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File size:	343.29K
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Word count:	6,958
Character count:	37,451
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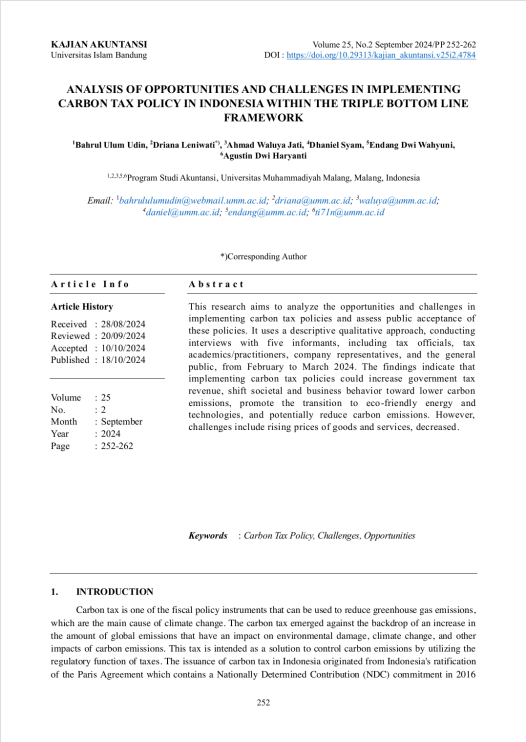

KAJIAN AKUNTANSI
Universitas Islam Bandung

Volume 25, No.2 September 2024/PP.252-262
DOI : https://doi.org/10.29313/kajian_akuntansi.v25i2.4784

ANALYSIS OF OPPORTUNITIES AND CHALLENGES IN IMPLEMENTING CARBON TAX POLICY IN INDONESIA WITHIN THE TRIPLE BOTTOM LINE FRAMEWORK

[1]Bahrul Ulum Udin, [2]Driana Leniwati*), [3]Ahmad Waluya Jati, [4]Dhaniel Syam, [5]Endang Dwi Wahyuni, [6]Agustin Dwi Haryanti

[1,2,3,5,6]Program Studi Akuntansi, Universitas Muhammadiyah Malang, Malang, Indonesia

Email: [1]bahrululumudin@webmail.umm.ac.id; [2]driana@umm.ac.id; [3]waluya@umm.ac.id; [4]daniel@umm.ac.id; [5]endang@umm.ac.id; [6]it71n@umm.ac.id

*)Corresponding Author

Article Info

Article History

Received : 28/08/2024
Reviewed : 20/09/2024
Accepted : 10/10/2024
Published : 18/10/2024

Volume : 25
No. : 2
Month : September
Year : 2024
Page : 252-262

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Keywords *: Carbon Tax Policy, Challenges, Opportunities*

1. INTRODUCTION

Carbon tax is one of the fiscal policy instruments that can be used to reduce greenhouse gas emissions, which are the main cause of climate change. The carbon tax emerged against the backdrop of an increase in the amount of global emissions that have an impact on environmental damage, climate change, and other impacts of carbon emissions. This tax is intended as a solution to control carbon emissions by utilizing the regulatory function of taxes. The issuance of carbon tax in Indonesia originated from Indonesia's ratification of the Paris Agreement which contains a Nationally Determined Contribution (NDC) commitment in 2016

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Driana Leniwati
PLAGIASI DOSEN
University of Muhammadiyah Malang

Document Details

Submission ID
trn:oid:::1:3076265630

Submission Date
Nov 12, 2024, 1:55 PM GMT+7

Download Date
Nov 12, 2024, 1:56 PM GMT+7

File Name
PORTUNITIES_AND_CHALLENGES_IN_IMPLEMENTING_CARBON_TAX_POLICY.pdf

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[1,2,3,5,6]Program Studi Akuntansi, Universitas Muhammadiyah Malang, Malang, Indonesia

Email: [1]bahrululumudin@webmail.umm.ac.id; [2]driana@umm.ac.id; [3]waluya@umm.ac.id; [4]daniel@umm.ac.id; [5]endang@umm.ac.id; [6]ti71n@umm.ac.id

