



ENCOURAGING SUSTAINABLE DEVELOPMENT WITH GREEN TAX CREDIT POLICY

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Abstract

Climate change is an issue that is currently of concern to various parties. Many studies reveal that climate change can have an adverse impact on various aspects of human life. Therefore, various countries have issued policies to encourage sustainable development to mitigate the effects of climate change. This research examines the implementation of the green tax credit policy in Indonesia as a form of government effort to encourage sustainable development. This research discusses the proposed scheme, benefits, and challenges of implementing green tax credit policy in Indonesia. A qualitative method with a literature study and scoping review is used in this research. The analysis method used in this research is descriptive qualitative. The results of this study show that the green tax credit scheme provides numerous benefits, such as being more universal, being implemented easily, and encouraging sustainable development in the long term. The challenges of implementing this policy are decreased tax revenue, monitoring costs, and resistance from certain parties. Seeing the benefits of green tax credits in promoting sustainable development, the government can consider implementing this policy in Indonesia.

Keywords: Green tax credit, Renewable energy, Sustainable development, Tax incentives

Abstrak

Perubahan iklim merupakan isu yang saat ini sedang menjadi perhatian berbagai pihak. Banyak penelitian mengungkapkan bahwa perubahan iklim dapat memberikan dampak buruk pada berbagai aspek kehidupan manusia. Oleh karena itu berbagai negara telah mengeluarkan kebijakan untuk mendorong pembangunan berkelanjutan dalam rangka memitigasi dampak perubahan iklim tersebut. Penelitian ini bertujuan untuk mengkaji penerapan kebijakan green tax credit di Indonesia sebagai bentuk upaya pemerintah untuk mendorong pembangunan berkelanjutan. Penelitian ini membahas mengenai usulan skema, manfaat, serta tantangan penerapan kebijakan green tax credit di Indonesia. Metode kualitatif dengan studi kepustakaan dan scoping review digunakan pada penelitian ini. Metode analisis yang digunakan pada penelitian ini adalah kualitatif deskriptif. Hasil dari penelitian ini menunjukkan bahwa skema green tax credit memberikan berbagai manfaat seperti: bersifat lebih universal, dapat diimplementasikan dengan mudah, serta mendorong pembangunan berkelanjutan dalam jangka panjang. Sementara tantangan dari implementasi kebijakan ini adalah: penurunan penerimaan pajak, biaya pengawasan, dan resistensi dari pihak tertentu. Melihat manfaat dari green tax credit dalam mendorong pembangunan berkelanjutan, maka pemerintah dapat mempertimbangkan untuk segera menerapkan kebijakan ini di Indonesia.

Kata Kunci: Energi terbarukan, Green tax credit, Insentif pajak, Pembangunan berkelanjutan

INTRODUCTION

Climate change is an issue that is gaining attention from various parties. It is inseparable from the increasing public awareness of environmental issues. Climate change is a long-term change in the average weather conditions in an area (Santos & Bakhshoodeh, 2021). In addition, IPCC (2023) explains that climate change can be defined as the annual incremental increase in the Earth's surface temperature. Meanwhile, Hidayati & Suryanto (2015) defined climate change as a change in the world's climate pattern that causes erratic weather phenomena. These various definitions show that climate change is a phenomenon that causes changes in the environment around us.

Climate change is not just a fictional story. Various signs of climate change can be easily observed in our environment. Between 2011 and 2020, the average temperature of the earth's surface was 1.1° C compared to the average temperature of the earth's surface in 1850-1900 (IPCC, 2023). Meanwhile, the concentration of greenhouse gases such as CO₂, CH₄, and N₂O in the atmosphere continued to increase in the range of 200-2019 compared to the average in 1850-1900 (IPCC, 2023). The increasingly frequent occurrence of extreme weather, such as extremely high rainfall, storms, and extreme air temperatures, are also signs of climate change



Haryanto & Prahara (2019). In addition, climate change also causes sea levels to rise (Mimura, 2013). After seeing these various phenomena, climate change is happening in our environment.

