

LITERATURE REVIEW: IMPLEMENTATION OF CARBON TAX IN INDONESIA



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Abstract

Climate change is an international issue that requires fast and decisive action from many countries, including Indonesia, to set a carbon price to reduce greenhouse gas emissions, which are the main drivers of climate change. In Indonesia, one of the initiatives to reduce carbon emissions is the implementation of a carbon tax. This study uses a qualitative methodology and a literature review to provide comprehensive knowledge of how Indonesia implements carbon pricing. The results show that the Indonesian government took a proactive approach to addressing problems caused by climate change when implementing the Carbon Tax. The policies set by the government provide a strong basis for implementing the Carbon Tax.

Keywords: Implementation, Carbon Tax, Climate Change

INTRODUCTION

In this modern era, it cannot be denied that there is one major global challenge that is most urgent, namely climate change. This is caused by increasing greenhouse gas (GHG) emissions, especially carbon dioxide (CO₂), which significantly affects the earth's climate. This phenomenon causes extreme weather changes, rising sea levels, and serious impacts on the sustainability of the global ecosystem. Of course, climate change cannot be separated from human activities, one of which is very influential, namely the burning of fossil fuels such as coal, petroleum and natural gas. Emissions from these activities release large amounts of CO₂ into the atmosphere, creating a thick layer of greenhouse gases that trap the sun's heat in the atmosphere. As a result, the Earth's global temperature is gradually increasing, causing major changes in weather patterns and ecological systems (Adyana, 2023).

The effects of climate change are visible through changes in rain patterns, increased events related to extreme weather such as storms, floods and drought. In addition, rising sea temperatures cause bleaching of coral reefs, melting of glaciers, and threats to climate-dependent wildlife. This is not only an environmental problem, but also has serious impacts on humans, such as famine, conflict over resources, and forced migration. In an effort to overcome the problems caused by climate change, countries in the world and various international organizations have decided to act to reduce greenhouse gas (GHG) emissions. Indonesia, as one of the countries with the largest greenhouse gas (GHG) emissions in the world, faces serious challenges related to the impact of climate change. In 2020, Indonesia reported greenhouse gas (GHG) emissions of 2.6 billion tons of CO₂e, which is equivalent to around 1.2% of total global greenhouse gas (GHG) emissions. This significant increase is largely influenced by human activities in key sectors such as energy, industry and agriculture. The energy sector is the largest contributor to greenhouse gas (GHG) emissions in Indonesia.

Increasingly significant economic development has triggered increasingly massive use of machines and technology. It cannot be denied that humans are increasingly dependent on machines, both vehicles for mobility and industrial machines in various industrial processes. The use of these machines has a significant impact on the environment. The more machines used, the more air pollution and carbon dioxide which is the result of combustion from machine use automatically increases. High air pollution and carbon dioxide levels in

the air are the main causes of global warming. Apart from these two main causes, other activities carried out by humans such as deforestation, land clearing for uses other than forestry, industrial waste pollution, and excessive use of electricity also worsen global warming. When global warming gets worse, this will affect the climate and temperatures on earth which will also get worse. If there is no effort and handling of these problems, it is not impossible that in the future, this earth, this environment will become an unhealthy place to live in. Several ways are being sought as an effort to reduce global warming, one of which is by implementing a carbon tax.

The carbon tax was first implemented by Finland in 1990. Meanwhile in Asia itself, there are four countries that have implemented a carbon tax, namely India in 2010, Japan in 2012, China in 2017, and Singapore in 2019. Seeing that other countries have implemented carbon taxes, this makes Indonesia consider implementing carbon in its own country. The implementation of this carbon tax is a step in Indonesia's commitment to reducing global warming. The aim of implementing this carbon tax is to change economic behavior towards a green economy or environmentally friendly economy. The Indonesian government itself targets greenhouse gas emissions to fall by 29% with the country's own capabilities and 41% with international support by 2030. Implementation of the carbon tax It is hoped that this will make industrial players aware of minimizing excessive use of machines and triggering environmentally friendly technological innovations. The implementation of a carbon tax in Indonesia can make Indonesia cleaner or less polluted and contribute to tackling global warming. Apart from that, carbon tax can also be a source of state tax, considering the many industrial sectors that produce a lot of carbon dioxide and the increasing use of motorized vehicles in Indonesia.

REVIEW OF LITERATURE

The carbon tax originates from the Pigouvian tax concept, namely a tax imposed on economic activities that produce negative externalities, with the aim of encouraging the responsibility of economic actors for the costs of environmental pollution caused. These taxes serve as a tool to manage and reduce activities that have the potential to create negative impacts on the environment, by forcing individuals to consider the consequences of their

actions through the implementation of binding taxes. Carbon tax, according to the IBFD International Tax Glossary (Rogers-Galabush, 2015), is defined as a form of tax applied to fossil fuels, with the main aim of reducing Green House Gas (GHG) emissions to overcome air pollution and prevent climate change. Apart from being a regulatory tool, a carbon tax can also function as an additional source of state revenue.