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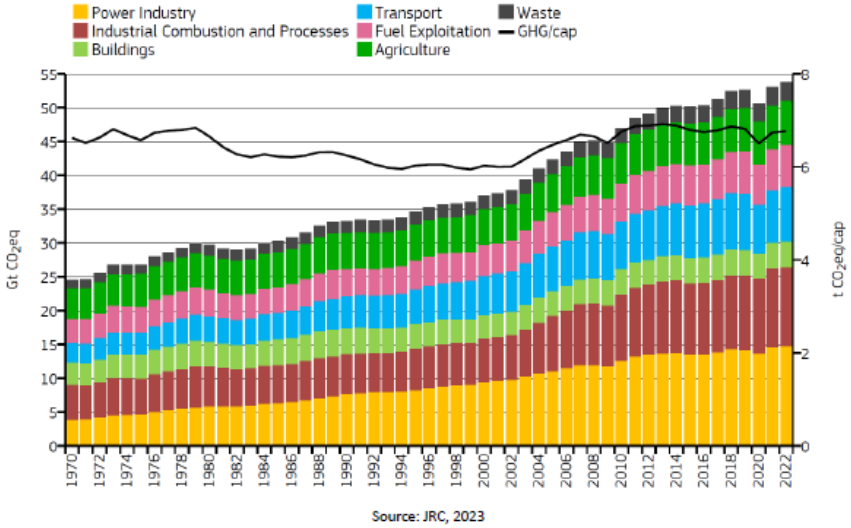
1. INTRODUCTION

Carbon tax is one of the fiscal policy instruments that can be used to reduce greenhouse gas emissions, which are the main cause of climate change. The carbon tax emerged against the backdrop of an increase in the amount of global emissions that have an impact on environmental damage, climate change, and other impacts of carbon emissions. This tax is intended as a solution to control carbon emissions by utilizing the regulatory function of taxes. The issuance of carbon tax in Indonesia originated from Indonesia's ratification of the Paris Agreement which contains a Nationally Determined Contribution (NDC) commitment in 2016

which makes handling climate change a priority agenda in planning and implementing national development 2020-2024. This commitment created a new taxation article related to carbon tax in Law Number 7 of 2021 concerning Harmonization of Taxation with an imposition rate of IDR 30 per kilogram of carbon dioxide equivalent with a cap and tax scheme and is planned to be applied to the coal-fired power plant sector starting April 1, 2022 (Fiscal Policy Agency, 2021). However, the carbon tax has been delayed again to wait for the readiness of the carbon market mechanism and has been postponed to 2025 (Purwanti, 2022).

Figure 2. Global GHG emissions by sector (left axis, bars) and per capita (right axis, black line), 1970-2022 (in Gt CO_{2eq})



Source: JRC, 2023

Figure 1. Global Greenhouse Gas Emission Rate by Sector

Based on the latest report from the European Commission in the JRC Science For Policy Report written by Crippa et al. (2023), it is explained that global greenhouse gas emissions in 2022 have reached 53.8 Gt CO2eq (without LULUCF). The majority of global greenhouse gas emissions in 2022 consisted of CO2 from fossil fuels that contributed 71.6% of total emissions, methane at 21%, nitrous oxide at 4.8%, and F gas at 2.6%. The data obtained for 2022 represents the highest level of global greenhouse gas emissions ever recorded and has grown by 1.4% or 730Mt CO2eq from 2021. This upward trend shows its continuation in the recovery period after the Covid-19 Pandemic. When compared to 2020, global greenhouse gas emissions have grown by 6.2%, and grew by 2.3% when compared to 2019 (Crippa et al. 2023).

The European Commission report also shows that Indonesia is among the top greenhouse gas emitters. Indonesia ranks 7th globally and contributes 2.3% of global greenhouse gas emissions, followed by Japan 2.2%, Iran 1.8%, Mexico and Saudi Arabia 1.5% each, Canada 1.4%, South Korea and Turkey 1.3% each, Australia 1.1% and South Africa 0.99% of global greenhouse gas emissions. Topping the list is China, which accounts for 29.2% of global greenhouse gas emissions, followed by the United States with 11.2%, India with 7.3%, the EU27 with 6.7%, Russia with 4.8%, and Brazil in sixth place with 2.4% (Crippa et al. 2023).

Carbon taxes have environmental and sustainability benefits, but implementation faces a range of barriers, including regulation, politics, fossil energy dependence, economic impact and societal readiness. As of 2022, only 26 countries have implemented carbon taxes, including some of the largest emitters such as Japan and Mexico. In addition to the carbon tax, 40 countries also implement an emissions trading system. Of the 16 largest emitting countries, only 5 have a carbon tax and 3 have an emissions trading system. This shows that not all large emitting countries are serious about tackling climate change with carbon taxes (Ritchie, H. & R. P., 2022).

