

# FI Campus 2025

## *Financing Greentech: the role of equity, innovation and clean industrial transition*

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Corinne Uppman-Helminen

*Teamleader Financial Instruments, Swedish Agency for Economic and Regional Growth (Tillväxtverket)*

Sille Pettai

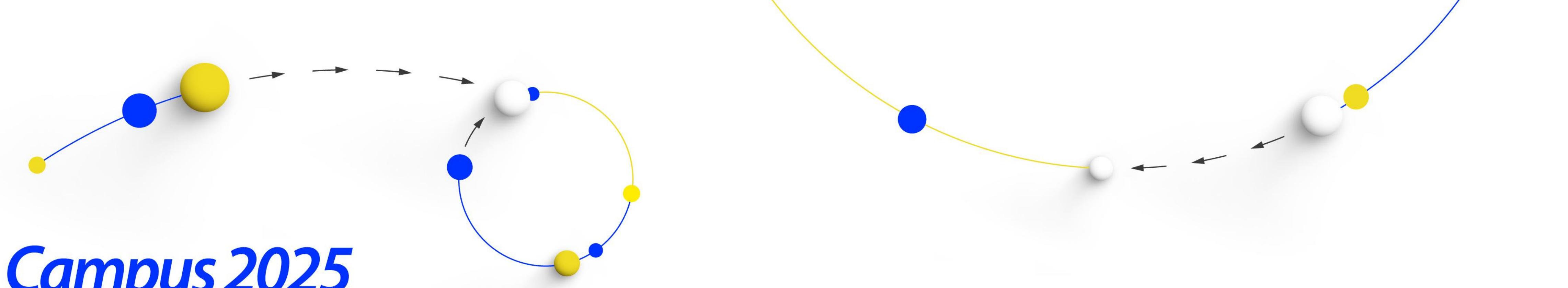
*CEO, SmartCap*

Isabelle Canu

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Jan Ossenbrink

*CEO, VAMO*



## *Financing Greentech: the role of equity, innovation and clean industrial transition*

Salome Gvetadze

Senior Research Officer

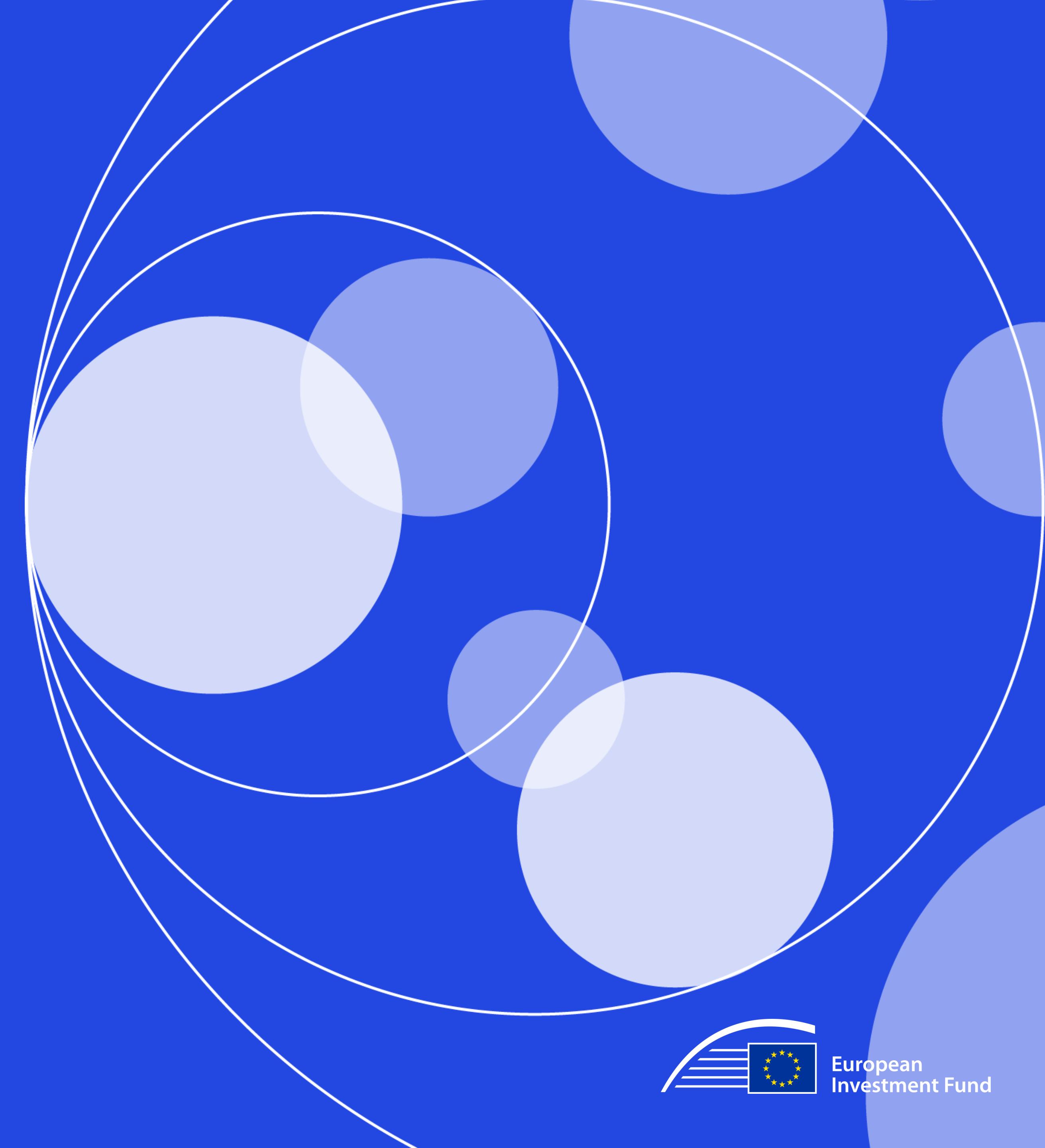
*European Investment Fund*

# Financing Greentech: the role of equity, innovation and clean industrial transition

FI Campus 2025 - 27 November, Brussels

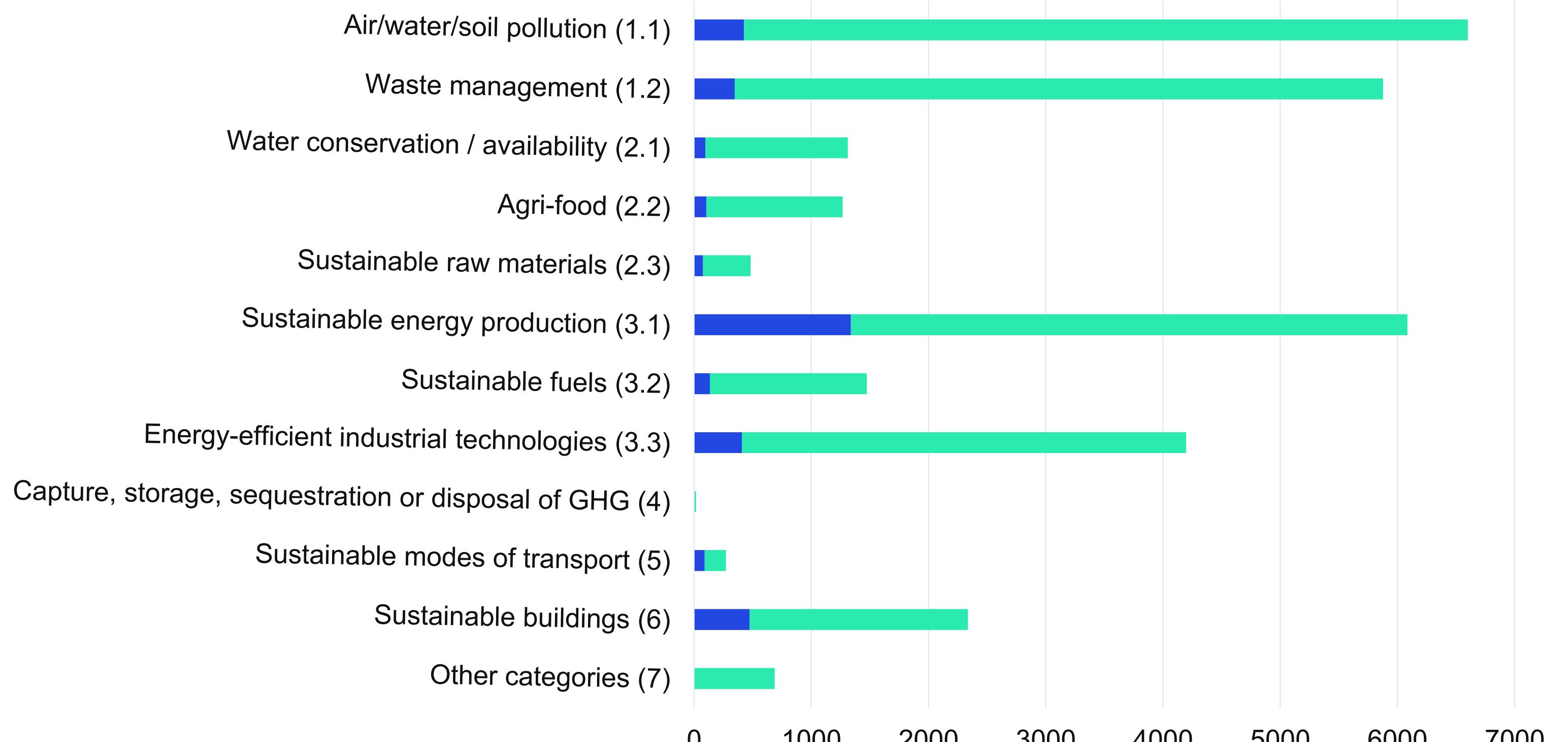
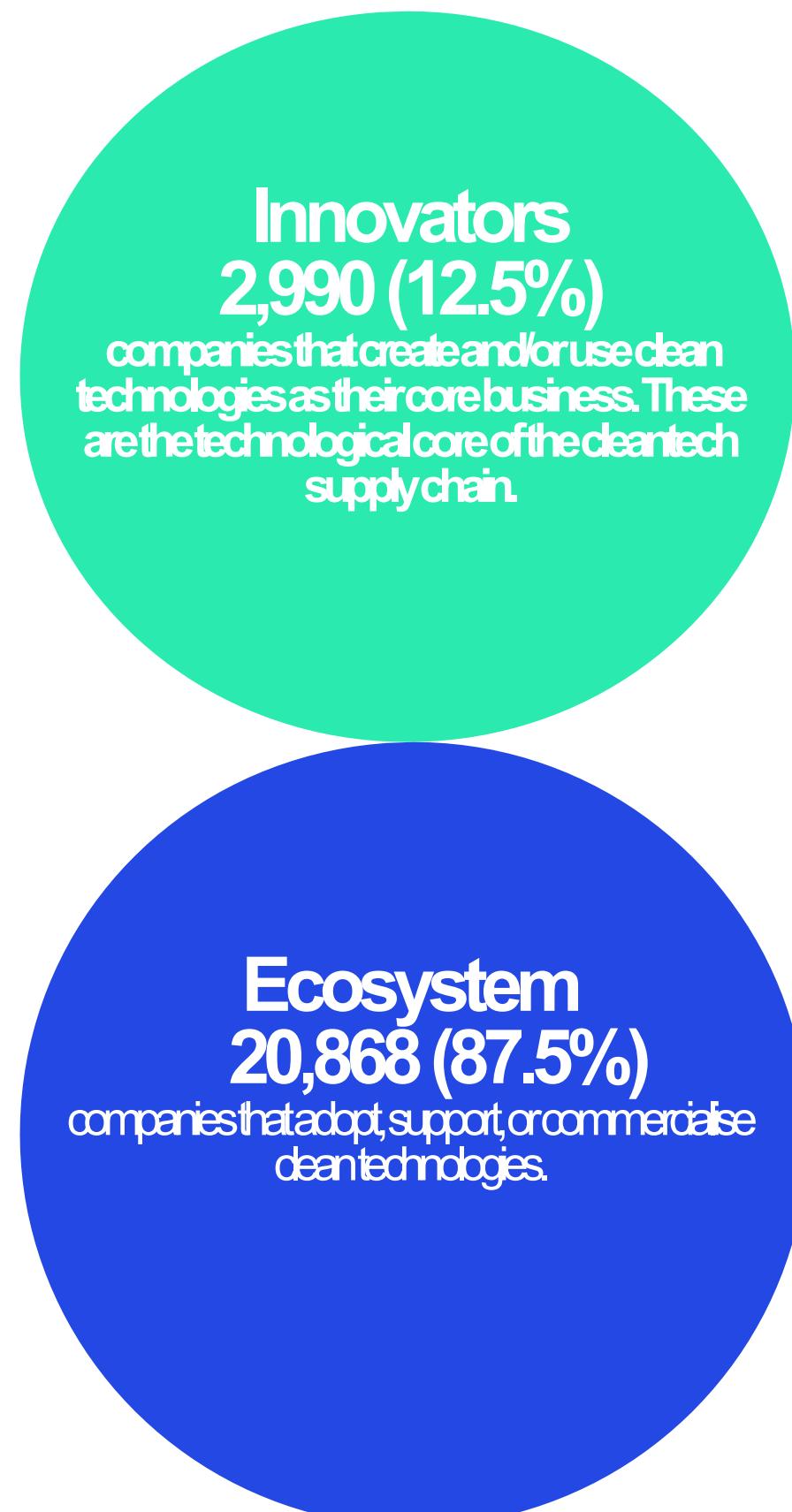
Salome Gvetadze  
Senior Research Officer

