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THE DRIVING FORCES OF THE MATERIAL RESOURCE EFFICIENCY IN EUROPE

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Abstract: During the last decade, use resources in a sustainable way and their efficient management throughout the lifecycle, has benefited from increased attention within the European Union, presenting itself as a smart way of addressing environmental, climate, economic and safety objectives. The starting point of the paper is the question of what are the major factors and concerns that lead the policies of material resource efficiency in each country. The analysis aimed to identifying the major factors who were reported by each country and that lead to the efficiency of material resources and the existing concerns. The most countries reported a combination of three or four categories, although some other countries mentioned more, significant variations being recorded in their response. Efforts are therefore needed in the coming years to demonstrate the benefits of material resource efficiency as a synergistic approach to reducing environmental pressures, addressing economic challenges and combating climate change, and which have been recognized and require greater attention in the future. The overall picture that results is that the economic benefits of improving the efficiency and circularity of resource use are increasingly recognized and acted, indicating the need to be aware of the importance of the efficiency of material resources and the opportunities it promotes and supports.

Keywords: sustainable development, efficiency of resources, major factors, concerns.

JEL Classification: Q42, Q56.

Introduction

During the last years, the sustainable use of resources has been given special attention within the European Union policy, identifying itself as an intelligent way of approaching the objectives of economic efficiency, environment, climate and safety.

Our starting point is the question - what are the major concerns that can ensure the efficiency of material resources at the level of the EU/each member state?

As a first action, countries set themselves the goal of identifying major drivers and concerns; there were significant differences, ranging from the support of one or two driving forces, such as "environmental protection" or "economic development", to a detailed analysis of local conditions, followed by an analysis of material resource efficiency policies that can ensure the solution of the problems in the respective country.

The major factors of the efficiency of material resources

The reported factors can be grouped into:

- factors related to economic interests, such as increasing competitiveness, ensuring access to raw materials and energy and improving production efficiency;

- factors related to environmental, climate and safety concerns, such as reducing environmental pressures, preventing environmental degradation or reducing greenhouse gas emissions;

- factors aimed at regulatory requirements, such as national/EU level regulations, compliance with international objectives and commitments;

- other factors (drivers).

Most countries reported a combination of three or four categories, although some mentioned more. Each one presents a series of sub-factors (sub-drivers):

1. Economic interests consider:

- increasing competitiveness;

- secure supply of raw materials and energy;

- reducing dependence on imported resources;

- job creation and employmen;

- increasing the use of secondary raw materials and material closing loops;

- creation of new market opportunities/ecological jobs;

- improving the performance of the energy sector;

- improving production efficiency;

- ensuring the economic growth impulse;

- reducing exposure to volatile prices;

- concerns related to the lack of resource.

2. Environmental, climate and safety concerns take into account:

- reducing pressure on the environment (including environmental pollution and degradation);

- efficient waste management;

- reduction of greenhouse gas emissions;

- sustainable use and management of resources;

- reducing the use of resources;

- protection of human health.

3. The regulatory requirements consider:

- compliance with EU legislation/objectives;

- compliance with national legislation/targets;

- compliance with international commitments.

4. Other factors consider:

- reducing the social impact/addressing social concerns;

- supporting sustainable consumption and production and supporting consumers to make optimal decisions.

➢ *The economic interests*

The predominance of economic factors indicates that countries consider the use and efficiency of resources as an essential issue from an economic and strategic point of view - doing more with less - is considered primordial. As a significant action, the European Green Deal was established (European Commission, 2020), which is the basis of a competitive and efficient EU economy from the point of view of resource use, with the primary targets: zero net greenhouse gas emissions greenhouse until 2050; recording an economic growth dissociated from the use of resources; the equitability of citizens, sectors and regions.

The need to increase competitiveness is the most recurrent driver for countries that support a special economic interest, regarding the efficiency of the use of resources, either with the aim of maintaining a top position among competitors, or due to the target of surpassing the performance of other countries.

The supply of raw materials and energy was identified as another significant decision factor, reported by countries to reduce dependence on imported resources; most countries refer, in a general way, to access to raw materials in the future, other countries (Denmark and Turkey - mentioning fuels or water) are more specific.

