.

Public organizations, as custodians of taxpayers' money, are guided by principles of fairness, transparency, accountability, and value for money, operating under strict public scrutiny. Traditional public procurement focuses on achieving the lowest cost of purchase to optimize value for public funds. However, this approach often neglects longer-term environmental and social costs (Roman, 2017).

Sustainable procurement, in contrast, incorporates economic, environmental, and social aspects, also known as the triple bottom line (Elkington, 1998; Da Costa & Da Motta, 2019). Sustainable procurement can be defined as a process that meets organizational needs for goods, works, and utilities while generating benefits for society, the economy, and minimizing environmental damage (UK Sustainable Procurement Task Force, 2006). Sustainable public procurement (SPP) refers to the integration of broader social and environmental concerns in procurement processes by governments, public sector bodies, and international organizations (Brammer & Walker, 2011).

SPP reflects broader economic objectives like job creation, technology innovation, and support for small and medium-sized enterprises (SMEs), while adhering to the fundamental principles of public procurement. Environmentally, SPP considers factors such as pollution and resource efficiency. Socially, SPP integrates concerns around ethical sourcing, fair employment practices, supplier diversification, and alignment with the UN Global Compact, Guiding Principles on Business and Human Rights, and the SDG 2030 Agenda (Testa, Iraldo, Frey, & Daddi, 2012a).

SPP is not an alternative form of procurement; rather, it uses existing procurement principles to meet functional and performance requirements while incorporating economic, environmental, and social objectives and cost considerations. Institutions such as the EU Public Procurement Directive (2014), the OECD Working Party on Leading Practitioners on Public Procurement (LPP), and the World Bank New Procurement Framework (2015) have broadened the definition of value for money to encompass overall value across an item's life cycle, including total cost of ownership and quality aspects to support more

environmentally and socially sustainable outcomes.

Despite these initiatives, most governments are not fulfilling their commitment to promoting sustainable public procurement. The missed opportunity to leverage the public sector's purchasing power towards national sustainable development objectives and the broader SDG agenda is immense (Anees et al., 2018). The total volume and associated purchasing power of public procurement is a significant market force with the potential to influence product innovation and supplier behavior (Thai, 2001; McCrudden, 2004). Governments have utilized public procurement to drive national development objectives in various contexts, such as post-apartheid socio-economic reform in South Africa (Mabece, 2019), re-orienting the public sector in Abu Dhabi (Renukappa, 2014), or greening public bus services in Sweden (Aldenius & Khan, 2017).

Public procurement volumes in the EU, OECD countries, and emerging economies like Brazil, China, and the US represent a significant percentage of GDP, granting the public sector immense impact and purchasing power on national markets worldwide (European Commission, 2020; OECD, 2017; IPEA, 2018; CCGP, 2019; Bloomberg Government, 2020). While high-income countries spend more on public procurement in absolute terms, the percentage of public procurement as part of government expenditure is higher in many lower-income countries (Anees et al., 2018).

The role of public procurement as a vehicle for addressing global challenges has been promoted since the International Conference on Environment and Development at Rio de Janeiro (1992) and the Agenda 21 UN Guidelines for Consumer Protection (1999), which encouraged governments and international agencies to adopt sustainable

practices in their operations, particularly through procurement policies. The Johannesburg World Summit on Sustainable Development (2002) further called for the promotion of sustainable goods and services through public procurement. These initiatives have been reinforced by the Marrakech Process (2003), which supports governments in implementing sustainable consumption and production through regional consultations and training.

Despite SPP being recognized as a powerful agent of change, it remains an understudied topic in public sector management. Research on sustainable procurement practices in the public sector lags that of the private sector (Walker & Brammer, 2009; Grandia & Meehan, 2017). Moreover, SPP literature often suffers from an overly optimistic bias, portraying SPP as an almost guaranteed win-win, while reality is often less progressive (Roman, 2017).

The objective of this paper is to understand the actual challenges to implementing SPP, including in low-income and middle-income countries, and develop corresponding policy and practitioner-level recommendations for strengthening SPP implementation strategies.

To achieve this objective, we conducted a comprehensive literature review that incorporates recent studies on SPP experiences in low-income and middle-income countries (LMICs). We identified key barriers and enabling conditions for effective SPP implementation, as well as successful case studies and best practices. Based on this analysis, we propose a conceptual framework that categorizes these barriers and prerequisites across four dimensions: legal framework, implementing public organization, practitioner level, and national supply market readiness.

We found that a supportive legal framework is crucial for establishing a solid foundation for SPP implementation, including clear regulations, guidelines, and monitoring systems. Implementing public organizations should adopt a proactive approach to embedding sustainability principles in their procurement policies and practices, as well as fostering a culture of continuous learning and improvement.

At the practitioner level, capacity building and training are essential to ensure that procurement professionals have the necessary skills and knowledge to effectively implement SPP. This includes understanding how to evaluate bids based on a combination of economic, environmental, and social criteria, as well as how to engage with suppliers to promote sustainable practices throughout the supply chain.

National supply market readiness is another critical factor for successful SPP implementation. Governments should work closely with the private sector to raise awareness of the benefits of sustainable products and services, create market incentives for suppliers to adopt sustainable practices, and support the development of local sustainable industries.

Our findings contribute to the ongoing dialogue on how to strengthen SPP implementation strategies by highlighting the importance of addressing these barriers and leveraging enabling conditions. By doing so, governments and public sector organizations can harness the immense purchasing power of public procurement to drive sustainable development and contribute to the achievement of the 2030 Sustainable Development Goals. Further research should explore the specific challenges and opportunities faced by LMICs in implementing SPP, as well as the potential for cross-sector

collaboration and partnerships to accelerate progress towards a more sustainable future.

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ASSESSING SPP IMPLEMENTATION CHALLENGES

A systematic review of the literature on SPP constraints reveals that research has predominantly focused on high-income countries such as the UK (Walker & Brammer, 2009; Brammer & Walker, 2011), France (Oruezabala & Rico, 2012), the US (Snider, Halpern, Rendon, & Kidalov, 2013), Ireland (Gormly, 2014), Canada (Ruparathna & Hewage, 2015), Denmark (Alberg Mosgaard, 2015), Sweden (Hall, Löfgren, & Peters, 2016), Australia (Ahsan & Rahman, 2017), the US (Roman, 2017), and the EU (Amann et al, 2014; Iraldo & Barberio, 2017).

However, recent years have seen an increase in research on SPP implementation in locations beyond high-income countries, including Chile (Serpell, Kort, & Vera, 2013), China (Zhu, Geng, & Sarkis, 2013), Malaysia (McMurray, Islam, Siwar, & Fien, 2014), Russia (Romodina & Silin, 2016), Brazil (Aragão & Jabbour, 2017; Delmonico, Jose, et al., 2018), Cambodia

(Durdyev, Zavadskas, Thurnell, Banaitis, & Ihtiyar, 2018), South Africa (Mabece, 2019), Pakistan (Anees, Zaidi, Mehmood, Hou, & Umair, 2018), Ghana (Nyantakyi, 2019; Adjei-Bamfo & Maloreh-Nyamekye, 2019), and across Latin America (Blanco-Portela, et al 2018). The growing body of SPP research from emerging economies offers insights across various sectors, such as public universities (Blanco-Portela et al., 2018; Anees et al., 2018), construction and real estate (Durdyev et al., 2018; Shen, Zhang, & Zhang, 2017), and broader public procurement institutions (McMurray et al., 2014; Romodina & Silin, 2016).