European Investment Fund



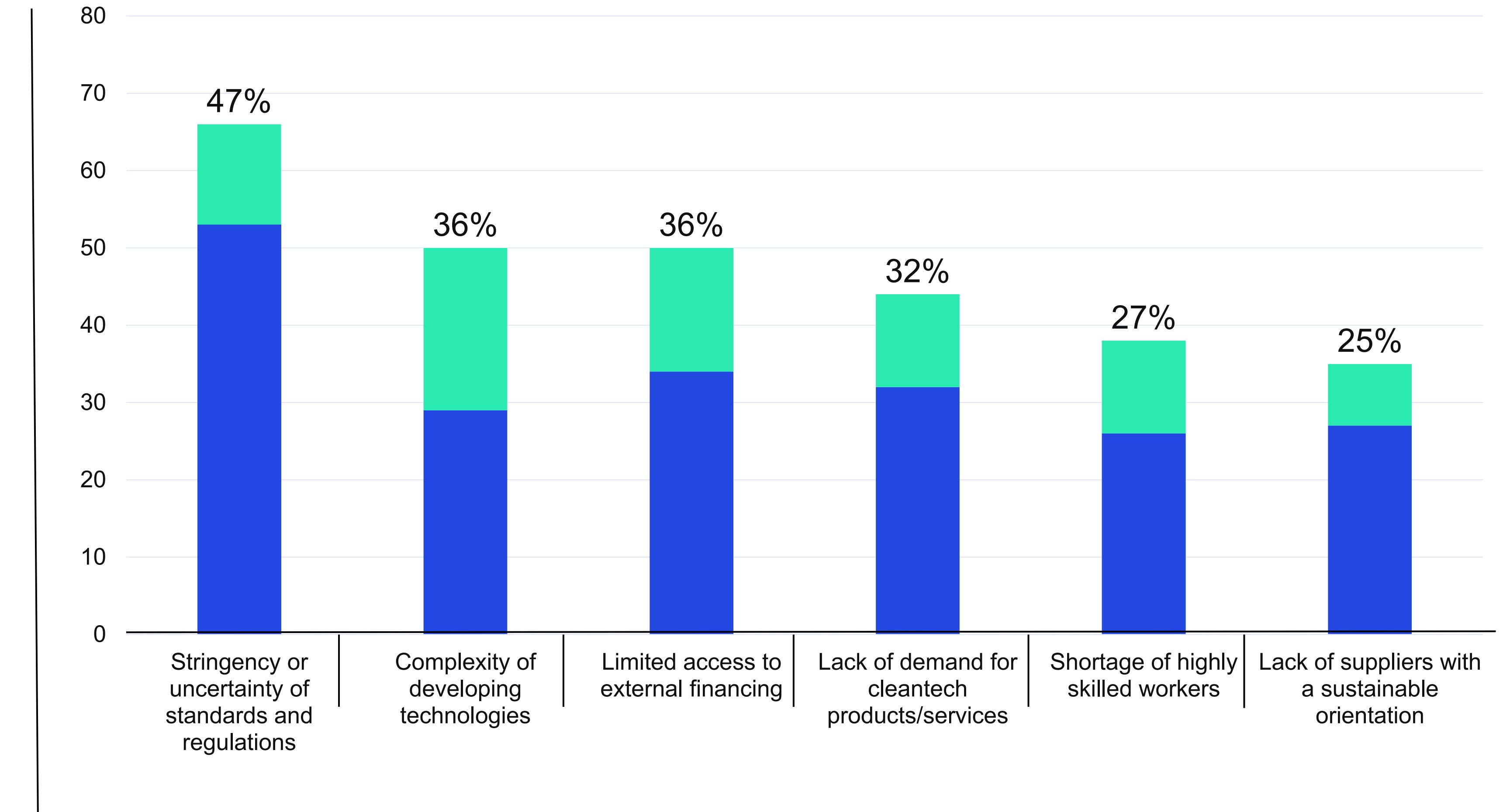
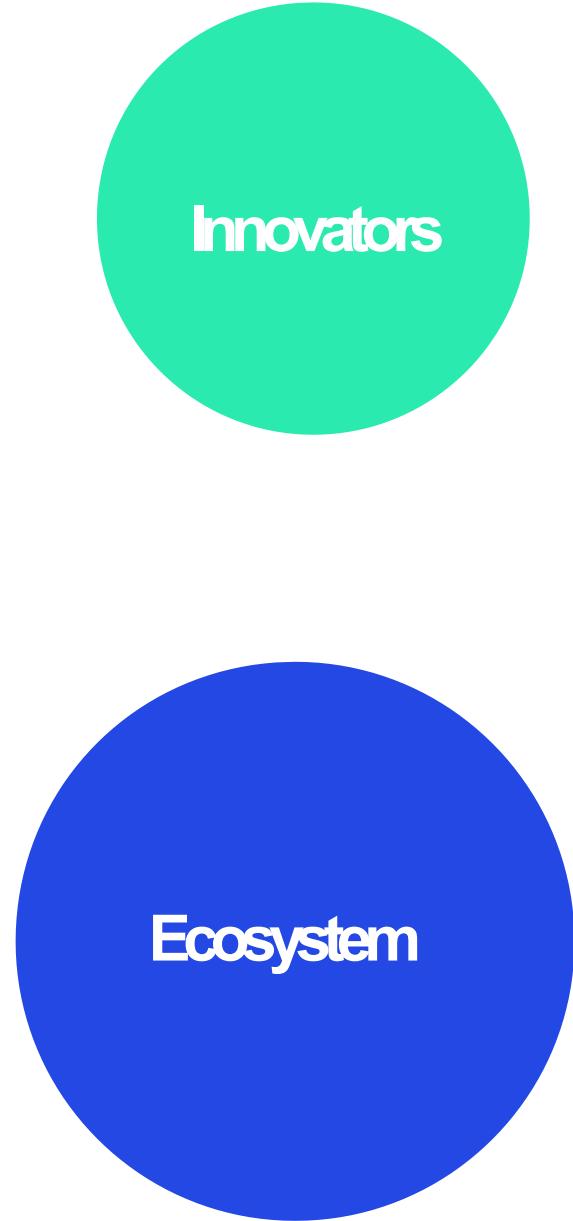
# Mapping the European Cleantech sector

## Technological categories



# Cleantech Survey

## Main difficulties faced entering the cleantech sector

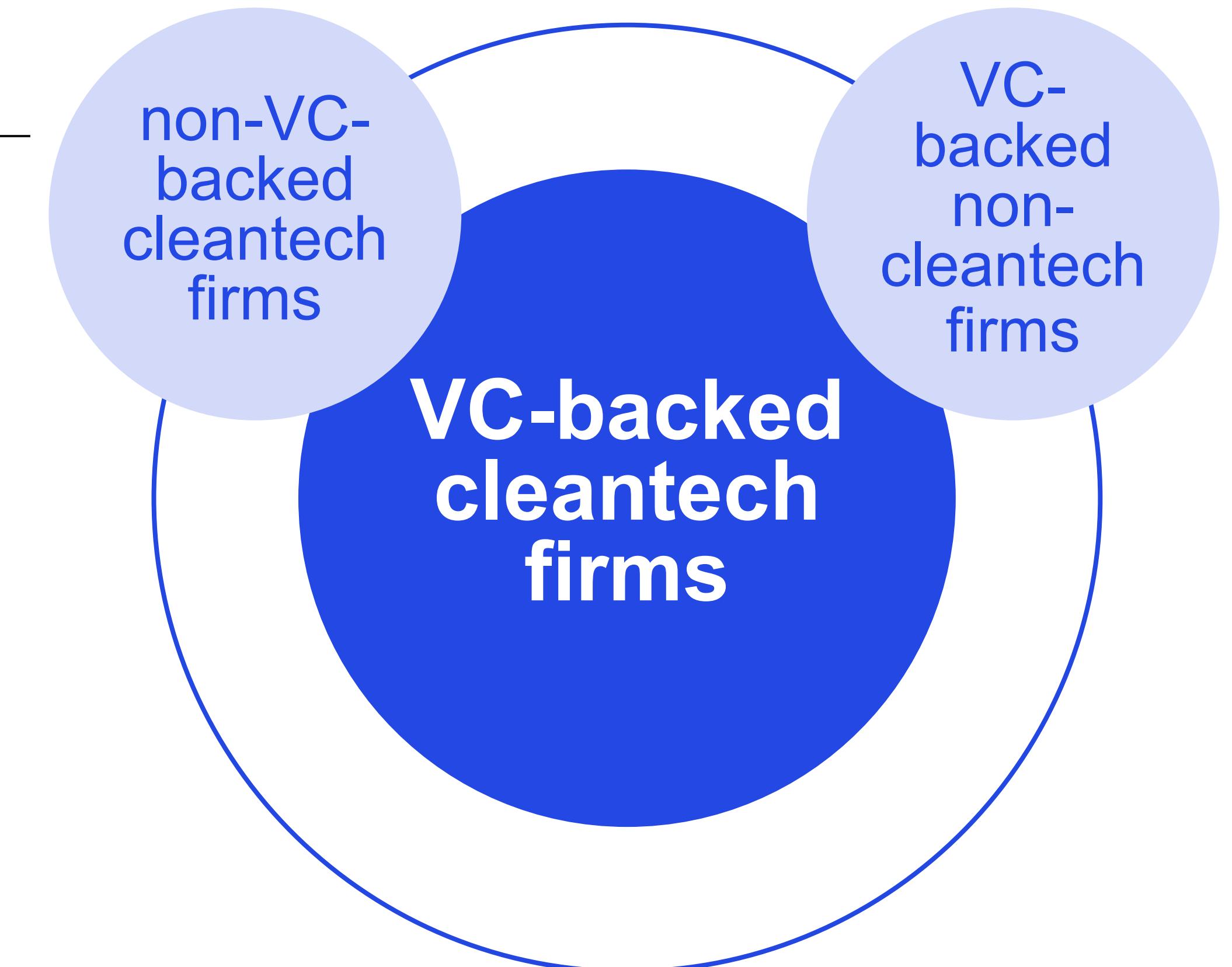


# VC and Cleantech innovation

## Venture Capital (VC) impact on cleantech growth

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- +8 % in total assets,
- +8 % in employment
- ~ in sales



