Initiating the Principle of Intergenerational Equity and the Concept of Sustainable Development in Indonesia Using Tax Collection

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Abstract. One of the factors contributing to environmental damage is carbon emissions. The greenhouse effect, which contributes to global warming and climate change, is just one of the harmful effects created. The carbon tax is one of the tools employed by many nations, including Indonesia, to lessen this impact to actualize the idea of intergenerational equality and sustainable development. The government's commitment to decreasing carbon emissions is demonstrated by the passage of Law No. 7 of 2021 on the Harmonization of Tax Regulations. The Indonesian government is now creating the ideal tax collection arrangements. Indonesia's carbon tax collecting model aims to implement sustainable development's guiding principles. Additionally, it is envisaged that economic equilibrium can be achieved by developing a fair tax collection model that can balance several parameters. The pertinent factors are the climate in which carbon emission reductions can be achieved, consumer effect and corporate sustainability, and state revenue.

Keyword: Carbon Tax, Sustainable Development, Intergenerational Equity

1 Introduction

Environment-related issues are something that both industrialized and developing nations face. In essence, environmental issues affect not just the national order but also the global order. Carbon dioxide emission is one of several things that harm the environment. The process of releasing carbon into the atmosphere is known as carbon emissions. While greenhouse gas emissions are considered a significant factor in the environmental harm brought on by climate change, carbon emissions can have an actual greenhouse effect. A greenhouse illustrates a situation in which the heat from the sun is trapped in the earth's atmosphere, raising global temperatures.

Nitrogen dioxide (N2O), methane (CH4), carbon dioxide (CO2), and Freon (SF6, HFC, PFC) are among the gases that contribute to the warming of the atmosphere [1]. The quantities of greenhouse gases can rise due to numerous human activities. These activities include burning fossil fuels due to industrialization, clearing agricultural land by burning forests, using fossil fuels for transportation, power generation, and the most significant sources of carbon emissions, oil and gas refining. Concerns are raised by the rise in carbon emissions since it could lead to climate change and other detrimental effects on the environment, as well as global warming.

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In addition to producing greenhouse gases, carbon emissions produce particulates, sulfur dioxide, and nitrogen oxides, which are the principal causes of air pollution and may harm human health and quality of life [2]. Carbon emissions can potentially increase greenhouse gas levels, resulting in climate change, flooding, rising sea levels, and degraded natural ecosystems. The likelihood of hydrometeorological disasters, which make up 80% of all disasters in Indonesia, can grow due to climate change. Climate change risk can affect food shortage, impair health quality, harm ecosystems on land and in the ocean, and cause water scarcity [3]. High carbon or greenhouse gas emissions can burden future generations, which impedes efforts to promote sustainable development [4] to achieve environmental management based on intergenerational justice and the idea of sustainable development, mitigation to reduce carbon emissions must be a collective commitment across countries.

In an effort to mitigate the effects of carbon emissions, government policies can be carried out, including policies on energy efficiency and conservation programs, saving energy consumption, the declaration of the Net Zero Emission program, and others. In addition, taxes can also be used as an instrument in the carbon emission mitigation strategy [5]. Mitigation efforts through tax instruments are also implemented in Indonesia. The issuance of Law 7 of 2021 concerning the Harmonization of Tax Regulations marks the government's commitment to mitigate through tax policies. The policy for implementing this carbon tax is also related to Presidential Regulation No. 98/2021 regarding implementing Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Controlling Greenhouse Emissions in National Development.

The collection of this carbon tax was intended to begin on April 1, 2022. However, it was postponed for several reasons. The government is delaying the introduction of tax collection because the regulation governing the collection of carbon taxes is not ready. The discussion surrounding the collection of this tax also brought up some worries about how it would affect society and the industrial sector. It is fascinating to analyze how attempts to implement the principles of intergenerational justice and sustainable development related to collecting carbon taxes in this regard. What is the methodology used in Indonesia to implement the concepts of sustainable development and economic balance when collecting carbon taxes?

