

ECO-INNOVATIONS AS A RESULT OF COMPANIES' INNOVATION ACTIVITIES

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Introduction

- Innovations
 - key factor for socioeconomic development of regions
 - source of competitive advantage
- Long-term sustainability – quantitative growth and ecological aspects
- Innovations + ecology = eco-innovations
- Eco-innovations = environmental or ecological innovations

Eco-innovations...

- ...new and modified processes, equipment, products, techniques and management systems that avoid or reduce harmful environmental impacts. (*Kemp-Arundel*)
- ...any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment or achieving a more efficient and responsible use of natural resources, including energy. (*EU – CIP Programme*)
- ...can be defined as innovation that serves to prevent or reduce anthropogenic burdens on the environment, clean up damage already caused or diagnose and monitor environmental problems. (*VINNOVA*)

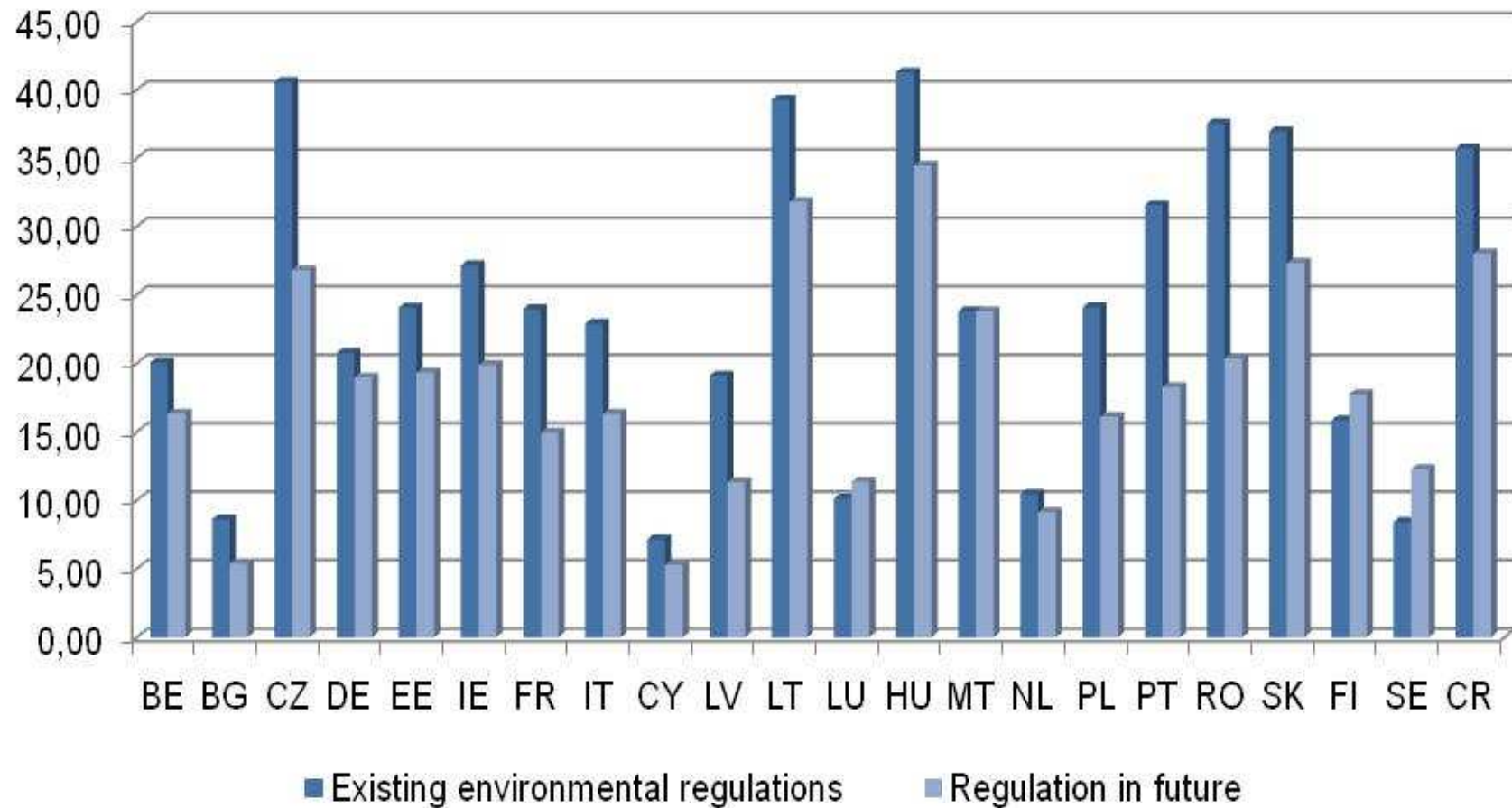
Eco-innovations in a larger framework

- Summarizing of the definitions:
 - eco-innovations are the innovations that contribute to reducing of negative environmental impacts caused by production and consumption.
- Three important questions:
 - Who initiated development of the eco-innovation?
 - Who will appear the positive impacts of eco-innovations at?
 - Were the environmental targets of innovations intended primarily or were they rather the secondary effect?