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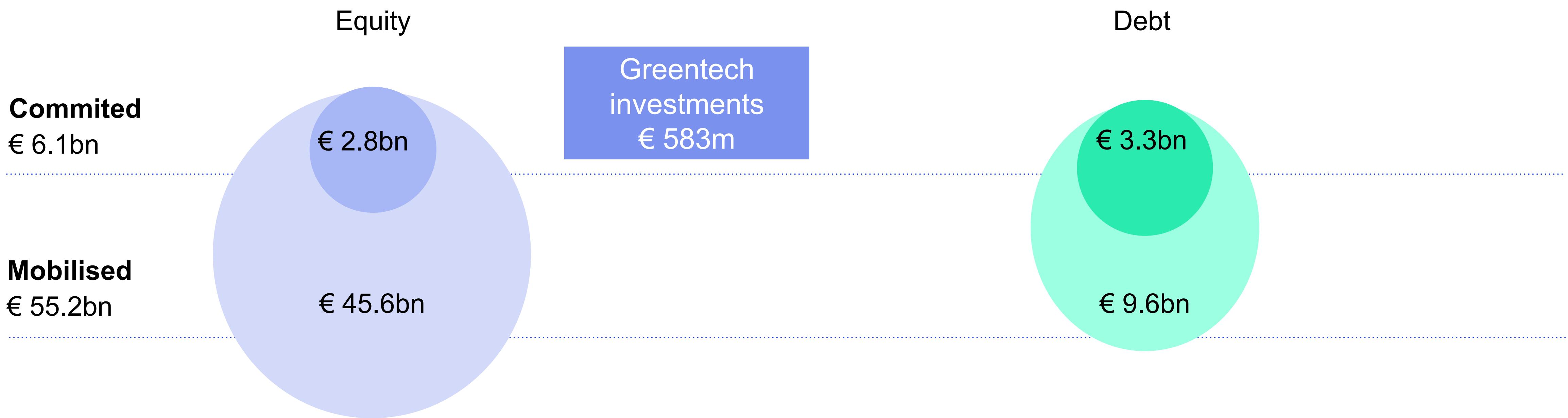
- +9 % in sales
- ~ in total assets
- ~ in employment



# EIF in 2024

## Summary of climate action and environmental sustainability (CA&ES) financing

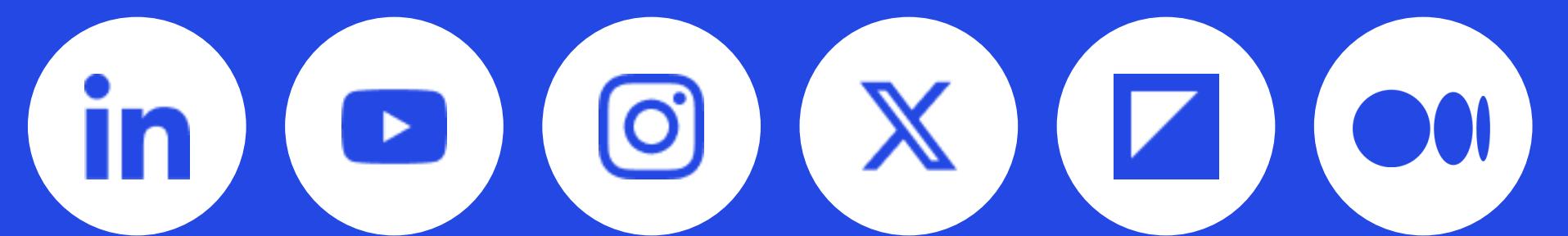
CA&ES – 43% of overall financing



**TechEU** supporting innovation  
including cleantech

€70 bn in EIF/EIB debt and equity  
financing, mobilising € 250bn by 2027

# Follow our stories and work



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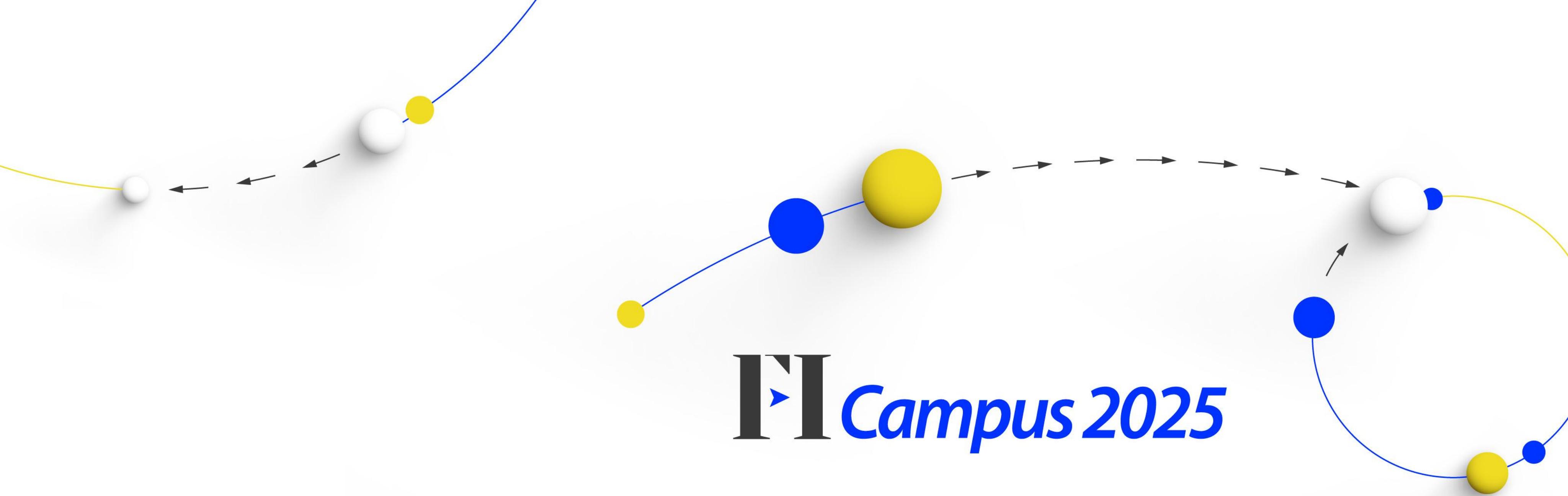
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Thank you





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## *Financing Greentech: the role of equity, innovation and clean industrial transition*

Jade Salhab

Senior Private Sector Specialist

World Bank

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# *Promoting Energy Efficiency and Productivity of EU firms*

*Insights from ongoing World Bank study on Poland and Romania and other evidence from regional analysis*