2 Method

Normative juridical research, often known as doctrinal legal, is the methodology employed in this study. The normative legal approach views law as an independent, normative symptom that exists independently of social processes [6]. A legislative approach, a historical approach, a comparative approach, or a conceptual approach can all be used when applying the doctrinal approach [7]. Descriptive analysis is the type of research definition employed in this study. This study's general conclusions are described in as much detail as feasible, followed by an analysis of the pertinent theories or concepts.

3 Finding and Discussion

3.1 The Correlation of the Principles of Intergenerational Equity, the Concept of Sustainable Development, and the Carbon Tax

When the United Nations Conference on the Human Environment was convened in Stockholm, Sweden, in 1972, the idea of sustainable development (Sustainable Development) came to light (Declaration Of United Nations Conference On Human Environment). It is beginning to be mentioned in Principle 1, which is implicitly the essence wanted in the concept of sustainable development, one of the principles that govern fundamental human rights. The Stockholm Declaration's first tenet states:

"*Man has a fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and wellbeing, and he bears solemn responsibility to protect and improve the environment for present and future generations"* [8].

According to this principle, each individual has a right to freedom, equality, and a sufficient standard of living in a healthy environment. They also must preserve and enhance that environment for current and future generations. The Stockholm Principle II also suggests a desire to protect the environment, as stated [9]:

"*The natural resources of the earth, including the air, water, land, flora fauna and especially representative samples of natural ecosystem, must be safeguarded for benefit of present and future generations through careful plannning or management as appropriate"*.

Finally, the phrase "Sustainable Development" evolved based on these guiding ideas. The United Nations Environment Program (UNEP), the International Union for Conservation of Nature and Natural Resources (IUCN), and the World Wide Fund For Nature (WWF) issued the World Conservation Strategy in 1980, which is where the term "sustainable development" was first used. Using the guiding principles Last but not least, the phrase "Sustainable Development" came into use. The United Nations Environment Program (UNEP), the International Union for Conservation of Nature and Natural Resources (IUCN), and the World Wide Fund For Nature (WWF) issued the World Conservation Strategy in 1980, which is where the term "sustainable development" was first used. In Nairobi, Kenya, UNEP celebrated the 10th anniversary of the global environmental movement (1972–1982). It was decided to create the World Commission on Environment and Development and choose Harlem Brundtland as its chair.

According to the Brundtland Report from 1987, also known as "Our Common Future," sustainable development is a development process (for land, cities, businesses, and communities) with guiding principles. It addresses current demands without jeopardizing future generations. The concept incorporates two key ideas: first, that meeting the basic needs of the world's poor must come, and second, that environmental sustainability is constrained by social structures and technological constraints, making it necessary to satisfy both the goals of economic and social growth—all nations, whether wealthy and developing ones are outlined in the concept of sustainability [10].

The concept of sustainable development is composed of five major principles. The development process must be continuously supported by natural resources, a sustainable environment, and human quality. Second, natural resources (especially water, air, and land) have a threshold. Third, environmental quality is directly correlated with quality of life. Fourth, patterns of use of natural resources should not close other options in the future. Fifth, sustainable development assumes transgenerational symbiosis [11]. Based on the description, it is clear that the idea of sustainable development calls for the use of natural resources. Since

the environment belongs to future generations as well as the current one, it is hoped that the current generation will use natural resources found in the sea, earth, and air with wisdom. This intergenerational equity principle also referred to as the intergenerational equity principle.

The rights and obligations between generations are strongly tied when discussing the idea of intergenerational fairness. Future generations' rights and current generations' obligations are related in the intergenerational context. According to this idea, intergenerational rights are inherent in all generations' demands. When using this planet, generations must agree that they are responsible for protecting it by upholding the rights of both current and future generations. The rights of the current and future generations on this planet must be preserved, and this strongly depends on the obligations of the former. Intergenerational justice, therefore, revolves around this.

