European Water Regulators

The Role of Independent Regulation in the Circular Economy

2nd Workshop on the Economic Regulation of Municipal Waste
"Costs and Tariffs of Municipal Waste Services"

11th December 2024, Brussels – CEER and Online

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Second Part

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Introducing Municipal Waste Regulators

National, independent regulatory authorities are established in:

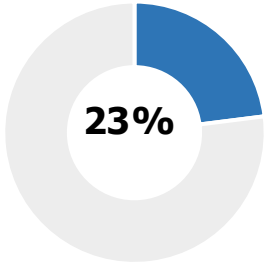
- Greece (RAEWW)
- Hungary (MEKH)
- Italy (ARERA)
- Latvia (PUC)
- Lithuania (VERT)
- Portugal (ERSAR)
- Romania (ANRSC)

- Industry's **adequacy**: counterbalancing fragmentation
- **Governance**: solving conflict of interests, need for an independent entity
- **Transparency**: costs awareness, a clearer decision-making process
- **Quality of services**: meeting expectations of citizens and communities
- **Responsibility**: bringing the overall waste system to the path towards compliance with EU objectives

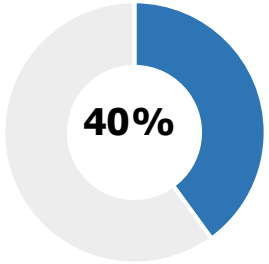
Where?

What?

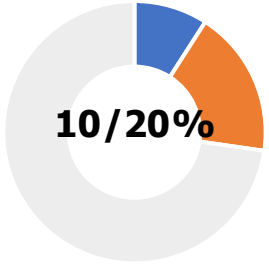
Why?



51,7 MT of MW generated, equal to 23% of the total EU production



Recycling rate 40% (weighted average) vs. 48% of the EU average



Contributing to the Circular Economy

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Key Topics of Commissioner Roswall Mission Letter

Fields of **Independent Regulator's action**, no matter what their actual powers, institutional setup, and size (independent regulators can also be established at local level!)

Circular Economy Act

- Sound evaluation of **actual and efficient costs** of the treatment industry (includes disposal and recycling)
- **Standardization** of recyclable materials to be traded

Effective, simple implementation

- "Polluter pays principle" implementation requires **cost-reflective** fees
- Supporting the Circular Economy means societal participation, which in turn involves **transparency** (know what you're paying for)

Incentives

- Independent tariff setting means incentivizing citizens to adopt desired behavior, as well operators to **reduce service costs** for any given objective

Public and Private Investments

- **Supporting investments** while avoiding excessive increases in fees and tariffs is probably the most important objective the independent Regulators have been tasked with by Member States

