

Tackling Climate Change through Green Public Procurement



April 2026

Why green public procurement is important?

- There is **little evidence** on how green public procurement (GPP) policies can contribute to achieve climate goals of countries. A few empirical papers have been published:
 - GPP awards **increase the probability of introducing more environmental production elements** in SMEs.
 - **Winning green contracts reduce emission relative to firm size and increase productivity. These effects persist in the long run.**
 - In a comparison of emissions of three stages of the production chain of school feeding policies in Turin was found that the **production stage produces more emission than distribution or provisioning.**

GHG imputed to government purchases account for **3% of the total GHG** emissions for direct activities (purchases) while the indirect activities (emissions generated by the suppliers) account for **12%**.

Why there is a little evidence on effects of GPP on the environment?

- **Large heterogeneity** of products and services purchased by entities.
- Measuring effectiveness implies the use of a **variety of data sources**
- **Establishing causality** of environmental impact into a contract is complex and difficult.

Generate evidence on the effectiveness of GPP policies allows:

- **Estimate the impact of GPP** on environment and the market.
- **Evaluate the GPP policies** on firm's carbon emission.
- **Evaluate whether GPP** is a cost-effective industrial policy.
- **Identify the best instruments** to implement the reforms.

Green Public Procurement Stages



Why we implement GPP?

- Objectives set the direction for GPP reforms.
- Indicators monitor performance
- **Prioritization** determines the scope of application and targeting of GPP practices.

Regulation – product bans, fines, environmental standards, recycling schemes, mandatory

- **Product Bans:** Prohibitions on resources and products with adverse environmental impacts.
- **Fines:** Penalties for non-compliance with environmental regulations.
- **Environmental Standards:** Resource, energy use, production, waste management, pollution control.
- **Recycling Schemes:** Deposit-refund Schemes.
- **Mandatory Product Liability:** Extend producers' and suppliers for products.

The enabling framework provides the institutional support to drive GPP reforms.

- **Regulation:** A comprehensive GPP regulatory framework
- **Reporting** Information on implementation impact.
- **Capacity Building** Awareness raising across stakeholders.
- **Technical Support:** Manuals and guidance materials.

Operational tools simplify the choice of buying green and reduce barriers on procurers.

- **Environmental Criteria** applied in procurement stages.
- **Ecolabelling Schemes** simplify environmental requirements.
- **Life-Cycle Costing (LCC):** Simplified frameworks for priority impacts.

- **Monitoring Compliance**
- **Measuring the Effects on the Market and the Environment.**
- **Integrating Measurement into the Electronic Procurement System**

Monitoring and measuring



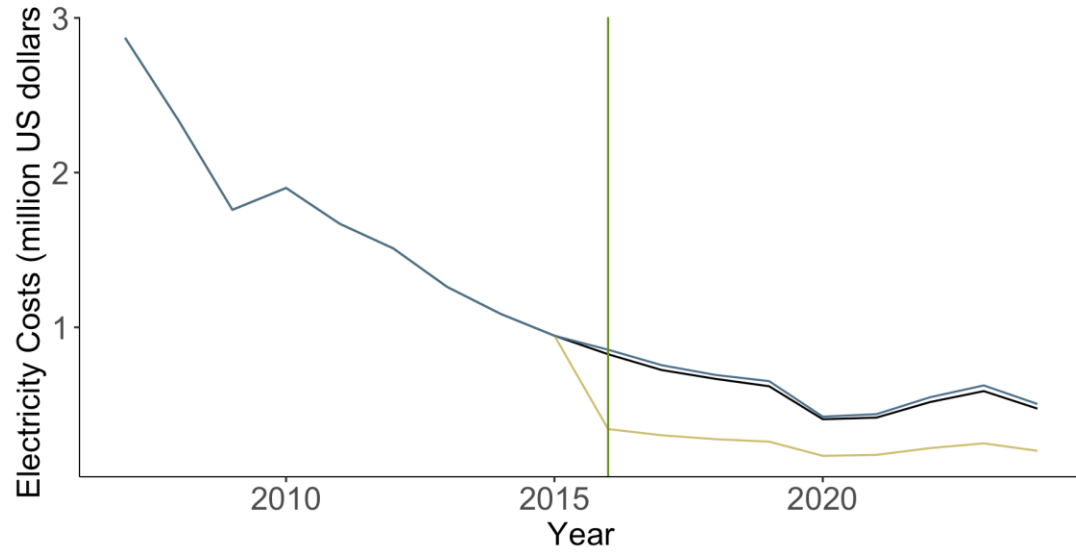
The analysis allows to evaluate the strengths and weakness of the policy to maximize its contribution to address climate change.