A SYNTHESIS OF SPP IMPLEMENTATION BARRIERS

The growing body of research emphasizes that SPP practices have been acknowledged as a potent policy instrument for fostering sustainable production and consumption. However, implementing SPP, particularly in middle- and lower-income economies, continues to pose challenges. The following section synthesizes the identified obstacles to SPP adoption across diverse public organizations and national contexts, laying the foundation for recommendations aimed at enhancing the effectiveness of SPP implementation.

LEGISLATIVE FRAMEWORK, POLITICAL WILL & EFFECTIVE PERFORMANCE MONITORING

Successful implementation of SPP hinges on a clear and unambiguous national legal framework, as public procurement is governed by adherence to legislation and policy frameworks. This framework must define national SPP objectives and provide policy guidance on the application and monitoring of sustainable public procurement practices.

Regrettably, research suggests that existing insufficient or inconsistent government policies and regulations are a major obstacle for successful SPP implementation (Nyantakyi, 2019), (Delmonico, et al., 2018), (Durdyev et al., 2018), (Ahsan & Rahman, 2017), (Ruparathna & Hewage, 2015). In Latin America, for example, inconsistent policy frameworks at both federal and state levels often create confusion around SPP activities (Delmonico, Jose, et al., 2018). Without a clear legal framework, procurement officials may hesitate to implement SPP practices due to compliance risk concerns (Carlsson and Waara, 2006) and are more likely to adopt only those aspects of SPP mandated by law (Romodina & Silin, 2016). Mandatory policy frameworks generally prove more effective in driving implementation, as they do not rely on the initiative of individual ministries, departments, or individuals (UNEP, 2017).

To implement the legal framework, consistent definitions and applications of SPP are required (Sourani & Sohail, 2011), (Ruparathna & Hewage, 2015), (Ahsan & Rahman, 2017), as well as clear organizational guidelines and strategic goals for SPP application (Sourani & Sohail, 2011), (Alberg Mosgaard, 2015), (Buniamin, et al 2016), (Ahsan & Rahman, 2017), (Delmonico et al., 2018), (Blanco-Portela et al., 2018). These guidelines must address conflicts between purchasing process priorities (Walker & Brammer, 2009), (McMurray et al., 2014), (Delmonico, Jabbour, et al., 2018). Providing simple and clear information to help procurement practitioners understand expected practices has been found to increase their willingness to implement SPP (Faith-Ell et al., 2006).

Moreover, findings from South Africa and Ghana indicate that pluralistic regulatory frameworks lead to confusion around requirements and increase vulnerability to fraud and corruption due to the multitude of rules and regulations (Mabece, 2019), (Nyantakyi, 2019). These findings underscore

the need for a comprehensive monitoring and evaluation system to oversee SPP policy application and outcomes. Effective monitoring is essential to prevent SPP policies and practices from being applied at the procurement practitioner's discretion, which can open the door to opportunistic or fraudulent behavior. Auditing is also necessary to deter unethical suppliers from falsifying qualifications or reporting requirements (Adjei-Bamfo & Maloreh-Nyamekye, 2019).

KEY LEGISLATIVE & POLICY BARRIERS:

- Insufficient legislative and policy framework to guide SPP implementation and prioritization.
- Inconsistent SPP definitions and application of government policies and regulations.
- Lack of political SPP goal setting and public communication.
- Absence of an effective SPP compliance monitoring and evaluation system.

PRACTITIONER-LEVEL CAPACITY TO IMPLEMENT SPP

Individual-level factors play a significant role in the sustainable transformation of procurement processes, emphasizing the importance of behavioral change at the individual level (Blanco-Portela et al., 2018), (Meehan & Bryde, 2011), (Grandia & Meehan, 2017). Procurement practitioners' lack of awareness and training on sustainable procurement is consistently identified as the main barrier to implementing sustainable procurement, followed by a lack of guidance and resources, including expertise (McMurray et al., 2014). This is in line with findings from various public sectors in China (Zhu et al., 2013), Russia (Romodina & Silin, 2016), Cambodia (Durdyev et al., 2018), Pakistan (Anees et al., 2018), Latin America (Delmonico, Jabbour, et al., 2018), and Ghana (Nyantakyi, 2019).

Brazilian research further indicates that cultural challenges will continue to hinder SPP implementation if sustainable procurement is not supported by training for public procurement practitioners and suppliers (Delmonico, Jose, et al., 2018). Procurement organizations must provide intensive training on designing and implementing SPP-informed tendering procedures, including defining sustainability requirements, qualifying suppliers, identifying the best "sustainable value for money" offer, and evaluating the "environmental value" of the offer and integrating it into the monetization of the price (Testa et al., 2012a).

While drafting sustainable procurement is not difficult, implementing it is (UNEP Environment Management Group, 2006). Given SPP's broad definition, the primary challenge lies in the implementation phase. A key barrier is often the organization's own capacity to apply sustainable procurement across its internal processes (Brammer & Walker, 2011) and the lack of practical tools to guide requisitioners, procurers, and suppliers in evaluating goods and services using sustainable development criteria (UNEP Environment Management Group, 2006), (Gormly, 2014), (Aragão & Jabbour, 2017). Overall, there is a general lack of guidance and a shortage of relevant resources and tools to support practitioners in applying SPP practices.

Unfortunately, procurement is often conceptualized as a singular process, underestimating the diversity of categories and their individual complexities, as well as the unique contractual arrangements and management requirements involved in delivering a broad public procurement portfolio. Specific category-level expertise is needed to perform meaningful sustainability assessments and life-cycle analyses, whether procuring construction or cleaning services or

evaluating the manufacturing process of a particular good. Practitioners also face challenges when integrating life-cycle costs into the actual bids (Romodina & Silin, 2016).

This complexity complicates the alignment of policy and procurement practice and the scope and depth of required training interventions. The need for technical expertise, especially category-specific life-cycle cost analysis, varies significantly across different categories, highlighting the need for category-specific tools and criteria to assess product sustainability and life-cycle costs. The EU and OECD have developed a series of publicly available category-specific GPP criteria and Life-cycle costing (LCC) guidelines that can be easily adapted for this purpose. To address the shortage of procurement practitioners with category specific SPP expertise, training and guideline development are essential elements of SPP implementation (Björklund, 2011), including the use of certifications and eco-labels to close the information gap (Iraldo & Barberio, 2017). Governments may simply lack sufficient access to the expertise needed for implementing SPP, necessitating resource pooling or helpdesk establishment to adopt sustainable procurement practices.

Access to specialized practitioners is a particular concern for local governments (Geng & Doberstein, 2008), (Walker & Brammer, 2009), with findings suggesting a significant association between the size of local governments and their focus on SPP (Michelsen & Boer, 2009), (Testa et al., 2012). Smaller departments and local governments may face higher barriers in implementing SPP initiatives due to limited access to specialized personnel or full-time managers dealing with SPP (Rüdenauer, Koch, Möller, & Seebach, 2007). Consequently, national-level SPP strategies should consider the sustainable procurement capacity of local government

teams and avoid a one-size-fits-all approach (Liu et al., 2019).

KEY PRACTITIONER-LEVEL BARRIERS:

- Training deficit in implementing SPP-informed tendering procedures.
- Lack of category-specific expertise and criteria to assess life-cycle costs.
- Absence of processes and tools for conducting supplier due diligence.
- Shortage of practical tools to guide requisitioners, buyers, and suppliers.
- Insufficient availability of sustainably produced goods and services on national markets.