Do Regulators deliver? The Investments Puzzle

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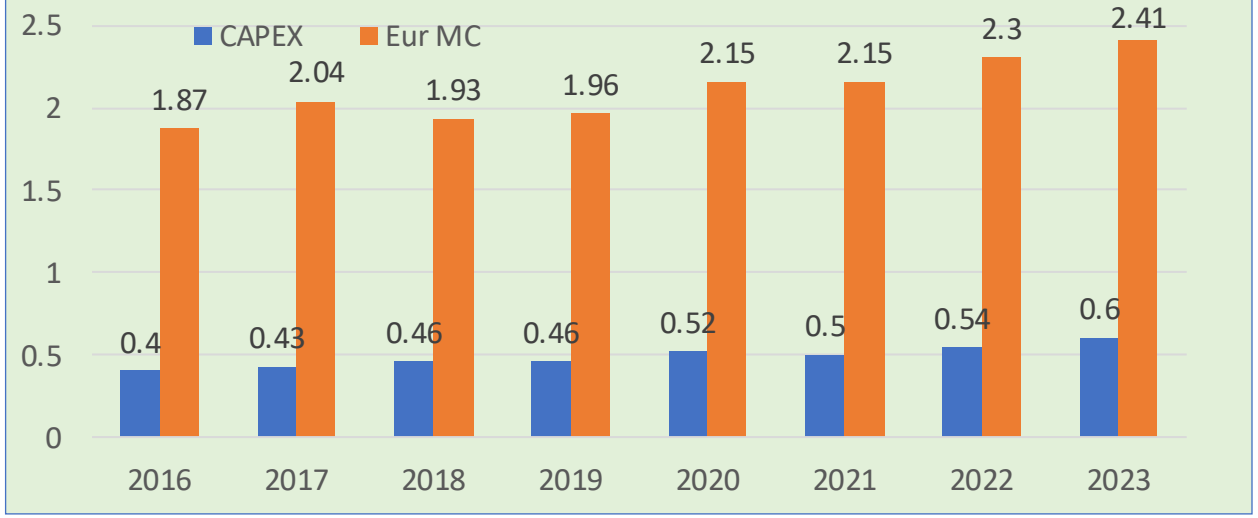
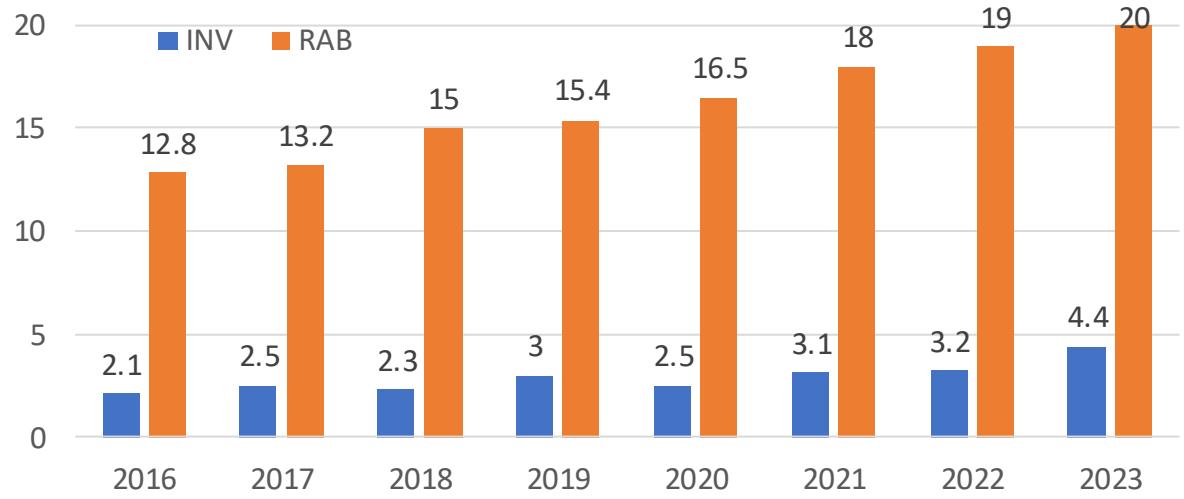
Case Study: Tariff Regulation and Investments over time in Italy's Water Services

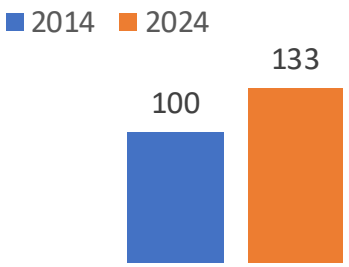
Average tariff EUR/CM +29%, of which CAPEX +50%



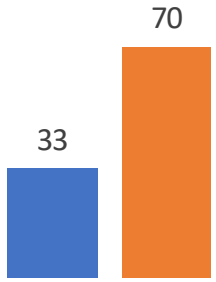
Investments (+110%) and RAB (+56%), Billion Euro



Average tariff 2014-2024, Index



Investments per capita 2014-2024, EUR



- Regulation seems to have resulted in higher investment/RAB growth than tariff growth
- By acting on operating costs, the regulatory model prevented the increased capital costs from being entirely passed on to consumers
- Can this be "exported" to Municipal Waste sector?

Building Block: Municipal Waste Costs and Tariffs

Municipal Waste Services costs incurred in and reported by operators

How Regulators approach costs

- Check consistency with service offered (auditing, unbundling)
- Select "acceptable" costs in terms of efficiency, following a regulatory target model
- Possibly (methodology in force in other regulated sectors) set "standard costs" for any given service
- Check consistency of recoverable costs with quality targets, as well as with environmental objectives
- Establish a "cost development path", lowering future costs through price-cap
- Enrich the cost development path with incentives to invest, and/or to recycle, ….
- Finally, establish **Regulated Revenues** for any operator, or for bundled operators

- Costs allowed to be recovered become "**Regulated Revenues - RR**"

- Regulated Revenues, as defined by Regulators, are transformed in "applicable fees and tariffs" and become a cost to be paid by citizens and/or municipalities
- Local authorities (not excluding the regulators themselves) apply distribution mechanism, so to assign shares of the RR to different categories of users (households, SMEs, public entities)
- Applicable parameters to implement distribution may vary from housing surface to the number of household components
- These parameters may include conventional parameters like "the expected waste generation for any economic activity and/or local features"
- The outcome of the process is the fee/tariff/tax citizens pay to ensure cost covering

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2nd Part: Evidence from Costs and Tariffs Figures

- **Average tariffs in the R6 - The club of Regulated MSs**
- **Space for Efficiency?**