Research on carbon taxes shows a variety of perspectives and important findings. Andersson (2019), Pratama et al. (2022), and RS. Aisyah et al. (2020) assess that a carbon tax has the potential to significantly reduce carbon emissions, with Pratama et al. estimating that tax revenue from Indonesia's energy sector could

reach IDR 23,651 trillion by 2025. The tax is also considered to support sustainable development and the transition to a green economy. In contrast, Maghfirani H.N. (2022) and Matsumoto (2023) highlight the impact of carbon taxes on household welfare, especially in rural areas with dependence on energy such as electricity and kerosene, and the economic challenges that may arise. Putri & Septian (2023) criticized the carbon tax policy in Indonesia by stating that while the adoption of this tax may be effective, its implementation is still less environmentally protective and could exacerbate inequities for low-income communities. Meanwhile, Tjoanto & Tambunan (2022) identified key challenges to carbon tax implementation in Indonesia, including political factors, governance, business influence, and public resistance.

This study differs from previous studies (Putri & Septyan, 2023; Tjoanto & Tambunan, 2022) in focus and method. This study examines the opportunities and challenges of carbon tax and public acceptance directly through interviews, while previous studies focus on the critique of justice according to Islam and implementation challenges. Compared to the research of Maghfirani H.N. (2022) and Matsumoto (2023), this research uses a descriptive qualitative method through interviews to dig deeper, not only the effect on welfare, but also public acceptance of the carbon tax policy. The purpose of this research is to analyze the opportunities and challenges of implementing a carbon tax policy in Indonesia, which has generated pros and cons in various countries. Theoretically, this research is expected to contribute to the development of carbon tax policy theory, and enrich the understanding of its impact on the economy and the environment. Practically, this research is expected to guide policy makers in designing an effective carbon tax policy and help companies adjust their business operations to be more sustainable and innovative in accordance with green economy principles.

2. LITERATURE REVIEW

Teori Triple Bottom Line

The term Triple Bottom Line (TBL) was first used in the book Cannibals With Forks by Elkington who criticized industries or companies that were only profit-oriented and less concerned about the negative impacts resulting from their business processes. This concept was first introduced by John Elkington in 1994 as a way to assess a company's performance that is broader and includes economic, social, and environmental aspects. Triple Bottom Line (TBL) is an approach in business management that describes a holistic approach to sustainability by taking into account several important aspects commonly referred to as the 3Ps including profit, people, and planet (environment) (Elkington, 2004).

Sustainable Development Goals

The concept of development emphasizes harmony between economic growth, social justice, and environmental balance. This concept combines three main dimensions: economic, social, and environmental, with the aim of achieving sustainable prosperity for people and planet, commonly known as the 3Ps (profit, people, planet) (Cato, 2009; World Bank, 2012). In this context, sustainable economic growth not only refers to increasing income, but also takes into account social welfare, justice and nature conservation.

The objectives of sustainable development according to Psppr (2023) include the following:

1) No poverty
2) Zero hunger
3) Healthy and prosperous life
4) Quality education
5) Gender equality
6) Clean water and proper sanitation
7) Clean and affordable energy
8) Decent work and economic growth
9) Industry, Innovation and infrastructure
10) Reduced inequality
11) Sustainable cities and settlements
12) Responsible consumption and production
13) Climate change management
14) Ocean ecosystems
15) Terrestrial ecosystem

16) Peace, justice and resilient institutions
17) Partnerships to achieve goals.

3. RESEARCH METHODS

This research is a type of descriptive qualitative research that aims to understand the phenomena studied or experienced by research subjects, such as behavior, perceptions, motivations, actions, etc., as a whole and explicitly with natural methods in a special natural context (Moleong, 2017).
The types of data used are primary and secondary data. Primary data is in the form of transcripts obtained through interviews in person, online, and also through text messages conducted during February - March 2024 with 5 informants divided into:

Tabel 1. List of Informants

No.	Initials	Category	Work Experience
1.	RS	Tax Officials	Central Jakarta DGT Regional Office Employee
2.	TN	Academician/Practitioner	Lecturer UMM / Partner KAP TNR / Tax Consultant
3.	ASW	Company Parties	Assistant Vice President of PT Petrokimia Gresik
4.	MDPL	General Public	Housewife
5.	J	General Public	Kindergarten Teacher

Remarks: Using initials for informant's safety

Meanwhile, secondary data obtained from literature studies in the form of official documents such as Indonesian Law No. 7 of 2021 concerning Harmonization of Tax Regulations, PT PLN (Persero) sustainability report 2018-2022, and articles/journals or national and international news articles. Meanwhile, data analysis is carried out through the stages of data collection using the interview method and literature study, then the data is reduced to select important data and not, then important data is presented systematically so that it is easy to understand, and finally the conclusion drawing stage.

