THE ROLE OF TAXATION IN SUSTAINABLE DEVELOPMENT – NECESSITY AND LIMITS

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ABSTRACT: *The involvement of taxation in sustainable development is a complex and increasingly important topic in the context of the economic, social, and environmental challenges faced by modern societies. Taxation can play a crucial role in supporting sustainable development through various fiscal policies and instruments.*

Keywords: *Eco-friendly investments, Carbon taxes, Green certificates*

JEL Classification: *Q52, Q58, H23*

1.INTRODUCTION

The means analyzed in this article through which taxation can contribute to sustainable development are: promoting green investments, internalizing external costs, redistributing resources, and generating revenue for sustainable projects. Governments can use fiscal policies to encourage investments in sustainable technologies and practices, such as renewable energy, through tax reductions, subsidies, or tax credits, Internalizing external costs. Pollution taxes or carbon taxes are examples of fiscal instruments that can be used to reflect the true costs of negative environmental impacts in market prices. This can discourage harmful behaviors and promote more eco-friendly alternatives.

Fiscal policies can be used to reduce economic and social inequalities, ensuring a more equitable distribution of resources, which is essential for long-term sustainable development. Taxes and levies can be used to finance projects that contribute to sustainable development, such as green infrastructure, education, and public health.

Although taxation can be a powerful tool, there are certain limits and challenges. The most important ones are:

Efficiency and equity: Implementing green taxes or other fiscal measures can have a regressive impact on low-income populations if appropriate compensatory measures are not introduced. This can create social and political tensions.

*International coordination***:** In a globalized economy, national fiscal measures can be limited by the lack of international coordination. For example, carbon emissions taxation could be ineffective if not applied uniformly on a global scale, as economic activities might relocate to countries with more lenient regulations.

Another limitation is the administrative and compliance costs. Implementing and monitoring fiscal policies for sustainable development can involve significant administrative costs for both the government and taxpayers.

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The risk of **tax evasion** is another limitation. High taxes on resources or polluting activities may encourage tax evasion or the relocation of these activities to economies with more lenient regulations, thereby undermining sustainability goals.

It is essential for fiscal policies to be well-designed, adapted to the national and regional context, and integrated into a broader policy framework for sustainable development. This requires:

1.Continuous evaluation and adjustment: Fiscal policies must be regularly monitored and adjusted to ensure they remain effective and equitable.

2.*Transparency and public consultation:* Engaging communities and stakeholders in the fiscal policy-making process can enhance their acceptance and help avoid adverse effects.

3.International collaboration: Countries must collaborate to ensure that fiscal policies for sustainable development are coordinated and effective on a global scale, avoiding distortions in international markets.

In conclusion, taxation has significant potential to contribute to sustainable development, but this potential can only be fully realized if policies are carefully designed and implemented, taking into account specific economic, social, and environmental contexts.

2. PROMOTING GREEN INVESTMENTS

This concept refers to the implementation of policies and measures that stimulate the financing and development of projects aimed at protecting the environment, reducing carbon emissions, and promoting the sustainable use of natural resources. It is an essential component in achieving sustainable development goals.

Fiscal policies play a crucial role in promoting green investments. Through these policies, governments can create a favorable environment for sustainable investments [1].

Examples include:

-***Subsidies and tax exemptions:*** Direct subsidies for green projects or tax exemptions for companies investing in green technologies are effective measures to encourage investment in this field.

-***Carbon taxes:*** Imposing taxes on carbon emissions can discourage investments in polluting industries and redirect capital toward more environmentally friendly solutions.

-***Tax credits for renewable energy:*** Offering tax credits for investments in solar, wind, or other forms of renewable energy encourages companies to allocate resources in these areas.

Governments can also introduce regulations that support the development of green projects.

-***Energy efficiency standards:*** Improving energy efficiency in buildings, vehicles, and equipment through regulations can stimulate investment in more efficient technologies.

-***Environmental impact reporting requirements:*** Requiring companies to report their environmental impact can increase transparency and encourage investment in projects with a positive environmental impact.

The development of specific financial instruments to support green investments is essential. These include:

-***Green bonds:*** These are financial instruments issued by governments or corporations to finance environmental projects. Funds raised from green bonds are used exclusively for investments that contribute to environmental protection.

-***Sustainable investment funds:*** The creation of investment funds focused on green projects can mobilize private capital to support sustainable development.