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27 November 2025



**THE WORLD BANK**



European  
Commission

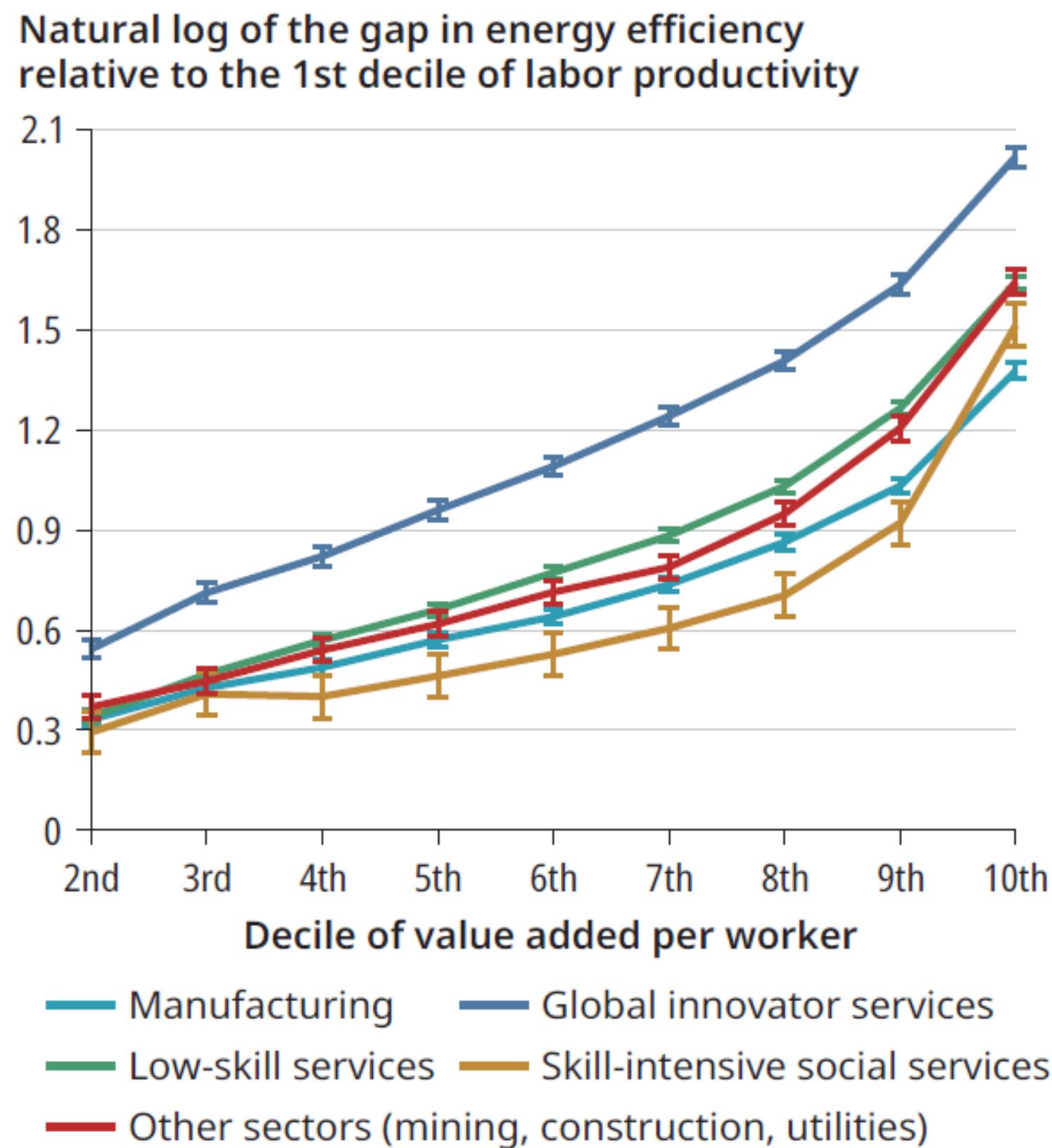
# **Key messages...**

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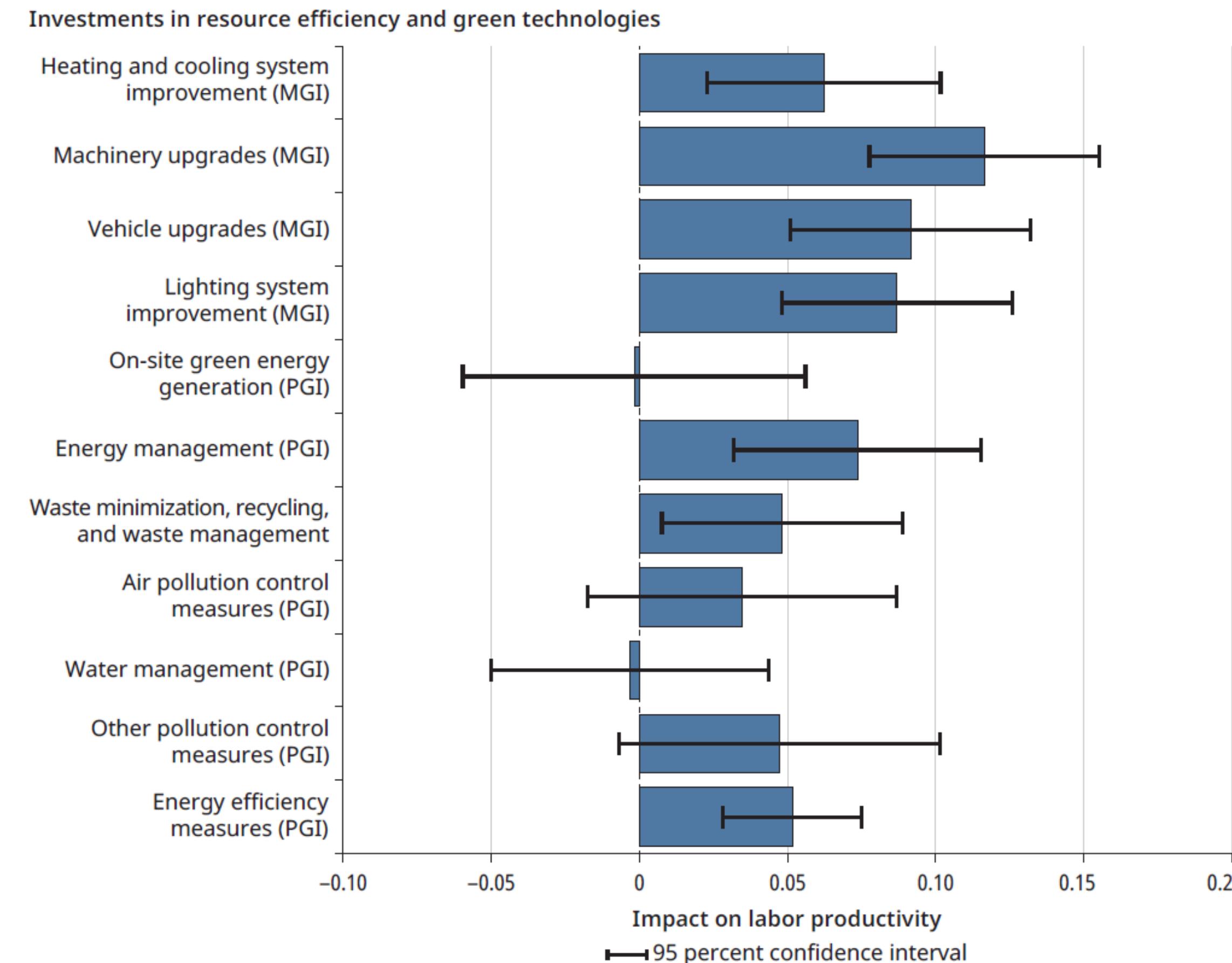
- 1. Energy efficiency and productivity are strongly correlated**, showing climate objectives align with competitiveness
- 2. Improvements in firm-level efficiency are key drivers of reductions in CO<sub>2</sub> emissions** (more than fuel-switching by said firms)
- 3. But market dynamics are *not* always rewarding more energy-efficient firms...**
- 4. ...and private (financial) returns to energy efficiency improvement are small compared to public gains (except for energy-intensive sectors)**, so public intervention is warranted.

# *Firm-level data shows there is no trade-off between greening the economy and competitiveness*

*Energy efficiency is positively correlated across sectors with productivity*



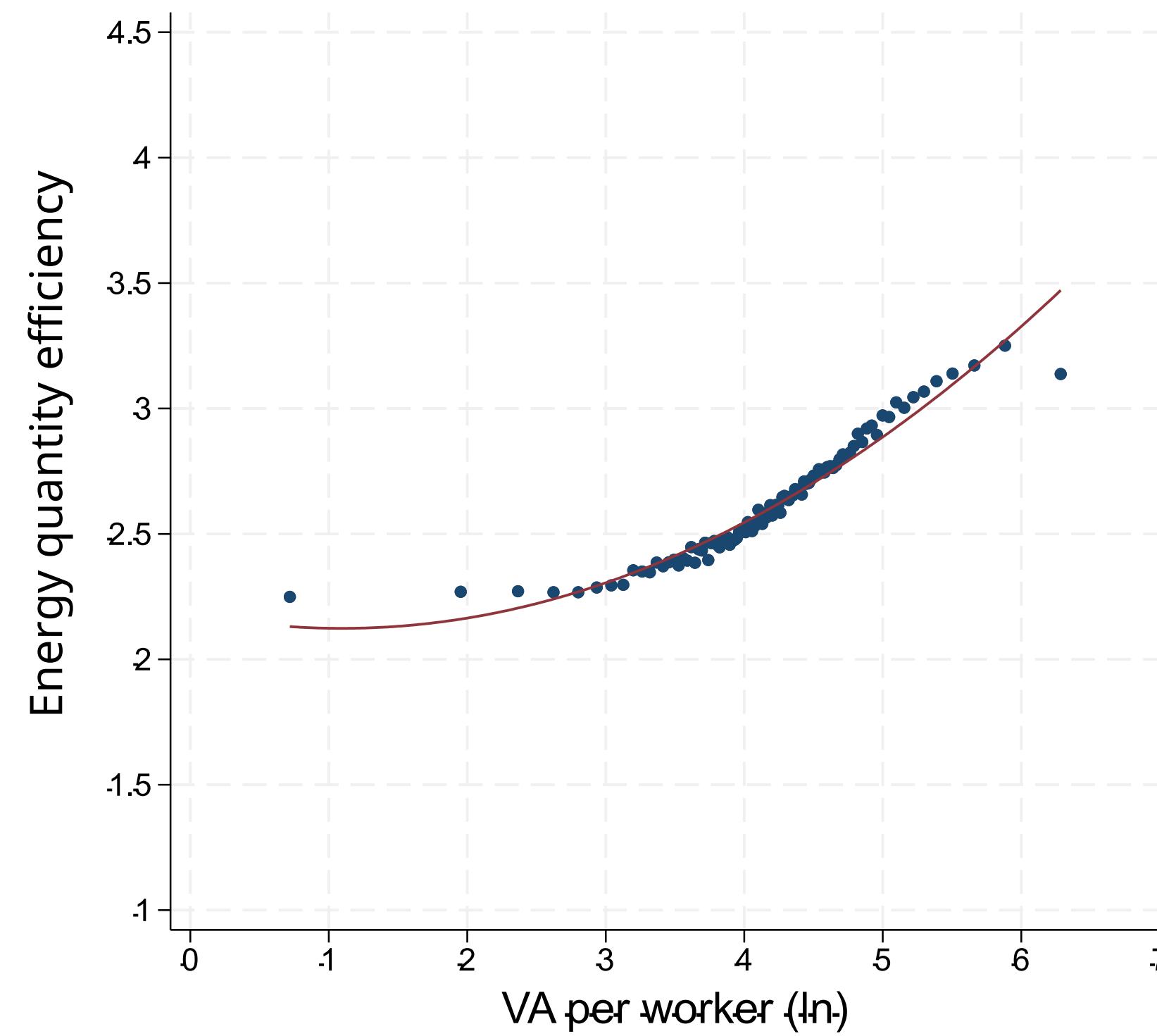
*Green technology investment positively correlated with productivity*



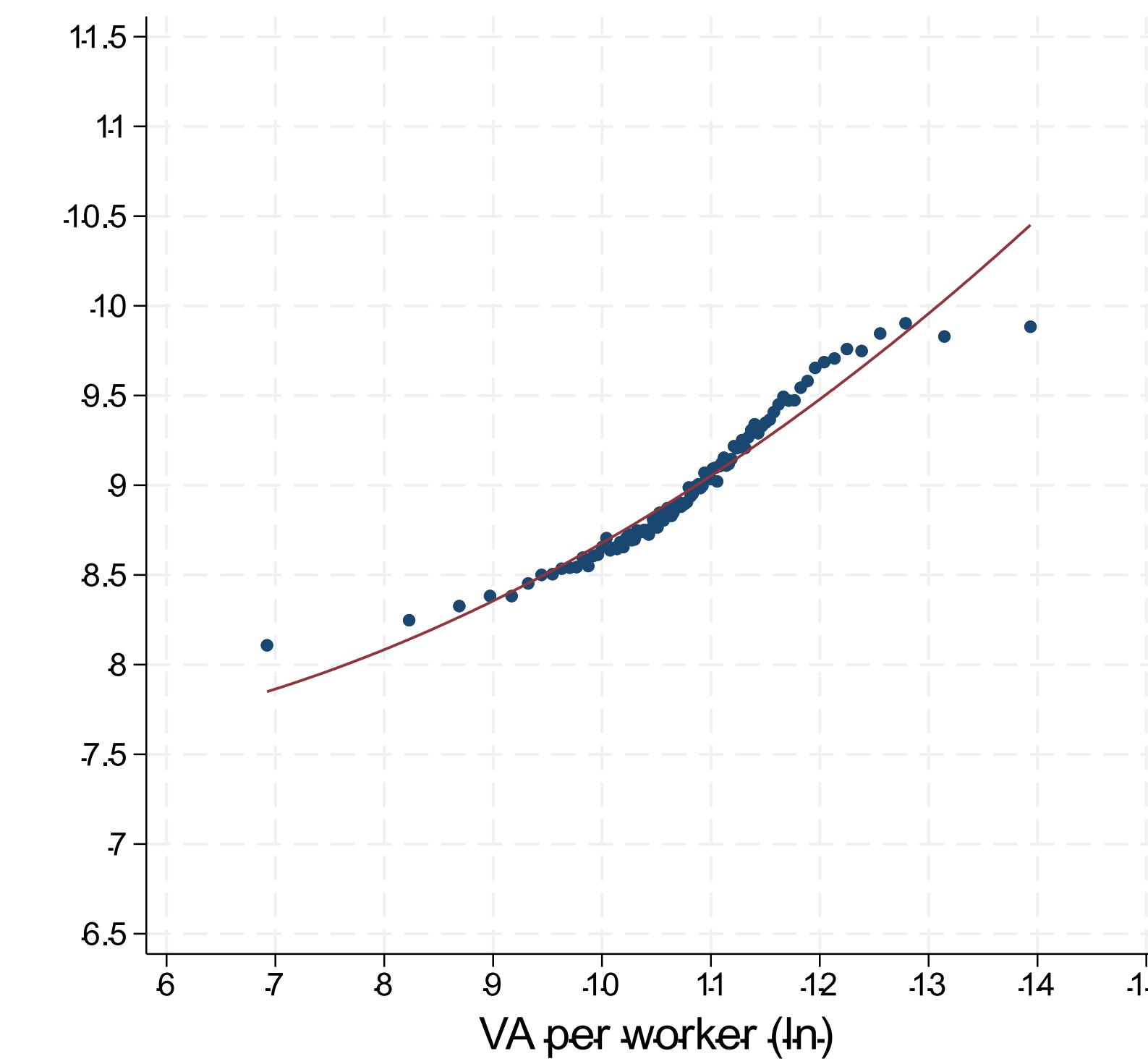
# *...and this applies across the EU*

*Energy efficiency is positively correlated with productivity*

**Poland**



**Romania**



Notes: Energy quantity efficiency and value added per worker are expressed in logarithms (ln). Binned scatter plot between the energy quantity efficiency (deflated sales / Gigajoules). The regression controls for 3-digit industry of NACE Rev. 2 and geographic (NUTS2) fixed effects, year effects, size (SME dummy variable), and age class.