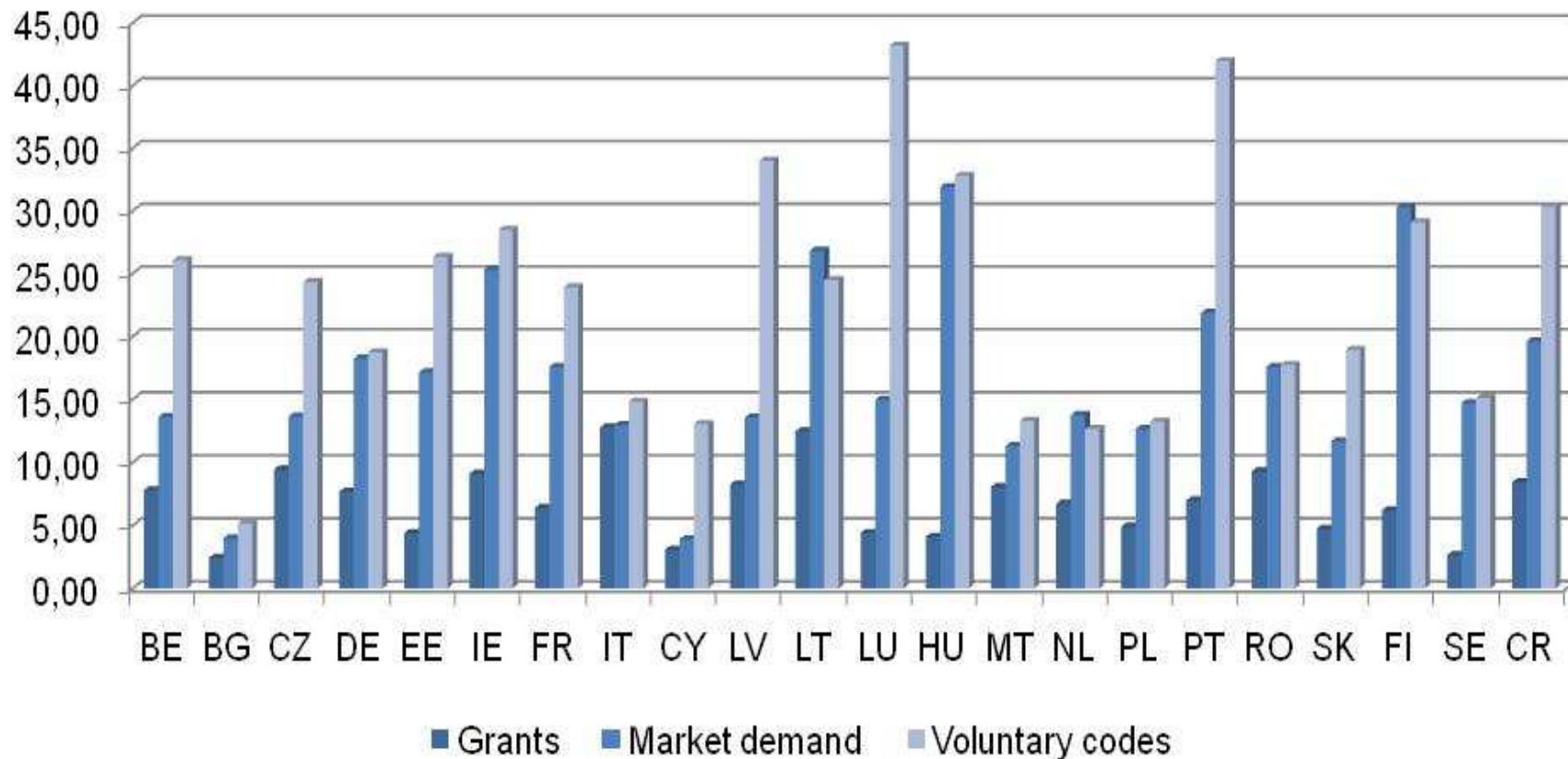
Statistics on eco-innovations in the EU

- Community Innovation Survey
- Since the 90's
- Oslo manual + Commission Regulation
- Eco-innovations only in the last survey for the period 2006-08 (CIS 2008)
