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# GREEN FISCAL INSTRUMENTS AND THEIR ROLE IN PROMOTING RENEWABLE ENERGY, ECONOMIC GROWTH, AND ENVIRONMENTAL SUSTAINABILITY

Maftuna Madaminova
PhD Student, Fergana State University, Uzbekistan
E-mail: m.madaminova@fdu.uz

**Abstract**

This paper examines how green fiscal instruments support renewable energy development and contribute to economic growth and environmental sustainability. The analysis focuses on feed-in tariffs, renewable energy subsidies, and tax incentives as key policy tools used to encourage investment in clean energy technologies. A review of recent empirical studies shows that these instruments can accelerate renewable energy deployment, reduce greenhouse gas emissions, and stimulate innovation and employment. At the same time, their effectiveness depends on policy design, institutional quality, and the broader economic context. The study concludes that well-targeted fiscal measures are important for achieving a balanced transition toward low-carbon and sustainable economic development.

**Keywords:** Green fiscal policy, Renewable energy, Feed-in tariffs, Tax incentives, Economic growth, Environmental sustainability

## 1. Introduction

The expansion of renewable energy has become a strategic priority for countries seeking to reduce dependence on fossil fuels and mitigate climate change. Governments increasingly use green fiscal instruments to encourage private

investment and improve the competitiveness of renewable technologies. These instruments lower investment risks and help overcome the high initial costs associated with solar, wind, and other clean energy systems.

Green fiscal instruments are particularly important because they can simultaneously support economic and environmental objectives. By stimulating investment in renewable energy, they can create employment opportunities, promote technological innovation, and reduce carbon emissions. However, policy outcomes vary across countries depending on the design and implementation of the instruments.

## 2. Main Findings

Feed-in tariffs are among the most widely used production-based incentives. They guarantee renewable energy producers a fixed payment for each unit of electricity supplied to the grid. This mechanism provides revenue certainty and improves investor confidence. Evidence from Japan indicates that feed-in tariffs accelerated renewable electricity deployment, although their effectiveness depended on grid flexibility and supporting infrastructure (Dong & Shimada, 2017). In OECD countries, wind feed-in tariffs were found to have a significant positive long-term effect on the share of renewable electricity (Sadik-Zada, 2025).

Tax incentives, including investment tax credits, production tax credits, and tax exemptions, reduce the financial burden associated with renewable energy projects. These measures can improve the profitability of investments and encourage wider adoption of clean technologies. Nevertheless, their environmental effectiveness is not always guaranteed. Murray et al. (2014) show that some tax incentives produce only modest reductions in greenhouse gas emissions despite substantial fiscal costs.

Direct subsidies are another important policy tool. They help lower upfront investment costs and improve access to renewable technologies. However, excessively high subsidy levels may create fiscal pressure and reduce overall economic efficiency. Qi and Li (2017) report that the relationship between renewable energy subsidies and economic growth may become less favorable when subsidies exceed a certain threshold.

The interaction between policy instruments also matters. Lecuyer and Quirion (2019) argue that feed-in tariffs can complement carbon pricing systems by maintaining renewable energy deployment when carbon prices are unstable. This finding suggests that coordinated policy packages are often more effective than isolated measures.

From a macroeconomic perspective, renewable energy support mechanisms can stimulate output, investment, and innovation. At the same time, they contribute to lower carbon emissions and improved environmental quality. Countries with stronger institutional capacity tend to obtain better results, highlighting the importance of effective governance and policy consistency.

## 3. Conclusion

Green fiscal instruments play a critical role in accelerating renewable energy development and advancing sustainable development goals. Feed-in tariffs, subsidies, and tax incentives can promote investment, support economic growth, and reduce environmental degradation when designed appropriately. Their success depends on careful targeting, institutional capacity, and coordination with broader energy and climate policies. For developing countries, these tools offer significant opportunities to expand clean energy while balancing economic and environmental priorities.




**References:**

1. Dong, Y., & Shimada, K. (2017). Evolution from the renewable portfolio standards to feed-in tariff for the deployment of renewable energy in Japan. Renewable Energy.
2. Lecuyer, O., & Quirion, P. (2019). Can uncertainties justify overlapping policy instruments to mitigate emissions? Ecological Economics.
3. Murray, B., Rivers, N., & others. (2014). The effects of clean energy tax incentives on greenhouse gas emissions.
4. Qi, T., & Li, J. (2017). The nonlinear relationship between renewable energy consumption, subsidies, and economic growth in the European Union.
5. Sadik-Zada, E. R. (2025). Long-run effects of wind feed-in tariffs on renewable electricity generation in OECD countries.