Advancing Green Purchasing in Slovak Municipalities



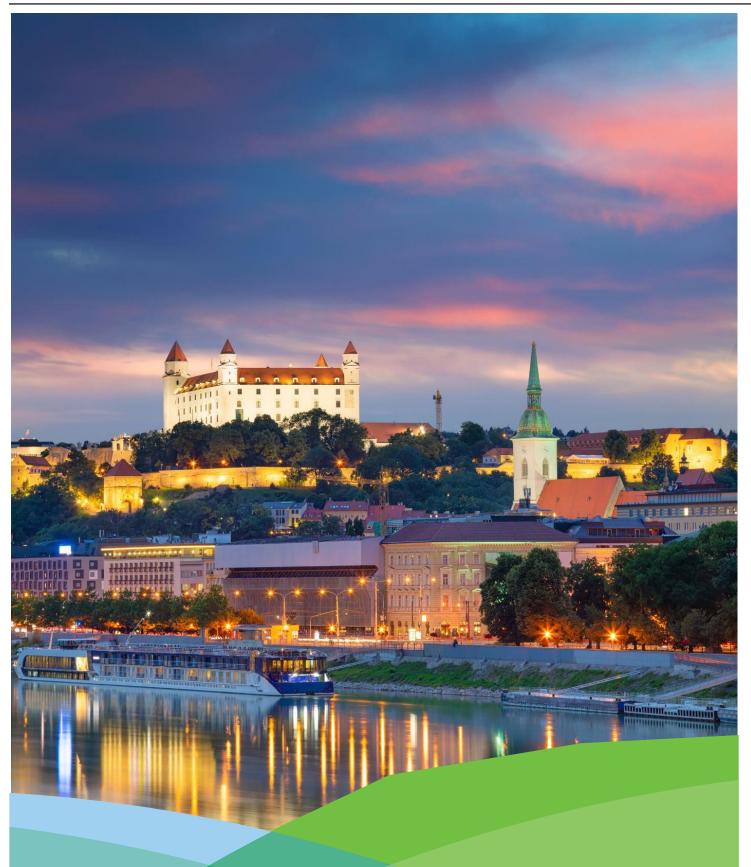
FAKULTA SOCIÁLNÍCH VĚD Univerzita Karlova

VŠB TECHNICKÁ ||||| UNIVERZITA OSTRAVA

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Executive Summary

The Slovak Republic spends approximately 12.5% of its GDP on public procurement. One of the main challenges of the public procurement system is transforming it from a mere instrument for securing purchases into a strategic component of public policies that aims to help society address today's grand challenges, such as global warming, energy crises, and post-COVID recovery.

Local governments play a crucial role in implementing green public procurement, especially in highly decentralized contexts like the Slovak Republic, which has around 2,890 municipalities. So far, we know very little about how green public procurement is applied at the local level. Our study is a collaborative effort involving researchers from the Sustainable Procurement Research Initiative at the Kogod School of Business and the School of Public Affairs at American University, Charles University, Ambis University, the Technical University of Ostrava, and Matej Bel University. The study aims to:

- Identify facilitators and barriers to adopting and implementing green purchasing policies in Slovak municipalities.
- Recommend actions for more effectively advancing green purchasing practices.

We surveyed 121 politicians and directors from the finance, acquisitions, general administration, municipal public services, and solid waste/environmental management departments across 2,891 municipalities and city districts. Due to the low response rate, some of the results are statistically insignificant. Nevertheless, we believe that our study can serve as an initial mapping of the real situation with green procurement at the local government level in Slovakia.

Our findings indicate that 31% of respondents report their city has a green purchasing policy. We found only a few statistically significant differences between organizations with green purchasing policies and those without.

The statistically significant differences were found in these areas: Organizations that adopt green purchasing policies are more likely to engage in interdepartmental discussions on sustainability in procurement and to implement initiatives that support small and medium-sized enterprises. They also establish targets for environmentally sustainable development, track expenditures on sustainable activities, provide employee sustainability training, and utilize environmental management systems.

Organizations that implement green purchasing policies prioritize the following environmental criteria: sustainability of offered products and services, disposal costs, and life cycle costs.

Among organizations with a green purchasing policy, 58% view it as successful. Statistically significant factors that enhance the likelihood of successful implementation of a green purchasing policy include: prioritizing environmental goals focused on reducing emissions and air pollution,



utilizing certificates and eco-labels for information, engaging all categories of employees in the implementation process, and rewarding employees who propose innovative solutions.

To encourage central and local governments to implement green public procurement, we offer the following recommendations:

- 1. Allocate the necessary human and financial resources to support the implementation of GPP at the municipal level.
- 2. Prepare clear and practical standards for different common types of GPP to guide implementation.
- **3.** Create a centralized information hub with resources, guidelines, and exemplary green contracts.
- **4.** Document and promote case studies from successful municipalities to inspire others.
- **5.** Collect and share examples of successful GPP implementation abroad to broaden the perspective.
- 6. Strengthen general procurement capacities at the local level through training, support services, and knowledge sharing.
- Introduce benchmarking tools tailored to municipality size to monitor and compare GPP.
- **8.** Target communication efforts at mayors to build political support for GPP.
- **9.** Identify and support local champions who can serve as role models.
- **10.** The goals have been set. Now it is time to start measuring them.

Research Collaboration

This report was developed in collaboration with researchers at the Faculty of Social Sciences of Charles University, Ambis University, a.s., VŠB Technical University, the Sustainable Procurement Research Initiative of Kogod School of Business and School of Public Affairs at American University, and the Matej Bel University.