- Selected countries of the EU + Croatia
- The figures about eco-innovations are expressed as share on the enterprises with innovation activity.

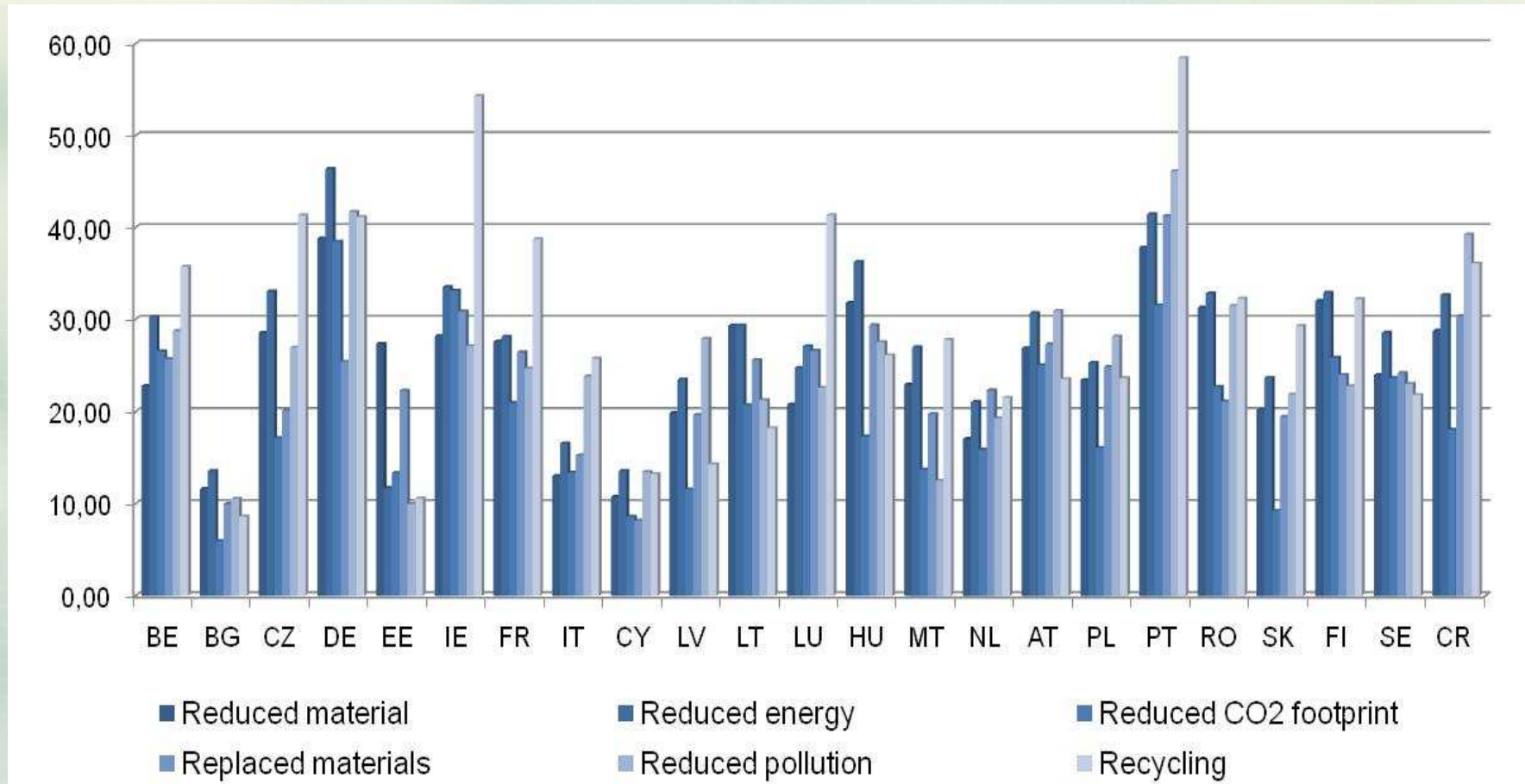
Motivation to introduce an environmental innovation – regulation [%]