The increasing public awareness of climate change issues is not without reason. This is because climate change can have a significant impact on human life. Extreme weather due to climate change causes a decrease in the number of certain species of animals and plants in nature (IPCC, 2023). Climate change can also disrupt food availability. This is because long droughts due to climate change can disrupt the production of crops for farmers (Hidayati & Suryanto, 2015). In terms of health, climate change can also cause various human diseases. Various phenomena, such as deaths due to heat waves, respiratory disorders, and cardiovascular disorders, are also the impact of climate change (Kim et al., 2014).

The impact of climate change can also be seen from the economic aspect. Various adverse effects of climate change will certainly cause losses to the economy. It is because economic activity cannot be separated from the surrounding environment. Therefore, when climate change causes changes in the environment, then, of course, this will also affect the economy (IPCC, 2023). The impact of climate change on the economy can be measured based on its effect on GDP. Kompas et al. (2018) estimated that economic losses from climate change could reach US\$ 9,593 billion or 3% of Global GDP by 2100, assuming a temperature increase of 3.2°C. Meanwhile, for Indonesia itself, climate change can cause a decrease in GDP of 13.27% in the long term (Kompas et al., 2018).

The magnitude of potential losses arising from climate change has led countries worldwide to issue various policies to prevent and overcome the impacts of climate change. It needs to be conducted considering the magnitude of the impact of climate change on the environment, economy, and social affairs (Carleton & Hsiang, 2016). One form of policy that has been developed in various countries is to encourage the realization of sustainable development. Sustainable development is development that meets the needs of present generations without reducing the ability of future generations to meet their needs (World Commission on Environment and Development, 1987). One of the concrete manifestations of sustainable development is the formation of the Sustainable Development Goals (SDGs) in 2015. Through the SDGs, UN member states agreed to encourage the realization of sustainability as outlined in seventeen goals.

One of the principles stated in the SDGs is the principle of participation. This principle means that participation from various parties is needed to realize the SDGs. Sustainable development will not be realized if it only depends on the role of the government from the public sector side (Mensah, 2019). This is because the costs required to mitigate the impacts of climate change and encourage the realization of sustainability are not small. In the energy sector, the costs required for climate change mitigation until 2030 reached 3,500 trillion (Kementerian LHK, 2019).

Tackling the impacts of climate change is costly and, therefore, requires the participation of the private sector. The role of the private sector is an important aspect in encouraging the realization of sustainable development (Lalaguna & Dorodnykh, 2018). The role of the private sector in sustainable development can be realized through corporate social responsibility (CSR), circular economy, and environmental initiatives (Rashed & Shah, 2021).

The growing private sector involvement in promoting sustainable development is certainly a positive thing. The integration of sustainability in a company's business can also benefit the company itself. Bayoud et al. (2012) explained that corporate CSR disclosure positively impacts financial performance and corporate reputation. Corporate sustainability disclosure activities through sustainability reports also positively impact the company's financial performance, characterized by an increase in return on assets (Burhan & Rahmanti, 2012).



Although it can provide numerous benefits, several things need to be considered for companies that want to integrate sustainability into their company. First, the benefits of integrating sustainability into the company's business processes cannot be obtained in a brief period. Horváthová (2012) explained that the benefits of sustainability activities carried out by companies can only be felt in more than one reporting period. The next problem concerns the high investment costs to implement sustainability in the company's business (Rashed & Shah, 2021). These factors sometimes cause companies not to start implementing sustainability aspects.

As a policy maker, the government has a vital role in encouraging private sector participation in realizing sustainability. Fiscal policy, especially tax policy, is one of the instruments the government can use to encourage this. As is well known, one of the functions of tax is to regulate. It means that taxes can be used to regulate certain things to achieve state goals. One of the tax policies that the government can use to encourage the role of the private sector in sustainability is the provision of tax incentives (Redonda, 2016).

Currently, the tax incentive schemes provided by the Indonesian government to encourage private sector participation in sustainable development are mostly tax allowances and tax holidays. These schemes have several disadvantages, such as a limited period and non-transparent costs (Klemm, 2009). It makes private sector participation in realizing sustainable development still not optimal. Various tax incentives the government has provided are still unable to encourage the private sector to be more involved in sustainable development. Therefore, a new tax incentive scheme is needed to complement the existing incentive scheme and encourage private sector involvement in realizing sustainable development in Indonesia.