SUPPLY MARKET READINESS

The readiness of the supply market, including individual suppliers, is a crucial factor in the successful implementation of SPP. A key external barrier consistently reported for SPP implementation is the lack of understanding of SP criteria and evaluation processes by suppliers and the marketplace. The primary challenge lies in supplier availability and awareness, as well as the actual availability of sustainably produced goods and services (UNEP Environment Management Group, 2006), (Walker & Brammer, 2009), (McMurray et al., 2014), (Ahsan & Rahman, 2017), (Shen et al., 2017), (Delmonico, Jabbour, et al., 2018), (Anees et al., 2018). This is especially true for highly specialized procurement categories in limited markets (Brammer & Walker, 2011).

The literature review suggests that the availability of sustainably produced goods and services is a particular challenge in low- and middle-income countries due to capacity constraints, limited awareness of SP, or general lack of market maturity and demand. The absence of sustainable goods or services may also result from coordinated market resistance, where existing practices benefit industry stakeholders (Durdyev et al., 2018). Additionally, if national supply markets cannot

meet public tender requirements due to high SP criteria, governments may worry about contracts being awarded to foreign suppliers, undermining national economic growth and innovation opportunities.

Government-backed regulations can serve as a key motivator for market development, influencing market maturity by setting production and consumption trends, promoting innovation, and establishing social responsibility standards (Oruezabala & Rico, 2012), (Amann et al., 2014). In some sectors, such as public transport, construction, health services, and education, public procurement constitutes a significant market share and can have a considerable impact (Diófási & Valkó, 2014). As a cornerstone of environmental policies in the EU, Green Public Procurement (GPP) exemplifies this approach.

By promoting and utilizing GPP, public procurement can offer industry real incentives for developing green technologies and products (Testa et al., 2012a), drive innovation, expand the market for eco-technologies (Diófási & Valkó, 2014), and act as a market trigger for eco-innovation (Iraldo et al., 2007). Governments can also play a vital role in mobilizing consumer purchasing preferences to influence market demand for sustainable products, which has been a significant factor for change in Europe.

KEY SUPPLY MARKET BARRIERS:

- Limited market awareness of SPP criteria and evaluation processes.
- Scarcity of sustainable goods and services meeting SPP standards.
- Insufficient incentives for developing sustainable technology innovation.
- Market sensitization and consumer preferences.

THE SPP COST FACTOR

The interplay between public procurement legislation, practices, and the supply market impacts the SPP cost factor. Traditional public procurement generally focuses on identifying the lowest-cost technically responsive bid at the point of purchase, while SPP aims to integrate a broader and longer-term costing model. If life-cycle costing (LCC) is not considered, sustainable production may appear more expensive than traditional production. Consequently, the higher prices of sustainable items compared to conventional products are often seen as a major obstacle to adopting sustainable procurement and have been consistently identified as a barrier to SPP implementation across budget-constrained public entities.

The higher real or perceived cost of sustainable goods and services is problematic since public sector budgets are often allocated based on traditional product prices, while sustainable products usually carry a higher price tag (Bouwer et al., 2006). To address the price issue, the Chinese central government, for example, subsidized local governments for purchasing green vehicles (Zhu et al., 2013) and has also subsidized local governments for purchasing other energy-saving products, including energy-saving electric appliances and lighting (Liu et al., 2019).

The cost factor can be a barrier for public organizations at all income levels (Geng & Doberstein, 2008), as they may perceive the price of SPP as an additional burden on their limited budgets due to consistent budgetary constraints (Brammer & Walker, 2011). In low- and middle-income countries, the cost factor is amplified. For instance, the higher cost of sustainable construction was deemed the most significant barrier to implementation in Cambodia (Durdyev et al., 2018), a sentiment echoed across public health procurement in

the UK (Brammer & Walker, 2011), Malaysia (McMurray et al., 2014), (Buniamin et al., 2016), Pakistan (Ahsan & Rahman, 2017), and Latin America (Delmonico et al., 2018). In Ghana, public procurement officials often reconsider SPP objectives in favor of price savings over sustainable outcomes (Nyantakyi, 2019).

Due to higher real or perceived costs of sustainable goods and services, government incentives to promote sustainable technologies and production methods are crucial for SPP implementation (Sourani & Sohail, 2011), (Serpell et al., 2013), (Ruparathna & Hewage, 2015), (Shen et al., 2017), (Iraldo & Barberio, 2017). In Cambodia, the lack of government incentives was identified as a significant barrier, emphasizing the importance of incentivizing industry stakeholders, particularly in countries where sustainable technology and practices are still in their infancy (Durdyev et al., 2018).

KEY SPP COST FACTOR BARRIERS:

- Real or perceived higher prices of sustainable products.
- Absence of government incentives or subsidies to address the "price-gap."
- Prioritization of short-term price savings due to budgetary constraints.

CONCEPTUAL FRAMEWORK OF BARRIERS & CONDITIONS FOR SPP IMPLEMENTATION

A conceptual framework has been developed based on the identified constraints and barriers, providing entry points to support SPP implementation. The model proposes that effective SPP requires intervention across several dimensions, including the Structural Level, the Organizational Level, the Individual Practitioner Level, and the wider Market Level.

FIGURE 1: FRAMEWORK OF BARRIERS & CONDITIONS FOR SPP IMPLEMENTATION

Level	Barriers for SPP	Conditions for SPP	Stakeholders
Policy Level	Insufficient legislative and policy framework to guide SPP implementation and prioritizations.	Concise Legislative Framework, Embedded SPP Targets in Overarching Policies, Effective Monitoring System, and Political Goal Setting	Government Parliament Relevant Ministries Civil Society Lobby Groups
	Inconsistent SPP definitions and application of government policies and regulations.		
	Lack of embedded SPP goal setting in overarching policies and public communication on SPP targets.		
	Lack of SPP monitoring and evaluation system overseeing policy application and outcomes.		
Organizational Level	Absence of organization-wide awareness on sustainable procurement.	Organizational Awareness & Buy-in, Enabling Institutional Framework, ISO Standards and Financial Resources	Public Entity Management Local Government Non-procurement Departmental Stakeholders End-users or Beneficiaries
	Absence of high-level buy-in and support from executive management.		
	Reluctance to change and organizational culture barriers.		
	Lack of organizational SPP guidelines, goal setting and performance measurement.		
	Limited empowerment and enabling institutional frameworks.		
	Lack of financial resourcing of procurement departments for SPP implementation.		
Practitioner Level	Training gap in designing and implementing SPP-informed tendering procedures.	Practitioner SP Capacity, Category-specific Tools & Methodologies	Procurement Managers Individual Practitioners Requisitioners
	Lack of category-specific expertise, tools, and criteria to assess life cycle costs.		
	Lack of processes and tools for conducting consistent and effective supplier due diligence.		
	Lack of practical tools to guide requisitioners, procurers and suppliers.		
Market-Level	Lack of industry and individual supplier awareness of SPP criteria and evaluation process.	Sufficient Supply Market Readiness, Willingness, and Absorption Capacity, Market Incentives, SME Support, Consumer sentiments	Industry Associations Individual Suppliers SMEs
	Lack of communication on SPP goals and objectives to market makers.		
	Absence of available sustainable goods and services (context and category-specific).		
	Lack of market incentives for developing sustainable technologies and innovation, or fiscal/tax incentives.		

