

Green Tax as a Form of Public Policy in Social Problem

Abdul Rahman¹, Yesi Hendriani Supartoyo², Zamroni Salim³

{rhnoke@gmail.com¹, izzanur693@gmail.com², Yesi001@brin.go.id³, zamronisalim@gmail.com⁴}

Politeknik STIA LAN Bandung, Bandung, Indonesia¹
National Research and Innovation Agency, Jakarta, Indonesia^{2,3}

Abstract. Global warming and climate change have become pressing and complex issues in the modern era. Many countries have made efforts to reduce greenhouse gas emissions by adopting various environmental policies. One of the increasingly popular policies is the imposition of environmental taxes or the so-called "green tax". According to literature research, the study found that the imposition of this tax is expected to encourage changes in consumer and producer behavior to reduce greenhouse gas emissions and environmental pollution. However, the imposition of green tax also has challenges and risks that must be addressed. Some of them include resistance from society, the risk of social and economic injustice, and concerns about negative impacts on economic growth. Therefore, a massive socialization and a role model of green tax as a policy instrument to reduce greenhouse gas emissions and environmental damage is necessary.

Keywords: green tax, environmental tax, climate change, greenhouse gas emissions, policy

1 Introduction

Global warming and climate change are becoming increasingly pressing and complex issues in this modern era. Many countries have made efforts to reduce greenhouse gas emissions by adopting various environmental policies. One of the increasingly popular policies is the imposition of environmental tax or better known as "green tax". The imposition of this tax is expected to encourage changes in consumer and producer behavior in reducing greenhouse gas emissions [1], [2].

However, the imposition of environmental tax also has challenges and risks that must be overcome. Some of them are resistance from society, risks of social and economic injustice, and fears of a negative impact on economic growth. Therefore, it is necessary to evaluate the imposition of environmental taxes as a policy tool to reduce greenhouse gas emissions [3], [4]

This paper will discuss the challenges and opportunities for green tax as a part of public policy to handle the social problems related to environment and provide recommendations for maximizing the effectiveness of this policy. The study will conduct a review of the termini literature, as well as analyze data and information related to environmental taxation in various countries. It is hoped that this paper can contribute to policy makers in overcoming environmental problems and climate change.

2 Literature Reviews

Green Tax is a tax related to the environment or in general it is called an environmental tax, which is a solution from the government's side for environmentally friendly financing / green financing [5]–[7]. This refers to the Government Regulation of the Republic of Indonesia Number 46 of 2017 concerning Environmental Economic Instruments which states that funds for handling pollution and/or Damage and restoration of the Environment are sourced from the state revenue and expenditure budget; regional income and expenditure budget; and/or other sources of funds that are legitimate and do not comply with the provisions of laws and regulations. Furthermore, this regulation underlines that the source of funds for the state and regional budgets can come from environmental taxes and fees [8]

Historically, green tax was born because of externalities from human activities related to the environment. Externalities themselves are the costs or benefits of economic activities experienced by third parties that are not related to these activities. Another definition of externality is the costs or benefits of market transactions that are not reflected (reflected) in prices. Theoretically, externalities are divided into positive externalities and negative externalities. Positive externalities are positive impacts arising from an activity, for example research and development activities to find vehicle fuel originating from waste, where this activity not only benefits inventors or research institutions, but also has an impact on reducing the living costs of people who use it. fuel for the vehicle. Other activities such as infrastructure development, education & training, vaccination, and others. Meanwhile, negative externalities are activities that have a negative impact, especially on the environment. Such as waste disposal, large-scale extraction of water for industrial needs, factory smoke, cigarette smoke and others [6], [7].

Thoughts related to green tax itself arise because of this negative externality, where the imposition of taxes is a solution to externality activities in addition to other solutions, including enforcement of property ownership rights, such as a ban on building houses on green land because it will impact floods, droughts, then there is clear regulations governing negative and positive externalities, as well as subsidizing the construction of village roads, hospitals and schools to encourage positive externalities. As a solution to negative externalities, green tax is indeed aimed at units that clearly cause damage to the environment. This is in line with what the OECD says that green tax is a tax that is collected based on a physical unit that is proven to have a negative impact on the environment [3], [5].