Green tax credit is one form of tax incentive that can be applied. Through this incentive, parties that have integrated sustainability aspects in running their business will be given tax credits to reduce their income tax payable. Several countries, such as the United States, Canada and Sweden, have implemented tax credit schemes to encourage the integration of sustainability in businesses run by companies.

Several studies have been conducted to analyze the utilization of tax credits to encourage sustainable development, especially related to the use of renewable energy. (Layser, 2016) revealed that the government's role in providing incentives and subsidies is important to encourage the development of renewable energy. Ogunlana & Goryunova (2017) revealed that European countries also use tax incentive schemes to encourage using environmentally friendly renewable energy. In addition, Hidayat et al. (2022) also explained that tax incentives are a crucial factor in encouraging the transition of green energy to the private sector.

There has not been much research in Indonesia on the proposed green tax credit to encourage sustainable development and private-sector participation. This research aims to discuss the proposed green tax credit implementation scheme in Indonesia, the benefits that can be provided by implementing this policy, and the challenges that need to be considered in implementing this policy. The difference between this research and previous studies is that this research will discuss a tax incentive scheme in the form of a green tax credit that has not been widely discussed in previous literature on tax incentives to encourage sustainable development. This research is expected to contribute to the literature related to taxation, especially regarding tax incentives. In addition, for the government, especially the Directorate General of Taxes (DGT) as a policy maker, this research is expected to be an input in the preparation of fiscal policies in the form of tax incentive schemes to encourage the achievement of sustainable development in Indonesia.



LITERATURE REVIEW

Stakeholder Theory

Stakeholders are any party that can influence and be affected by achieving organizational goals (Freeman, 1984). Stakeholder theory explains that when an organization can understand stakeholders, it can solve the problems it faces more effectively (Parmar et al., 2010). In stakeholder theory, an organization's main goal is to balance the different interests of various stakeholders (Freeman, 2015).

Stakeholder theory seeks to accommodate issues related to an organization's stakeholders (Romadhon, 2020). There are two approaches in stakeholder theory: normative and positive (Deegan, 2014). The normative approach emphasizes equal rights for each stakeholder (Romadhon, 2020). In the normative approach, organizations are also expected to manage relationships with stakeholders well (Romadhon, 2020). Meanwhile, in the positive approach, stakeholder theory is emphasized to be more concerned with the main stakeholders (Gunawan, 2015). Stakeholder theory explains that an organization must understand each stakeholder's interests to succeed.

Tax Incentives

Tax incentives are a form of government fiscal policy to achieve certain objectives. Tax incentives are usually closely related to the regulatory function of taxes. Tax incentives are generally defined as a policy to reduce the effective tax burden on a project (United Nations, 2018). Governments in various countries use tax incentives to achieve certain goals, such as attracting investors, encouraging investment, and encouraging certain behaviors from investors (OECD, 2022). However, on the other hand, if not managed properly, tax incentive policies can also cause greater costs than benefits (OECD, 2022).

Tax incentive schemes can be categorized into several types. Tanzi & Zee (2001) generally categorized tax incentives into tax holidays, investment allowances and tax credits, time differences, reduced tax rates, and free economic zones. Tax Holiday is an incentive scheme that is widely applied in developing countries. Tax holidays are usually given to newly established companies. These companies are given facilities in the form of exemption from tax payments for a certain period. Investment allowances and tax credits are incentives that are sometimes given in addition to the tax holiday scheme. In the allowance scheme, companies get additional deductions apart from depreciation on asset investment. At the same time, the tax credit scheme provides facilities in the form of a reduction in tax payable at the end of the tax year (United Nations, 2018).

Tax rate reduction is a tax incentive scheme that provides facilities for taxpayers to use tax rates lower than the general tax rate (OECD, 2022). This tax rate reduction scheme is different from a tax holiday because, in this scheme, taxpayers still must pay taxes, but at a lower amount than the burden should be (Tanzi & Zee, 2001). Furthermore, time difference incentive schemes are incentives that are usually related to revenue or expense recognition schemes. One form of time difference incentive scheme is accelerating depreciation expense recognition. Furthermore, the free economic zone is a tax incentive scheme based on the location of the investment made by the taxpayer (OECD, 2022). To obtain this tax incentive, taxpayers must invest in certain locations or areas the government has determined.