The Faculty of Social Sciences of Charles University, Prague, Czech Republic, is the leading research institute in the field of social sciences in the Czech Republic. The faculty consists of 5 institutes: Institute of Economic Studies, Institute of Communication Studies and Journalism, Institute of International Studies, Institute of Political Studies, and Institute of Sociological Studies. The faculty currently has 4000 students.

AMBIS Vysoká škola, a. s. is a Czech private non-university college based in Prague, specializing in banking, economics, information technology, marketing, human resources management, and others.

For more than 175 years, VŠB —Technical University of Ostrava has connected technical, economic, natural science, and art disciplines in modern study programs that respond to today's real problems. It carries out basic and applied research at the highest level. Thanks to its tradition and cooperation with industry and several domestic and foreign universities in a wide range of sectors, it provides innovative solutions in many fields.

The Sustainable Procurement Research Initiative is a cross-university collaboration among researchers in American University's Kogod School of Business and School of Public Affairs and more than 10 universities across the globe.

Matej Bel University in Banská Bystrica, Slovakia, is a public university and a member of the European University Association. It provides high-quality higher education and continuing education in line with scientific developments and practical needs. The university is engaged in creative scientific and artistic research. Its Faculty of Economics is currently implementing a complementary research project funded by the APVV grant scheme titled *"Green Public Procurement as a Tool for Innovative Environmental Solutions."*

Please Share this Report

This report is designed to help municipalities integrate green purchasing into their procurement processes. Please share it widely among your professional networks. A physical copy of this report can be obtained via email:

Michal Plaček at michalplacek@seznam.cz

Additional Information

Please visit the American University's Sustainable Procurement Research Initiative (kogod.american.edu/sustainable-procurementresearch-initiative-home) for additional information about green purchasing, best practices, project updates, and related research papers. To learn more about Faculty of Social Sciences at Charles University visit fsv.cuni.cz

Authors

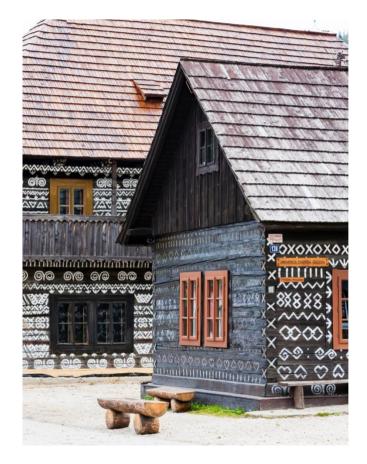
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Introduction

In 2023, Slovakia allocated approximately 12.5% of its GDP to public procurement, amounting to around EUR 14 billion.

In recent years, Slovakia's procurement system has introduced new legal obligations to foster sustainable public procurement. Under the 2022 amendment to the Public Procurement Act, contracting authorities that conduct at least ten procurement procedures per year (excluding lowvalue contracts) are required to include environmental or social considerations in at least 6% of those procedures. (Nemec et al. 2023) Despite this binding obligation, available data and analyses suggest that compliance remains limited. Instead, there is evidence of a continuing reliance on awarding contracts based primarily on the lowest price criterion, which undermines the transformative potential of sustainable procurement.

Numerous studies point out that the current system remains strongly oriented toward cost-efficiency, with an excessive emphasis on the lowest price criterion (Plaček et al., 2019; Rossel et al., 2024). This pattern, typical across many Central and Eastern European countries, represents a key barrier to harnessing public procurement as an effective public policy instrument.

Green public procurement illustrates this gap well. Although public sector activities are responsible for an estimated 40% of global emissions (Berhawesh et al., 2022), Slovakia has yet to fully leverage its potential to mitigate environmental impacts through procurement practice.

The Slovak Republic is a member of the European Union, and according to EU documents and policies, public procurement is an essential tool for the transformation towards sustainability (EU Commission, 2018). Green public procurement, therefore, not only aims to reduce negative environmental impacts, but can also make an important contribution to creating new markets and stimulating innovation. To fully harness the potential of green public procurement (GPP), it must be implemented consistently across all levels of government. In the municipal context, Slovakia faces particular challenges due to its high degree of decentralization. The country has a population of approximately 5.46 million spread across 2,891 municipalities, of which only 138 are classified as cities. This extreme fragmentation results in significant disparities in capacity and readiness to implement GPP.

Many small municipalities operate with minimal administrative structures, often consisting of just a mayor and one staff member responsible for the entire local agenda. In contrast, larger cities typically have dedicated procurement departments, qualified personnel, and even officers tasked with advancing sustainability goals. This imbalance creates uneven conditions for GPP implementation and limits the system-wide impact of national policy efforts.

Project Goals

To enhance the potential of green purchasing in Slovak municipalities, this report is guided by three project goals:

- **1.** Determine the facilitators and the barriers to the adoption and implementation of green purchasing policies in Slovak municipalities.
- 2. Recommend actions for advancing green purchasing practices more effectively.
- **3.** Encourage Slovak municipalities that lack green purchasing policies to implement them within their jurisdictions.

We combined the results of project goals 1 and 2 to develop a list of best practices that facilitate the implementation success of green purchasing policies.

We are sharing our findings through the following outlets:

- Discussion and sharing information with Slovak government institutions and agencies.
- Emails to professional organizations and international governance bodies that have agreed to distribute the report's findings to their network members.
- Emails to relevant media outlets with direct links to the report.