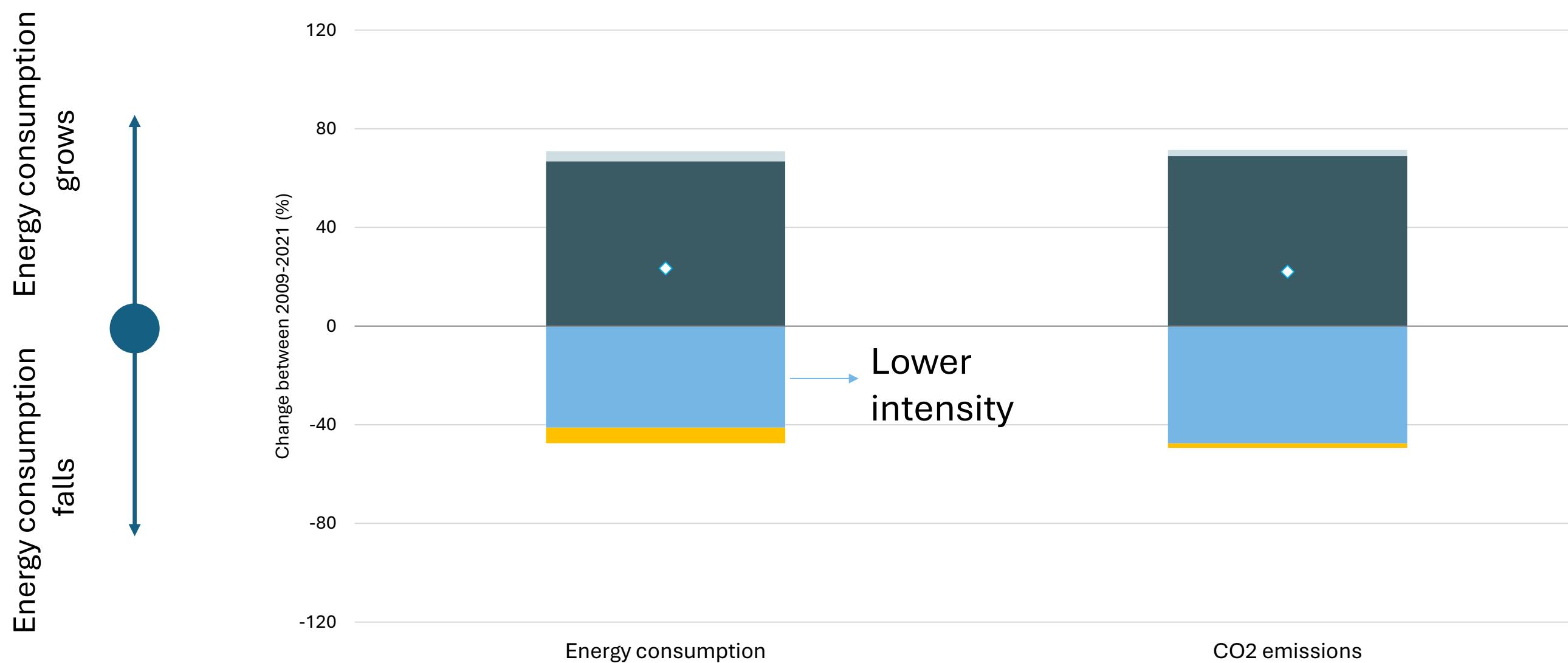
Source: World Bank's calculations based on the Energy Surveys and Structural Business Surveys from Statistics Poland (GUS) and Institute of National Statistics of Romania (INS).

# Sector energy intensity has contributed to reduction, while scale effects and market functioning (in Romania) increased energy consumption

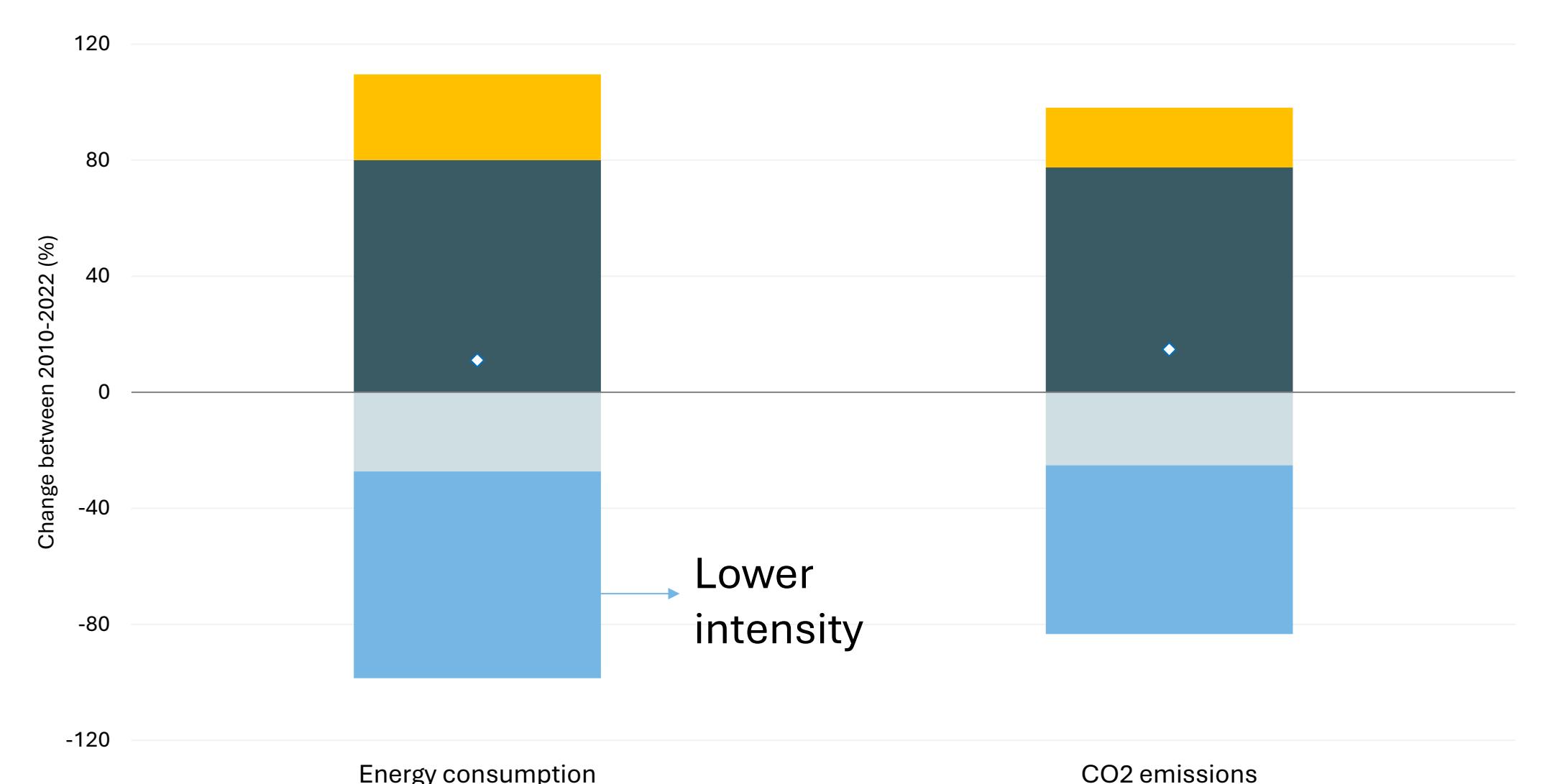
## *Energy Decomposition: Factors driving energy consumption changes, economy-wide*

Cumulative changes relative to initial year = 0

Poland (2009-2021)



Romania (2010-2022)