- Measuring the effects of GPP on the environment is the first step to make policy decision on how to tackle climate change through public procurement.

What is needed to measure?

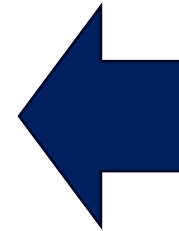
- **Procurement transaction data**
- **Environmental impact** data on needed outcomes (i.e. deforestation, water level, electricity consumption, GHG emissions, etc.)

Examples of outputs from analysis II

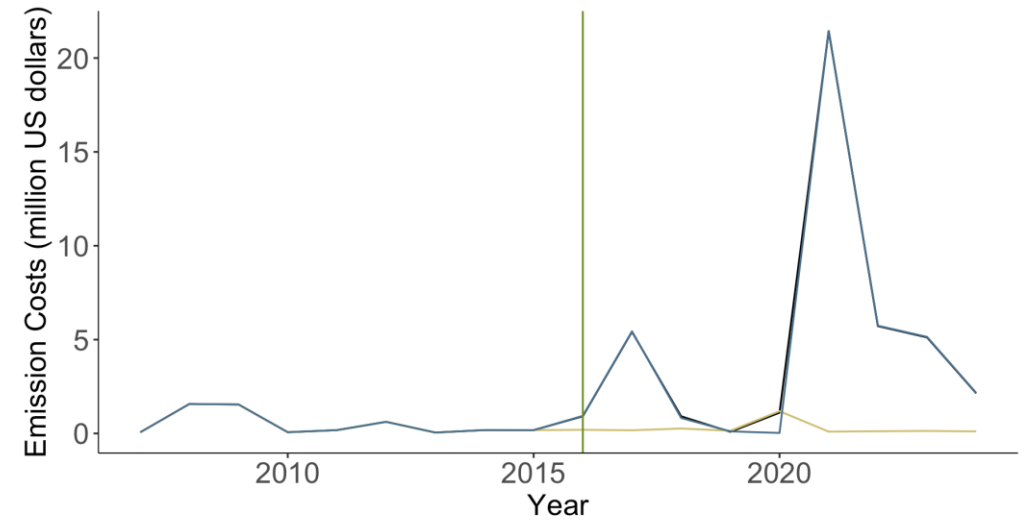


- Actual Electricity Costs
- Electricity Costs With Full GPP Compliance
- Electricity Costs With No GPP Compliance

Emissions cost are larger under mandatory policy

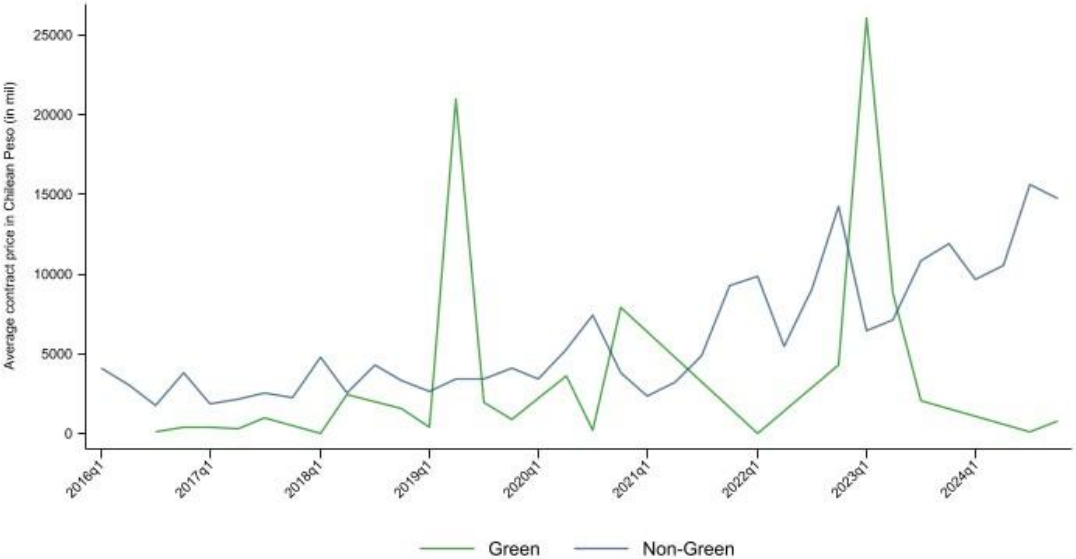


Large gains in electricity savings if policy becomes mandatory.