Many countries focus on new job creation in green sectors/job creation in general as one of the drivers of their material resource efficiency policies. Some - including Belgium, France, Germany, Latvia, the Netherlands and Portugal - have identified material resource efficiency as a strategy to provide a new boost to economic growth.

Overall, two other objectives: increasing production efficiency and improving the performance of the energy sector were and are also considered a driving force in material resource efficiency policies.

For many countries, these two categories were often implicitly recognized when security of supply concerns were mentioned.

Countries such as Belgium, France, Germany, Latvia, the Netherlands and Portugal have identified the efficiency of material resources as a strategy to ensure a new impetus to economic growth. Others, for example Denmark, claim that the efficiency of material resources in this sector is determined, first of all, by saving costs.

➢ *Environmental, climate and safety concerns*

The predominance of economic interests that also take into account environmental, climate and safety concerns are a strong engine for the development of material resource efficiency policies. The objective of mitigating pressures on the environment, climate and safety concerns, reducing pollution and degradation is one of the most targeted.

A broad spectrum of factors include the following:

• competitiveness, a key factor that emphasizes policies to reduce the costs of energy, materials, water and waste management;

• national economic and social development ambitions are based on the recognition of the existence of the fossil fuel shortage, the impact of climate change and the need to fundamentally change the way finite resources are used;

• the strategic objectives and regulatory requirements in the EU which are the basis of the approaches regarding the efficiency of the use of resources;

• energy policy which is driven by three primary objectives: supply security, environmental protection and cost competitiveness; there is a need for greater energy independence by increasing the use of renewable alternative energies that would ensure security of supply;

• the sustainable availability of raw materials, which stands out as an important factor for continued prosperity in an extremely open economy with a growing industrial sector.

In most countries, economic interests have overtaken environmental issues, although some (Lithuania and Sweden) state that environmental concerns are more pronounced.

Depending on the way of action of the countries, the scarcity of resources, the security of supply and the exposure to the high costs of resources, stand out as problems that can be addressed through an optimal use of material resources, which - in turn - will facilitate and environment protection, climate and safety.

On the other hand, concerns have been reported about human health and living standards as a policy factor for the rational and efficient use of resources, including a better state of the environment, mitigation of climate change, a transformation of the whole of Europe to operate in conditions of equitability and reliability.

➢ *Regulatory Requirements*

Compared to the first two categories, regulatory requirements (representing 10% of all drivers) have a limited role in stimulating resource efficiency policy development. However, two particularly important regulatory factors reported by countries are compliance with national regulations and EU requirements.

There are strategies aimed at the years 2030/2025, in the field of energy/climate neutrality and regarding sustainable development.

The current regulatory framework for material resource efficiency is still limited. At the same time, the importance given to energy and waste policies shows that EU policies provide a strong boost, where the regulatory framework is strong and/or includes targets.

Guiding principles taken into account:

• combining environmental needs with economic opportunities, innovation and social responsibility;

• recognition of the country's global responsibility in the national resource policy;

• reducing the dependence on primary resources in economic and production practices and strengthening the closed cycle management;

• ensuring the long-term use of sustainable resources and increasing quality.

➢ *Other drivers*

- the need to reduce the social impact and to address social concerns;

- sustainable consumption and production as a driver and the need to help consumers make better choices;

- public, business or media pressure does not appear to be a prominent role as a driver.

Conclusions

Reducing dependence on imports and ensuring stable access to resources have proven to be some of the most important concerns, necessitating the intensification of efforts regarding EU raw materials initiatives.

Currently, countries have identified the concept of the circular economy and closing material loops as a policy factor for material resource efficiency, following the Commission Communication on the circular economy, as early as 2015, "Closing the loop - An EU Action Plan for the Circular Economy".

While resource efficiency is considered primarily an economic issue with a strong ecological component, its potential to benefit health and well-being also needs to be highlighted and properly illustrated in practice.

Efforts are needed to demonstrate the benefits of material resource efficiency as a synergistic approach to reducing environmental pressures, addressing economic challenges and combating climate change that have been explicitly recognized and require greater attention in the future.

The relationship between resource efficiency and innovation, education and social considerations is certainly another important aspect of reflection from the perspective of achieving intelligent and inclusive growth.

It is indicated the need to continue the activity to increase awareness of the importance of material resource efficiency and the opportunities it promotes and supports, to build a competitive economy, with low GHG emissions and resistant to climate change and inclusive

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