■ Scale term

■ Structural Transformation

■ Average sector intensity effect

■ Market reallocation

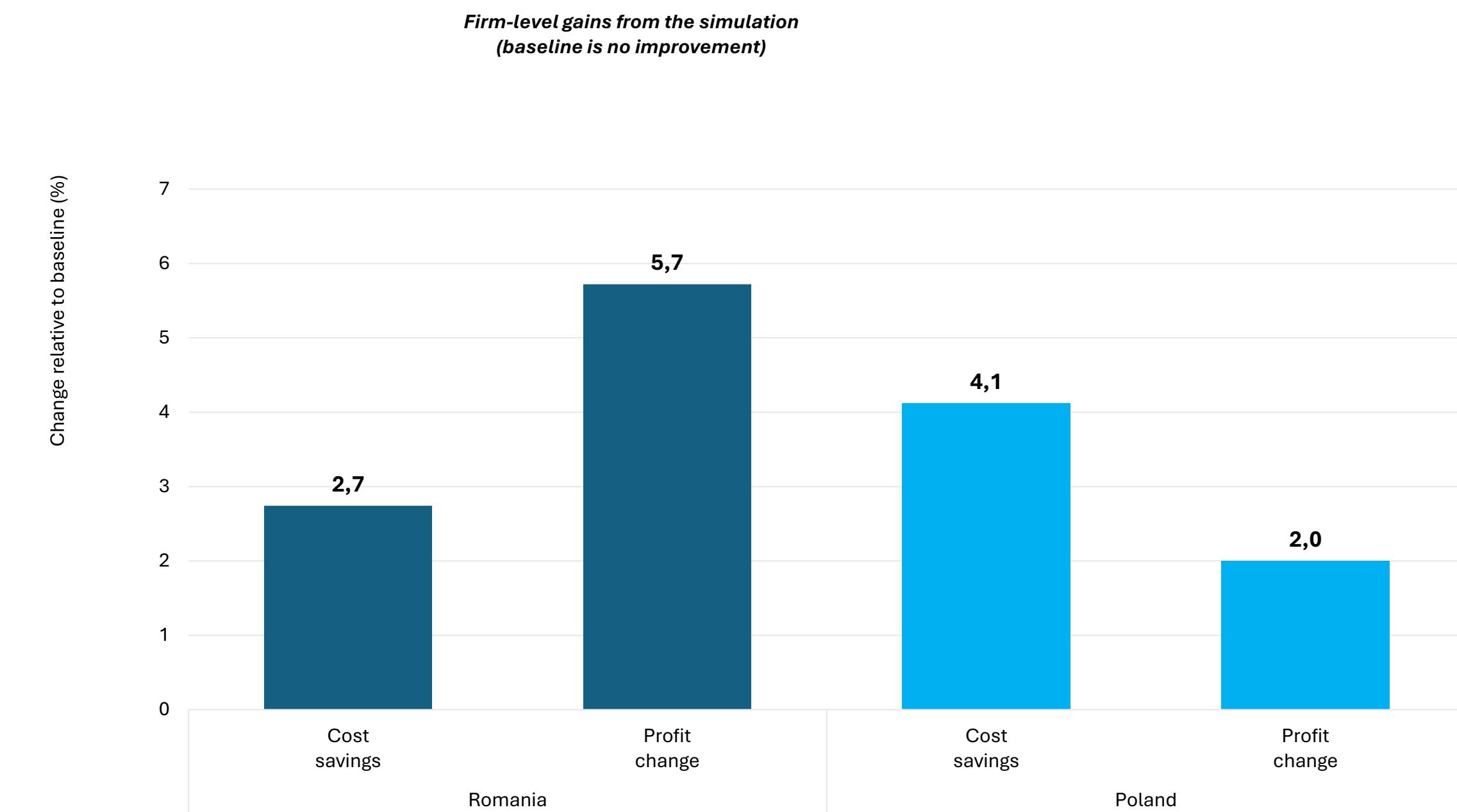
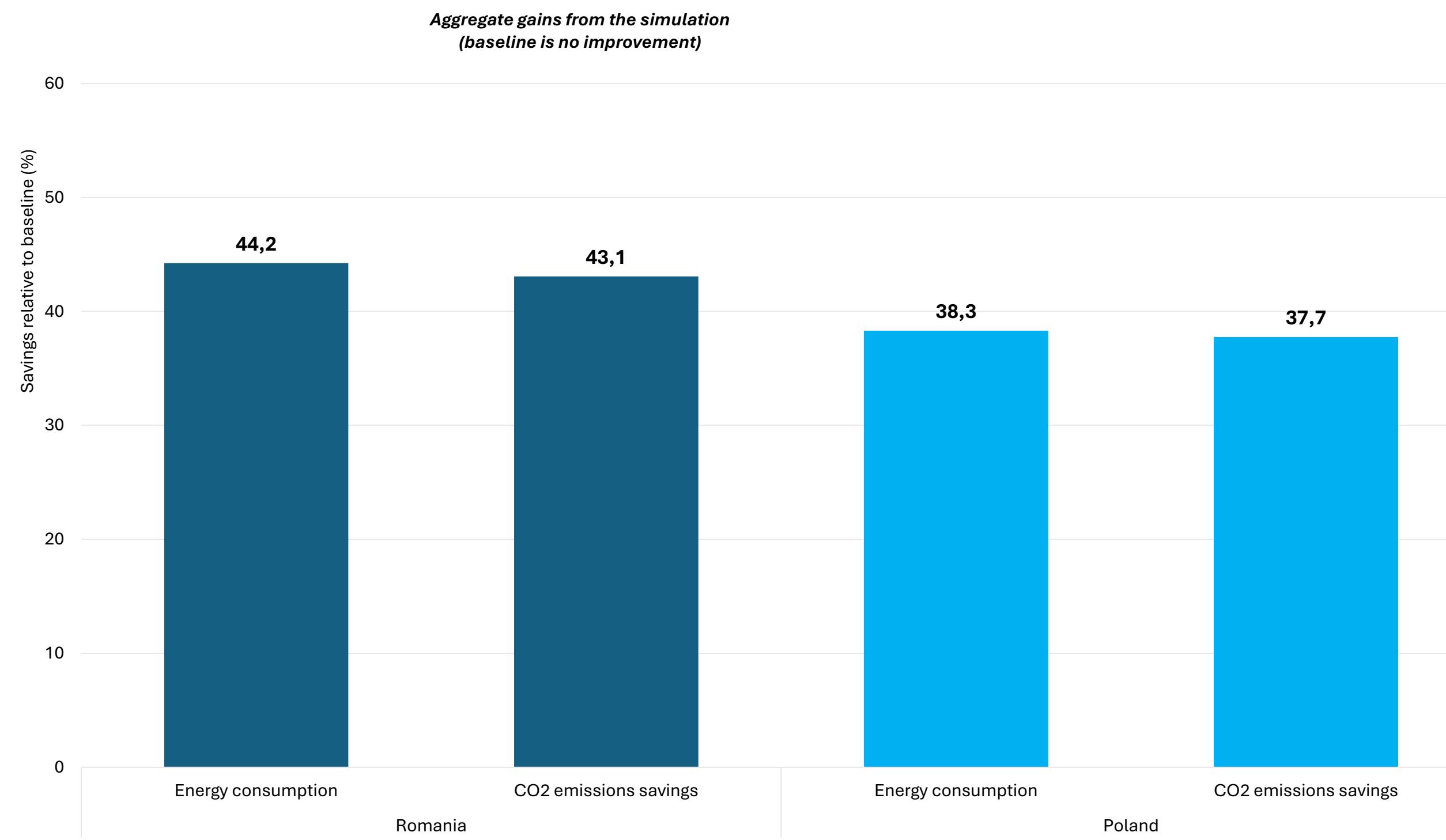
◇ Change in outcome

Notes: Sectors included: Manufacturing (C), Construction (F) and Services (G-N, except K-Financial Services; P-S, except Q88 – Social Work).

Source: World Bank elaboration based on Energy Surveys and Structural Business Surveys from Statistics Poland (GUS) and Institute of National Statistics of Romania (INS).

# Private (financial) returns to energy efficiency improvement are small compared to public gains

*Estimated impact of efficiency improvements if below-median efficient firms moved to the median efficiency in their sub-sector*



Notes: Manufacturing (C), Construction (F) and Services (G-N, except K-Financial Services; P-S, except Q88 – Social Work). Profit change is the relative change in total profits (levels). 16

Source: World Bank elaboration based on Energy Surveys and Structural Business Surveys from the Institute of National Statistics of Romania (INS).

***Thank you very much for your attention***

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**Please check out our recently launched productivity report on Europe and Central Asia with a specific chapter on energy efficiency/ green technologies:**



**Jade Salhab**  
Senior Private Sector Specialist  
Finance, Competitiveness and  
Investment  
Europe and Central Asia  
World Bank Group

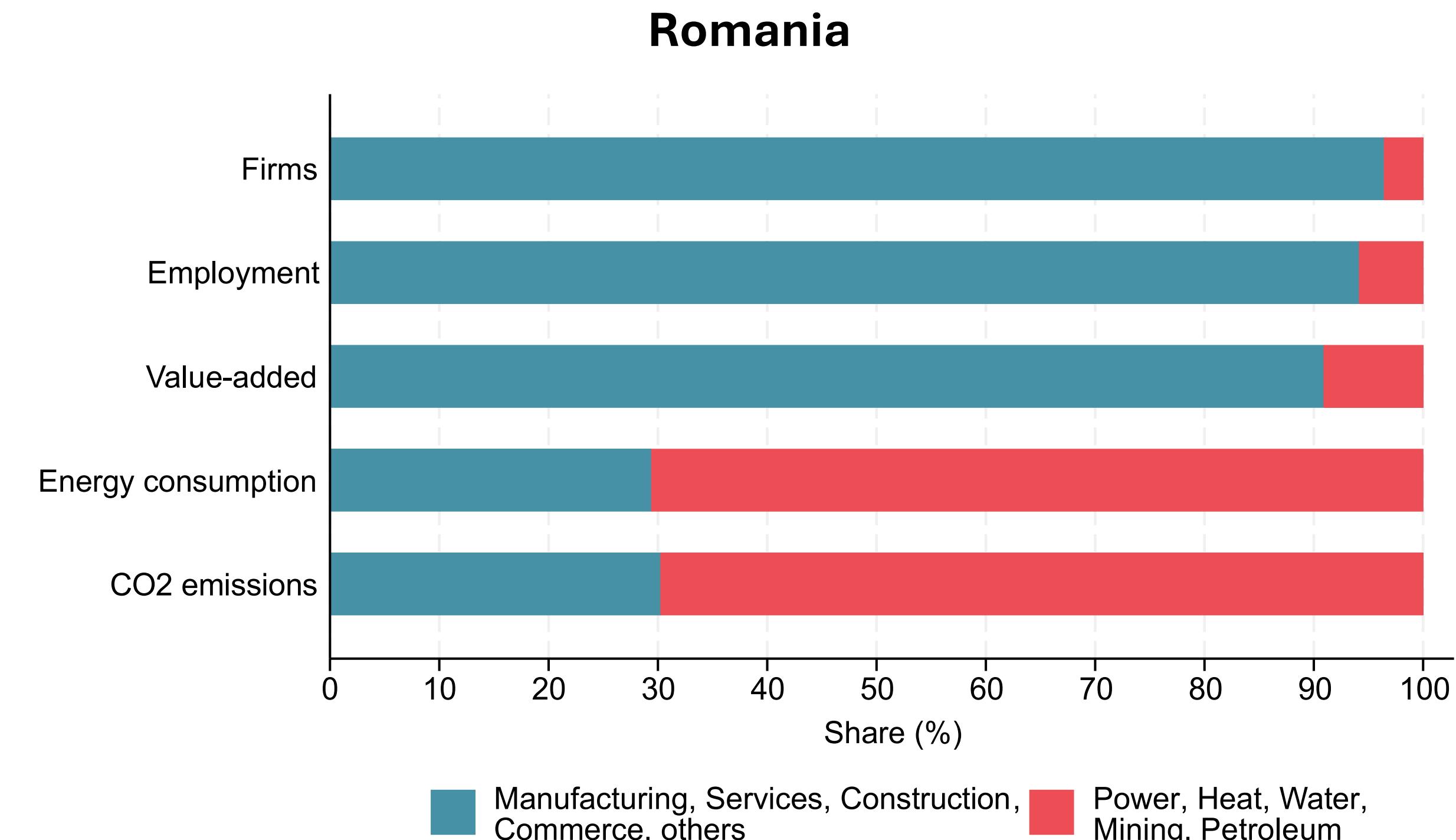
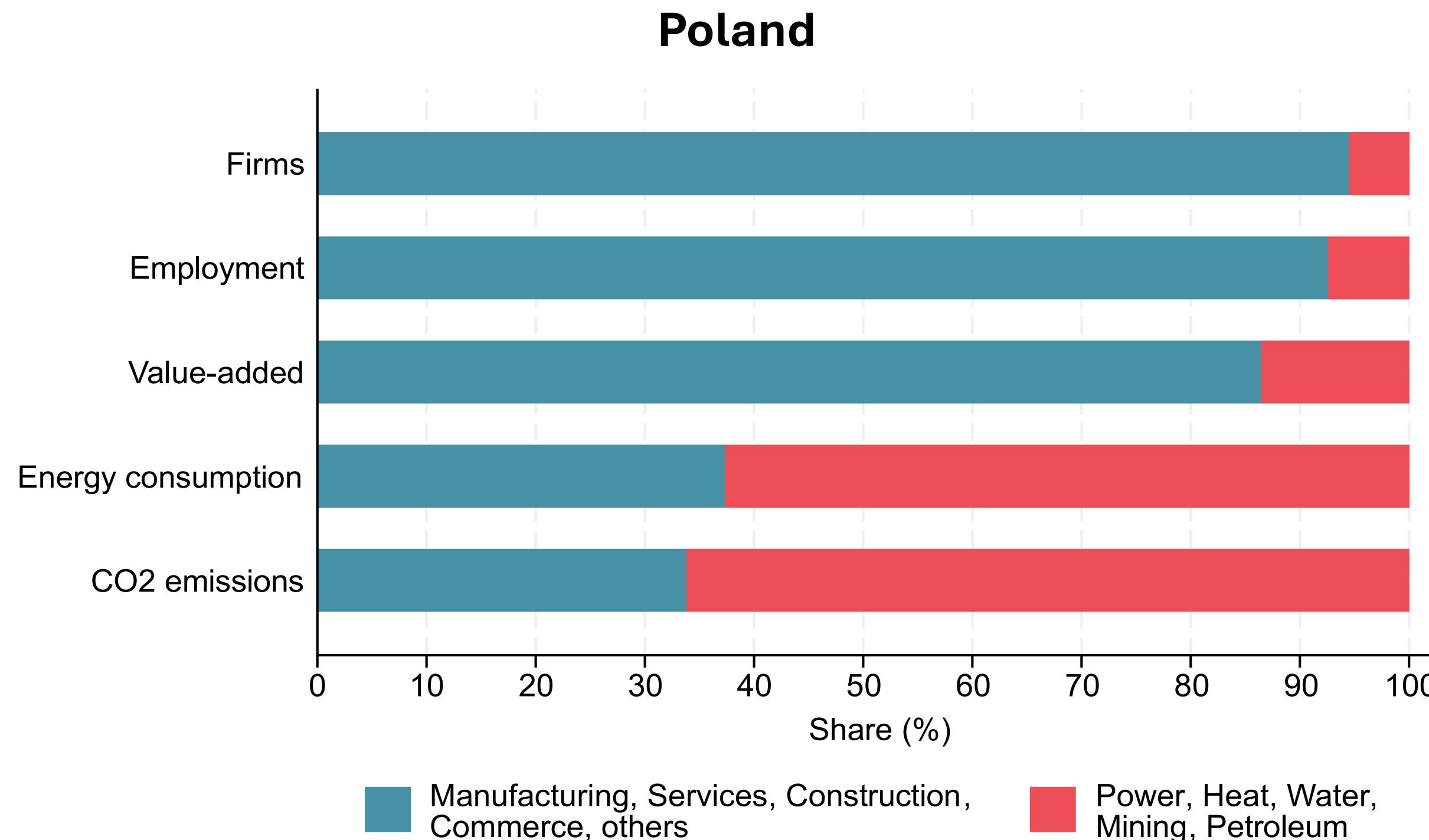
[jsalhab@worldbank.org](mailto:jsalhab@worldbank.org)