SPP Cost Factor

FIGURE 2: IMPLEMENTATION FRAMEWORK DIMENSIONS:

- The first dimension emphasizes the role of a concise **legislative framework**, signaling the political will of the government and securing a clear mandate for SPP implementation, followed by associated monitoring and evaluation of outcomes.
- The second dimension underlines the need for enabling **institutional frameworks and organizational buy-in**, and associated incentives and pressures for SPP implementation. In part, this reflects organizational culture and ability/willingness to change and empower the required SPP-supportive frameworks.
- The third dimension focuses on **practitioner-level capacity** to implement SPP, including awareness and training on sustainable procurement processes, including category-specific life-cycle cost analysis, managing SPP-informed tendering procedures, and due diligence processes. Effective implementation also requires the availability of practical SPP tools to guide requisitioners, procurers and suppliers.
- The fourth dimension is focused on **supply market readiness**, including strategic communication with the supply market on SPP objectives, criteria, and evaluation processes, to overcome resistance to participation. This dimension is, in turn, influenced by government legislation on incentives for developing sustainable technologies and production methods to enhance the market for more sustainable goods and services, and support mechanisms in place to support SME capability issues.

The SPP Cost Factor is considered a cross-cutting dimension, impacted by the legislative framework and underlying government incentives, procurement strategies applied at the practitioner-level, and existing market situation in the national context.

CONCLUSION

As the deadline for achieving the SDG 2030 Agenda approaches, and the impacts of climate change and social inequality become increasingly evident worldwide, it is crucial to fully utilize public procurement in supporting sustainable development outcomes.

This review contributes to the SDG target 12.7 by examining barriers to SPP implementation, based on an analysis of existing research findings and incorporating emerging literature on SPP experiences from low-income and middle-income countries. A conceptual framework was developed, creating a typology of barriers across four dimensions: the legislative framework, the internal dynamics of implementing public organizations, challenges at the practitioner level, and the readiness of

national supply markets to embrace SPP. The model also develops an understanding of the prerequisite conditions for effective SPP implementation and the associated stakeholders that need to be engaged at various levels of intervention.

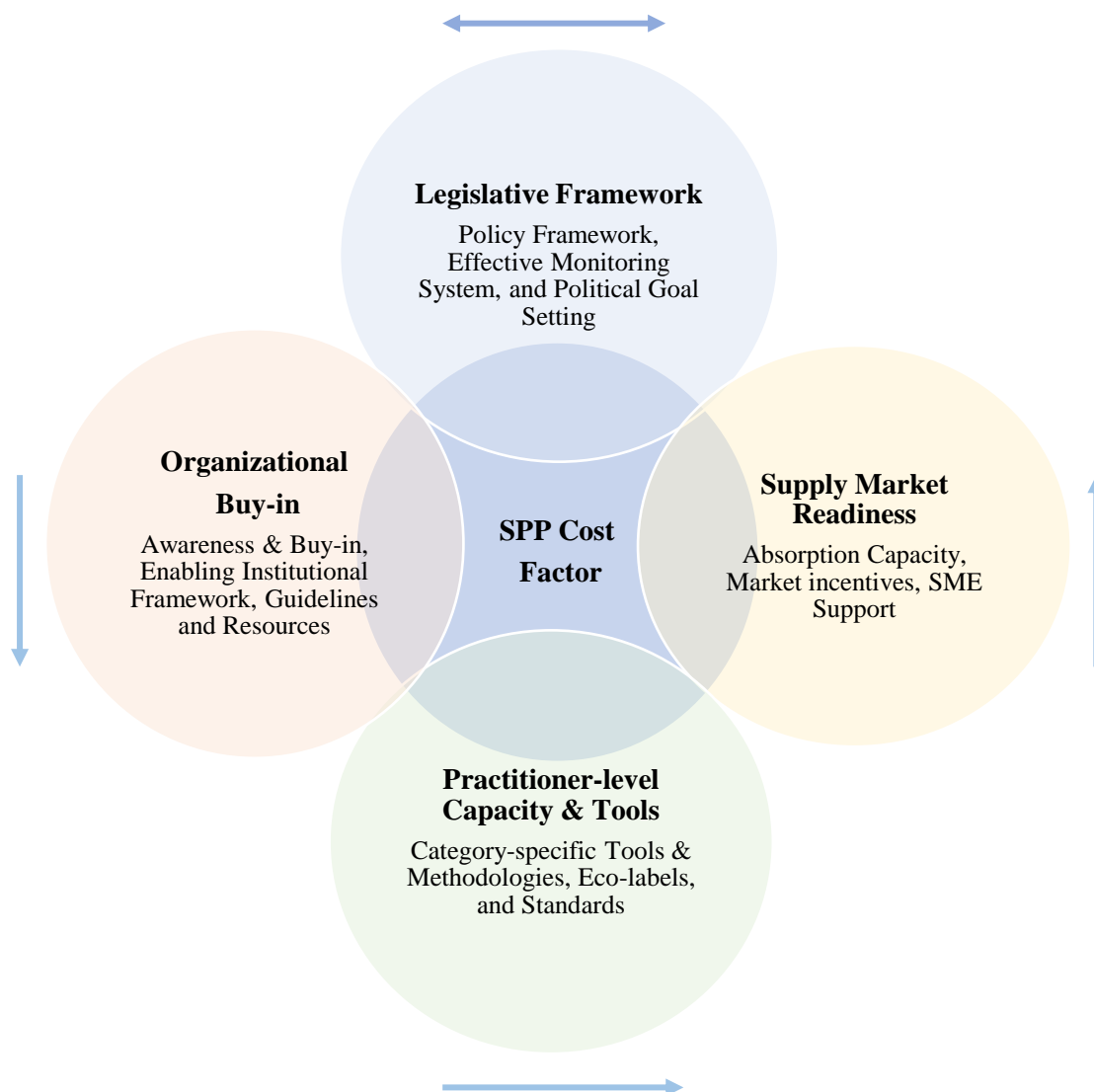
These findings also aid in more effectively measuring SDG indicator 12.7.1, which monitors country-level implementation of SPP policies and action plans. The findings can inform the required scope of 12.7.1 national action plans by defining the recommended levels of intervention and the prerequisite conditions for SPP implementation. This will facilitate better comprehension and measurement of the completeness of action plans and whether they are likely to generate the desired results and outcomes. Effective monitoring of SDG target 12.7 is critical for

benchmarking progress and ensuring continued momentum for SPP implementation and the broader SDG 2030 Agenda.

The findings are crucial for designing more impactful and targeted SPP implementation strategies and supplement the approach adopted by the Marrakech Task Force (MTF) Framework. The MTF Framework, further developed in the UNEP Sustainable Procurement Implementation Guidelines, suggests a stepwise approach to SPP implementation, involving an initial legal review and market readiness analysis, followed by an SPP policy plan and training, and finally,

implementation (Federal Office for the Environment (FOEN), 2008). The findings contribute to further strengthening this implementation design by emphasizing the importance of addressing organization-wide cultural change and buy-in, identifying category-specific practitioner-level capacity and resource barriers, and integrating the impact of the SPP Cost Factor into the SPP implementation cycle. The cycle also highlights the interrelationship between government legislation, associated market incentives, and supply market readiness.

FIGURE 3: SCOPE OF SPP IMPLEMENTATION CYCLE



The findings emphasize the importance of political leadership and support from top government officials, with a clearly communicated commitment to SPP and political goal setting. A concise legislative framework, signaling the political will of the government and a clear mandate for SPP implementation, is a fundamental requirement for public organizations to adopt SPP practices with confidence. This necessitates revising public procurement law to make it more conducive to SPP. The SPP commitment and targets, embedded within the obligation to Sustainable Development and the SDG Agenda, further need to be monitored and reported, with departments held accountable for performance. This requires that oversight functions align with stated SPP objectives and audit for long-term value for money. A series of useful resources are available online, such as the Procura+ Manual, providing a series of SP policy examples from EU cities (ICLEI, 2015).