- Actual Emission Costs
- Emission Costs With Full GPP Compliance
- Emission Costs With No GPP Compliance

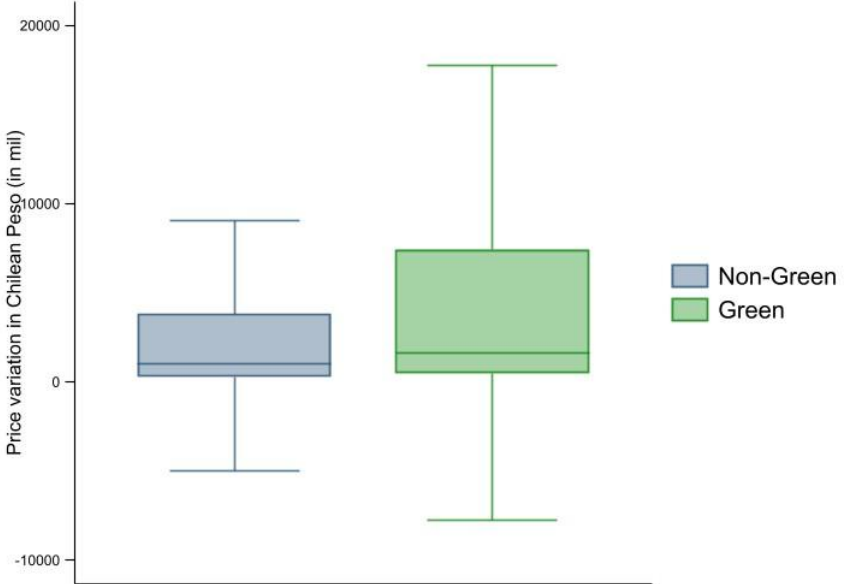
Examples of outputs from analysis V



Price is reported at unit measurement level.
Unit price has been gathered in three levels: unit (1), box (12 units) and large boxes (24 units)
13 outliers have been dropped

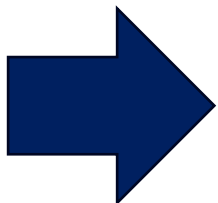


Variation in prices over time.



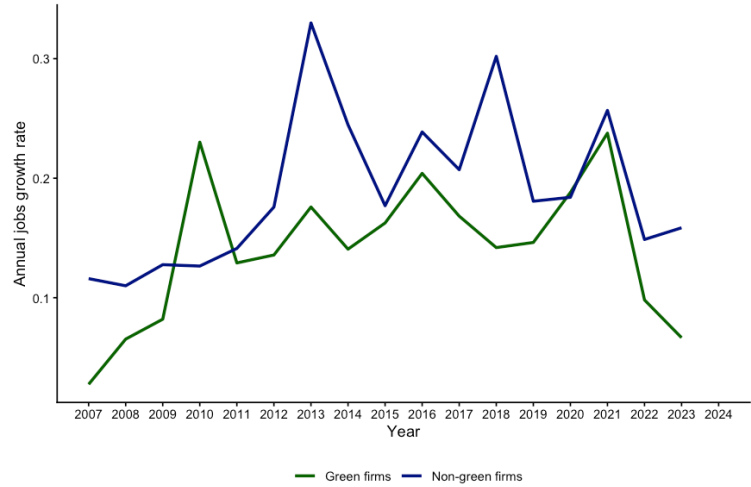
Outliers dropped. Values above 1.5 times the IQR (the height of the box) above the upper quartile (75th percentile) or below the lower quartile (25th percentile) dropped

Price estimation variation
(difference between budgeted
and executed).