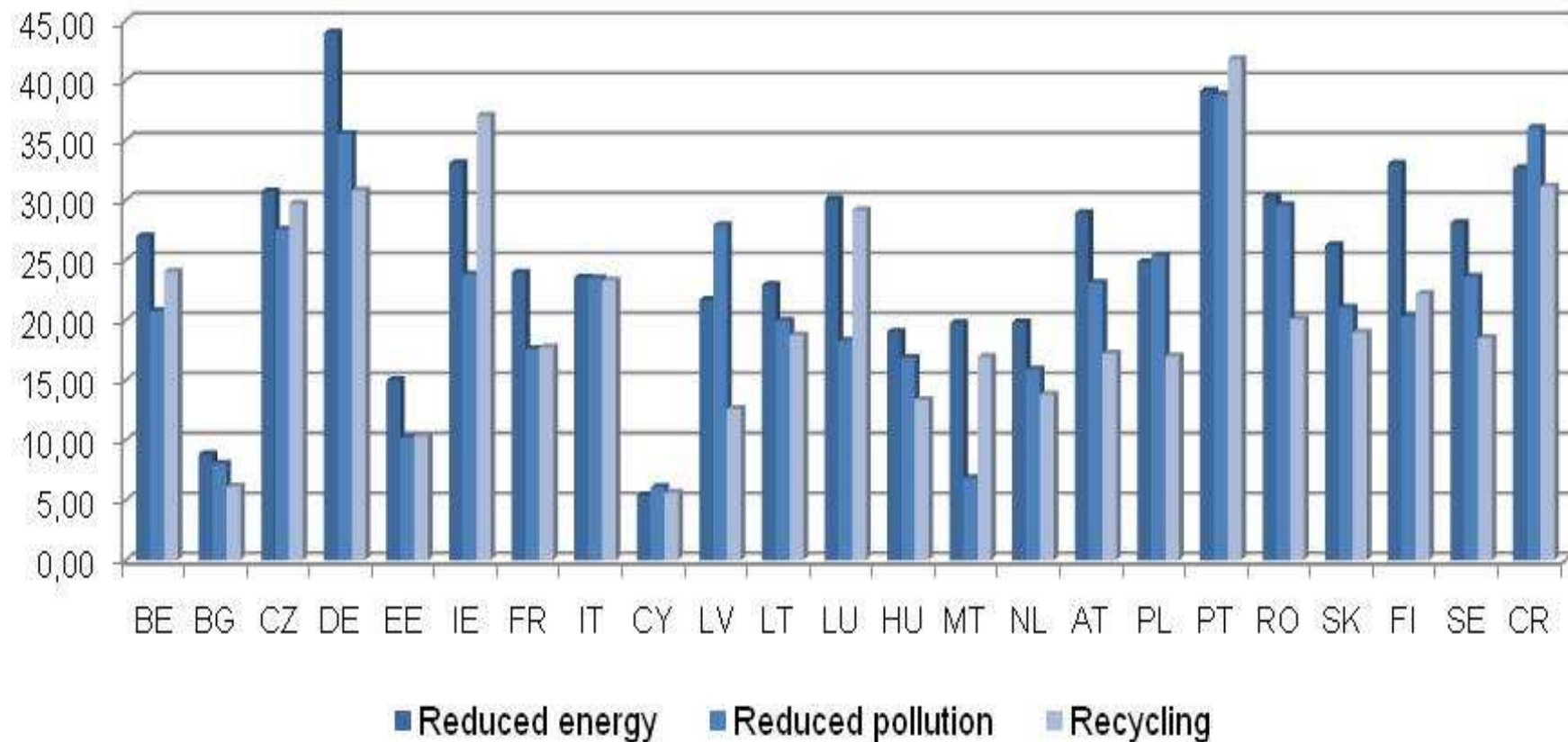
Motivation to introduce an environmental innovation – voluntary decision [%]