Secondly, the findings underscore the importance of organizational buy-in and behavioral change as key conditions for SPP implementation, highlighting the significance of departmental management and non-procurement stakeholder ownership. This aligns with findings suggesting that external stakeholder expectations are positively associated with the procurement function assuming a strategic role in sustainable procurement. Behavioral change requires intervention at the organizational level, involving the creation of an enabling environment that includes a clear management commitment to SPP in the form of a separate departmental sustainable procurement policy statement, a set of policy guidelines, and the budgetary resources and mechanisms to support implementation. There is a distinct need to recognize the human resources and support units required for SPP

implementation and uptake. The process should be encouraged through incentive systems, internal rewards linked to performance, and expanded awareness and sensitization of SPP to mid-level management and non-procurement staff to influence departmental prioritization and requisitioner perspectives. Finally, the process should be enforced through oversight and performance reviews, including departmental level goal setting and monitoring of SPP targets. SPP implementation is not just a technical challenge but also involves human-level factors, with organizational leadership and culture playing pivotal roles (Roman, 2017). This highlights the importance of communication and awareness-raising activities for general staff, such as seminars/workshops and in-house newsletters, to establish buy-in. Organizations can further incentivize behavioral change by, for example, integrating sustainable procurement into job descriptions and onboarding training for staff.

Thirdly, the findings unpack the technical barriers involved, underlining the category-specific challenges of SPP processing and the subsequent wide range of category knowledge and specialization required. This provides more granularity on the nature of needed practitioner training and category expertise, identifying the necessity of category-specific tools and criteria definitions to assess product sustainability, particularly regarding complex life-cycle cost analysis. Public procurement portfolios, whether in a central department or local government, usually include a vast diversity of categories, each with specific SPP requirements. As public procurement teams are generally lean or understaffed, the extra workload of SPP practices can be challenging. Training alone is, therefore, not the panacea for SPP implementation. Additionally, implementing organizations need to address

the "expertise-gap" at the practitioner level through new ways of pooling or sharing category expertise, lowering transaction time with more extensive use of eco-labels, conducting joint procurement, creating shareable knowledge platforms disseminating SPP standards and guidelines for critical categories, and/or centrally managing procurement categories with complex SP requirements. An example of such an initiative is the PIANOo site, a Dutch public procurement expertise center, which provides comprehensive information on sustainable public procurement (SPP). The information is prepared specifically for public purchasers and offers practical guidance and resources, plus details on the latest developments in the field of SPP. The EU Commission also provides online GPP criteria, Life-Cycle Costing tools, and SP Guidelines for individual categories. Finally, a comprehensive UNDP Guideline Note for Implementing Sustainable Health Procurement is available online.

Fourthly, the findings highlight the impact of higher costs associated with sustainable goods and services, the SPP Cost Factor, and its implications on public procurement decisions. This concern is critical, especially at the management levels of public institutions, which often face conflicting priorities between the service level expectations of local taxpayers, political visions, budget constraints, and the higher cost of SPP. The price concern is further exacerbated if budgets are allocated based on traditional lowest price methods. Additionally, local procurement entities operate in political environments where the priority may lean towards immediate and less costly solutions, securing quick wins before the next local election. These factors are realities facing procurement teams and limiting the space for spp. It is, therefore, important to acknowledge that cost matters in spp implementation, and as the world likely enters a post-covid-19 period of recession, cost will

likely matter even more. Under these circumstances, governments need to take a longer-term perspective and apply life cycle costing (lcc) when evaluating costs in tendering. A number of lcc tools and methodologies are available for specific goods and services, such as the smart spp guide and excel tool, or the clean fleets lcc tool for calculating lcc for vehicle purchases. Alternatively, governments can consider measures to overcome the potential short-term "price-gap" on key categories. These measures could be budget incentives, subsidizing green products like electric vehicles, increasing green taxes, or simply reducing subsidies on fuel and other commodities to allow a level playing field. Governments need to use more effectively outcome-based or performance-based sustainability specifications to better solicit innovation and introduce new technologies to meet sustainability targets. Examples and methodologies are available on the innovation procurement platform and the eu guidance for public authorities on public procurement of innovation.

FUTURE RESEARCH

As the demand for SPP implementation across all levels of government spending intensifies, further research is needed to identify context-specific barriers and opportunities, such as country income levels, organization types, maturity of national markets, and public sentiment. While some high-income countries have made significant progress, the extent of SPP implementation in low-income and middle-income countries remains unclear, as well as how public organizations are managing challenges related to cost, capacity gaps, and market availability. It is crucial to review best practices and lessons learned that can be adapted to middle- and lower-income contexts and identify priority interventions with the highest sustainability dividend. The UNEP's 2017 Global Review of Sustainable

Procurement serves as an important benchmark toward this objective (UNEP, 2017).

Moreover, understanding the scope of implementation across the broad SPP definition is essential, as findings suggest that while environmental considerations are widespread, social aspects of SP receive less attention (Gormly, 2014; UNEP, 2017). With emerging national legislation on human rights and forced labor in supply chains, such as the California Transparency in Supply Chains Act (2012), FAR (Federal Acquisition Regulation) Human Trafficking Rules (2015), UK Anti-slavery Act (2015), French Vigilance Law (2017), EU Non-Financial Reporting Directive (2018), Australian Modern Slavery Act 2018, and the mandatory EU human rights due diligence law expected to be in place by 2021, it is crucial that governments are similarly prepared to "walk the talk". Several guidelines

and toolkits on human rights due diligence are already available from organizations like the OECD, the Danish Institute of Human Rights, and a range of other organizations and NGOs. Additionally, reviewing the implications of SPP practices on corruption and malpractices, which continue to be a global drain on public spending, is critical for ensuring ongoing confidence in public procurement institutions and processes.

Overall, it is evident that the pursuit and implementation of SDG 12.7 are directly linked to the achievement of several other SDGs, including gender equality (SDG5), decent work and economic growth (SDG8), and all goals related to climate change and the environment. SDG 12.7 is therefore a significant influencer and accelerator of all SDG initiatives. As such, it is vital to embrace and mobilize the full potential of SPP in pursuit of the SDG 2030 Agenda.