Promoting green investments can be enhanced through collaboration between the public and private sectors:

-***Public-private partnerships:*** These can accelerate the implementation of sustainable projects by combining the resources and expertise of both sectors.

-***Innovation in public policy:*** Collaboration can lead to the development of innovative policies that support green investments, such as emission trading systems.

Another important aspect is **educating investors and the general public** about the importance of green investments, such us: a**wareness campaigns;** Governments and non-governmental organizations can run campaigns to raise awareness about the benefits of green investments. Or **financial education programs; t**hese can be aimed at investors to help them better understand the opportunities and risks associated with green investments.

Although promoting green investments is essential, there are significant challenges:

-**High initial costs:** Green projects can involve large initial costs, which may discourage investments without adequate government support.

-**Volatility risk:** Markets for green technologies can be volatile, which may make these investments appear risky to investors.

- **International coordination:** In a globalized economy, a lack of coordination between countries regarding green policies can lead to negative effects, such as the relocation of investments to countries with less strict regulations.

In conclusion, promoting green investments is a crucial component in achieving sustainable development goals. Success in this area depends on the implementation of appropriate fiscal and regulatory policies, the development of suitable financial instruments, effective collaboration between the public and private sectors, and educating and raising public awareness.

The data in **Table 1: Promoting Green Investments** illustrate the promotion of green investments in Romania, for the period 2007-2024. This data includes information on green investments (in millions of euros), government subsidies, the number of funded projects, and the percentage of renewable energy in the total energy produced.

Table 1: Promoting Green Investments, 2007-2024

	Green investments (Mil Euro)	Government subsidies (Mil Euro)	Projects (no)	Renewable energy (%)
2007	100	10	5	5
2008	150	15	10	6
2009	180	18	12	7
2010	220	20	15	8
2011	250	25	18	9
2012	270	30	20	10
2013	300	35	25	11
2014	350	40	30	12
2015	370	45	35	13
2016	400	50	40	14
2017	450	55	45	15
2018	480	60	50	16
2019	500	65	55	17
2020	550	70	60	18
2021	600	75	65	19
2022	650	80	70	20
2023	700	85	75	21
2024	750	90	80	22

Source: Author owns processing based on Eurostat data (2024)

Between 2007 and 2024, Romania made significant progress in promoting green investments, largely due to its accession to the European Union and alignment with European initiatives on renewable energy and the green economy.

In 2020, Romania achieved its renewable energy targets, with 24.5% of total energy consumption coming from renewable sources, surpassing the national target of 24% set by the EU [2]. A large part of this growth was driven by the development of the photovoltaic and wind sectors, supported by government subsidies and support schemes such as the green certificate scheme. This was one of the main measures to promote green investments in renewable energy.

Romania benefited from significant international funding for green energy and environmental infrastructure projects. For example, the World Bank supported Romania's green development projects, including a loan of EUR 599.1 million in 2024 to support green growth and inclusion [3]. This contributed to strengthening the transition to a greener economy by stimulating investments in green infrastructure.

Through the Large Infrastructure Operational Program (POIM) and other European structural funds, Romania invested in the energy efficiency of public and residential buildings, as well as in the modernization of infrastructure to reduce energy consumption and carbon emissions. These investments were supported by European funds, and the Romanian government provided fiscal incentives to companies that adopted energy-efficient solutions.

Although Romania has made progress in green investments, challenges remain related to integrating renewable sources into electricity grids and attracting more private investment in this sector. Additionally, better coordination between national and local authorities is needed to facilitate the implementation of new green projects.

Important statistical data highlight that in 2022, renewable sources represented approximately 25% of Romania's energy mix, with a significant share coming from wind and photovoltaic energy.

In recent years, Romania has issued green bonds to support investments in environmental infrastructure and renewable energy, following the European trend of increasing this type of financial instrument [4]. These statistics and developments highlight Romania's commitment to investing in green projects and achieving the sustainable development goals set at both national and European levels.

Interpreting the statistical data on the promotion of green investments in Romania for the period 2007-2024 involves a careful analysis of the evolution of each indicator and the relationships between them.

Here are some key aspects, in Figure 1, to consider:

Green investments (Million Euro):

-*Continuous growth: We* observe a steady increase in green investments from 100 million euros in 2007 to 750 million euros in 2024. This indicates growing interest and commitment to green projects, likely driven by government policies and increased awareness of environmental issues.