Green Tax Credit in Various Country

Governments in various countries have utilized tax incentives to encourage sustainable development. Tax incentives are given to parties implementing sustainability principles in their business activities. The United States is one country that has implemented a tax incentive scheme to encourage sustainable development in its country. Incentive schemes that have long been implemented in the United States are the Investment Tax Credit (ITC) and Production Tax Credit (PTC) (United States Environmental Protection Agency, 2023). Both incentives allow



taxpayers to obtain a reduction in income tax (tax credit) from a certain percentage of environmentally friendly investments made. The green investment referred to here is generating electricity from renewable energy. ITC provides tax credits based on a certain percentage of the investment value taxpayers have spent in investments to generate electricity from renewable energy. At the same time, PTC provides a tax credit with a certain nominal value based on electricity generated from renewable energy.

In March 2023, Canada also issued a new policy on tax incentives to encourage a green economy in Canada (Jankovic et al., 2023). In the policy, there are several tax incentives in the form of tax credits given to several green investments. Some of these incentives include a 30% tax credit for investments in green technologies such as solar, wind, hydro, nuclear, and technologies that reduce emissions. In addition, there is also a 15% tax credit given to produce environmentally friendly electricity.

European countries have also implemented tax incentive policies to encourage private sector involvement in sustainable development, especially using renewable energy (Ogunlana & Goryunova, 2017). Spain provides a tax credit of 12% of the investment value in renewable energy. Sweden provides a tax credit policy of 0.60 SEK/kWh of renewable electricity for entities or private individuals for excess electricity production (Westerberg & Lindahl, 2022).

METHODOLOGY

This research examines the implementation of the green tax credit scheme in Indonesia to encourage private sector participation in sustainable development. Based on these objectives, the philosophy of this research is subjectivism. The philosophy of subjectivism is a research philosophy that the truth in the world results from different perceptions and actions of various individuals (Saunders et al., 2023). This research will explore various views on tax incentive schemes to encourage sustainability and then provide suggestions for policy schemes in Indonesia. This research uses an inductive approach. This research begins by analyzing a problem related to private sector involvement in sustainable development. Furthermore, based on these problems, this research will provide a proposed tax incentive scheme to encourage sustainable development in Indonesia.

Qualitative methods with literature studies and scoping reviews are used to answer the problems discussed in this study. A literature study is a qualitative research method carried out by collecting information or scientific papers that are literature in nature (Ridwan et al., 2021). Meanwhile, the scoping review is a qualitative research method that aims to conduct an overview of a problem based on the results of research on previous literature (Munn et al., 2018). Data collection in this study was conducted using documentation, especially related to literature relevant to the problems in this study. The literature collected comes from journal articles, reports, news, and other references. Then, this research uses a qualitative descriptive method to analyze the literature that has been collected to answer research questions related to the proposed scheme and the benefits and challenges of implementing green tax credits in Indonesia.

FINDINGS AND DISCUSSION

Through the literature collection process that has been conducted, several literatures that are relevant to the topics discussed in this study have been obtained. The literature discusses several topics, such as tax incentive schemes (Klemm, 2009; OECD, 2022; Tanzi & Zee, 2001; United Nations, 2018) and the application of tax credit incentives to promote sustainable development (Dinata et al., 2023; Fu & Tang, 2022; Roach, 2015; Wahyuni et al., 2020; Wang et al., 2022) and challenges in the implementation of green tax credit policies (Geels, 2014; Simnett et al., 2009). The next section will present a more detailed discussion of the proposed



scheme, benefits, and challenges in the implementation of green tax credit in Indonesia based on the collected literature.

Proposed Green Tax Credit Scheme

There are several aspects that the government needs to consider in designing a tax incentive scheme. Implementing a tax incentive policy is usually related to the regulatory function of taxes. Tax incentives usually encourage investment in certain fields (Klemm, 2009). In addition, the provision of tax incentives can also aim to change the behavior of taxpayers so that it is following what is expected by the government (Sassi & Belloni, 2014). Therefore, for the objectives of the tax incentive policy to achieve the expected goals, the government needs to implement the right scheme.