ANNEX 1: LITERATURE REVIEW: BARRIERS FOR SPP IN PUBLIC INSTITUTIONS

Key Barriers & Constraints	SPP Constraints Literature
<p>Insufficient Policy Framework: Lack of legal framework, Inconsistent government policies, Inconsistent institutional legislation and implementation, Lack of Government Incentives, Lack of Policy commitment and action points, Lack of mandatory SP rules/legislation, Insufficient monitoring, and enforcement of SPP, Lack of inter-agency cooperation, Lack of outcome measures.</p>	<p>(Brammer & Walker, 2011), (Sourani & Sohail, 2011), (Oruezabala & Rico, 2012), (Serpell et al., 2013), (McMurray et al., 2014), (Ruparathna & Hewage, 2015), (Buniamin, Ahmad, Rauf, Johari, & Rashid, 2016), (Romodina & Silin, 2016), (Ahsan & Rahman, 2017), (Shen et al., 2017), (UNEP, 2017), (Durdyev et al., 2018), (Delmonico, Jabbour, et al., 2018), (Blanco-Portela et al., 2018), (Anees et al., 2018), (Adjei-Bamfo & Maloreh-Nyamekye, 2019), (Mabece, 2019), (Nyantakyi, 2019)</p>
<p>Lack of Management Commitment: Lack of high-level political buy-in and support, Lack of political will and budget constraints, Need for goals by upper management, Support from organizations leadership, Lack of policymakers' support.</p>	<p>(UNEP Environment Management Group, 2006), (Walker & Brammer, 2009), (Brammer & Walker, 2011), (Björklund, 2011), (McMurray et al., 2014), (Alberg Mosgaard, 2015), (Ahsan & Rahman, 2017), (Anees et al., 2018), (Blanco-Portela et al., 2018), (Delmonico, Jabbour, et al., 2018), (Adjei-Bamfo & Maloreh-Nyamekye, 2019)</p>
<p>Lack of an Institutional SPP Framework: Conflicts between the priorities of the purchasing process, Lack of clear organizational guidelines and strategic goals for the application of SPPs, Bureaucracy, Rigid organizational structures of Public Institutions, compartmentalized internal organizational structure, Lack of resources.</p>	<p>(Walker & Brammer, 2009), (Sourani & Sohail, 2011), (Serpell et al., 2013), (McMurray et al., 2014), (Gormly, 2014), (Alberg Mosgaard, 2015), (Ruparathna & Hewage, 2015), (Buniamin et al., 2016), (Ahsan & Rahman, 2017), (Iraldo & Barberio, 2017), (UNEP, 2017), (Aragão & Jabbour, 2017), (Delmonico, et al., 2018), (Blanco-Portela et al., 2018), (Anees et al., 2018), (Adjei-Bamfo & Maloreh-Nyamekye, 2019), (Liu, Xue, Yang, & Shi, 2019)</p>
<p>Organizational Culture, SPP Awareness & Behavioral Change Constraints: Organizational culture as a motivator, Reluctance to change, Lack of inclusion of SP in staff performance reviews, Lack of personal commitment to SP by staff.</p>	<p>(Walker & Brammer, 2009), (Lin & Ho, 2011), (Meehan & Bryde, 2011), (Sourani & Sohail, 2011), (Ruparathna & Hewage, 2015), (Grandia & Meehan, 2017), (UNEP, 2017), (Delmonico, Jabbour, et al., 2018), (Blanco-Portela et al., 2018), (Durdyev et al., 2018), (Blanco-Portela et al., 2018), (Liu et al., 2019)</p>
<p>Lack of Technical Capacity to Implement SPP processes: Shortage of professional staff, Inconsistent definitions of SP, Lack of expertise on SP implementation, Lack of SP Tools, Lack of understanding of SP Criteria, Complexity of SP concepts, Procurer Awareness, Limited capacity of stakeholders, Lack of training, Lack of information on SP practices, Lack of SP specifications, Lack of tools to measure life-cycle costs.</p>	<p>(Faith-Ell, Balfors, & Folkesson, 2006), (UNEP Environment Management Group, 2006), (Walker & Brammer, 2009), (Björklund, 2011), (Brammer & Walker, 2011), (Sourani & Sohail, 2011), (Testa et al., 2012a), (Zhu, Geng, & Sarkis, 2013), (McMurray et al., 2014), (Gormly, 2014), (Ruparathna & Hewage, 2015), (Romodina & Silin, 2016), (Aragão & Jabbour, 2017), (UNEP, 2017), (Delmonico, Jose, et al., 2018), (Durdyev et al., 2018), (Adjei-Bamfo & Maloreh-Nyamekye, 2019), (Anees et al., 2018), (Nyantakyi, 2019)</p>
<p>Supply Market Readiness: Supplier Knowledge, Supplier availability/awareness, Insufficient Integration between suppliers and purchasers, Supplier Knowledge & Awareness, Lack of sustainable products or services to purchase, Limited visibility into supply chains.</p>	<p>(UNEP Environment Management Group, 2006), (Walker & Brammer, 2009), (Sourani & Sohail, 2011), (Brammer & Walker, 2011), (McMurray et al., 2014), (Gormly, 2014), (Ruparathna & Hewage, 2015), (Alberg Mosgaard, 2015), (Ahsan & Rahman, 2017), (Shen et al., 2017), (UNEP, 2017), (Blanco-Portela et al., 2018), (Durdyev, et al 2018), (Anees et al., 2018)</p>
<p>Cost/Financing Constraints: Perception of higher cost of sustainable products, Long pay-back periods from sustainable practices, Reluctance of construction companies to invest sustainable designs, Cost of greener products, Price of green items an extra burden, Sufficient funds not available.</p>	<p>(Bouwer, et al, 2006), (Geng & Doberstein, 2008), (Walker & Brammer, 2009), (Brammer & Walker, 2011), (Zhu, Geng, & Sarkis, 2013b), (McMurray et al., 2014), (Alberg Mosgaard, 2015), (Ahsan & Rahman, 2017), (Shen et al., 2017), (Iraldo & Barberio, 2017), (UNEP, 2017), (Durdyev, Zavadskas, Thurnell, Banaitis, & Ihtiyar, 2018), (Delmonico, Jabbour, et al., 2018), (Anees et al., 2018), (Nyantakyi, 2019)</p>

REFERENCED WEBSITES AND OTHER USEFUL SPP RESOURCES

- The PIANOo site, is a Dutch public procurement expertise center, which provides comprehensive information on sustainable public procurement (SPP): <https://www.pianoo.nl/en/public-procurement-in-the-netherlands/sustainable-public-procurement-spp>.
- The UNEP Sustainable Public Procurement Implementation Guidelines provides a complete SPP implementation framework for organizations implementing sustainable public procurement: <http://www.unep.fr/scp/procurement/docsres/ProjectInfo/UNEPImplementationGuidelines.pdf>.
- The Procura+ Manual provides clear, easy-to-understand guidance for European public authority on how implement sustainable procurement: <https://procuraplus.org/manual/>.
- EU GPP criteria and Life-Cycle Costing tools and Guidelines for individual categories: <https://ec.europa.eu/environment/gpp/lcc.htm>.
- The UNDP Guidelines for Sustainable Procurement of Healthcare Commodities and Services supports the implementation of sustainable procurement of health care commodities and services: <https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/guidelines-for-sustainable-procurement-of-healthcare-commodities.html>.
- OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Industry: <https://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-Garment-Footwear.pdf>.
- OSCE Compendium of relevant reference materials and resources on ethical sourcing and prevention of trafficking in human beings for labor exploitation in supply chains: Second updated edition: <https://www.osce.org/cthb/450769>.
- Danish Institute of Human Right - Toolkit on Human Rights for Procurement Policy Makers and Practitioners: https://www.hrprocurementlab.org/wp-content/uploads/2020/03/DIHR_Toolkit_public-procurement_2020.pdf.
- The ISO 20400 Sustainable Procurement Guidance (2017) provides guidelines for organizations wanting to integrate sustainability into their procurement processes: <https://www.iso.org/news/2016/08/Ref2105.html>.
- ICLEI provides training and services to public authorities wanting to implement sustainable, innovation, and circular public procurement: <https://sustainable-procurement.org/resource-centre/>.
- The Innovation Procurement Platform provides links and resources to support implementation of innovation in public procurement processes: <https://innovation-procurement.org/>
- The EU Guidance on Public Procurement of Innovation supports application of public procurement innovation (PPI): <https://innovation-procurement.org/implementing-innovation-procurement/>