In global matters, attention to carbon emissions has emerged since the UN Conference on Development and Environment in Rio de Janeiro in 1992, and continues to grow with the Paris Agreement in 2015. In Indonesia, the implementation of carbon tax has been regulated by Law on Harmonization of Tax Regulations Number 7 of 2021, as an effort to reduce carbon emissions, especially in the industrial and transportation sectors. A carbon tax is not only an economic instrument to internalize the external costs of fossil fuel use, but also an effective mitigation measure to reduce carbon emissions. By imposing additional tax burdens on activities that produce emissions, the government creates financial incentives for businesses and society to switch to cleaner and environmentally friendly production practices.

The implementation of a carbon tax creates economic pressure that encourages companies and individuals to reduce greenhouse gas emissions, especially from production and consumption activities. Additional revenue from a carbon tax can be allocated to support environmental projects, investments in renewable energy, or other emissions reduction initiatives, creating an additional source of funds to support sustainable development (Pusparini et al., 2023)

Carbon tax is one of the policy instruments implemented to overcome the problem of greenhouse gas emissions, especially carbon dioxide, which originates from production and consumption activities. The main aim is to provide economic incentives to business actors and communities so that they reduce greenhouse gas emissions. This instrument seeks to change behavior by imposing additional taxes on activities or products that produce carbon emissions (Adyana, 2023).

Carbon taxes are structured to create economic pressure that encourages companies and individuals to reduce greenhouse gas (GHG) emissions. By placing additional tax burdens on emissions-generating activities, governments create financial incentives to

encourage cleaner, environmentally friendly production practices. One of the main focuses of a carbon tax is to encourage a shift from the use of fossil fuels to renewable energy sources. By taxing carbon emissions, governments create economic motivation for producers and consumers to switch to more sustainable and environmentally friendly energy sources. Carbon taxes play a role in reducing society's dependence on fossil fuels, which are the main contributor to greenhouse gas (GHG) emissions. Through adding taxes on the use of fossil fuels, governments stimulate efforts to search for and adopt cleaner energy alternatives. Additional revenue generated from a carbon tax could be allocated to support environmental projects, investments in renewable energy development, or other emissions reduction initiatives. This creates additional funding sources to support sustainable development efforts.

The implementation of a carbon tax is Indonesia's main concern in facing the problem of greenhouse gas emissions and playing an active role in reducing the impact of global climate change. Concrete steps in implementing the carbon tax in Indonesia involve active involvement from the government, business actors and the entire community. Although research on the development of carbon tax implementation in Indonesia is still limited, several studies generally reflect the challenges and opportunities faced in the national context. Although specific research on the implementation of carbon taxes in Indonesia is still limited, a number of studies tend to highlight general aspects related to carbon taxes in various national contexts. Research focus includes environmental policy impact evaluation, sustainable economic analysis, and climate change mitigation strategies. The results of these articles can provide valuable insights regarding the challenges and opportunities in implementing a carbon tax in Indonesia (Ardelia & Parahyangan, 2023).

The implementation of a carbon tax has a dual objective, namely increasing state income and improving community welfare through the benefits of a cleaner environment (Sonia, 2023). The carbon tax rates set in various countries vary and depend on the level of carbon emissions in the country itself. This finding is in line with the research results (Dilasari et al., 2022) emphasized that the Carbon Tax Policy aims to reduce carbon externalities, especially carbon dioxide. Implementation of these policies encourages individuals to think about the consequences of their actions. The implementation of this

carbon tax can reduce greenhouse gas emissions, increase state revenues, and send a signal to both consumers and industry players that companies must pay for the carbon emissions they produce. Without this policy, society has the potential to experience price distortions where activities that produce carbon emissions are priced too low because companies are not required to pay or consider the costs of emissions felt by other affected parties.

Reducing greenhouse gas (GHG) emissions refers to a series of efforts to reduce the total greenhouse gases released into the atmosphere as a result of human activities. The implementation of a carbon tax is considered as one method that can make a significant contribution to achieving GHG emission reduction targets. The carbon tax aims to provide economic incentives for businesses and society to switch to cleaner and environmentally sound production practices. International research shows that implementing a carbon tax has great potential in achieving GHG emission reduction targets in various countries.

RESEARCH METHOD

The research method applied is a literature review, which is an approach to collecting and evaluating relevant research related to a particular topic focus. Literature review is a descriptive analysis that involves description, analysis, comparison, views and summaries of various existing research. This approach uses library data or secondary sources, also known as systematic review research, with the aim of assessing, identifying and interpreting findings related to a research topic.