4. RESULT AND DISCUSSION

Economic, Social, and Environmental Opportunities of Carbon Tax Policy Implementation

The economic opportunity of implementing a carbon tax policy is mainly seen from the potential increase in state revenue through the fiscal sector, especially in the energy sector such as power generation. Currently, most power plants in Indonesia still rely on non-environmentally friendly energy sources, such as coal. The following is an excerpt from an interview with informant RS (Tax Official):

"As for the opportunity, according to us in DGT, there is actually a big opportunity to increase state revenue, especially from the taxation sector, from this carbon tax. It is quite large, considering that in Indonesia, the majority still use coal for electricity generation, so that will be the sector that will be imposed first. Because the emission is still high, the tax is quite high, and then gradually to other sectors, the tax revenue will also increase. Later, it can be used to fund important projects such as infrastructure development, social programs, or environmental projects."

Informant TN (Academician/Practitioner) in the interview explained that one of the opportunities that will be obtained in the implementation of carbon tax is the financial benefits for the state, fiscal revenue will certainly increase. The following is an excerpt from his interview:

"pollution can be reduced so that the climate or the universe is maintained, continue to receive state revenue, state revenue from the tax sector becomes greater because of the addition of this carbon tax, and can increase public awareness of the importance of the environment."

Based on this, carbon tax has the potential to become a new source of revenue, reinforcing the results of research by Pratama et al. (2022) that shows this potential. PT PLN (Persero), for example, produced 308,002 GWh of electricity in 2022, with only 13.14% generated from renewable energy, while 86.8% still relies on sources that produce carbon emissions. Below is the amount of emissions generated from PLN's electricity production in 2020-2022:

Table 2. PT PLN (Persero) Carbon Emission Data 2018 - 2022

EMISSION	UNIT	2022	2021	2020	2019	2018
Scope 1	Million Ton CO2e	163,43	158,30	149,91	157,68	150,53
Scope 2	Million Ton CO2e	9,66	7,84	6,69	6,08	5,73
Scope 3	Million Ton CO2e	97,20	86,23	67,87	59,18	54,54
Total	**Million Ton CO2e**	**270,34**	**252,38**	**292,614**	**222,95**	**210,80**

Source: PT PLN (Persero) Sustainability Report

The implementation of carbon tax in the energy sector, especially in power generation, aims to reduce the use of high-emission fuels such as fuel, gas, and coal. Carbon emissions in the energy sector are divided into three scopes: scope 1 (fuel combustion and vehicle emissions), scope 2 (loss of electricity and office consumption), and scope 3 (purchase of electricity, fuel, assets, and goods). The carbon tax is imposed in accordance with Article 13 of the HPP Law, calculated based on carbon emissions that negatively impact the environment at a minimum rate of IDR 30.00 per kilogram of CO2e. Based on projected emissions data from PT PLN (Persero) using the exponential smoothing method, carbon tax revenue is expected to reach IDR 8.110 trillion in 2022, declining to IDR 5.680 trillion in 2027. This fluctuation is influenced by the energy transition and the reduction of electricity production with environmentally unfriendly fuels. The projection of carbon tax revenue from PT PLN (Persero)'s power plant is explained in more detail in the following table:

Table 3. Projection of State Tax Revenue Receipts From PT PLN (Persero) 2022 – 2027

Years	Total Carbon Emissions (Kg)	Minimum Carbon Tax Rate (IDR/kg CO2e)	Potential Tax Revenue (Million)	
2022	270.336.999.996	30	Rp	8.110.109
2023	288.597.267.261*	30	Rp	8.657.918
2024	259.737.540.535	30	Rp	7.792.126
2025	233.763.786.481*	30	Rp	7.012.913
2026	210.387.407.833*	30	Rp	6.311.622
2027	189.348.667.050*	30	Rp	5.680.460

*) : Total carbon emissions projected using exponential smoothing method, main data source from table 2.
Source: data processed

The implementation of a carbon tax policy in Indonesia also offers significant opportunities in social and environmental aspects. Socially, a carbon tax can change the behavioral patterns of people and businesses, encouraging them to care more about the environment, invest in environmentally friendly technologies, and switch to electric vehicles and public transportation modes. The following are excerpts from interviews with several informants:

Informant RS (Tax Official) also explained that the implementation of carbon tax can also change the pattern of people who previously used private transportation to switch to public transportation or transition to using electric vehicles in the following interview results:

"Maybe in my opinion, but maybe not at this early stage. The problem is, first they still want to apply it to power plants first, then maybe continue to other sectors such as transportation. If it has spread to transportation/vehicles, it will definitely change the pattern in the community, who usually take their own vehicles will later take public transportation because fuel will certainly be expensive when subject to carbon tax, because the emissions produced are quite large. It is also possible that some will switch to electric vehicles such as electric cars and motorcycles."