# Focus on manufacturing, services, construction and commerce given their importance in terms of firms, value added and employment

## Distribution of firms, employment, value added, energy consumption and CO2 emissions by sector group

As % of the total of each variable



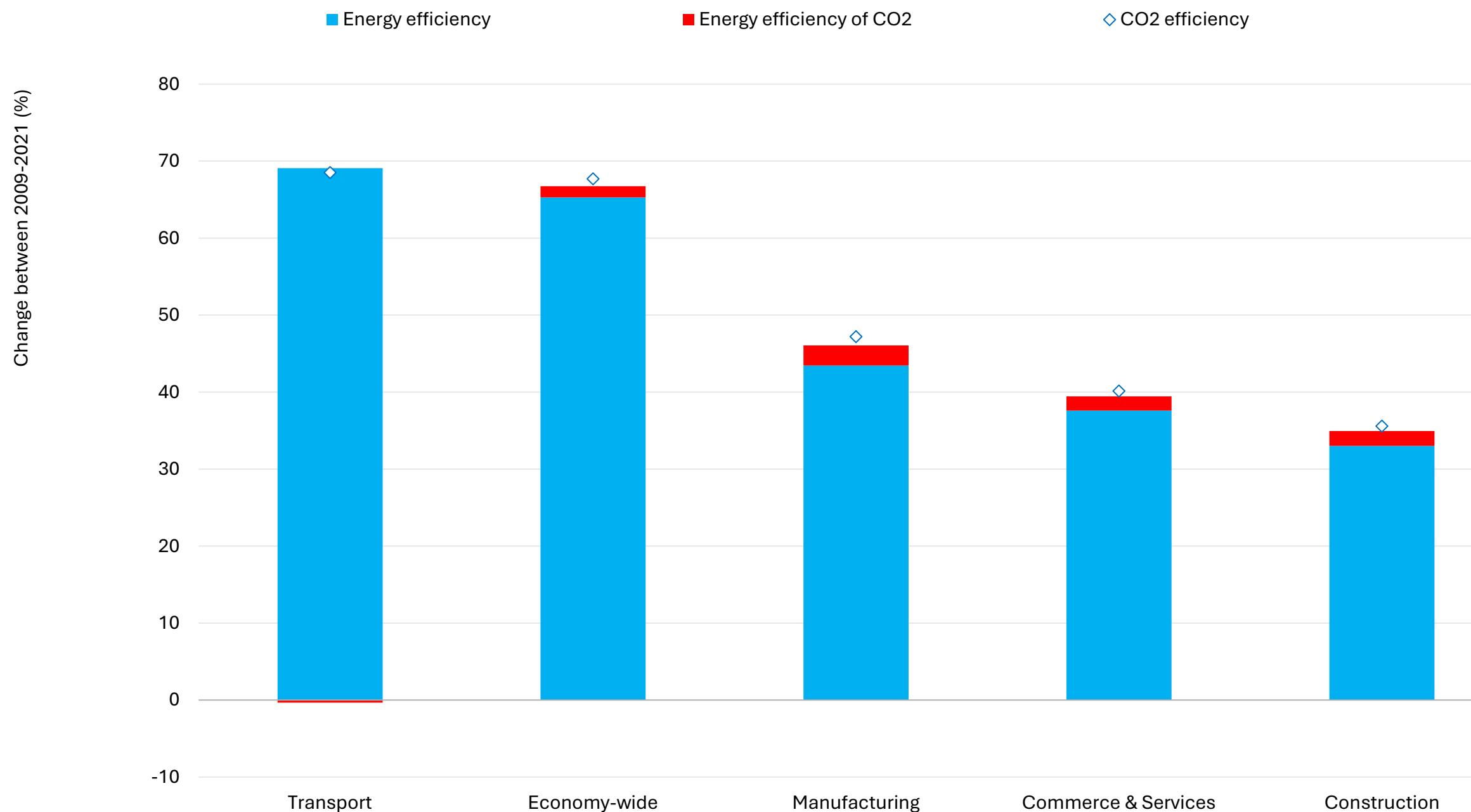
Notes: The following sectors are excluded from the analyses: Crop & Animal Production (A01); Forestry (A02); Financial and Insurance act. (K); Public Administration and defense (O); Social work act. (Q88).

Source: World Bank elaboration based on Energy Surveys from Statistics Poland (GUS) and Institute of National Statistics of Romania (INS).

# CO2 efficiency gains stemmed from better energy use, not cleaner fuels (source dependency is high)

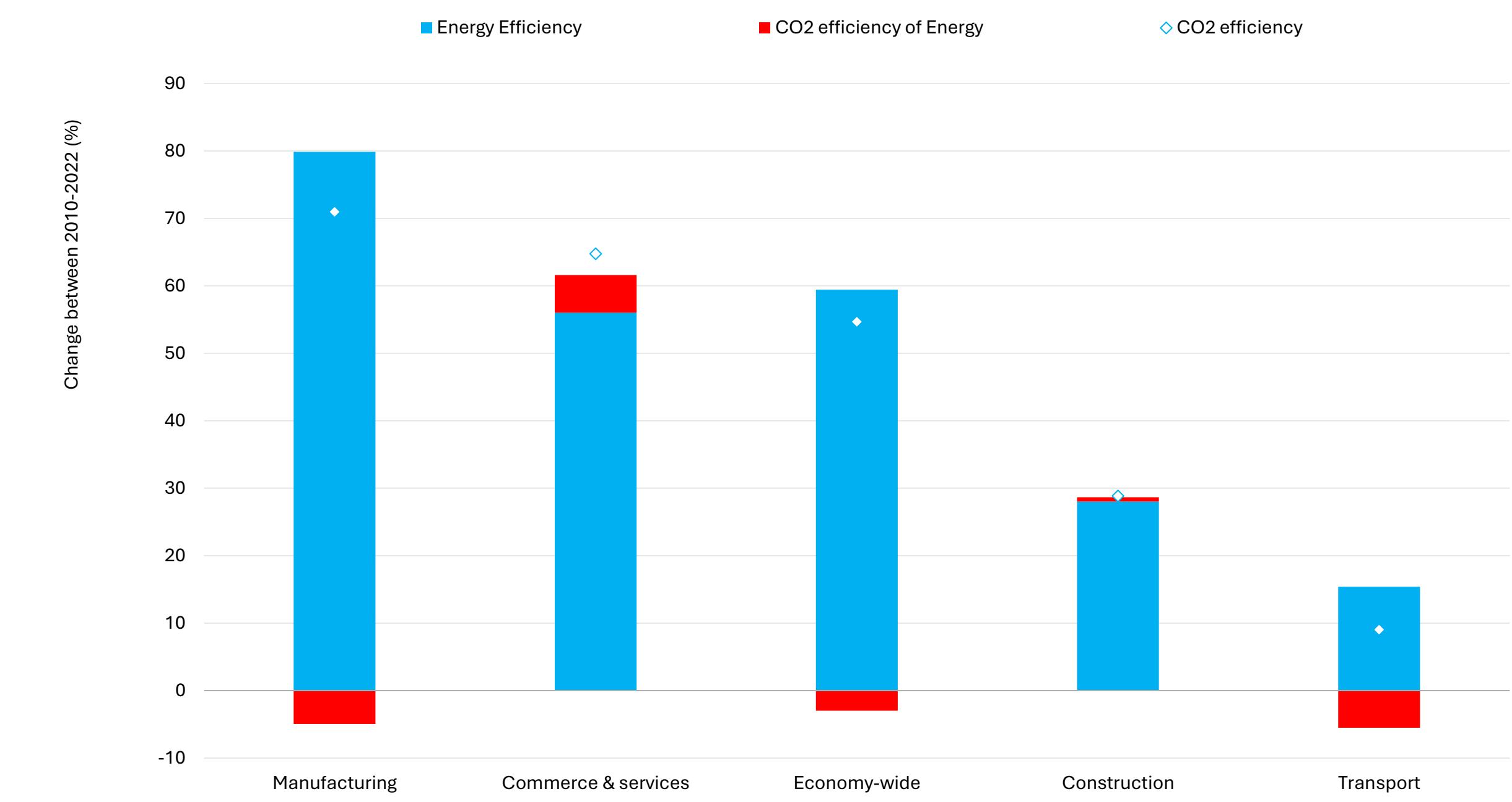
*Decomposing carbon efficiency: more energy efficient firms or greener energy sources?*

Poland



$$\frac{Output_t}{CO2_t} = \frac{Output_t}{Energy_t} \times \frac{Energy_t}{CO2_t}$$

Romania



Notes: Sectors included: Manufacturing (C), Construction (F) and Services (G-N, except K-Financial Services; P-S, except Q88 – Social Work).