In conducting this research, the literature review method was carried out by following systematic stages to ensure objectivity and credibility. This stage includes preparing the background, objectives and background of the research by explaining the interests and setting goals to identify the problem. The identification was carried out through analysis of previous research journals.

The next step is data searching, which involves using Google Scholar to search for journals that are relevant to the research topic. Because this research is a literature review, the data used is dominated by secondary sources in the form of journals or previous research.

The research results are presented in the form of descriptive sentences which are arranged systematically and are qualitative in nature, avoiding the use of numerical data.

RESULTS AND DISCUSSION

The prospect of implementing a carbon tax in Indonesia from an economic perspective promises a significant positive impact. One of the main aspects is the potential for tax revenue, which can be an important source of income for the government. This income can be used to support sustainable development programs and reduce dependence on other sources of income that may not be environmentally friendly. In addition, the implementation of a carbon tax encourages the transition to a low-carbon economy. With financial incentives, it is hoped that industry players will be more oriented towards energy efficiency and environmentally friendly technology. This not only supports climate change mitigation efforts but can also increase the competitiveness of national industry in the global market. In the context of global competition that increasingly demands sustainability, industrial players who adopt environmentally friendly practices can gain competitive advantages. Economic growth can be accommodated through investment in the clean energy and green technology sectors. By providing incentives to industry to reduce carbon emissions, the implementation of a carbon tax creates new opportunities for related sectors. Investments in clean energy not only support climate change mitigation efforts but also create new jobs and strengthen national economic resilience (Adyana, 2023).

Political supporting and inhibiting factors play a crucial role in the process of implementing carbon tax in Indonesia. Supporting factors, especially in the political context, are key to the successful implementation of this policy. Awareness of the urgency of climate change and the government's commitment to achieving carbon emission targets creates positive momentum. Environmental sustainability and fulfilling international commitments to mitigate climate change are the main drivers of political support. However, a number of political challenges could pose significant obstacles. The resistance that may emerge from certain industrial sectors, especially those with a high dependence on carbon-based resources, could be a serious barrier. In addition, concerns regarding the short-term economic impact of implementing a carbon tax could also trigger political resistance (Ikhtiarin et al., 2023).

In overcoming this challenge, sustainable political diplomacy is the determining factor. Intensive conversations between government, industry and society are needed to ensure joint support and achieve strong politics. Engagement of all stakeholders to achieve a shared understanding of the long-term benefits of carbon taxes and sustainable development will play a key role in establishing the necessary political support. This collaborative approach is critical to achieving successful implementation of a carbon tax, overcoming political obstacles, and designing effective and sustainable policies (Anwar, 2022)

The social implications of implementing a carbon tax require special attention to its impact on more vulnerable groups, especially poor households. The existence of special redistribution or protection policies is essential to ensure that the burden of carbon tax costs does not burden those who have economic limitations. These steps could include developing compensation or subsidy programs for significantly affected community groups. On the other hand, the implementation of a carbon tax also has a positive impact on job creation in the clean energy sector. Increased investment in renewable energy and environmentally friendly technologies is creating new job opportunities. Empowering the local economy through these sectors can improve community welfare and reduce unemployment rates (Yudhana & Madalina, 2022).

Expanding employment opportunities in the clean energy sector can be a constructive solution to overcome the negative social impacts of implementing a carbon tax. A balanced approach between social protection and job creation can help create policies that are not only environmentally sustainable but also have a positive impact on social welfare. Overall, implementing a carbon tax in Indonesia requires a holistic approach, considering economic, political and social aspects. By designing policies that take into account the needs of more vulnerable groups of society and at the same time encourage the sustainable development of sectors, the implementation of a carbon tax can be an effective instrument in achieving overall sustainable development goals.

CONCLUSION

The implementation of the Carbon Tax in Indonesia reflects the government's proactive steps in facing the challenge of climate change. Against the backdrop of climate

change which is increasingly real and has a wide impact in Indonesia, this step becomes an urgent need. The legal and policy framework established by the government creates a solid foundation for the implementation of the carbon tax, covering key sectors such as industry, energy, transportation and agriculture. The existence of a carbon tax provides economic incentives to reduce emissions, encourage green innovation, and support the renewable energy sector. However, the potential economic and social impacts impact society. The proposed solution involves strategies to minimize social inequalities that may arise. Regular performance evaluation, accurate emission measurements, and active participation from the private sector and civil society are the keys to successful carbon tax implementation. By referring to the experience of other countries that have adopted similar measures, Indonesia can strengthen its carbon tax policy to achieve the goal of reducing emissions in a sustainable manner. Recommendations for the future should include policy improvements, close monitoring, and innovative steps to encourage the transition to a low-carbon, sustainable economy.

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