Additionally, we developed a project summary and professional articles that are posted to the Faculty of Social Sciences, Charles University, Ambis University, VŠB – Technical University Ostrava, Matej Bel University, and the Sustainable Procurement Research Initiative (kogod.american.edu/sustainable-procurement-research-initiative-home). These materials will be featured in social media posts via Twitter, Facebook, and LinkedIn.

Research Approach

To achieve our project goals, we reviewed existing research related to public green purchasing. We also developed our instrument based on the instrument applied in the United States (U.S.). The instrument was translated into the Slovak language and adapted so it could be applied in the context of Slovakia. This is why some of the presented alternatives vary from the original U.S. instrument.*

Based on the survey of U.S. cities, the instrument applied in the Slovak Republic addresses the following areas:

- Local government purchasing activities
- Local government environmental sustainability policies/practices
- Department-level policies/practices
- Department structure and culture
- Professional/personal information



Within these broader areas, questions covered topics including:

- The structure of purchasing decisions in a municipality
- Municipal-level purchasing policies and practices
- Department-level purchasing policies and practices
- Information on sustainable products
- Information on vendor relationships
- Influence of external groups (e.g. citizens, higher levels of government)

* Sources: Darnall, N., J.M. Stritch, S. Bretschneider, L. Hsueh , M. Duscha, J. Iles, W. No, J. Suarez, C. Burwell. 2017. *Advancing Green Purchasing in Local Governments*. Phoenix: Arizona State University, Center for Organization Research and Design, Sustainable Purchasing Research Initiative;

Darnall, N., J.M. Stritch, S. Bretschneider, L. Hsueh. 2017. *Local Government Green Purchasing Survey*. Phoenix: Arizona State University, Center for Organization Research and Design, Sustainable Purchasing Research Initiative.

Survey recipients

In earlier sections of this report, we mentioned the considerable heterogeneity of Slovak municipalities. This leads to significant differences in their organizational structure and the distribution of competencies in the field of sustainability and public procurement. This also indicates a notable difference from previous reports of the Sustainable Purchasing Research Initiative, such as allowing politicians to respond to the survey.

The following protocol was used to obtain department contacts within the Slovak municipalities:

- 1. We used the Slovak census list of all municipalities.
- 2. In Google, we used search words (e.g., name of a municipality) to find each municipality's official webpage or obtained it from state government websites.
- 3. Once a municipality webpage was found, we identified the relevant municipal department's webpage.
- 4. If the department director's contact information was available, we recorded the director's name, email address, phone number, and mailing address.
- 5. If the department director's information was not available, we made calls to the municipality to identify the person most appropriate to answer our survey or use the general contact email address.

Survey administration

We received responses from 121 participants, of which 38% were politicians at the mayor and deputy mayor levels, and 62% were civil servants. The breakdown among civil servants was as follows: 56% were office directors, department directors, or held lower-level management roles (such as lawyers, economists, grant managers, etc.), while 44% were administrators. 13% of all respondents had a doctoral degree, 55% held a master's degree, 3% had a bachelor's degree, 12% completed higher vocational education, and 19% had secondary education. The most common field of study is economics. The respondent sample was evenly split, consisting of 50% men and 50% women.

In terms of the size of the municipalities, the size structure of the respondents is as follows:

Municipality population (inhabitants)	Size structure of the respondents (%)
Less than 500	0,60
501-999	4,27
1,000-9,999	12,10
10,000-49,999	17,08
50,000 and over	18,51

Survey respondents also practice sustainable habits in their personal lives: 94% separate and recycle waste, 88% conserve energy at home, 95% save water at home, 64% purchase environmentally friendly products, 78% compost waste, and only 4% regularly donate money to environmental protection.



The final questionnaire had 38 questions and was distributed from September to December 2023. In the first distribution phase in September, all municipalities in the Slovak Republic were contacted. Due to the low return rate of the questionnaire in the first wave of outreach, we proceeded with the next wave of distribution, which took place in October and November. The questionnaire closed for responses in February 2024.

The following documents provide further information about our research approach. All documents are available at kogod.american.edu/sustainable-procurement-research-initiative-home.

The final Slovak survey

Measurement and Statistical Assessment

Consistent with the previous U.S. and Japan studies (Darnall et al. 2017, 2018), two survey questions formed the basis of our evaluation of the factors that impede or facilitate green purchasing within Slovak municipalities. The first question examined green purchasing policy adoption and asked, "To the best of your knowledge, has your municipality implemented a formal policy pertaining to the following purchasing issues?" Department directors were provided a list of policies, one of which was "Environmentally friendly purchasing." The following definition was provided:

Environmentally friendly purchasing is the set of activities undertaken by an organization to implement purchasing that reduces negative effects on the environment.

Department directors who answered "Yes" to this question were identified as individuals working in municipalities with a green purchasing policy. Those who answered "No" were identified as working in municipalities without a green purchasing policy.

The second survey question that guided our evaluation assessed department directors' views on the success of their green purchasing policies' implementation. For directors who responded "Yes" to the first question, we measured the success of implementation with this question: "We are interested in your overall assessment of the implementation of your municipality's environmentally friendly purchasing policy. How would you rate your municipality's overall implementation of this policy?"

Department directors responded on an 11-point scale with 5 representing "Very successful," 0 indicating "Neither successful nor unsuccessful," and -5 signifying "Very unsuccessful." For this report, we classified municipalities as having a "Successful" green purchasing policy by combining responses from 1 through 5. Policies considered "Less than successful" were identified by responses from 0 through -5. This success measure is perceptual and was chosen for several reasons. First, municipalities' green purchasing policies are highly diverse, differing in their level of formalization, scope, maturity, and other factors.