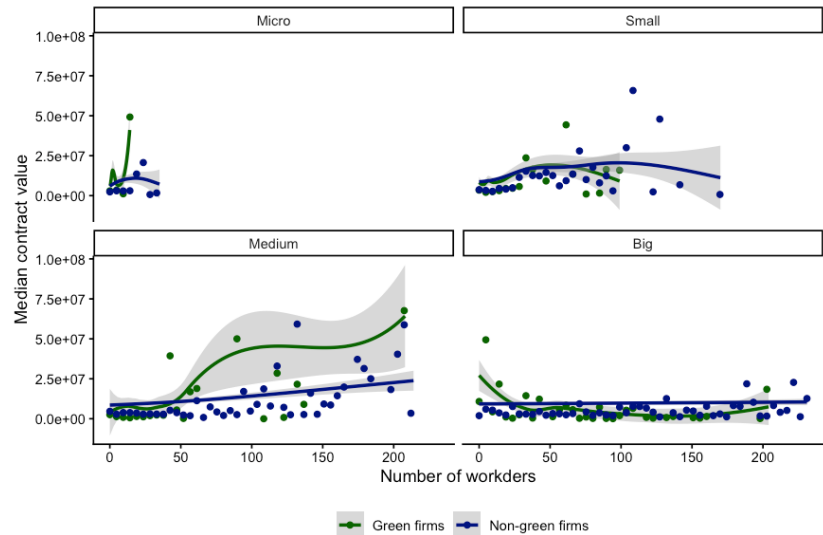
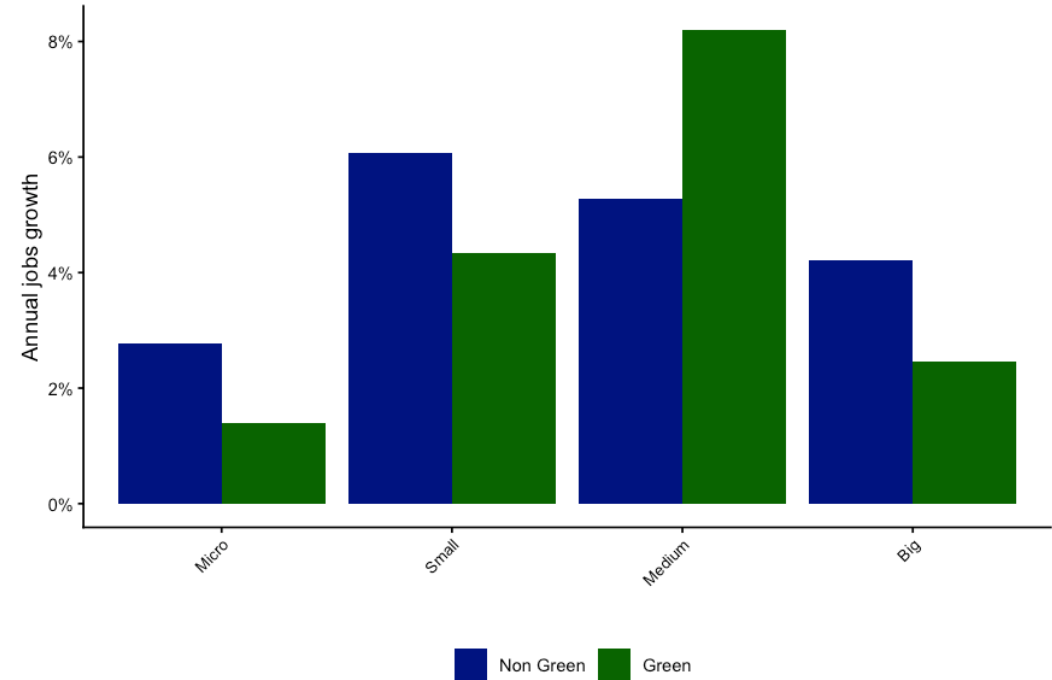