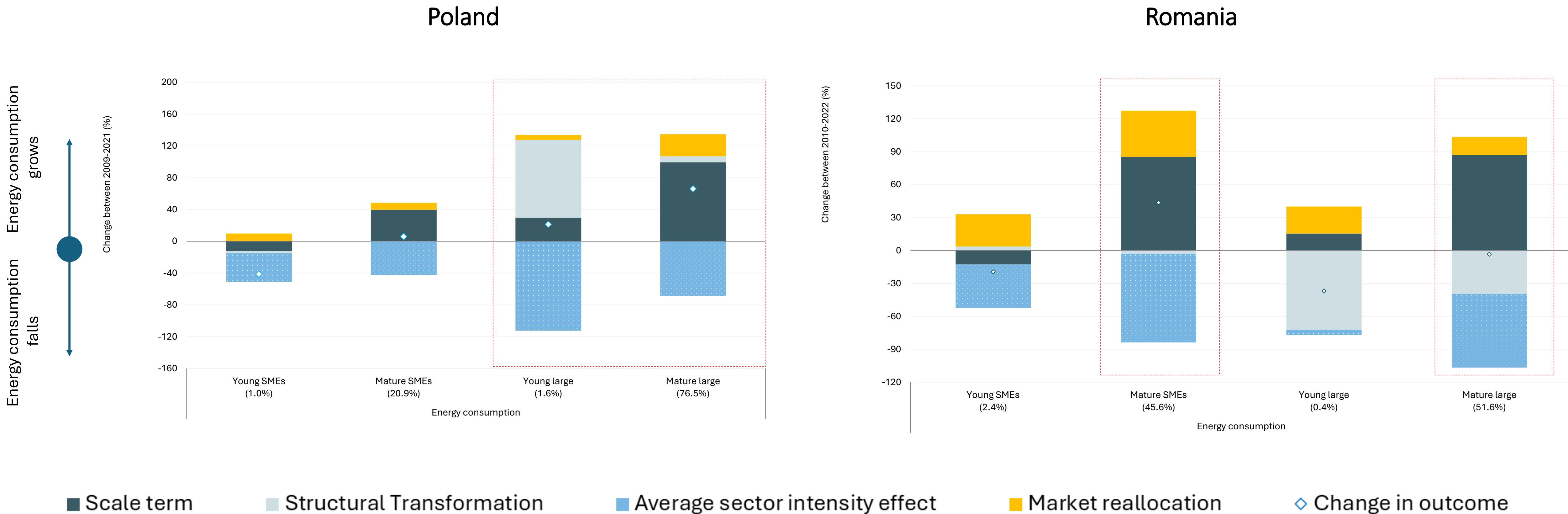
Source: World Bank elaboration based on Energy Surveys and Structural Business Surveys from Statistics Poland (GUS) and Institute of National Statistics of Romania (INS).

Source dependency

# Mature firms made greater intensity reductions than young in Romania; in Poland lower intensity was driven by large firms

## *Energy Decomposition: Factors driving energy consumption changes by age-size class*

Cumulative changes relative to initial year = 0



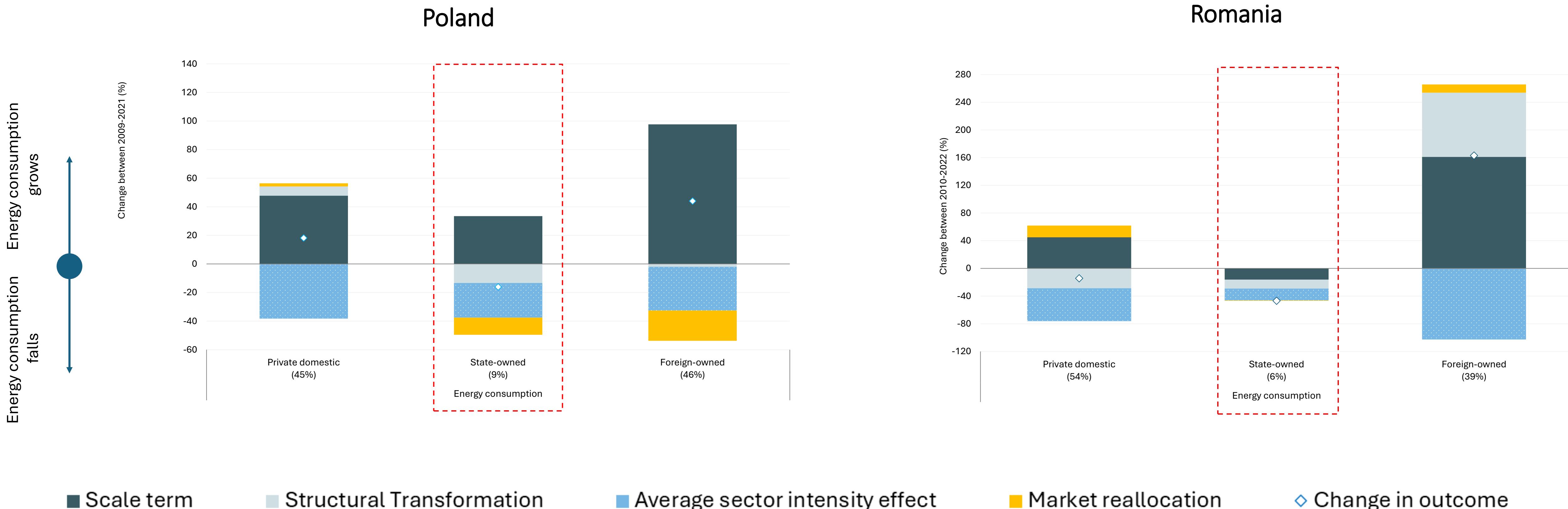
Notes: Sectors included: Manufacturing (C), Construction (F) and Services (G-N, except K-Financial Services; P-S, except Q88 – Social Work).

Source: World Bank elaboration based on Energy Surveys and Structural Business Surveys from Statistics Poland (GUS) and Institute of National Statistics of Romania (INS).

# FDI and the private sector are crucial for reducing energy intensity, with stronger differences in Romania

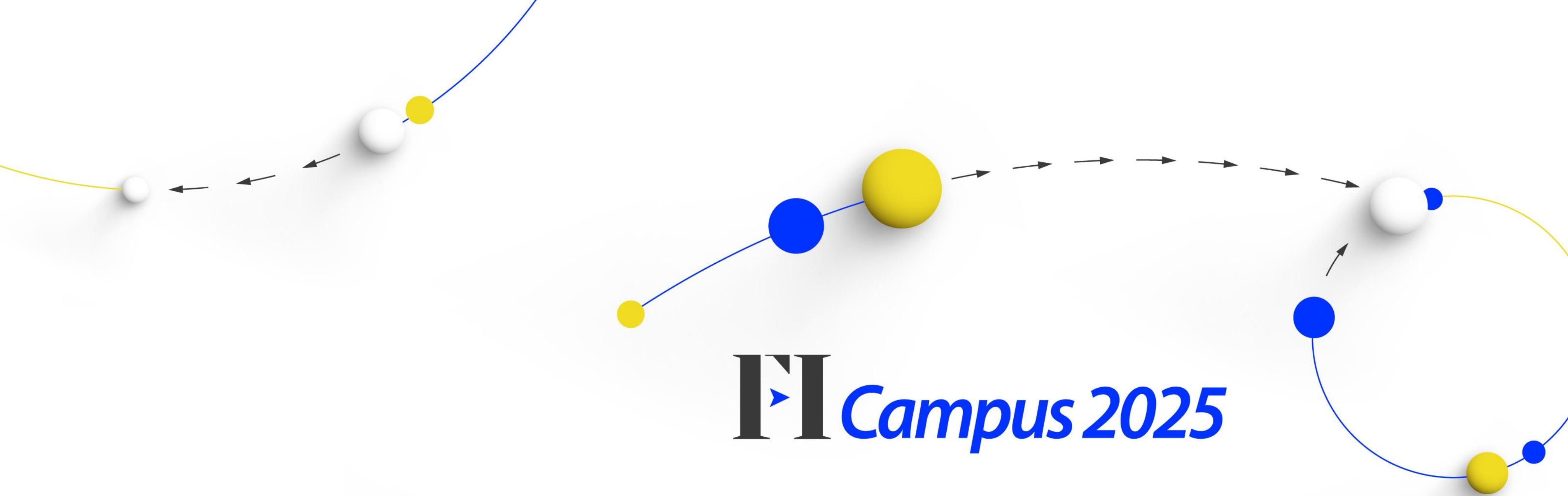
## *Energy Decomposition: Factors driving energy consumption changes by ownership*

Cumulative changes relative to initial year = 0



Notes: Sectors included: Manufacturing (C), Construction (F) and Services (G-N, except K-Financial Services; P-S, except Q88 – Social Work).

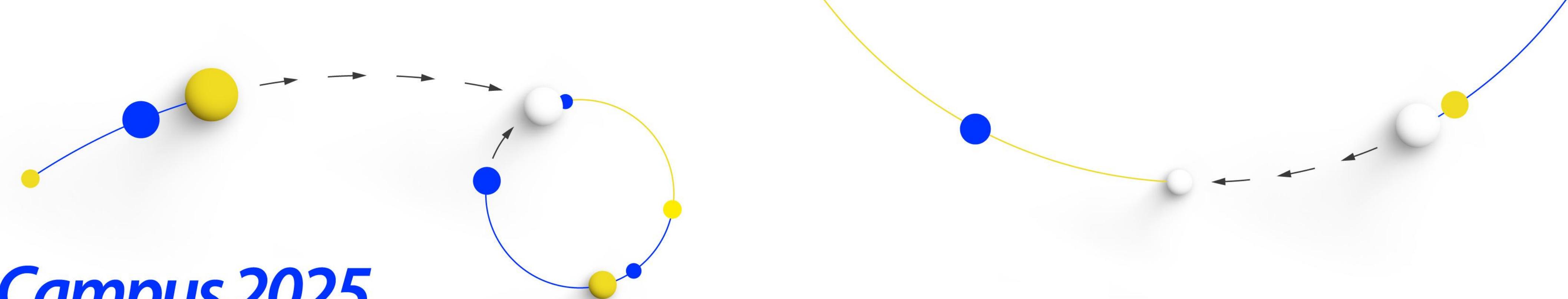
Source: World Bank elaboration based on Energy Surveys and Structural Business Surveys from Statistics Poland (GUS) and Institute of National Statistics of Romania (INS).



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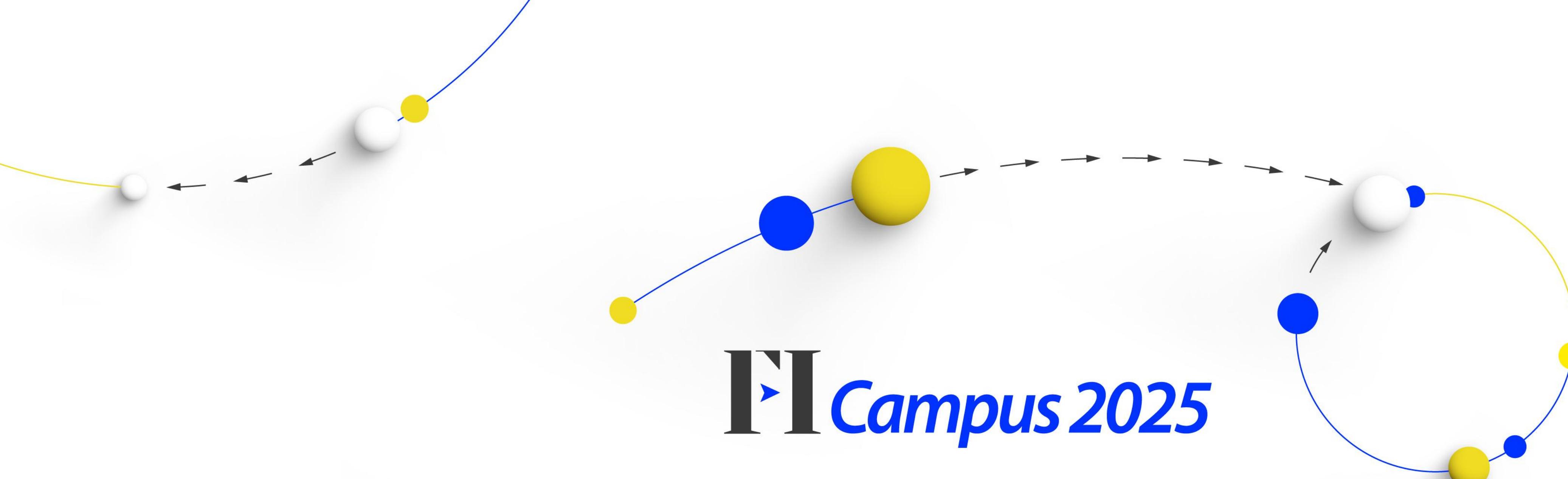
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# Thank you

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