Responses to both questions were compared with all other survey responses using chi-square statistical tests. Our findings offer a preliminary assessment of the factors that facilitate the adoption of green purchasing policies and their implementation success. We must also highlight the potential limitations of our study. Firstly, the representativeness of the sample of respondents. This representativeness can be observed from an organizational perspective, where there are 2,891 municipalities, and we obtained responses from 121. This sample is not representative.

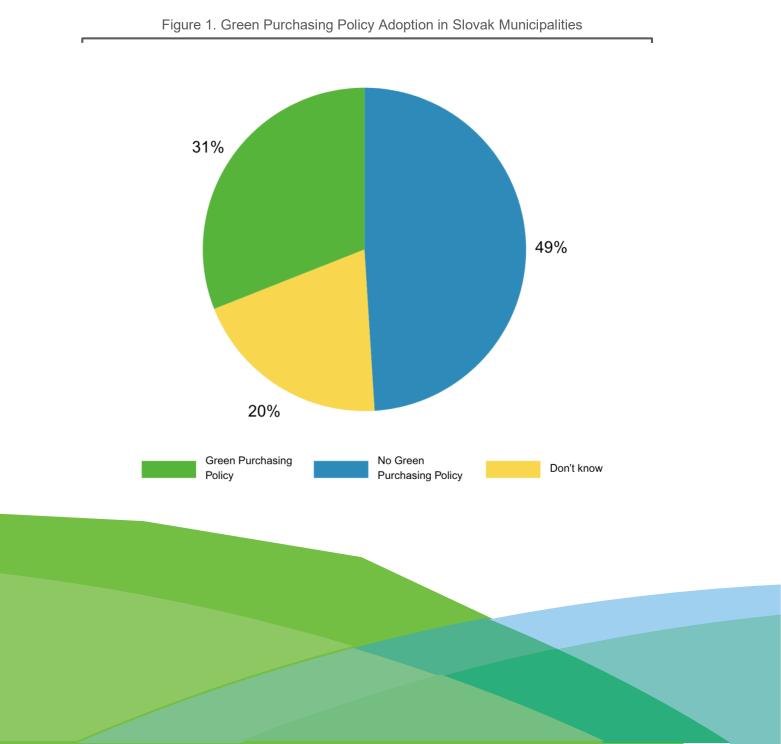
The second perspective concerns the representativeness of the population responsible for public procurement at the municipal level. We lack precise information on the size of this population or on the specific titles, functions, and responsibilities, as these positions can vary widely. Our results do not aim to establish causality. The low response rate at the organizational level (4.19% of all organizations) also impacts the statistical significance of the findings. This mainly relates to the significance of differences between organizations that report having a green purchasing policy and those that do not. Most response differences are not statistically significant at the 1%, 5%, or 10% levels.

We must highlight several possible biases. First, it may be self-selection bias. Representatives of municipalities that have a positive relationship with green public procurement may respond to surveys. The second type of bias may be social desirability bias, in which respondents choose options that they consider socially desirable.

Green Purchasing in Slovak Municipalities

Green purchasing policies consist of formal policies such as legal frameworks, ordinances, executive orders, resolutions, and administrative directives. They also include fewer formal approaches that involve adding green purchasing criteria to existing or complementary policies (e.g., a sustainability plan or an energy conservation policy).

In our sample of respondents (politicians and civil servants), 31% answered that their organization has some form of green purchasing policy (plans, procedures, etc.), 49% said that their organization does not have any, and 20% answered "I do not know" (see Figure 1). This answer may indicate that the organization also does not have a green purchasing policy because if one existed, we can assume that the responsible staff would be familiar with it.



Which Factors Impede or Facilitate Green Purchasing Policy Adoption?

As mentioned in the methodology section, due to the sample size, it was difficult to identify statistically significant differences between organizations with green policies and those without, so we decided to compare the organizations. We conducted the comparison using the same structure as the report 'Advancing Green Purchasing in Czech Municipalities.' This approach also allows us to compare the two countries.

Factors of interest:

- 1. Complementary policies and practices
- 2. Purchasing criteria
- 3. Information access
- 4. Leadership, employees, and resources
- 5. Vendor roles
- 1. Complementary policies and practices

Complementary policies and practices are existing organizational activities that can support green purchasing. They can help reduce the costs of adopting green purchasing policies because organizations with complementary policies and practices already have a foundation to build green purchasing programs. Complementary policies and practices also help motivate management commitment and create shared vision around similar issues.

We asked department directors several questions about their municipality's complementary policies and practices, the first of which was, **"To the best of your knowledge, does your municipality have any of the following?"**

Respondents were presented with a list of complementary policies and practices. Figure 2 describes those found to be statistically significant in the survey.

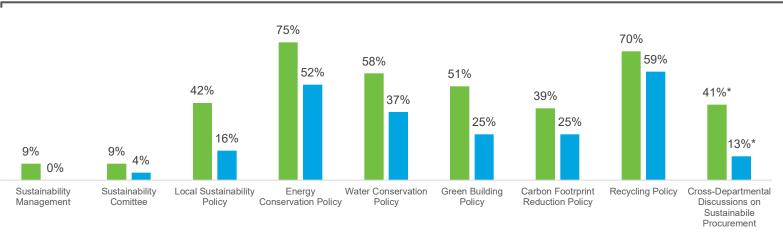


Figure 2. Complementary Sustainability Policies and Practices

Green Purchasing Policy No Gre

No Green Purchasing Policy

The results show only one statistically significant difference between municipalities with a green purchasing policy and those without one. A larger proportion of organizations with a green purchasing policy hold regular meetings between different departments focused on green purchasing.