The production of carbon emissions is one of the actions that can obstruct sustainable development and the implementation of the intergenerational equity principle. Large-scale carbon emissions may have detrimental externalities that affect the world's order. Countries must share a commitment to adopting measures aimed at lowering greenhouse gas emissions in the global order. At the Conference of Parties (COP) 15 in 2009, Indonesia expressed its commitment to decreasing carbon emissions, pledging to reduce greenhouse gas (GHG) emissions by 26% on its own or by 41% with international aid by 2020. Concerning the business as usual (BAU) scenario in 2030, Indonesia's commitment was strengthened by releasing its first Nationally Determined Contribution (NDC) document in November 2016. This document established an unconditional objective of 29% and a conditional target of up to 41% [12].

One of the strategies used by nations to reduce the consequences of carbon emissions is taxation. Thirty nations have adopted carbon taxes, according to World Bank statistics. It makes sense when people consider that taxes serve a common end purpose and a budgeting function. In their regular operation, taxes act as tools for achieving specific objectives or are directed toward the regulatory role. One of the most effective tools for addressing negative externalities is taxation. Any activity that can hurt others must be responsible and pay the price. The imposition, also referred to as a Pigouvian tax, is meant to punish and correct the effects of externality. A tax known as a Pigouvian tax is imposed on commercial operations that have a negative externality. Taxes will naturally increase expenses because they are imposed. Therefore, it is hoped that people will refrain from acting in ways that have these adverse effects or, at the very least, minimize them. Given that the damage affects the environment, which is a public area, imposing penalties in the form of taxes is fair.

According to a study, imposing a new tax on carbon emissions is highly effective at reducing carbon emissions. According to the study's data, establishing a carbon tax can lower the carbon rebound effect by 14% to 56% and mitigate it [13].

Implementing tax strategies is one of Indonesia's measures to keep its promise to lower carbon emissions. Taxes are levied on carbon emissions that harm the environment, as specified in Chapter VI Article 13. In an effort to uphold the Government of Indonesia's commitment to utilizing the Carbon Economic Value (SEZ) instrument, which consists of trading and non-trade instruments, to achieve the NDC objective. Imposing a carbon price is one of the non-trade measures. Additionally, it is stated in the explanation of Article 13 Paragraph 1 of Law No. 7 of 2021 that the carbon tax is implemented to reduce greenhouse gas emissions in order to aid in Indonesia's NDC. NDC stands for Nationally Determined Contribution, a promise made at the national level to help combat climate change and advance the Paris Agreement's objectives for the United Nations Framework Convention on Climate Change.

Based on the description provided above, implementing a carbon tax is intended to reduce the adverse environmental effects of carbon emissions, which indirectly supports efforts to achieve sustainable development based on the intergenerational equity principle.

Taxes can be used as a tool to encourage environmentally friendly activities and to penalize actions that could harm the environment to achieve sustainable development through tax facilities, such as offering tax incentives in the regulations. A company that transforms utilizing technology that can reduce carbon emissions to a lower limit and meets the conditions established by the government may be rewarded. By offering this incentive, taxpayers are being treated fairly. Taxes reward environmentally friendly actions and punish acts that harm the environment. Regarding attempts to achieve sustainable development and efforts to manage the climate in the global order, developed and developing countries must share a commitment while still considering climate justice. In order to combat climate change, developed industrial countries must be held accountable for their high carbon emissions. The same norms that apply to developed countries should not be applied to developing countries. It is possible to use responsibility differentiation, beginning with mitigating measures, funding, technology transfer, and capacity building. Developed countries must work with developing countries to develop cutting-edge technologies that can reduce carbon emissions, among other things, by providing money and knowledge transfer.