3 Methods

Because this paper is a literature review, the method used is analysis and synthesis from various sources and references that are relevant to the topic of Green Tax. In writing this paper, a search for sources that are reliable and relevant to the topic is carried out, then an evaluation is made of each source obtained and collected. Data and information from collected sources are then analyzed and synthesized to produce a more comprehensive understanding of the topic of Green Tax and the challenges and opportunities associated with its implementation.

4 Results and Discussion

To reduce the negative impact of a physical unit on the environment, there are two concepts for implementing green tax, namely the concept of imposing environmental tax and providing tax incentives/credits. The imposition of environmental tax means that every company that worsens environmental conditions will be subject to mandatory levies. This refers to the polluter pays principle, that is, whoever produces pollution will be taxed. While providing incentives means giving credit/tax reduction to people who consume environmentally friendly goods, including companies that protect the environment with their environmentally friendly programs [9].

Both concepts have been regulated in Government Regulation of the Republic of Indonesia Number 46 of 2017. Article 38 of this regulation states that the application of green tax is carried out through: a) the imposition of central and regional tax rates on everyone who utilizes natural resources based on environmental impact criteria; b) the imposition of regional public service retribution rates based on the calculation of the cost of providing facilities and infrastructure that prevent environmental pollution and/or damage; c) application of non-energy subsidies which are limited within a certain period to each person whose production activities have an impact on improving environmental functions. So, this regulation adopts two green tax concepts, namely the imposition of tax rates and fees and the application of subsidies [8].

In addition to the concept of green tax, this government regulation also informs the purpose of imposing green tax and the activities subject to this tax. The purpose of imposing a green tax is to 1) encourage environmental preservation; 2) provide monetary encouragement to carry out activities that have a positive impact on natural resources and the environment; and 3) provide a monetary burden to reduce activities that have a negative impact on natural resources and the environment. While the activities that are subject to green tax according to this regulation are the activities of taking and/or using: groundwater; Surface water; swallow's nest; open ligaments and rocks; motor vehicle fuel; motorized vehicles, and other activities that have an impact on the environment in the form of depreciation of natural resources; environmental pollution and environmental damage [5]–[7].

Specifically, this study highlighted key findings related to implementation of green tax including challenges and opportunities its implementation, namely:

A. Implementation of Green Tax

Globally, the implementation of green tax has had a positive effect on tax revenues. In several countries the concept of green tax, both the application of taxes and the provision of subsidies/tax credits have been implemented. In America, the use of hybrid cars or electric cars get a tax credit of 30 percent of the price of the car; granting a 10% discount for non-CFC AC users; including the purchase of tax credits for e-filling users. In the UK, 81 percent of people are only willing to buy environmentally safe products and 75 percent of consumers in Australia are willing to pay more for environmentally friendly products.

Meanwhile, based on the European Environment Agency, the contribution of Green Tax to total tax revenue in several countries is as follows: Canada (3.99 percent); Denmark (10.27 percent), France (4.91 percent), Japan (6.58 percent), Netherlands (8.93 percent), Norway (6.86 percent), Sweden (5.84 percent), United Kingdom (7.57 percent), US (3.46 percent) [3], [5], [10].

B. Implementation of Green Tax in Indonesia, Challenges and Opportunities

In Indonesia, the implementation of Green Tax is regulated in Government Regulation No. 46 of 2017. For the concept of a tax credit, it is regulated in the form of incentives, while

the tax imposition is regulated by the following scheme: 1) Tax subjects, manufacturing companies with turnover above 300 million; 2) Tax Objects: Production resulting from converting raw materials into finished goods; and 3) a tariff of 0.5 percent of production costs [8]. Unfortunately, the implementation of this concept faces challenges, including rejection from the industrial world because the imposition of taxes is associated with production costs. In detail, the challenges faced in implementing Green Tax are:

1. Taxation in Indonesia still focuses on the budgetary function, the use of which does not focus on environmental improvement.
2. There are concerns in practice, the imposition of a green tax, the results are not used for the environment, but focus on other things (focusing on budgetary purposes).
3. There is potential for overlapping between green tax as a new tax and previous taxes.
4. There was resistance from the business community because it was considered a high-cost legalization of the economy, entrepreneurs felt they were cash cows with lots of taxes to pay but rarely paid attention to their needs.
5. It is suspected that the Draft Law on Green Tax is more of an alibi for fiscal interests than for environmental protection.