Differences are also observed in the use of all other related policies. Organizations with green purchasing policies utilize instruments such as sustainability managers, sustainability committees, municipal sustainability policies, energy-saving policies, water-saving policies, green building policies, carbon footprint reduction policies, and recycling policies more frequently. However, these differences are not statistically significant.

Overall, recycling policies, carbon footprint reduction policies, green building policies, water-saving policies, and energy-saving policies are the most commonly adopted across organizations. Conversely, sustainability managers and sustainability committees are the least frequently used.

To explore issues related to more socially oriented complementary policies, department directors were asked, "To the best of your knowledge, has your municipality implemented a formal policy pertaining to any of the following purchasing issues?"

Figure 3 shows differences in all responses between respondents with and without a green purchasing policy.

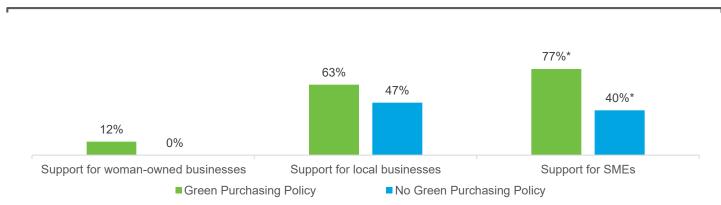


Figure 3: Socially oriented complementary policies

We found statistically significant differences between organizations with green purchasing policies and those without in supporting small and medium-sized enterprises. Seventy-seven percent of organizations with a green purchasing policy support small and medium-sized enterprises, compared to 40% of organizations without such a policy.

No statistical differences were found in supporting local businesses, although 63% of organizations with a green purchasing policy support local businesses, versus 40% of those without.

Support for women-owned businesses is nearly absent in our sample.

In addition to asking about complementary policies, we examined municipalities' complementary environmental practices. Respondents were asked, "Please indicate whether the following environmental practices have been implemented or adopted throughout your municipality." Our respondents were presented with a list of options. Figure 4 presents the results.

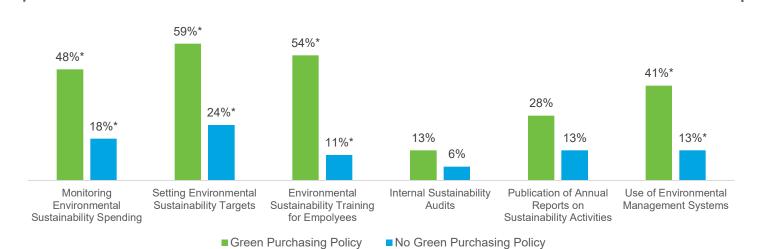


Figure 4: Environmental policies adopted by the Slovak municipalities.

Organizations with a green purchasing policy differ statistically significantly from other organizations in that a higher proportion of them monitor expenditure on environmental policies (48% vs. 18%), set targets for environmentally sustainable development (59% vs. 24%), train employees in environmental sustainability (54%) vs. 11%), and use environmental management systems (41% vs. 13%). Conversely, there are no statistically significant differences among organizations regarding internal audits focused on sustainability (13% vs. 6%) and the publication of annual sustainability reports (28% vs. 13%).

The final area we assessed focused on complementary policies and practices that were related to the more technical aspects of purchasing. Department directors were asked, "To the best of your knowledge, has your municipality implemented the following purchasing activities?"

Our analysis found no statistically significant differences between organizations with green purchasing policies and those without. Organizations widely use e-auctions, while shared procurement is used occasionally in some municipalities.

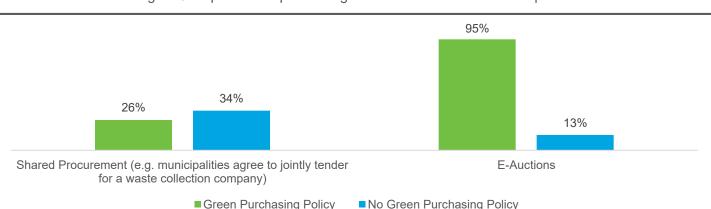


Figure 5: Implemented purchasing activities in the Slovak municipalities

No Green Purchasing Policy

2. Purchasing criteria

Purchasing criteria are the factors individuals consider when deciding to buy a good or service. Department directors were asked, "In thinking about your department's purchasing criteria, how important is each of the following characteristics of a product or service?"

Respondents were given a sheet of criteria to rank from not important to critical (1 being the least important and 5 being very important). This approach allows us to compare the perceived importance of criteria among respondents who have or have not implemented a green purchasing policy, as well as to compare the importance of each criterion against others.





Respondents perceive environmental criteria as less important than other factors, such as price, previous experience with suppliers, supplier qualifications, and relationship with the supplier. We did not identify statistically significant differences in the perceived importance of these criteria between organizations with and without a green purchasing policy. It is important to emphasize that the preference for price over other purchasing criteria is particularly significant in the Slovak Republic. Thus, contracting authorities still favor the lowest price criterion above others.

To understand the use of environmental criteria in more detail, we asked respondents the following question, "How important or not important are the following aspects in your purchasing decisions in your village/town?"