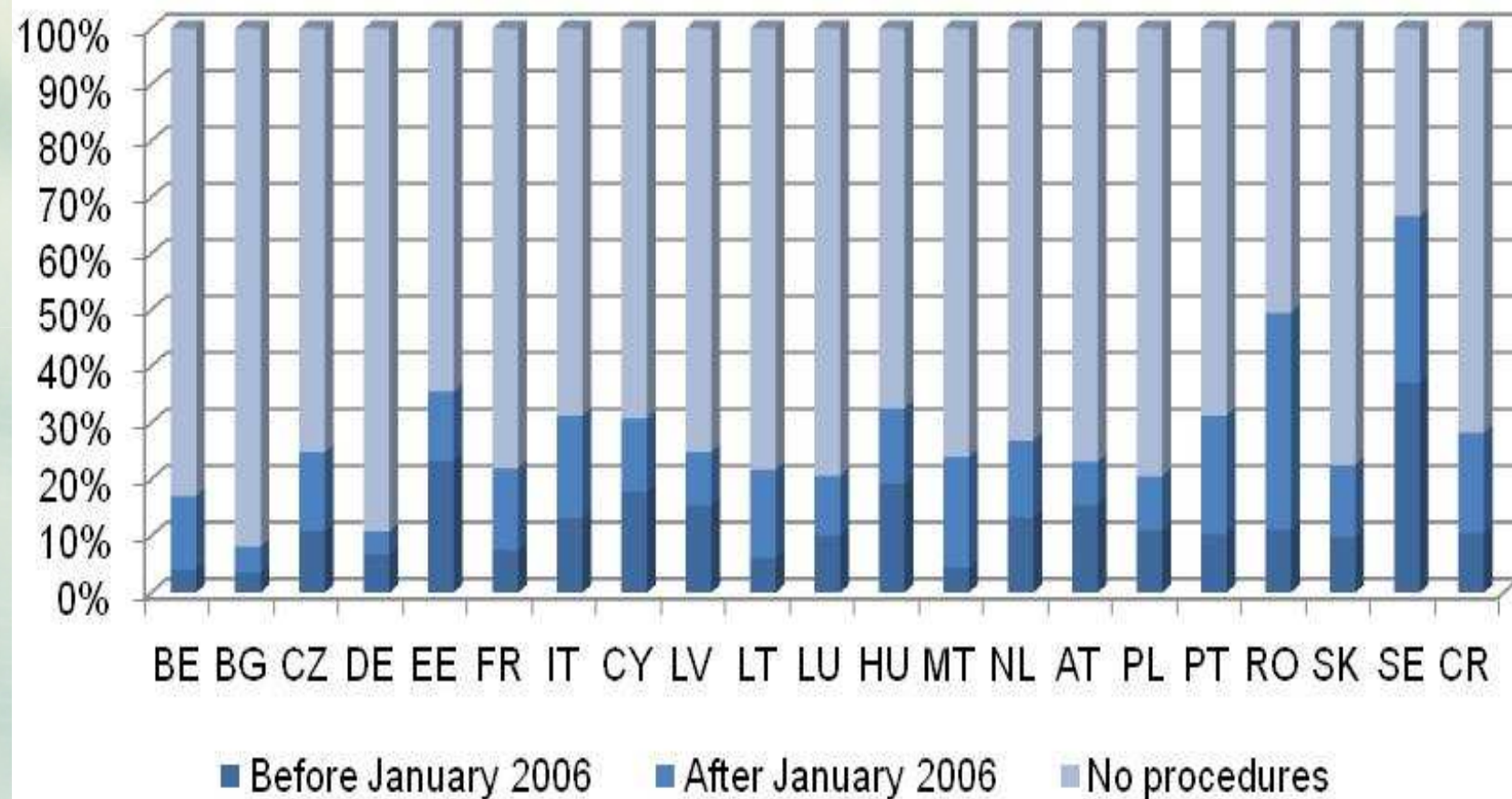
Innovations with environmental benefits – benefits for producers [%]



Innovations with environmental benefits – benefits for users [%]



Enterprises with procedures in place to regularly identify and reduce environmental impacts [%]



Influence of selected economic level indicators on eco-innovations

- assessment of relation between selected indicators of economic level of countries and partial characteristics of eco-innovations
- assumption: elementary dependence is direct relation between higher economic level and higher appearance of selected characteristic of eco-innovations
- Indicators
 - GDP at market prices (EUR per inhabitant)
 - Total R&D expenditures (% of GDP)
 - Turnover from innovation (% of total turnover)