BIBLIOGRAPHY

- Adjei-Bamfo, P., & Maloreh-Nyamekye, T. (2019). The “baby steps” in mainstreaming sustainable public procurement in Ghana: A “double-agency” perspective. *Journal of Public Affairs*, 19(1), 1–16. <https://doi.org/10.1002/pa.1902>
- Ahsan, K., & Rahman, S. (2017). Green public procurement implementation challenges in Australian public healthcare sector. *Journal of Cleaner Production*, 152, 181–197. <https://doi.org/10.1016/j.jclepro.2017.03.055>
- Alberg Mosgaard, M. (2015). Improving the practices of green procurement of minor items. *Journal of Cleaner Production*, 90, 264–274. <https://doi.org/10.1016/j.jclepro.2014.11.077>
- Aldenius, M., & Khan, J. (2017). Strategic use of green public procurement in the bus sector: Challenges and opportunities. *Journal of Cleaner Production*, 164, 250–257. <https://doi.org/10.1016/j.jclepro.2017.06.196>
- Amann, M., Roehrich, J. K., Eßig, M., & Harland, C. (2014). Driving sustainable supply chain management in the public sector: The importance of public procurement in the European Union. *Supply Chain Management*, 19(3), 351–366. <https://doi.org/10.1108/SCM-12-2013-0447>
- Anees, S., Zaidi, H., Mehmood, F., Hou, F., & Umair, R. (2018). Socio-Economic Planning Sciences Addressing the sustainable development through sustainable procurement : What factors resist the implementation of sustainable procurement in Pakistan? *Socio-Economic Planning Sciences*, (October), 100671. <https://doi.org/10.1016/j.seps.2018.11.008>
- Aragão, C. G., & Jabbour, C. J. C. (2017). Green training for sustainable procurement? Insights from the Brazilian public sector. *Industrial and Commercial Training*, 49(1), 48–54. <https://doi.org/10.1108/ICT-07-2016-0043>
- Björklund, M. (2011). Influence from the business environment on environmental purchasing - Drivers and hinders of purchasing green transportation services. *Journal of Purchasing and Supply Management*, 17(1), 11–22. <https://doi.org/10.1016/j.pursup.2010.04.002>
- Blanco-Portela, N., R-Pertierra, L., Benayas, J., & Lozano, R. (2018). Sustainability leaders’ perceptions on the drivers for and the barriers to the integration of sustainability in Latin American Higher Education Institutions. *Sustainability (Switzerland)*, 10(8). <https://doi.org/10.3390/su10082954>
- Bloomberg Government. (2020). The top government contractors in FY19. Retrieved from BGOV200 website: <https://about.bgov.com/bgov200/>
- Bouwer, M., de Jong, K., Jonk, M., Berman, T., Bersani, R., Lusser, H., Nissinen, A., Parikka, K. and Szuppinger, P. (2006). *Green Public Procurement in Europe 2006*. Conclusions and recommendations. Haarlem: Virage.
- Brammer, S., & Walker, H. (2011). Sustainable procurement in the public sector: An international comparative study. *International Journal of Operations and Production Management*, 31(4), 452–476. <https://doi.org/10.1108/01443571111119551>
- Buniamin, S., Ahmad, N., Rauf, F. H. A., Johari, N. H., & Rashid, A. A. (2016). Green Government Procurement Practices (GGP) in Malaysian Public Enterprises. *Procedia Economics and Finance*, 35(16), 27–34. [https://doi.org/10.1016/s2212-5671\(16\)00006-x](https://doi.org/10.1016/s2212-5671(16)00006-x)
- CCGP. (2019). The Ministry of Finance announced that in 2018, the national government procurement data procurement scale reached 3586.14 billion yuan, an increase of 11.7% from the previous year. Retrieved from China Government Procurement Network website: http://www.ccgp.gov.cn/jdjc/fxyj/201909/t20190904_12826216.htm
- Da Costa, B. B. F., & Da Motta, A. L. T. S. (2019). Key factors hindering sustainable procurement in the Brazilian Public sector: A Delphi study. *International Journal of Sustainable Development and Planning*, 14(2), 152–171. <https://doi.org/10.2495/SDP-V14-N2-152-171>
- Delmonico, D., Jabbour, C. J. C., Pereira, S. C. F., de Sousa Jabbour, A. B. L., Renwick, D. W. S., & Thomé, A. M. T. (2018). Unveiling barriers to sustainable public procurement in emerging economies: Evidence from a leading sustainable supply chain initiative in Latin America. *Resources, Conservation and Recycling*, 134,

70–79. <https://doi.org/10.1016/j.resconrec.2018.02.033>

- Delmonico, D., Jose, C., Jabbour, C., Carla, S., Pereira, F., Beatriz, A., ... Renwick, S. (2018). Resources , Conservation & Recycling Unveiling barriers to sustainable public procurement in emerging economies : Evidence from a leading sustainable supply chain initiative in Latin America. *Resources, Conservation & Recycling*, 134(January), 70–79. <https://doi.org/10.1016/j.resconrec.2018.02.033>
- Diófási, O., & Valkó, L. (2014). Step by step towards mandatory green public procurement. *Periodica Polytechnica Social and Management Sciences*, 22(1), 21–27. <https://doi.org/10.3311/PPso.2151>
- Durdyev, S., Zavadskas, E. K., Thurnell, D., Banaitis, A., & Ihtiyar, A. (2018). Sustainable construction industry in Cambodia: Awareness, drivers and barriers. *Sustainability (Switzerland)*, 10(2), 1–19. <https://doi.org/10.3390/su10020392>
- Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management*, 8(1), 37–51. <https://doi.org/10.1002/tqem.3310080106>
- European Commission. (2020). Why public procurement is important. Retrieved from Internal Market, Industry, Entrepreneurship and SMEs website: https://ec.europa.eu/growth/single-market/public-procurement_en
- Faith-Ell, C., Balfors, B., & Folkesson, L. (2006). The application of environmental requirements in Swedish road maintenance contracts. *Journal of Cleaner Production*, 14(2), 163–171. <https://doi.org/10.1016/j.jclepro.2004.11.004>
- Federal Office for the Environment (FOEN). (2008). Marrakech Task Force on Sustainable Public Procurement (MTF on SPP). Retrieved from <http://www.unep.fr/scp/marrakech/taskforces/pdf/Procurement2.pdf>
- Gelderman, C. J., Ghijsen, P. W. T., & Brugman, M. J. (2006). Public procurement and EU tendering directives - Explaining non-compliance. *International Journal of Public Sector Management*, 19(7), 702–714. <https://doi.org/10.1108/09513550610704716>
- Geng, Y., & Doberstein, B. (2008). Greening government procurement in developing countries: Building capacity in China. *Journal of Environmental Management*, 88(4), 932–938. <https://doi.org/10.1016/j.jenvman.2007.04.016>
- Gormly, J. (2014). Challenges to Sustainable Procurement in Commercial Semi-States in Ireland. *Journal of Public Procurement*, 14(3), 395–445.
- Grandia, J., & Meehan, J. (2017). Public procurement as a policy tool: using procurement to reach desired outcomes in society. *International Journal of Public Sector Management*, 30(4), 302–309. <https://doi.org/10.1108/IJPSM-03-2017-0066>
- Hall, P., Löfgren, K., & Peters, G. (2016). Greening the Street-Level Procurer: Challenges in the Strongly Decentralized Swedish System. *Journal of Consumer Policy*, 39(4), 467–483. <https://doi.org/10.1007/s10603-015-9282-8>
- ICLEI. (2015). *The Procura+ Manual: A Guide to Implementing Sustainable Procurement*. 106. Retrieved from http://www.procuraplus.org/fileadmin/user_upload/Manual/Procuraplus_Manual_Third_Edition.pdf
- IPEA. (2018). Programs aim to insert micro and small companies in government procurement. Retrieved from IPEA Study on MSEs in public procurement website: https://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=34435%3Aprogramas-visam-inserir-micro-e-pequenas-empresas-nas-compras-governamentais&catid=6%3Adinte&directory=1&Itemid=1
- Iraldo, F., & Barberio, M. (2017). Drivers, barriers and benefits of the EU ecolabel in European companies' perception. *Sustainability (Switzerland)*, 9(5), 1–15. <https://doi.org/10.3390/su9050751>
- Lin, C. Y., & Ho, Y. H. (2011). Determinants of Green Practice Adoption for Logistics Companies in China. *Journal of Business Ethics*, 98(1), 67–83. <https://doi.org/10.1007/s10551-010-0535-9>