Respondents received a list of environmental criteria to rate by importance, from least important (value 1) to most important (value 5). We found statistically significant differences in how respondents perceived the importance of the following sustainability criteria between those whose organizations had a green purchasing policy and those without one: sustainability of products and services offered, product disposal costs, and life cycle costs.

There are statistically insignificant differences between organizations with and without a green purchasing policy regarding reduction of packaging waste, recyclability, and reduction in emissions.



Figure 7. Importance of Environmental Criteria

The differences in how respondents perceive the importance of individual items are minimal. Respondents view the sustainability of products and services as the most important environmental criterion, while reductions in emissions are considered the least important.

To explore the importance of environmental concerns related to specific purchasing categories, we asked department directors, "Within your department, how important are environmental sustainability concerns to the purchasing of the following types of products and services?"

Respondents were presented with a list of product and service categories. They rated the importance of environmental criteria on a scale of one to five, with 1 being the least important and 5 being the most important.

Figure 8 shows the results. Across all product categories, respondents with green purchasing policies indicated that environmental concerns were more important than for those in municipalities without such policies. However, we found statistically significant differences only in the professional services category.

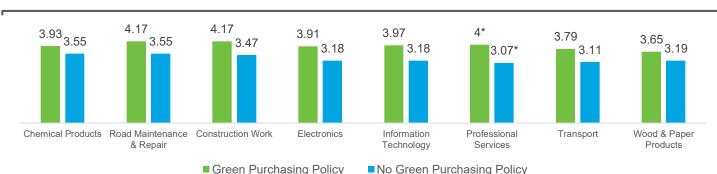


Figure 8. Importance of Environmental Concerns on Specific Products

In the next question, we focused on the importance of the technical specifications of the contract. We asked respondents the following question: *How important is the technical specification of the subject matter of the contract when you are dealing with the following situations?* Respondents rated the importance of technical specifications in various situations, scoring from least important (1) to very important (5). We did not find statistically significant differences in how organizations with a green purchasing policy perceived the importance of technical specifications compared to those without.



Figure 9. Importance of Technical Specification

The results show that all groups of respondents consider technical specifications to be most important when purchasing complex products.

3. Information access

Information can influence purchasing decisions and outcomes. For this reason, we asked department directors about their access to specific information sources: "Departments may use different sources when making purchases. Please indicate whether each of the following information sources is available to your department when making purchasing decisions."

In responses to this question, we did not find any statistically significant differences between respondents from organizations with a green purchasing policy and those from organizations without one. The largest share of organizations use certificates and ecolabels (82% vs. 63%), followed by information on the environmental impact of products (65% vs. 40%), while a very small share of organizations use a catalogue of social enterprises (37% vs. 27%).

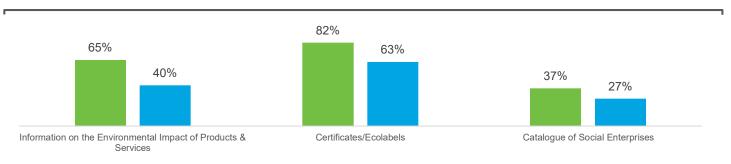


Figure 10. Information Sources Available to Departments When Making Purchasing Decisions

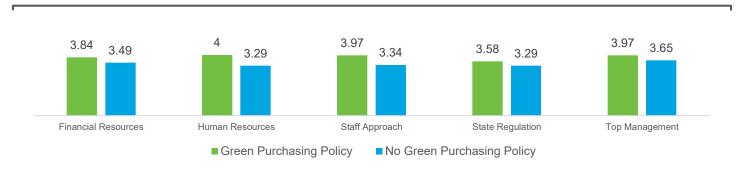
Green Purchasing Policy No Green Purchasing Policy



4. Leadership, employees, and resources

Leadership, employees, and resources are often cited as critical elements in the adoption of organizational policies. Respondents were asked, **"In your view, to what extent does each of the following either constrain or facilitate your department's ability to implement environmentally sustainable purchasing?"** Respondents were asked to rate each factor in order of importance, assigning a score of 1 to the least important factor and a score of 5 to the most important factor.

We were unable to find statistically significant differences between responses from organizations with a green purchasing policy and those without one. Respondents generally consider all categories equally important.





To get more details about the internal organization of purchasing processes, we asked respondents the following question: "There are several ways in which cities and municipalities purchase goods and services. Please rate your agreement on the following scale - strongly agree - strongly disagree."

We did not find any statistically significant differences in the responses between organizations with green purchasing policies and those without in this question either. Both groups most agree that individual departments cooperate during the purchasing process and that purchasing is coordinated by management. The lowest level of agreement is with the statement that purchasing is organized by the finance department.

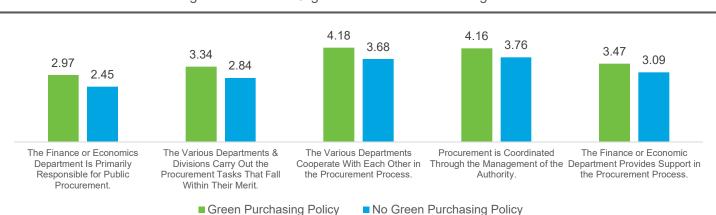
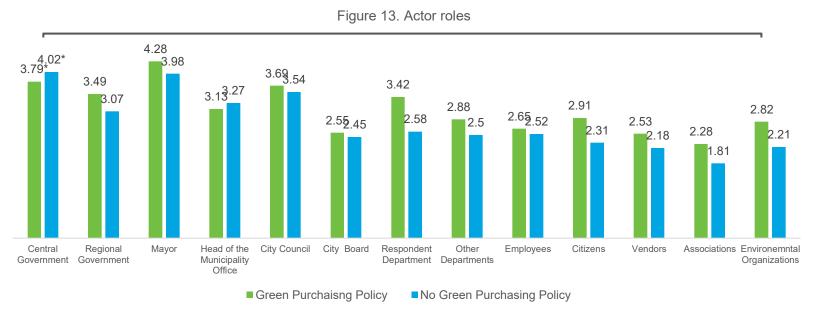