Informant ASW (Company Party) in an interview with researchers provided the following information:

"In my opinion, the Carbon Tax is the best alternative. In addition to the Carbon Tax. If it's about reward and punishment, I don't think so, companies will not focus much on what is called to produce clean energy. Because

some... not some, the Ministry of Environment has implemented, what is called punishment. For companies that exceed the waste limit especially. There is already a punishment, but the companies still violate. Because they feel that if I violate, what's the name, I can pay cheaply and that's it. As a result, they don't want to change. Well, with this Carbon Tax that is applied maybe not only in Indonesia, but also internationally. And I see the issue, I still don't know the issue, the issue is very expensive too. Finally, I believe companies will push to try to build new factories with clean waste, clean discharges. Because with the Carbon Tax, they will calculate, this is mas, long term. I pay Carbon Tax for five years, why don't I build a factory for five years already. There will be a calculation. I'm sure the company would rather build a factory for production with less waste that is clean than he pays the long-term Carbon Tax."

Information obtained from informant TN (Academician/Practitioner) in an interview with researchers also strengthens the prediction of changes in the activity or consumption patterns of business actors and the community. To researchers, informant TN (Academician/Practitioner), provided the following information:

"If asked about relevance, I think it is relevant, because one of the functions of tax is the regulatory function, it is important to regulate something through taxation. For example, in addition to the carbon tax, there is a luxury goods VAT tax (PPNBm), the rate is high, so it causes people's consumption patterns to decrease. This carbon tax is also like that, with such a rate in the carbon tax, it will definitely increase the cost of industrial activities, from transportation or maybe other sectors. There are actually two options, if the cost increases due to the addition of carbon tax, users of services/products will likely reduce their consumption and producers will eventually cut production capacity so that the amount of emissions produced in the process will also decrease. Or the company will invest in more environmentally friendly assets/machinery so that the emissions produced in the process are less or can be up to zero emissions. Less emission is good for the environment, so it can be said to be relevant in climate mitigation because of that."

Furthermore, TN (Academician/Practitioner) also provided information on predictions of changes in people's consumption patterns, especially in terms of mobility:

"Along with environmental awareness, there will be alternatives to using transportation modes that can reduce carbon emissions, such as using electric vehicles or using public transportation modes. I might also switch to electric vehicles if the cost of fuel becomes expensive."

In terms of the environment, this policy has the potential to significantly reduce greenhouse gas emissions by adding internal costs to products and services that produce carbon emissions. This can encourage companies to seek clean energy alternatives and reduce climate change impacts such as rising global temperatures and air pollution. The implementation of a carbon tax also makes green energy more competitive, encouraging innovation in renewable energy and a decrease in the use of environmentally unfriendly fossil fuels. The following are excerpts from interviews with several informants:

Informant RS (Tax Official) in an interview with researchers provided the following information:

"Yes, in my opinion, carbon tax is one of the instruments that is very relevant for us in Indonesia in reducing greenhouse gas emissions. So, by implementing a carbon tax, it can make industries and communities more aware of the impact of exhaust emissions on the environment. In addition, carbon tax can also motivate people and industries to use environmentally friendly technology. Later, if there are many people who use environmentally friendly machines or tools, the carbon emissions produced during the process will be small, if the emissions are small, it is good for nature, the environment, so that climate change is not too severe. So, overall, the carbon tax could be the right step for us to reduce the impact of climate change in Indonesia."

Furthermore, in an interview with informant ASW (Company Party), the following results were obtained:

"I agree, mas. Because of what? Because of the Carbon Tax that might be high, yes. The Carbon Tax will encourage companies to implement clean energy. So, trying to change from coal if in Petro to electrical energy. If there is no Carbon Tax, mas, I'm sure the implementation can be maybe 50 years in the future before the implementation (transition to green energy) is complete. But if there is a Carbon Tax, I'm sure some of the state-owned enterprises have already built new factories, mas. With what's the name? With more environmentally friendly settings. Some, even Petro has made new plants that are environmentally friendly. As a result, maybe in the year 2000. Maybe if I heard, 2030, some of the younger SOEs are ready with this Carbon Tax, mas. So, they have calculated that many of my factories will be up to standard. The Carbon Tax will not be so much. So in 2030, mas. So, that is the most appropriate instrument, mas, Carbon Tax."