In this green tax credit policy, the government must consider several aspects. Some of these aspects are the incentive's subject, object, and implementation scheme. The first aspect that needs to be considered is the intended subject of this tax incentive scheme. The government needs to determine which taxpayers can use this incentive scheme. This research proposes that individual and corporate taxpayers can use this incentive in the green tax credit scheme. Furthermore, taxpayers entitled to use this incentive are not limited to taxpayers in a particular sector.

Providing incentives to all taxpayers is in line with the objective of this incentive to be universal. Universal means that all taxpayers can utilize this incentive if they fulfill the provisions related to sustainability aspects that are required in this scheme. So far, tax incentives provided by the government to encourage sustainable development are usually always limited to certain industries or sectors. Realizing sustainable development requires the participation of all stakeholders (Mensah, 2019). Therefore, green tax credit incentives will benefit all taxpayers who integrate sustainability into their businesses. This will accelerate the achievement of sustainable development goals in Indonesia.

Furthermore, after determining the subject of the green tax credit, the government needs to determine the object of this incentive. The object referred to here is an activity or an activity that must be conducted by the taxpayer to benefit from this incentive. The determination of this object is related to the type of investment the government wants to encourage (United Nations, 2018). Determining this object is important for policymakers to pay attention to. The selection of the right object aims to identify the type of investment the government wants to encourage and ensure that the right taxpayer utilizes the incentive (United Nations, 2018).

The purpose of implementing this green tax credit is to encourage private sector participation in sustainability development. Therefore, the object regulated in this incentive must be an activity or activities related to sustainability. One of the activities that can be used as the object of this incentive is the production of electrical energy from taxpayers. This is inseparable from the fact that electrical energy has a vital role in the production process of an industry (Rosadi & Amar, 2019). Thus, when the company intends to adopt sustainability aspects in its business processes, it can start using renewable electrical energy. In connection with this, the object that can be selected for this green tax credit is the production of electricity from renewable energy. Renewable energy can come from water, wind, solar power, and other renewable sources.

So far, most of the electricity in Indonesia is still generated through fossil fuels. Based on data from the U.S. Energy Information Administration (EIA), 82.19% of electricity in Indonesia is generated through fossil fuels, while only 17.81% is generated from renewable sources. Electrical energy generated from burning fossil fuels such as coal can have a negative impact on the environment and health (Sabubu, 2020). The number of power plants that use coal energy is partly due to the cost of producing electricity from coal, which is still cheaper than renewable energy sources (Arinaldo & Pujantoro, 2019). Therefore, applying green tax



credit is expected to encourage taxpayers to switch to using electrical energy sourced from renewable energy. One of them can be done by installing solar panels to produce electrical energy from sunlight.

After determining the subject and object of this green tax credit incentive, the last aspect that needs attention is the implementation scheme of this incentive. As explained earlier, this incentive will be given to all taxpayers who generate electricity in their business from renewable energy. This incentive scheme has long been implemented under the Production Tax Credit (PTC) in the United States. In this scheme, taxpayers are given a tax credit with a certain amount calculated based on the kWh of renewable electricity produced. In the US, the tax credit is up to 2.6 cents per kWh of electricity generated from renewable energy (United States Environmental Protection Agency, 2023).

Meanwhile, in Indonesia, the value of the tax credit provided must be further studied to provide adequate benefits and remain following the government budget. To obtain this credit, taxpayers must first submit a claim by reporting the electricity generated from renewable energy during one tax year. Then, the tax officer will verify the report, and the tax credit application will be accepted. Facilitating the verification process can be done by disclosing energy production in the sustainability report published by the taxpayer. When the sustainability report has received assurance from an independent auditor, it already has good credibility (Simnett et al., 2009) and can be used as an adequate verification basis for tax credits.