Correlation between reasons for launching eco-innovations and economic level of country

European Union

	Present regulation	Future regulation	Grant	Market demand	Voluntary codes
GDP	-0.51	-0.36	-0.11	0.08	0.33
Expenditures on R&D	-0.36	-0.11	-0.06	0.29	0.03
Turnover	0.16	0.31	0.02	0.01	-0.23

Central and East Europe

	Present regulation	Future regulation	Grant	Market demand	Voluntary codes
GDP	0.51	0.57	0.16	0.32	0.64
Expenditures on R&D	0.17	0.40	0.20	0.60	0.66
Turnover	0.56	0.42	0.13	0.05	-0.28

Correlation between benefits of eco-innovations for producers and economic level of country

	Reduced material	Reduced energy	Reduced CO2 footprint	Replaced materials	Reduced pollution	Recycling
GDP	-0.05	0.09	0.52	0.22	0.03	0.37
Expenditures on R&D	0.10	0.12	0.36	0.23	-0.02	-0.04
Turnover	0.32	0.29	0.18	0.02	-0.07	0.22

Correlation between benefits of eco-innovations for users and existence of procedures and economic level of country

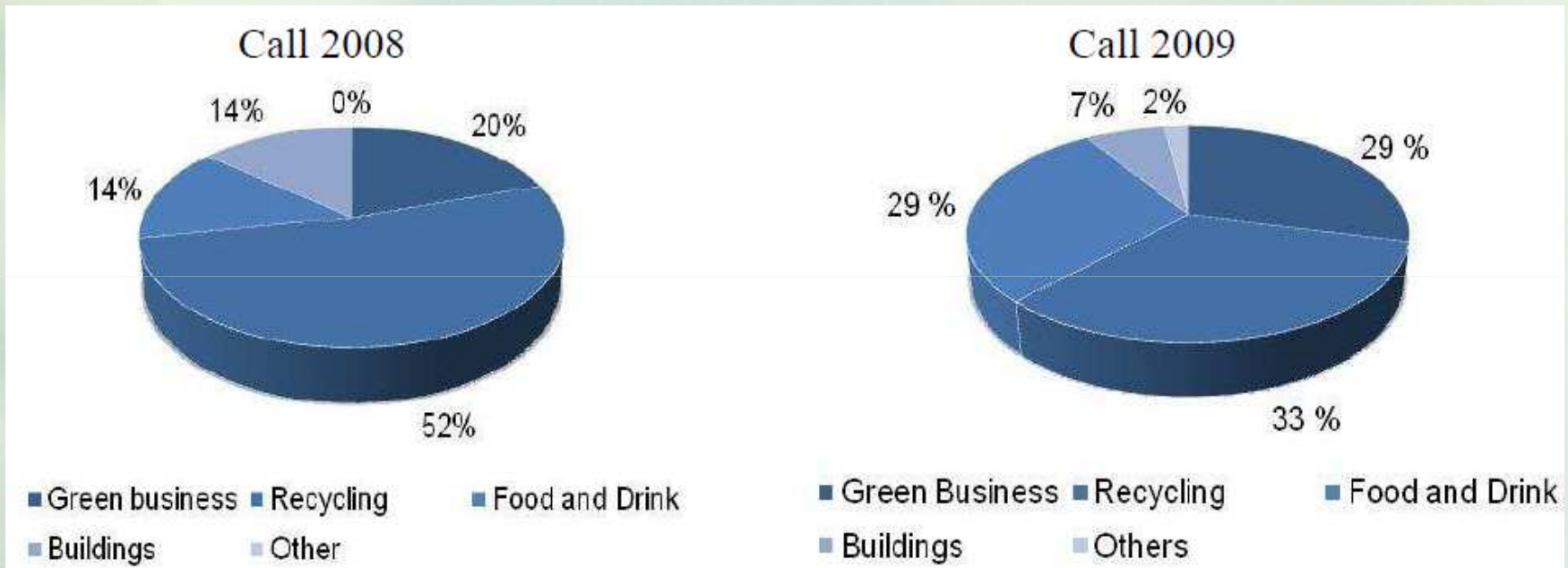
	Reduced energy	Reduced pollution	Recycling of product	Existence of procedures
GDP	0,30	-0,03	0,33	0,02
Expenditures on R&D	0,15	-0,08	-0,02	0,13
Turnover	0,23	-0,10	0,16	0,11