Furthermore, informant ASW (Company Party) expressed his opinion that the opportunity of implementing a carbon tax policy in Indonesia is that it can make the air cleaner and reduce the greenhouse effect and guarantee a sustainable environment, the following information was submitted:

"The opportunity is clearly still there. For the environment, sustainability for the environment is more guaranteed. Because the air becomes cleaner, it also reduces the greenhouse effect, which in my opinion, if it gets worse, the ozone layer is exposed, then humanity will even run out. Because of the leakage of the ozone layer. So in my opinion, compared to what is called in science, there is people-planet-profit, if we are too concerned with profit, later the planet will be destroyed, the people will be lost. So how do we have a little profit, it's okay, but the planet and the people are still there."

In addition to RS (Tax Official) and ASW (Company Party), TN (Academician/Practitioner) also said that in the environmental aspect, the opportunities that can be obtained are pollution reduction which is beneficial for environmental sustainability. The following are the results of the interview with TN (Academician/Practitioner):

"For sure, pollution can be reduced so that the climate or the universe is maintained, continue to receive state revenue, state revenue from the tax sector becomes greater because of the addition of this carbon tax, and can increase public awareness of the importance of the environment."

Economic, Social and Environmental Challenges of Carbon Tax Policy Implementation

The challenges of implementing a carbon tax policy in Indonesia include economic, social, and environmental aspects. From an economic perspective, a carbon tax can lead to an increase in the price of products and services, especially those that still use fossil fuels or non-environmentally friendly energy. This increase in production costs can weaken the purchasing power of the lower middle class and reduce company profits, especially those that have not yet switched to environmentally friendly technology. The following are excerpts from interviews with several informants:

MDPL (General Public) expressed their objection to the economic impact of the carbon tax implementation plan. MDPL said that before the carbon tax, the price of basic commodities had increased significantly, and after the carbon tax is implemented, the price will increase further and will burden the middle and lower classes. The following statement was delivered in the interview:

"But to be honest, there is no carbon tax yet, basic commodities are already on the rise with climate change and disasters, especially in Central Java, where there was a flood yesterday, the government also seems to not care whether there is a disaster like what, basic commodities will still go up, so if it is added to the carbon tax, it will increase even more, so we, as middle to lower class people, also object to it, but again, if we for example refuse, we cannot do anything, so we are forced to accept it by force."

Informant J (General Public) expressed his objection if the price of goods or services increased too much, but J also said that it needs to be analyzed in advance regarding the increase in the price of products or services whether it is still affordable or difficult for the community to reach. The following is an excerpt from his interview:

"For environmental reasons, I automatically agree, it's just that we have to adjust to the community's economy again, we first see how expensive goods/services are if a carbon tax is applied, if it is considered to suppress the community, then I rather object."

In addition to informants MDPL (General Public) and J (General Public). Informant ASW (Corporate Party) also provided information related to economic challenges in the form of decreased business profits that his company would have to face if the carbon tax was implemented in Indonesia. The following is an excerpt from his interview:

"If this carbon tax is implemented by the Ministry of Environment and Forestry, the Ministry of SOEs requires it. We willingly or unwillingly participate, Mas. Because we have no choice. And if asked whether petrochemicals are ready, petrochemicals are ready, Mas. Because we have calculated the cost at that time. Our risk management friends have calculated what expenses will be incurred. Indeed, it really erodes profits. So until I hear, this is still heard, Mas. So there is no exact figure yet. So it reduced petrochemical profits by 50%. But petrochemicals still have profits, that's for sure. Because the 23 petrochemical plants, almost 80% of them are not environmentally friendly. So they are still old factories."

In the social aspect, the implementation of a carbon tax could reduce a company's after-tax profit, which impacts CSR funds for the welfare of the surrounding community. In addition, the push to switch to environmentally friendly technology could reduce the number of workers, increase unemployment, and potentially trigger protests or factory closures. To find out more about the social impacts that may be faced in implementing a carbon tax policy in Indonesia, researchers conducted interviews with various parties. The following information is the result of the interview:

Informant ASW (Company) conveyed social challenges seen from the perspective of corporate social responsibility (CSR), the following is an excerpt from his interview:
"It will have an impact on the lower class of society. I'm trying to look at this from a CSR point of view, Mas. The company has a CSR budget, Mas. CSR is usually a percentage of profit. When the profit goes down, we will usually help the lower and middle class communities. We usually give a big budget to them, whether it's the education sector or the economy, as a result of the carbon tax with reduced profits, automatically, Mas, will reduce our CSR budget. Which is usually enjoyed by the lower community and the middle to lower community. That's for sure, Mas. From our point of view, Mas. The point of view."