Figure 12. Internal Organization of the Purchasing Process

The next question was: **"In your opinion, what influence do the following actors have on the implementation of sustainable public procurement in your municipality?"** Respondents were asked to rate each actor in order of importance, assigning a score of 1 to the least important factor and a score of 5 to the most important.

We found only one statistically significant difference between respondents from organizations with green purchasing policies and those without, specifically regarding the importance of the central government. Respondents from organizations without green purchasing policies consider the central government to be more important than those with green policies. Both groups agree that mayors are the most important, while business associations, environmental organizations, and vendors are viewed as the least important.



5. Vendor roles

"Vendor roles" refer to how municipalities engage with their vendors over time. We asked respondents about their department's vendor roles using the following survey question: "In thinking about your relationships with vendors, to what extent do you disagree or agree with the following statements about procurement/purchasing in your department?"

We asked respondents to express their level of agreement with each statement. The agreement scale ranged from strongly agree, agree, don't know, disagree, and strongly disagree.

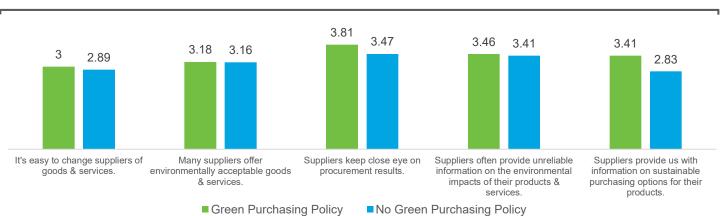


Figure 14. Vendor Roles

In the responses, we found no statistically significant differences between respondents from organizations with a green procurement policy and those from organizations without a green public procurement policy. Across the groups surveyed, respondents most strongly agree that suppliers monitor tender results and that suppliers often do not provide reliable information.

What Factors Influence Green Purchasing Implementation Success?

Adopting a green purchasing policy does not necessarily mean that its implementation is successful. 31% of our survey respondents said their organization had implemented a green purchasing policy (green color on the chart), 49% of respondents said they had not implemented a green purchasing policy (blue color), 20% of respondents said they did not know if their organization had implemented a green purchasing policy. In the next question, we asked respondents from organizations that had implemented a green purchasing policy to rate the success of the policy's implementation. Of the respondents, 58% stated they considered the implementation successful, and 42% could not judge its success or consider the implementation successful.

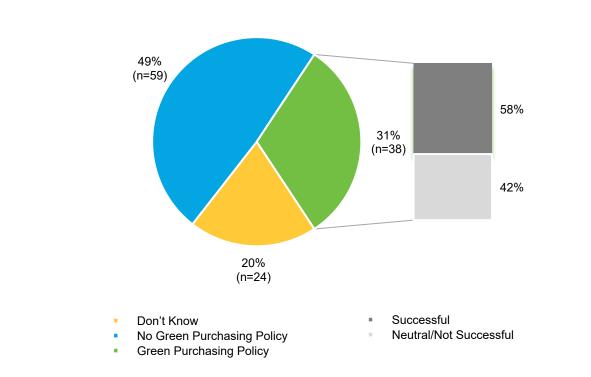


Figure 12. Green Purchasing Policy Adoption and Implementation Success

To determine the factors associated with the success of green purchasing policy implementation, we examined their presence in various activities and policies. From this analysis, we identified several key practices and activities linked to the likelihood of implementation success. Practices marked with (*) are connected to the successful implementation of green purchasing policy.

- 1. Complementary policies and practices
- 2. Information access
- 3. Leadership and implementation responsibilities
- 4. Vendor roles
- 5. Innovation culture

1. Complementary Policies and Practices

As discussed earlier, complementary policies and practices are formalized procedures that facilitate green purchasing and thus increase their likely success because similar internal capabilities are needed to manage both types of activities. They also create management commitment and shared vision around similar issues, thus embedding green purchasing deeper into a municipality's routine operations.

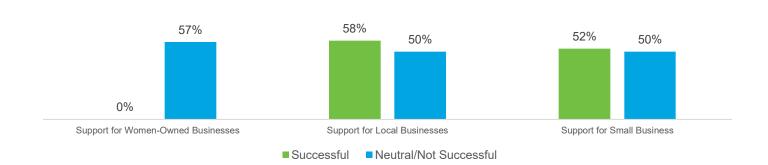
We first focused on complementary policies that could support the successful implementation of a green purchasing policy. We compared the responses of those who successfully implemented the policy with those who did not. We did not find any statistically significant differences; however, successful implementers are more likely to set environmental sustainability targets and conduct internal sustainability audits. There are also minor differences in monitoring environmental sustainability spending and the use of environmental management systems.



Figure 13. Probability of Successful Implementation of Green Purchasing Policy, Given Municipality Practices

In the next question, we focused on the existence of socially oriented policies. We tested whether these policies are associated with the successful or unsuccessful implementation of green purchasing policies. We asked our respondents if they were implementing policies to support women-owned businesses, local businesses, and small businesses. A larger proportion of unsuccessful implementers have policies for women-owned businesses. These results are inconsistent.