Examples of outputs from analysis VI- *Jobs creation*

Annual growth of jobs over time



Growth of jobs by size of company

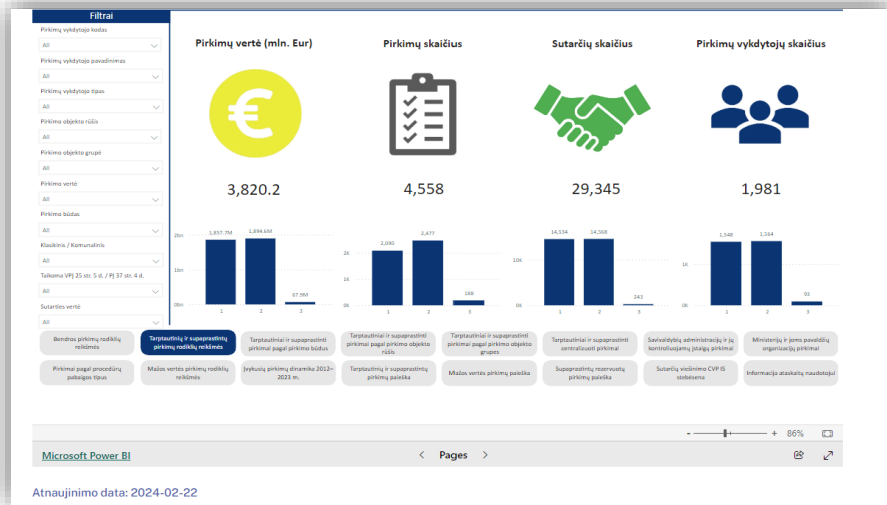


Component – Non-functional prototype



- Develop a **technical non-functional prototype** to integrate the methodology into the eGP system to:
 - **Systematize the measurement** of the GPP effects
 - **Monitor the GPP effects** in real time
- **What is needed?**
 - Feasibility of the electronic procurement system to integrate outsources data
 - Technical team from procurement authorities to integrate the system

Examples of data presentation



Ex-ante tool to evaluate bidders for mandatory products (Latvia)

Time limit for submission of tenders

Energy costs per unit 0 EUR/MJ

Working life mileage (km) to be used in calculations

Fuel type Izvēlieties

Fuel consumption (l/100km)

Carbon dioxide (CO2) emissions (g/km)

Emissions of nitrogen oxides (NOx) (g/km)

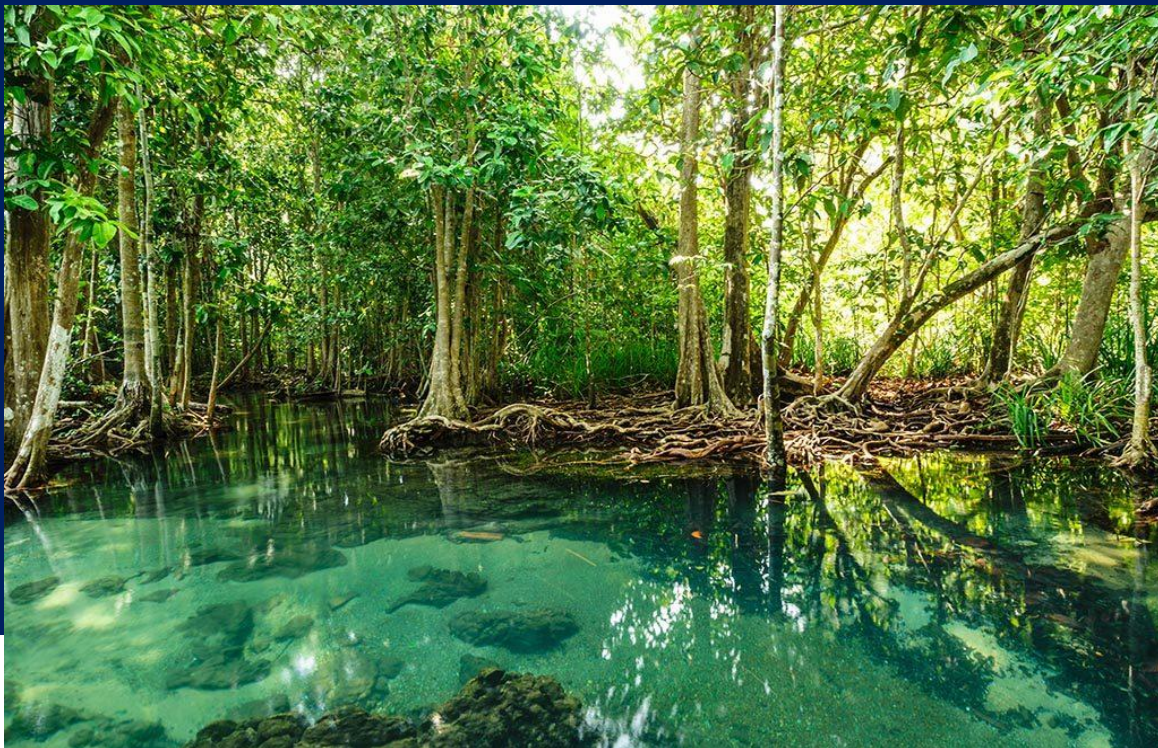
Emissions of non-methane hydrocarbons (NMHC) (g/km)

An additional screen/tab in the tool is planned to be added to present the environmental impacts and economic impact of GPP (Lithuania)

Note: The World Bank has not developed these tools. The WB is providing support to these countries to develop another calculator, and a section in the current dashboard to capture the effects on emissions of green purchases.



Thank you!



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