Among the various challenges of implementing Green Tax in Indonesia, there is always a glimmer of hope. There are several opportunities that are the key to optimism for the implementation of Green Tax in Indonesia. These opportunities are illustrated in the following figure:



Fig. 1. Opportunities

Like tit for tat, the government has taken advantage of these opportunities by gradually implementing Green Tax, starting with the imposition of a Carbon tax which took effect on April 1, 2022, based on Law No. 7 of 2021 concerning harmonization of taxation. Initially, the application of this tax was aimed at the coal-fired power plant industry, with a rate of 30 IDR per kg CO₂e.

5 Conclusions

From an overall perspective, this study concludes that Green Tax will be an effective solution for funding in handling social problem in the environment aspect in Indonesia. The green tax was born from an externality, in fact it will provide an economic externality to the community. Simply put, the relationship between economic externalities and the existence of a green tax is that when this tax is included in the production price component, the price of the product will increase. Price increases cause demand to fall, so companies reduce production and exploitation of the environment decreases. As a result, the environment is available, which can be utilized by the community for economic improvement. In addition, environmental improvements can be carried out with funding sourced from this Green Tax.

As a part of public policy, there are several recommendations in strengthening the implementation of Green Tax in Indonesia, namely: 1) conducting counseling related to green tax to each industry; 2) formulating policies that involve all parties; 3) a clear green tax policy, where the aim is as a means for environmental improvement. Then clear the rate and method of withdrawal and not overlapping with the previous tax rules. Furthermore, 4) there are pilot areas for implementing green tax with careful and regular monitoring; and 5) additional incentives for companies implementing the Green Tax Law. More interestingly these recommendations are illustrated in the figure below.

References

- [1] N. Stern, *The Economics of Climate Change: The Stern Review*. Cambridge: Cambridge University Press, 2007. doi: DOI: 10.1017/CBO9780511817434.
- [2] A. Agarwal and S. Narain, "81Global Warming in an Unequal World: A Case of Environmental Colonialism," *India in a Warming World: Integrating Climate Change and Development*. Oxford University Press, p. 0, Nov. 21, 2019. doi: 10.1093/oso/9780199498734.003.0005.
- [3] IMF, "Fiscal Policies for Paris Climate Strategies —," no. May, 2019.
- [4] L. E. Erickson and G. Brase, "Paris Agreement on Climate Change," *Reducing Greenh. Gas Emiss. Improv. Air Qual.*, pp. 11–22, 2019, doi: 10.1201/9781351116589-2.
- [5] Oecd, "Taxing Energy Use 2019: Using Taxes for Climate Action," *OECD Publ. Paris*, 2019, doi: <https://doi.org/10.1787/058ca239-en>.
- [6] G. Fang, G. Chen, K. Yang, W. Yin, and L. Tian, "Can green tax policy promote China's energy transformation?—A nonlinear analysis from production and consumption perspectives," *Energy*, vol. 269, p. 126818, 2023.
- [7] Z. Zhixin and L. Ya, "The Impact of Carbon Tax on Economic Growth in China," *Energy Procedia*, vol. 5, pp. 1757–1761, 2011, doi: <https://doi.org/10.1016/j.egypro.2011.03.299>.
- [8] G. R. of the R. of I. N. 46 of 2017, *Environmental Economic Instruments*. 2017.
- [9] S. Carattini, S. Levin, and A. Tavoni, "Cooperation in the climate commons," *Rev. Environ. Econ. Policy*, vol. 13, no. 2, pp. 227–247, 2019, doi: 10.1093/reep/rez009.
- [10] T. M. Kerr, *State and Trends of Carbon Pricing 2016*, no. May. 2016. doi: 10.1596/978-1-4648-1001-5.