Urgency and Benefit

The Indonesian government has implemented several tax incentives to encourage the role of the private sector in supporting sustainable development. Through Government Regulation of the Republic of Indonesia Number 9 Year 2016 on the Amendment to Government Regulation Number 18 Year 2015 on Income Tax Facility for Investment in Certain Business Fields and/or Certain Regions, the government has incentivized companies that invest in renewable energy power plants. The types of tax incentives provided through the regulation include a 30% reduction in net income, accelerated depreciation of tangible assets, compensation for losses of more than 5 years, and the imposition of a lower dividend rate for payments to foreign taxpayers. One thing that needs to be underlined from the government regulation is that these incentives are not only specifically regulating the renewable energy power generation sector but also various fields that are considered to have a high priority on a national scale or conducted in certain regions.

The Indonesian government also provides tax holiday facilities for investments in the renewable energy sector. This policy is stated in the Regulation of the Minister of Finance of the Republic of Indonesia number 130/PMK.010/2020 regarding the Provision of Corporate Income Tax Facilities. In this policy, the government provides facilities in the form of exemption from tax payments within a certain period for companies investing in renewable energy power plants. Like the previous policy, this tax holiday policy is not specifically for investment in renewable energy power plants but for pioneer industries in certain sectors (Dinata et al., 2023).

The tax incentive scheme to encourage sustainable development in Indonesia is still not specific and universal. The incentives provided are not specific because the industries that receive incentives are not only industries in the renewable energy sector. In addition, the minimum investment value required to obtain both facilities is high, so only taxpayers with large capital can take advantage of these incentives. Tax holiday schemes also usually have a certain time limitation, discouraging long-term investment (Tanzi & Zee, 2001).

The government needs to complement the tax incentive schemes provided to encourage sustainable development in Indonesia. Green tax credit is a form of tax incentive that the government can use to complement the tax allowance and tax holiday incentives provided by



the government. So far, there has been no incentive scheme with tax credits provided by the government to encourage private sector participation in sustainable development. The tax credit scheme has several advantages compared to other tax incentive schemes, so this scheme can be the right solution to complement the tax incentive scheme that the government has provided to encourage sustainability.

Tax incentive policies in several countries have proven successful in encouraging private sector participation in realizing sustainable development. The Production Tax Credit (PTC) incentive scheme in the United States has proven to be able to encourage increased electricity production from renewable energy (Karimi et al., 2018). Roach (2015) also expressed the same thing, stating that PTC effectively promotes electricity production from renewable energy, especially wind. In addition, tax incentives have also been shown to encourage green innovation in companies (Wang et al., 2022). Fu & Tang (2022) revealed that tax incentives effectively lower the costs companies require to adopt green technology in their business.

The first advantage of the green tax credit scheme is that it is more universal than other incentive schemes. This is because both individual taxpayers and corporate taxpayers can obtain this incentive. In addition, the tax credit scheme does not have a minimum investment value requirement that taxpayers must meet to obtain incentives (United Nations, 2018). In the green tax credit scheme proposed by this research, this incentive applies the same scheme as the Production Tax Credit (PTC) implemented in America. The tax credit amount is given based on the amount of electricity generated from renewable sources by individuals and entities. Therefore, this incentive scheme can encourage individuals and entities to use electricity from renewable sources to obtain tax credits.

Tax credit schemes are also relatively easier to implement. Klemm (2009) revealed that the tax credit scheme can be implemented easily with an automated and transparent method. In the green tax credit scheme, the amount of tax credit that can be used as a deduction for income tax payable is calculated by the taxpayer based on the production of electricity from renewable energy conducted by the taxpayer. This scheme aligns with the self-assessment tax collection system that applies in Indonesia. Therefore, this green tax credit scheme will not be burdensome from the administrative side of the tax collecting authority, the Directorate General of Taxes (DGT).

The tax credit earned by the taxpayer depends on the amount of electricity production from renewable energy generated by the taxpayer. This scheme means there is no minimum value of investment that the taxpayer must spend in the tax credit scheme (United Nations, 2018). This provision makes the green tax credit scheme more flexible for taxpayers. Taxpayers can still benefit from this incentive regardless of the value of the investment made by the taxpayer because the amount of tax credit is calculated based on the amount of electrical energy generated. Therefore, taxpayers can flexibly make investments according to their respective financial capabilities and can still obtain tax credits.