Support of eco-innovations in the European Union

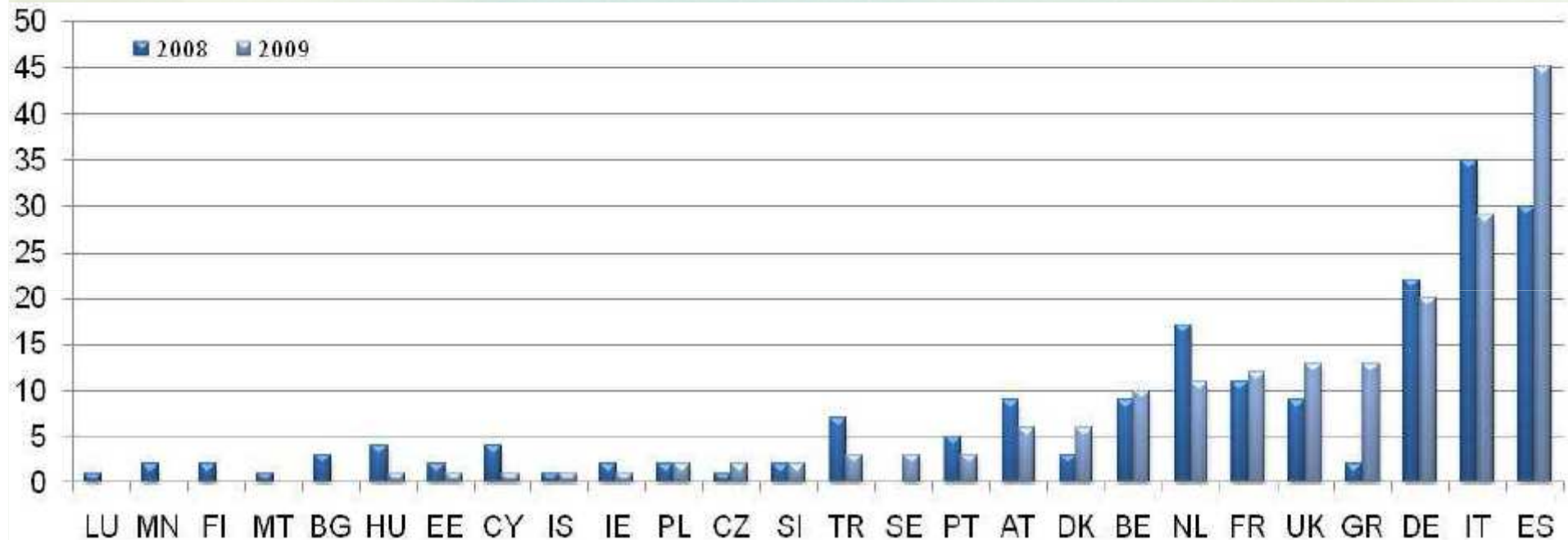
- Competitiveness and Innovation framework Programme 2007-2013
- subprogramme Entrepreneurship and Innovation Programme (EIP)
- Measure Eco-innovations (pilot and market replication projects)
- CIP Programme – Eco-innovations: proposal of the calls

	Call 2008	Call 2009	Call 2010
Number of proposals	134	202	287
Number of participants	444	614	895
Requested funding (€)	110 000 000	150 000 000	264 000 000
Average funding requested (€)	830 000	770 000	921 000
SME (%)	74	70	66

CIP Programme – Eco-innovations: supported sectors



CIP Programme – Eco-innovations: supported participants



Conclusions

- eco-innovation is any innovation that reduces negative impacts caused by production and consumption
- environmental regulations has big influent on introducing eco-innovations especially in new member states of the EU
- the most frequent benefit for firms is possibility to recycle followed by costs reasons
- the most frequent benefit for customers is reduced energy used by the new product
- It was proved the negative relation between companies' need to satisfy requirements of present environmental legislation and GDP per inhabitant
- in countries with high share of innovative products on turnover the environmental legislation is more frequently reason for development of new innovations
- the only effects of eco-innovations for producers where some slight dependence on economic level was proved is reduced CO₂ production

Thank you for your attention