3.2 The carbon tax collection regulatory model in Indonesia was created as an effort to realize the principle of sustainable development and as a form of economic balance

As previously stated, Law No. 7 of 2021, About the Harmonization of Tax Regulations, has provisions in Article 13 paragraph (1) that govern the collection of carbon taxes in Indonesia. The carbon tax is intended to offset carbon dioxide (CO2e) emissions that harm the environment by depleting natural resources, polluting the environment, and causing environmental harm. The carbon tax roadmap is taken into consideration when implementing the tax. A roadmap for the carbon price is provided in the explanation of Article 13, paragraph 3 of Law No. 7 of 2021:

1. A strategy for reducing carbon emissions, according to the roadmap for carbon taxes. The goal of the carbon emission fulfillment strategy is to help the government meet its pledge to cut greenhouse gas emissions by at least 29% on its own and 41% with international assistance by 2030, with the ultimate goal of reaching net zero emissions (NZE) by 2060.
2. Priority Sector Targets are the top priority for reducing greenhouse gas emissions because they account for 97% of all NDC emission reduction targets. These sectors include energy, transportation, and forestry.
3. Various carbon tax policies, carbon trading, and sectoral technical policies, including the phase-out of coal, the creation of new and renewable energy, and enhancing biodiversity, are focused on attaining the NZE 2060 target that gives predictability in the business climate.
4. Multiple policies must be in alignment.

The roadmap for the carbon price will include a plan for reducing carbon emissions, priority goals, and an emphasis on creating new, renewable energy sources.

Individuals or organizations that buy products containing carbon or engage in activities that cause carbon emissions are taxed under this carbon tax. The price of carbon per kilogram of carbon dioxide equivalent (CO2e) or comparable units is set higher or equal to the carbon tax rate. The tax rate is fixed at a minimum of Rp. 30 (thirty rupiahs) per kilogram if the carbon price on the carbon market is less than Rp. 30 (thirty rupiahs) per kilogram. The

introduction of the carbon price in 2022 to 2024 is first applied to the emission limit (cap and tax) for the Steam Power Generation Sector, according to the explanation of Article 13 paragraph (3) of Law No. 7 of 2021. However, the government has only recently established the law and its implementing regulations. Thus tax collection is currently being delayed.

The establishment of the implementing regulations for the collection of carbon taxes must be done carefully and wisely by taking into account several related factors, including environmental factors, specifically the achievement of the goal of reducing carbon emissions, justice for the impact on consumers and business sustainability, and state revenues. The "four maxims," which include equality and equity, certainty, the convenience of payment, and economics of collection, were laid out by Adam Smith as criteria for establishing fair tax regulations. While the principle of *equity* is described as fairness, the principle of *equality* is the idea that people in similar circumstances should be treated fairly. Legal certainty, which is the goal of creating laws with requirements that must be firm, obvious, and without ambiguity, is what is meant by *certainty*. Taxes must be collected on time to comply with the *convenience of the payment* premise because the cost of collecting taxes should not exceed the revenue. Tax collection must be based on the principle of *economic collection*.

A carbon tax can be implemented according to Adam Smith's notion. Equity and equality must be incorporated into any carbon tax. Whether all sectors emit emissions or there are some constraints, the idea of equity in collecting carbon taxes can be used to decide which sectors receive a carbon tax. The new law specifies who is subject to a carbon tax, i.e., people or organizations who purchase carbon-containing products or engage in carbon-emitting activities. Additionally, it is stated in the explanation of Article 13 Paragraph 5 that items containing carbon include but are not limited to fossil materials that emit carbon. These activities include those in the energy, agricultural, forestry, land use, industrial, and waste sectors that result in carbon emissions. The article links two activities, namely the purchase of carbon and activities that produce carbon, when considered in terms of tax issues. If this has to do with the tariff described in Article 18 paragraphs (8) and (9)—which specify that the carbon tax rate is set higher or equal to the market price of carbon—then it can only be used in connection with carbon-buying activities.