Furthermore, ASW (the Company) also explained that there is a possibility that after the carbon tax is implemented the company will make the factory more efficient with environmentally friendly technology that is usually automated. The transition of technology from manual to automated manufacturing in factories can have an impact on reducing the number of employees (layoffs), especially for outsourced employees who are usually local residents, so that it can lead to an increase in unemployment, even to demonstrations and factory closures. The following is the information from the interview:
"In terms of this, Mas, in terms of factory efficiency, Mas. Usually with the carbon tax, our factory will make the factory environmentally friendly, it must be automatic, Mas, the factory. Not manual. With an automated factory, it will reduce a lot of labor, especially outsourced labor. These outsourced workers are usually people who live around the company. When there is a more automated factory, the reduction of employees, usually the most important reduction of employees is outsourced employees, Mas. That has an impact, Mas. Those who originally had a job become unemployed. That's in terms of, what do you call it, labor. Unemployment increases, and then it can. So the demonstration, Mas, because they are local people, Mas, yes. With demonstrations, it can even create a higher risk. That is, they close the factory, Mas. We can't operate. That's even more horrifying. So indeed, the study, what is it called, this carbon tax must be really well-considered by the government. And don't apply it immediately. Immediately 100%, maybe 10% first. Usually, for example, the new stone is reduced, we can still breathe if the coal is reduced. But if everything that is not environmentally friendly is closed, we are already. That's dangerous, Mas."

On the environmental side, challenges include uneven facilities and infrastructure, especially in remote areas. The lack of transportation infrastructure affects efforts to reduce carbon emissions, as people rely more on private vehicles, which contribute to increased greenhouse gas emissions.
Informant MDPL (General Public) expressed his complaints when using public transportation with his toddler child. The following information was conveyed:
"If it's a long-distance trip like I usually take the train, it's okay to take public transportation. Meanwhile, if we travel long distances here, it is difficult if we want to take public transportation, especially if I have small children, it is more difficult in my opinion if we take public transportation at short distances. It's also okay with now there are also many outputs of electric motors, there are also many electric cars, but the more friendly ones are actually still electric motors."

In addition to MDPL (General Public), another informant, J (General Public), also stated that his low interest in transitioning to public transportation modes is due to inadequate and uneven facilities in his area in Lumajang. The following information was provided by J (General Public) in the interview conducted:
"If it's public transportation, I don't think so, especially short distances. because here the facilities are also not good and evenly distributed, mikrolet is rare, and the train doesn't even reach the middle of the city, almost on the border of the neighboring city, it's very far away. If it's a vehicle like an electric motorbike, I still don't think about it, because its use is also the same, we also add costs to pay for more electricity, and then use it for long distances also requires a lot of power. if for long distances, I'd rather use public transportation only."

Acceptance of Carbon Tax Policy

Public acceptance of the carbon tax policy is generally positive although sometimes forced. People's understanding of the carbon tax influences their attitude; those who do not understand often reject it because of the price increase, while those who understand it tend to be more accepting by considering the environmental benefits. The following are excerpts from interviews with several informants:

MDPL (General Public) informants stated that they accept the carbon tax policy even though they are forced to do so. The following statement was delivered in the interview session:
"For me, whether I want it or not, I am forced to accept it because my income is still average, whether I want it or not, I have to accept it. The problem is that it is also for the good of the Indonesian people in order to achieve a clean, healthy environment, good air. Moreover, as a housewife, if staples rise or are directly related

to the consumption products of the community, it will affect staple foods so all staple foods rise, it will also have an impact on housewives."

MDPL (General Public) informants expressed compulsion to accept carbon tax for the good of Indonesian society and for the achievement of a clean, healthy and preserved environment. Furthermore, the researcher also asked about the informant's opinion if the environmental conditions in the form of climate, weather and seasons returned to normal as before. MDPL (General Public) informants also gave statements agreeing if the environment became normal and maintained as before in the following interview excerpt:
"Yes, I agree."
In addition, MDPL (General Public) informants also emphasized their hopes for such an environment and also hopes for a carbon tax policy in the following interview excerpt:
"My hope is to create clean air without a lot of carbon dioxide, with stable weather, then and if a carbon tax is required, I hope the tax is not too high."

Furthermore, informant J (General Public) also showed his agreement with the carbon tax policy although with a little compulsion. The following are the results of the interview with informant J:
"If a policy is issued, as a community I follow it, but the amount must be reasonable, if as a community it is for private users, it should not be expensive if possible, if possible, it should not be the same as the industry."

