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ENVIRONMENTAL TAXES AND THEIR ROLE IN THE DEVELOPMENT OF THE GREEN ECONOMY

Turayev Alijon Akmal ugli

Associate Professor of the Department of "Investment and Innovations" of the Samarkand Institute of Economics and Service, Acting PhD.

alijon.turayev@mail.ru

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Abstract

This article tax system plays a crucial role in ensuring the economic stability and financial independence of any state. The effectiveness of this system largely depends on the proper organization of tax control mechanisms that guarantee the full and timely collection of tax revenues. This study examines the essence, main forms, and practical significance of tax control, with particular focus on cameral control, mobile inspections, thematic investigations, and digital control systems.

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Introduction

Environmental taxes have emerged as an essential instrument in addressing contemporary ecological challenges and promoting sustainable economic development. In the context of increasing environmental degradation, climate change, and resource depletion, governments worldwide are seeking effective policy tools to balance economic growth with environmental protection. Among these tools, environmental taxation plays a critical role by incorporating environmental costs into economic decision-making processes and encouraging more sustainable behavior among producers and consumers[1].

The concept of a green economy is closely linked to sustainable development, emphasizing efficient resource use, reduced environmental risks, and improved human well-being. Environmental taxes, often referred to as "green taxes," are designed to internalize negative externalities such as pollution, carbon emissions, and excessive resource consumption. By imposing financial charges on environmentally harmful activities, these taxes create economic incentives for businesses and individuals to adopt cleaner technologies, reduce emissions, and utilize resources more efficiently[3].

The importance of environmental taxes lies not only in their regulatory function but also in their fiscal potential. Revenues generated from such taxes can be allocated to environmental protection programs, renewable energy development, and sustainable infrastructure projects. This dual function—environmental regulation and revenue generation—makes environmental taxation a powerful mechanism for supporting the transition to a green economy.

In recent years, many countries have introduced various forms of environmental taxes, including carbon taxes, energy taxes, pollution charges, and waste management fees. The effectiveness of these instruments depends on their design, implementation, and integration within broader environmental and economic

policies. Moreover, advancements in digital technologies and data monitoring systems have improved the efficiency and transparency of environmental tax administration, enabling governments to better track environmental impacts and enforce compliance[4].

Literature review.

The issue of environmental taxation and its role in the development of the green economy has been widely discussed in economic, environmental, and public policy literature. Scholars generally agree that environmental taxes are among the most effective market-based instruments for reducing environmental damage, promoting efficient resource use, and encouraging sustainable development. Unlike traditional regulatory approaches, which rely mainly on direct restrictions and administrative controls, environmental taxes influence the behavior of producers and consumers through economic incentives, making environmentally harmful activities more costly and environmentally friendly alternatives more attractive[5].

One of the main theoretical foundations of environmental taxation is based on the concept of externalities, particularly the works of Arthur Pigou. Pigouvian taxation suggests that when economic activities generate negative externalities such as pollution, the state should impose taxes equal to the social cost of those activities. “In this way, market prices reflect the real environmental cost of production and consumption”. This approach has become central to modern environmental economics and has provided the conceptual basis for carbon taxes, energy taxes, pollution charges, and resource extraction fees.

A considerable body of foreign literature emphasizes that environmental taxes contribute not only to environmental protection but also to economic modernization. Researchers such as Pearce, Ekins, and Fullerton argue that green taxes encourage firms to adopt cleaner technologies, invest in innovation, and improve energy efficiency. These studies show that environmental taxation can accelerate the transition from resource-intensive growth models to greener and more sustainable economic systems. In particular, carbon taxation has been identified as one of the most effective tools for reducing greenhouse gas emissions and combating climate change[6].

Another important direction in the literature concerns the relationship between environmental taxes and the concept of the green economy. According to the United Nations Environment Programme, a green economy is one that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities. Within this framework, “environmental taxes are viewed as key policy instruments for guiding production and consumption toward sustainability”. They create financial incentives for renewable energy use, waste reduction, recycling, and the rational use of natural resources. A number of studies confirm that countries with well-developed environmental tax systems tend to demonstrate higher levels of ecological innovation and stronger progress in sustainable development indicators[7].

In the literature of developed countries, special attention is paid to the “double dividend” hypothesis. “This theory suggests that environmental taxes can generate two simultaneous benefits: first, they reduce pollution and environmental degradation; second, they provide public revenue that can be used to reduce other distortionary taxes or to finance social and environmental programs”. Authors such as Goulder and Parry note that this idea has made environmental taxation especially attractive for policymakers, since it combines ecological and fiscal objectives in one instrument. “However, they also emphasize that the realization of this double dividend depends on tax design, revenue recycling mechanisms, and the structure of the broader fiscal system”[8].

At the same time, numerous studies point out that environmental taxes may create certain economic and social challenges. One of the main concerns highlighted in the literature is the regressive nature of some environmental taxes, especially energy and fuel taxes, which may disproportionately affect low-income households. Researchers argue that without compensatory measures such as tax credits, targeted subsidies, or social support programs, environmental taxation may increase inequality and face strong public resistance. This issue has become particularly relevant in discussions of carbon taxation and energy price reforms.

Research Methodology

In this study, theoretical and practical methods were used based on a comprehensive approach to studying tax control and its forms. In particular, the essence, tasks and main forms of tax control were systematically studied using the methods of analysis and synthesis. Through the comparative method, the experience of foreign countries was compared with the practice of Uzbekistan, and their specific aspects were identified.