Next, we focused on the level of internal environmental priorities. We identified a statistically significant connection with the reduction of emissions and reduction of air pollution. In other cases, such as energy savings, waste reduction, emission reduction, and recycling, we did not find statistically significant associations. We must again point out that the results are influenced by the sample size.

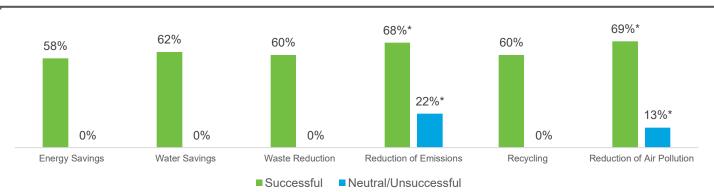


Figure 15. Probability of Successful Implementation of Green Purchasing Policy, Given Municipality Environmental Priorities

2. Information Access

Respondents were asked about the sources from which they obtained information relevant to purchasing products and services. They were given the following options: ecolabels/certificates, social enterprise catalogs, and price. We found a statistically significant effect of using certificates and ecolabels. Unsuccessful implementers rely more on price information.

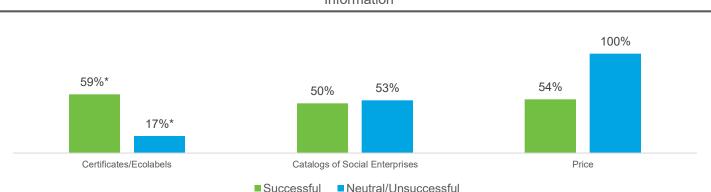


Figure 16. Probability of Successful Implementation of Green Purchasing Policy, Given Access to Types of Information

3. Leadership and Implementation Responsibilities

Studies on the implementation of green public procurement in the Slovak context often undermine the role of top management. Organizations engage in green public procurement because top management deems it important. It is interesting to observe how the involvement of various management levels in an organization affects implementation success. We asked respondents about the importance of top management, middle management, and rank-and-file employees.

We found a statistically significant effect from the involvement of top management, middle management, and employees at all levels. In general, a higher proportion of successful implementers recognize the importance of all employee categories.

Figure 17. Probability of Successful Implementation of Green Purchasing Policy, Given Perceptions of Locus of Responsibility



4. Vendor Roles

The roles of vendors are critical for a municipality's adoption and effective implementation of a green purchasing policy. We asked respondents to express their level of agreement or disagreement with statements about suppliers. We inquired whether it is easy to switch suppliers, whether suppliers offer enough environmentally friendly products, or if they provide information about the sustainability of their products. We also wanted to know whether suppliers are proactive and monitor tender results. The findings were surprising. A statistically significant factor linked to successful implementation is the realization that suppliers often provide unreliable information about the environmental impact of products and services.

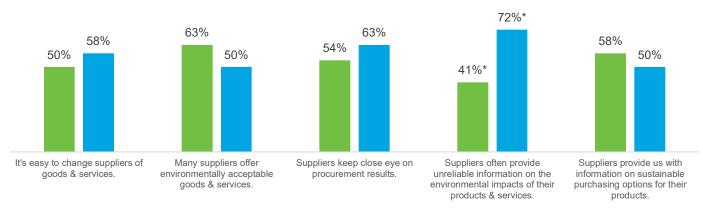


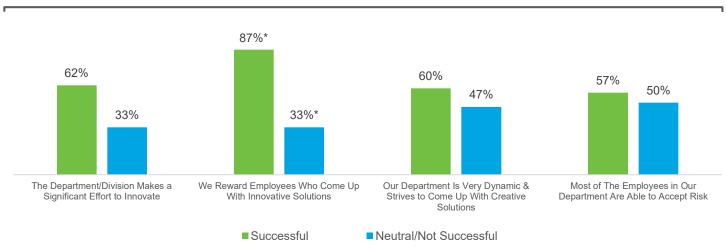
Figure 18. Probability of Successful Implementation of Green Purchasing Policy, Given Vendor Roles

Successful Neutral/Unsuccessful

5. Innovation Culture

The section on innovation and culture within the organization yielded very interesting results. Respondents were asked about their level of agreement with the following characteristics of their department: a drive for innovation, rewarding innovative employees, the department's commitment to delivering creative solutions, and acceptance of risk. A statistically significant factor associated with successful implementation is rewarding employees who come up with innovative solutions.

Figure 19. Probability of Successful Implementation of Green Purchasing Policy, Given Perception of Innovation Culture





10 actions to advance green public procurement in Slovak municipalities

- 1. Allocate the necessary human and financial resources to support the implementation of GPP at the municipal level.
- 2. Prepare clear and practical standards for different types of GPP to guide implementation.
- 3. Create a centralized information hub with resources, guidelines, and exemplary green contracts.
- 4. Document and promote case studies from successful municipalities to inspire others.
- 5. Collect and share examples of successful GPP implementation abroad to broaden the perspective.
- 6. Strengthen general procurement capacities at the local level through training, support services, and knowledge sharing.
- 7. Introduce benchmarking tools tailored to municipality size to monitor and compare GPP.
- 8. Target communication efforts at mayors to build political support for GPP.
- 9. Identify and support local champions who can serve as role models.
- 10. The goals have been set. Now it is time to start measuring them.



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Additional Resources

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