Pricing must comply with the fairness principle. The interests of environmental safety must be considered when setting prices, as must the interests of corporate players. For environmental observers, a calculation based on the cost of Rp. 30 (thirty rupiahs) per kilogram of carbon dioxide equivalent (CO2e) is excessively low because the average cost of forest restoration is US$ 1,866/ha [14]. When evaluated from the standpoint of business actors, it will be different. A carbon tax is a hardship and may interfere with business continuity. High taxes will discourage investment, slower economic expansion, lower competitive industries' productivity, and may even burden the general public as the final consumer. Macroeconomic growth will be impacted by high carbon tax revenue, and it may even result in a decline in GDP [15].

The practice of collecting carbon taxes in several countries can be described as follows [16]:

In Sweden, a carbon tax is applied to all fossil fuel-related CO2 emissions, primarily from the construction and transportation industries. Fossil fuels used for heating purposes other than manufacturing, specific industries, domestic aviation, fuel exports, electricity production, forestry, and agriculture are among the things that are not included. A tax of US$119 per ton of carbon emissions is charged—one of the European nations with the highest carbon tax rates is Sweden. The formula used to calculate the carbon tax impacts Sweden's climate strategy, which calls for a reduction of 70% in transportation emissions, excluding domestic flights, by

2030. Implementing a carbon tax pricing resulted in a 19% decrease in carbon emissions from domestic transportation in 2018, which is anticipated to drop by 63% in 2030, making it near the target [16]. Although Sweden has high taxes, this does not cause the country's economy to collapse, and its GDP is growing to 78% [17].

Sweden's success is mainly due to three factors. First, in addition to flowing to the state treasury, money from the carbon tax is also utilized to reduce other taxes. Corporate income taxes decreased by 27% and personal income taxes by 30% when the carbon tax went into effect. The goal of the carbon tax, which is to influence behavior rather than increase state revenue, cannot be divorced from this policy. The second is the omission of regulations that some companies, like the steel industry, must adhere to remain competitive [18]. Therefore, it can be claimed that Sweden's carbon tax policy is balanced with other tax measures to keep the balance.

Since 2012, the Japanese government has imposed a carbon price. The cost per tonne of carbon emissions is fixed at US $3. There are limited exclusions for the industrial, power, agricultural, and transportation sectors, but otherwise, this tax applies to carbon emissions from all fossil fuels in all sectors. In Japan, implementing a carbon tax can result in a 25% reduction in emissions. Although the carbon tax in Japan contributed to the drop in GDP, the decrease was relatively marginal, barely 1.2%. Meanwhile, the impact of job loss is only about 0.4% [19]. Policies are implemented to lessen the economic effects of carbon taxes by recycling income, which is then utilized to lower income taxes and encourage investments in energy-efficient projects.

If we compare how carbon taxes are implemented in the two nations, we may conclude that the collection of carbon taxes only sometimes affects economic decline. These initiatives must be implemented in harmony with other fiscal initiatives to strike a balance between long-term environmental sustainability and economic expansion.

4 Conclusion

1. It is essential to see the relationship between the collection of carbon taxes, the intergenerational justice principle, and the sustainable development principle. The topic of environmental management has given rise to the idea of sustainable development. According to this idea, the development process must go on continuously. The intergenerational equity principle, which is part of the sustainable development idea, states that to achieve intergenerational justice, the use of natural resources and the environment belongs to all generations, not just the current one. In their ruler end function, taxes can be an instrument for achieving this objective. Implementing a carbon tax can reduce carbon emissions that negatively impact the environment.
2. By developing a fair tax collection model, it is possible to build the carbon tax collection model in Indonesia, which aims to realize sustainable development and economic balance. Fair tax collection aims to strike a balance between several linked concerns, including state revenues, equity for the impact on consumers and corporate sustainability, and environmental factors, specifically the achievement of the goal of lowering carbon emissions.

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