- Liu, J., Xue, J., Yang, L., & Shi, B. (2019). Enhancing green public procurement practices in local governments : Chinese evidence based on a new research framework. *Journal of Cleaner Production*, *211*, 842–854. <https://doi.org/10.1016/j.jclepro.2018.11.151>
- Mabece, S. (2019). The use of public procurement for Socio+economic Reform in Democratic South Africa: Triumphs and challenges two decades on. *Public Contract Law Journal*, *48*(2), 279–313.
- McCrudden, C. (2004). Using public procurement to achieve social outcomes. *Natural Resources Forum*, *28*(4), 257–267. <https://doi.org/10.1111/j.1477-8947.2004.00099.x>
- McMurray, A. J., Islam, M. M., Siwar, C., & Fien, J. (2014). Sustainable procurement in Malaysian organizations: Practices, barriers and opportunities. *Journal of Purchasing and Supply Management*, *20*(3), 195–207. <https://doi.org/10.1016/j.pursup.2014.02.005>
- Meehan, J., & Bryde, D. (2011). Sustainable procurement practice. *Business Strategy and the Environment*, *20*(2), 94–106. <https://doi.org/10.1002/bse.678>
- Michelsen, O., & Boer, L. De. (2009). Green procurement in Norway ; a survey of practices at the municipal and county level. *Journal of Environmental Management*, *91*(1), 160–167. <https://doi.org/10.1016/j.jenvman.2009.08.001>
- Nyantakyi, A. (2019). Preparing Today for Prosperity Tomorrow: Using Sustainable Public Procurement As a Tool for Development in Ghana. *Public Contract Law Journal*, *48*(2), 377–396. Retrieved from https://search.proquest.com/docview/2230609917?accountid=14744%0Ahttps://cbua-us.primo.exlibrisgroup.com/discovery/openurl?institution=34CUBA_US&vid=34CUBA_US:VU1&lang=es?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ
- OECD. (2017). Government at a Glance 2017. Retrieved from Government at a Glance website: https://www.oecd-ilibrary.org/governance/government-at-a-glance-2017_gov_glance-2017-en
- Oruezabala, G., & Rico, J. C. (2012). The impact of sustainable public procurement on supplier management - The case of French public hospitals. *Industrial Marketing Management*, *41*(4), 573–580. <https://doi.org/10.1016/j.indmarman.2012.04.004>
- Renukappa, S. (2014). Transformative Change Towards Sustainability: The Case of Abu Dhabi\nPublic Sector Organisation. *Proceedings of the 10th European Conference on Management Leadership and Governance*, (2009), 304–311.
- Roman, A. V. (2017). Institutionalizing sustainability: A structural equation model of sustainable procurement in US public agencies. *Journal of Cleaner Production*, *143*(February), 1048–1059. <https://doi.org/10.1016/j.jclepro.2016.12.014>
- Romodina, I., & Silin, M. (2016). Perspectives of Introduction Sustainable Procurement in Public Procurement in Russiae. *Oeconomia Copernicana Quarterly Journal*, *7*(1), 35–48. Retrieved from <http://dx.doi.org/10.12775/OeC.2015.003>
- Rüdenauer, I., Koch, Y., Möller, M., & Seebach, D. (2007). Costs and Benefits of Green Public Procurement in Europe - General Recommendations -. *Contract*, *49*(July).
- Ruparathna, R., & Hewage, K. (2015). Sustainable procurement in the Canadian construction industry: Current practices, drivers and opportunities. *Journal of Cleaner Production*, *109*(August 2014), 305–314. <https://doi.org/10.1016/j.jclepro.2015.07.007>
- Serpell, A., Kort, J., & Vera, S. (2013). Awareness, actions, drivers and barriers of sustainable construction in Chile. *Technological and Economic Development of Economy*, *19*(2), 272–288. <https://doi.org/10.3846/20294913.2013.798597>
- Shen, L., Zhang, Z., & Zhang, X. (2017). Key factors affecting green procurement in real estate development: a China study. *Journal of Cleaner Production*, *153*, 372–383. <https://doi.org/10.1016/j.jclepro.2016.02.021>
- Snider, K. F., Halpern, B. H., Rendon, R. G., & Kidalov, M. V. (2013). Corporate social responsibility and public

- procurement: How supplying government affects managerial orientations. *Journal of Purchasing and Supply Management*, 19(2), 63–72. <https://doi.org/10.1016/j.pursup.2013.01.001>
- Sourani, A., & Sohail, M. (2011). Barriers to addressing sustainable construction in public procurement strategies. *Proceedings of the Institution of Civil Engineers: Engineering Sustainability*, 164(4), 229–237. <https://doi.org/10.1680/ensu.2011.164.4.229>
- Testa, F., Iraldo, F., Frey, M., & Daddi, T. (2012a). What factors influence the uptake of GPP (green public procurement) practices? New evidence from an Italian survey. *Ecological Economics*, 82, 88–96. <https://doi.org/10.1016/j.ecolecon.2012.07.011>
- Testa, F., Iraldo, F., Frey, M., & Daddi, T. (2012b). What factors influence the uptake of GPP (green public procurement) practices? New evidence from an Italian survey. *Ecological Economics*, 82, 88–96. <https://doi.org/10.1016/j.ecolecon.2012.07.011>
- Thai, K. (2001). Public Procurement Re-examined. *Journal of Public Procurement*, 24(1998), 300.
- UK Sustainable Procurement Task Force. (2006). Securing the future. In *Print and Paper Monthly* (Vol. 18).
- UNEP. (2017). *Global review of sustainable public procurement*. United Nations Environment Programme. Retrieved from https://wedocs.unep.org/bitstream/handle/20.500.11822/20919/GlobalReview_Sust_Procurement.pdf?sequence=1&isAllowed=y
- UNEP Environment Management Group. (2006). *Sustainable Procurement in the UN System*.
- Walker, H., & Brammer, S. (2009). Sustainable procurement in the United Kingdom public sector. *Supply Chain Management*, 14(2), 128–137. <https://doi.org/10.1108/13598540910941993>
- Walker, H., & Brammer, S. (2012). The relationship between sustainable procurement and e-procurement in the public sector. *International Journal of Production Economics*, 140(1), 256–268. <https://doi.org/10.1016/j.ijpe.2012.01.008>
- Zhu, Q., Geng, Y., & Sarkis, J. (2013). Motivating green public procurement in China: An individual level perspective. *Journal of Environmental Management*, 126, 85–95. <https://doi.org/10.1016/j.jenvman.2013.04.009>



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