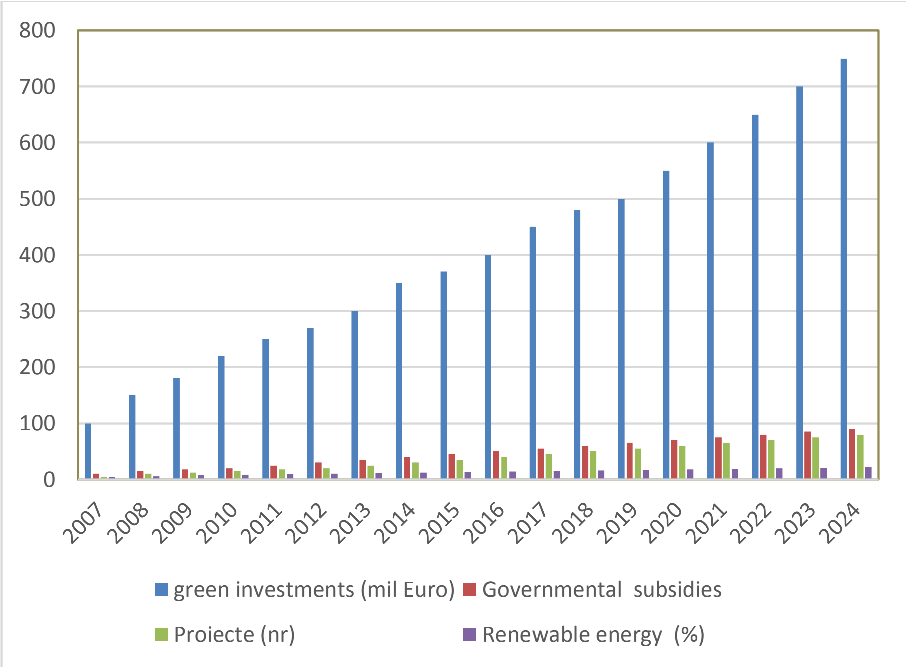
-*Analysis of inflection points:* Identify moments when investment growth accelerates or slows down. For example, if a significant increase is seen in a particular year, it may be useful to correlate this with the introduction of new fiscal policies or major economic events.

Government subsidies (Million Euro):

-*Correlation with investments:* The rise in government subsidies seems to follow a similar trend to that of green investments, growing from 10 million euros in 2007 to 90 million euros in 2024. This suggests that subsidies have played an important role in stimulating investments.

-*Subsidy efficiency:* Analyze whether the increase in subsidies is proportional to the increase in investments. If subsidies grow faster than investments, a reassessment of the efficiency of these funds may be necessary.

Figure 1. Green investments in Romania, 2007-2024 period



Source: Author owns processing based on Eurostat data (2024)

Number of funded projects:

-*Increase in number:* The number of funded projects has risen from 5 in 2007 to 80 in 2024, suggesting a diversification and expansion of green investments. This may indicate both improved access to financing for green projects and increased interest from the private sector.

-*Comparison with investments:* Check if the increase in the number of projects is proportional to the increase in total investments. A large discrepancy might suggest that individual projects are becoming larger and more complex, or that there is variable efficiency in resource allocation.

Share of renewable energy (%):

-*Gradual increase:* The share of renewable energy in total energy production has risen from 5% in 2007 to 22% in 2024. This indicates success in integrating green energy sources, in line with carbon reduction goals.

-*Impact of investments:* Correlate the growth in the share of renewable energy with green investments and government subsidies to evaluate how effectively these have contributed to increasing renewable energy production capacity.

Overall analysis:

-*Synergies between indicators:* Analyze how these indicators interact with each other. For example, an increase in subsidies and investments should lead to a rise in the number of projects and the share of renewable energy. If there is no direct correlation, a deeper analysis may be needed to identify barriers.

-Economic and political context: Try to place these developments in the broader context of economic and environmental policies in Romania. For instance, major legislative changes, adherence to international standards, or external influences may explain fluctuations.

3. CONCLUSION

The taxation is essential for promoting sustainable development, providing the resources needed for social equity, environmental protection, and economic growth. However, its effectiveness is constrained by factors such as economic distortions, tax evasion, and limited fiscal capacity, particularly in developing countries. To maximize its impact, tax policy must be carefully designed and integrated into a broader framework of sustainable development strategies.

The data suggests that Romania has made significant progress in promoting green investments, both through the direct increase in allocated funds and the rise in the number of projects and the share of renewable energy. However, for a comprehensive evaluation, it is essential to also consider external factors, the long-term sustainability of these policies, and potential improvements needed in resource allocation.

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