Summary: Average Municipal Waste Tariffs

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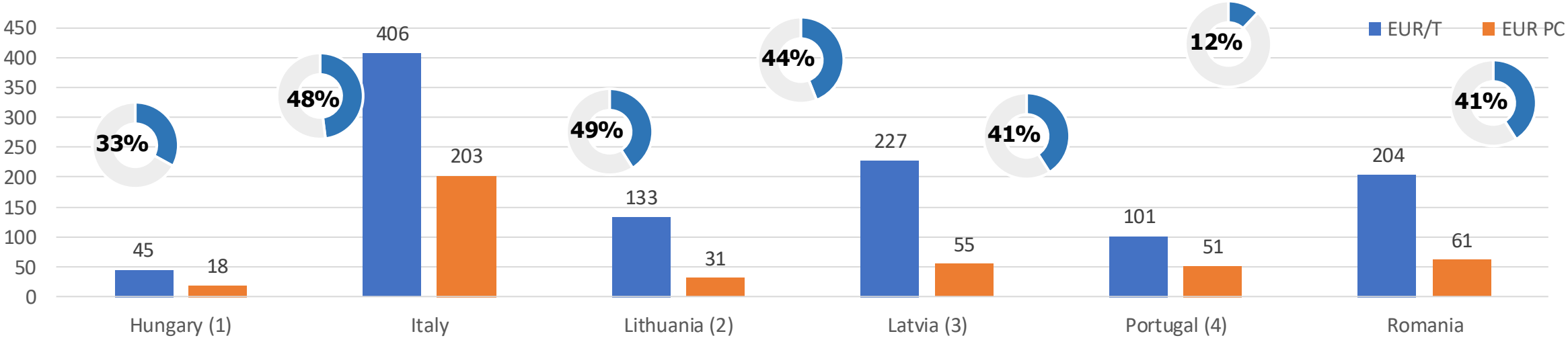
Average MW tariffs, Euro per ton and per capita (2023), and recycling rates

Weighted average for R6 by MW tons generated



- (1) **Hungary**: following the structural reform of 2023, this figure is expected to be substantially reviewed. The RR reported by the Regulator brings a per capita tariff of around 12 EUR; here, the effect of landfill tax is considered. However, a low tariff level can be explained by the introduction of a noticeable EPR/DRS scheme. In this scheme, producers of circular materials are called to cover collection and disposal costs for waste they are responsible for. For example, producers pay a 50 EUR/T fee for plastic packaging. In this chart these fee are not included in the average tariffs, since are not paid by MW service users, even if the EPR fees are reflected in increased consumer prices.
- (2) **Lithuania**: does NOT include landfill tax, which accounts for further 50 EUR/T in 2023
- (3) **Latvia**: Regulator oversees the disposal/treatment segment, for which it reports 114 EUR/TON and 28 EUR/PC. The values displayed include an estimate of the average of regional management fees, which vary significantly
- (4) **Portugal**: values displayed include the recovery of costs not yet caught by tariff system (2022 actual average tariff at 33 EUR/PC)
- **"Donuts" on top**: Recycling rates, i.e., percentages of recycled MW in weight. The super average is weighted by contribution to waste generation in TON/Y.

Balancing the Effects of Capital Requirements

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Need to act, room for improvement

- Adverse effects of rising capital costs can be countered by **operational costs reduction** through an efficiency-driving tariff setting action
- Is there space for efficiency in the MW management?

At the dawn of MW regulation in Italy (2017)

- An article by Beccarello – Di Foggia (Milan University), "The Municipal Waste Service in Italy: assessment of the efficiency, and proposals for regulation" analysed the potential benefit of the introduction of a national, independent regulation able to reduce undue costs
- Authors proposed a Greene's efficiency frontier based on a GLS model, and estimated the possible gain in efficiency at **2.0 – 2.6 billion** euro, meaning that **15-20%** of the total costs for WM services in Italy could be saved

Seven years later …

- More recently, a pool of researchers from JRC (Albizzati, Foster, Gaudillat, Manfredi, and Tonini, 2024) proposed a "Model to assess the environmental and economic impacts of municipal waste management in Europe"
- The researchers calculate the full environmental LL cost and find that **costs for citizens could be reduced by 8.4 billion**, one third of the annual full environmental life cycle costs estimated at the EU level

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Discussion, Q&A

Proposed topics for further discussion … And next Workshops

- Sound assessment of the "Investment Requirements" triggered by the Circular Economy
- Study of optimal mix of economic instruments expected to support these investments
- Evaluation of the "Room for Efficiency", and intervention by Regulators
- Can we imagine a convergence of national frameworks for cost-reflectivity and efficiency-driving regulation?
- When it comes to recycling chain, do economies of scale exist?
- How an effective EU market for recyclable materials can be established, if recycling costs can be different in different MSs?
- …..
- …..
- Last but not least: Enjoy your Circular … uhm, sorry, Winter Holidays!

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Thank you for your attention!