Analysis and Results

This study evaluates the role of environmental taxes in promoting the development of a green economy, focusing on their environmental effectiveness, fiscal contribution, and socio-economic impact. The analysis is based on both qualitative assessment of policy frameworks and quantitative data from countries implementing environmental tax instruments[9].

The findings indicate that environmental taxes are effective in reducing environmentally harmful activities, particularly greenhouse gas emissions, energy consumption, and waste generation. Carbon taxes and energy taxes have been especially successful in encouraging industries to adopt cleaner technologies and improve energy efficiency. Empirical data suggest that countries implementing environmental taxes have achieved measurable reductions in emissions, typically ranging from 5% to 20% over time, depending on tax rates and policy design[10].

In addition, environmental taxes create long-term behavioral changes among both producers and consumers. Higher costs associated with pollution-intensive activities incentivize firms to invest in environmentally friendly innovations, while consumers are encouraged to shift toward sustainable products and services.

Environmental taxes also serve as an important source of public revenue. The analysis shows that such taxes contribute between 5% and 10% of total tax revenues in many developed economies. These funds are often reinvested into environmental protection programs, renewable energy projects, and sustainable infrastructure development[11].

Furthermore, the concept of the “double dividend” is partially confirmed by the findings. Environmental taxes not only help reduce pollution but also provide financial resources that can be used to lower other taxes or support social programs. This enhances overall economic efficiency and supports fiscal sustainability.

The study demonstrates that environmental taxes play a crucial role in accelerating the transition to a green economy. By internalizing environmental costs, these taxes align market incentives with sustainability goals. Countries with well-developed environmental tax systems tend to show higher levels of green innovation, increased investment in renewable energy, and improved environmental performance indicators[12].

Moreover, environmental taxes support the development of circular economy practices, including recycling, waste reduction, and efficient resource utilization. They also contribute to the growth of green industries, such as renewable energy, eco-friendly manufacturing, and sustainable agriculture.

The integration of digital technologies into environmental tax administration has significantly improved efficiency and transparency. Automated monitoring systems, electronic reporting, and real-time data analysis enable more accurate tracking of emissions and resource use. As a result, tax authorities can better identify non-compliance, reduce administrative costs, and improve revenue collection.

The analysis shows that digital systems can increase tax collection efficiency by approximately 10–20% and reduce administrative costs by up to 30%. In addition, digital tools enhance transparency and reduce opportunities for tax evasion and corruption[13].

Despite their effectiveness, environmental taxes face several challenges. One of the main issues is their potential regressive impact, as higher energy and fuel prices may disproportionately affect low-income households. Without appropriate compensatory measures, such as targeted subsidies or tax relief, these policies may lead to social inequality and public resistance.

Another significant challenge is the resistance from industries, particularly those heavily reliant on fossil fuels. In some cases, businesses may experience increased production costs, which can affect competitiveness, especially in international markets.

Additionally, the effectiveness of environmental taxes depends on strong institutional capacity, clear legal frameworks, and reliable monitoring systems. In developing countries, limited administrative resources and insufficient technological infrastructure may hinder the successful implementation of such taxes[14].

The results of the study highlight several important conclusions:

- ❖ Environmental taxes are effective tools for reducing pollution and promoting sustainable behavior.
- ❖ They provide a stable source of public revenue and support the financing of green initiatives.
- ❖ The integration of digital technologies significantly enhances tax administration efficiency and compliance.
- ❖ Environmental taxation contributes to the development of a green economy by encouraging innovation, renewable energy use, and resource efficiency.
- ❖ However, challenges such as social equity concerns, administrative limitations, and industry resistance must be carefully addressed.

Overall, the analysis confirms that environmental taxes are a powerful and versatile policy instrument. When properly designed and implemented, they can simultaneously achieve environmental protection, economic efficiency, and sustainable development goals[15].

Conclusion

In conclusion, environmental taxes represent a vital policy instrument for achieving sustainable development and advancing the transition toward a green economy. This study has demonstrated that environmental taxation not only contributes to reducing environmental degradation but also plays a significant role in strengthening fiscal systems and promoting efficient resource allocation.

The analysis confirms that environmental taxes are effective in influencing the behavior of both producers and consumers by internalizing the environmental costs of economic activities. Instruments such as carbon taxes, energy taxes, and pollution charges encourage the adoption of cleaner technologies, reduce emissions, and support environmentally responsible practices. At the same time, these taxes generate stable public revenues that can be reinvested in environmental protection, renewable energy, and sustainable infrastructure.

Furthermore, the integration of digital technologies into environmental tax administration enhances efficiency, transparency, and compliance. Electronic monitoring systems and data-driven approaches enable more accurate tracking of environmental impacts and improve the effectiveness of tax collection mechanisms.

However, the study also highlights several challenges associated with environmental taxation, including potential social inequities, administrative limitations, and resistance from certain economic sectors. Addressing these issues requires well-designed policies that ensure fairness, provide support for vulnerable groups, and strengthen institutional capacity.

Overall, environmental taxes serve as a key mechanism for aligning economic development with environmental sustainability. By promoting innovation, encouraging responsible resource use, and supporting green investments, they contribute to long-term economic stability and improved societal well-being. Therefore, expanding and optimizing environmental tax systems, alongside broader environmental and economic policies, is essential for achieving sustainable and inclusive growth in the modern world.

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