Furthermore, J (General Public) also showed his agreement with the carbon tax if it is related to environmental reasons. The following is an excerpt from the interview:
"If for environmental reasons I automatically agree, it's just that it has to adjust to the community's economy again, we first see how expensive goods / services are if a carbon tax is applied, if it is considered to suppress the community, I kind of object to it."

Informant J (General Public) also showed his agreement with the carbon tax when the researcher asked questions related to his agreement and hope for the environment to be normal like before with a clean, healthy environment and normal climate/weather. The following is an excerpt from his interview:
"Yes, I agree, it's good that it's not too hot (not too hot). The problem is that the weather here now is very different from before. It used to not be as hot as it is now here."

Apart from the general public, informant TN (Academician/Practitioner) also showed his agreement with this policy on the grounds of environmental sustainability. The following is an excerpt from his interview:
"Accepting and for the sake of sustainability, the preservation of the environment. If the motivation is political, I don't want to do it, but if the motivation is environmental, it can be for our children and grandchildren."

ASW (The Company) also shows its readiness to face this carbon tax policy. The following is an excerpt from the interview:
"If this carbon tax is implemented by the Ministry of Environment and Forestry, the Ministry of SOEs requires it. We willingly or unwillingly participate, Mas. Because we have no choice. And if asked whether petrochemicals are ready, petrochemicals are ready, Mas. Because we have calculated the cost at that time. Our risk management friends have calculated what expenses will be incurred. Indeed, it really erodes profits. So until I hear, this is still heard, Mas. So there is no exact figure yet. So it reduced petrochemical profits by 50%. But petrochemicals still have profits, that's for sure. Because the 23 petrochemical plants, almost 80% of them are not environmentally friendly. So they are still old factories."

The results of the interviews above show that both the general public as well as companies and academics/practitioners accept this policy, although there is a compulsion from an economic perspective. Companies, for example, have prepared themselves and analyzed the cost impact through risk management. To increase acceptance, thorough socialization is essential. The government needs to explain the concept, purpose, rate, mechanism, and benefits of carbon tax, as well as provide information on subsidies or assistance to ease the burden on the public, especially the lower middle class. With a good understanding, people can see the long-term benefits of this policy and better support efforts towards a cleaner and more sustainable environment.

Opportunities and Challenges of Carbon Tax Policy Implementation in Indonesia from the Perspective of Sustainability Development Theory

The implementation of a carbon tax policy in Indonesia is in line with several points of the Sustainable Development Goals (SDGs). From an economic point of view (profit), this policy can increase significant state revenue, which can then be allocated for investment in renewable energy and environmentally friendly infrastructure, in accordance with Law Number 7 of 2021 concerning Harmonization of Tax Regulations. This supports SDGs point 13 related to addressing climate change. However, there are economic challenges that

arise in the form of potential reductions in corporate profits and increases in the prices of goods and services that could affect people's purchasing power.

In terms of social (people), carbon tax has the potential to encourage changes in people's behavior towards more environmentally friendly energy use, supporting SDGs point 7 (clean and affordable energy) and point 11 (sustainable cities and settlements). However, there are social challenges, such as a decrease in CSR budgets and a potential reduction in the workforce. Therefore, it is necessary to allocate funds from the carbon tax for skills training and job creation in the green sector. From the environmental dimension (planet), this policy can reduce carbon emissions and support SDGs point 13, although inadequate infrastructure in remote areas is still a challenge that must be overcome for carbon emission reduction efforts to be effective.

5. CONCLUSION

The implementation of a carbon tax policy offers significant opportunities such as reducing greenhouse gas emissions, increasing state revenue, and transitioning to green energy. However, economic challenges include rising prices of goods and services that affect people's purchasing power, especially the lower middle class, as well as decreasing corporate profits. Socially, this policy could reduce companies' CSR budgets. Other challenges relate to inadequate infrastructure and public transportation. Despite the resistance, the majority of people, businesses, and academics tend to accept this policy for the sake of environmental sustainability, provided that there is better socialization and understanding.

Based on the research conclusions, suggestions for future research include in-depth analysis of the economic impact of carbon tax, case studies of implementation in other countries, analysis of CSR budget reduction, research on infrastructure linkages with carbon emissions, and studies on effective socialization strategies. It is hoped that this research can provide a better understanding of the opportunities and challenges of implementing a carbon tax in Indonesia as well as guidance for more effective and sustainable policies in the future.

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