A further advantage of this scheme is that it can promote sustainable development in the long term. In the production tax credit scheme, taxpayers will still receive tax credits if they produce electricity from renewable energy, in contrast to the investment allowance and tax holiday schemes, which are limited by the investment value and a certain period, so the two schemes tend to encourage investment in the short term (United Nations, 2018). Therefore, when the government intends to encourage sustainable development in the long term by involving the private sector, the green tax credit scheme can be an option.

The application of green tax credit incentives can also have a positive impact on sustainability disclosures made by companies. This is because the sustainability disclosure standards issued by the Global Reporting Initiative (GRI) include provisions for disclosing the



company's electrical energy sources. In GRI 302-1, which regulates the disclosure of corporate energy consumption, companies must disclose energy consumption within the company, including energy consumption from renewable sources (Global Reporting Initiative, 2016). When the green tax credit scheme is established, the company will be incentivized to disclose the consumption of renewable energy produced by the company. This is because when companies disclose this information, they will get economic benefits through reduced income tax payments. Increased disclosure of sustainability reports can positively impact the achievement of SDGs at the national level (Alsayegh et al., 2023).

One of the biggest challenges of integrating sustainability in the private sector is the high price of electricity production from renewable energy (Wahyuni et al., 2020). Therefore, the government's role is needed in overcoming these problems. This is in line with the concept of stakeholder theory. Based on this theory, the government must understand stakeholders' needs to achieve the goals it wants to achieve. In this case, taxpayers, as parties from the private sector, need an incentive to ease the burden that must be incurred to produce electricity from renewable energy. In connection with this, the government needs to immediately implement this green tax credit policy to respond to the needs of stakeholders.

Challenges

Despite the numerous benefits that can be provided by implementing the green tax credit incentive scheme, several challenges need to be considered by the government when implementing this policy. The first challenge the government will face is the potential decrease in tax revenue. A decrease in tax revenue due to tax incentives can be caused by investments that will still be made even though there are no tax incentives and the practice of manipulating the incentives provided (United Nations, 2018). Some taxpayers recognize the need to use renewable energy in their businesses even though no tax incentives are provided. Therefore, in such cases, providing tax incentives will reduce these taxpayers' tax payments. The more electricity from renewable energy generated by the taxpayer, the greater the tax credit obtained so that the income tax paid will be less.

To overcome the problem of decreasing tax revenue, the government must prepare a careful plan for implementing the green tax credit policy. The purpose of implementing this policy is to encourage using electricity from renewable energy. This incentive needs to be given considering that the price of electricity from renewable energy is still relatively higher than conventional electricity from coal (Wahyuni et al., 2020). Therefore, to increase the effectiveness of this policy, the government also needs to encourage a decrease in the price of electricity production from renewable energy. When electricity production from renewable energy is getting cheaper, the government can gradually reduce the value of the green tax credit because the price of electricity production from renewable energy is affordable for taxpayers.

The green tax credit incentive will also pose challenges in terms of monitoring the utilization of this incentive. The monitoring costs arising from a tax incentive are the costs of initial verification and monitoring taxpayer compliance with the tax incentive requirements (United Nations, 2018). As explained earlier, to utilize this tax credit, taxpayers must submit a claim to the DGT to be verified by the taxpayer. In this verification process, there is the potential for taxpayers to manipulate so that they can obtain tax credits with a value greater than they should. One effort to overcome this problem is to encourage taxpayers to prepare a sustainability report and require the report to be audited by an independent auditor. This will increase the credibility of the report (Simnett et al., 2009) so that it can be used to verify the credit value given to taxpayers. In addition, DGT also needs to improve the quality of its human resources (HR) to check the accuracy of green tax credits obtained by taxpayers.

The green tax credit policy will certainly also cause resistance from several parties. Resistance is likely to arise from fossil fuel power plant businesses (Geels, 2014). The



application of incentives will encourage taxpayers to use electricity from renewable energy. This will give negative sentiment to the coal mining sector. So, there will be resistance to this green tax credit policy from coal mining entrepreneurs. The existence of resistance to the transition to renewable energy can reduce its benefits (Geels, 2014). Therefore, the government also needs to discuss this policy with stakeholders in the coal mining sector. The government needs to ensure that entrepreneurs in the coal mining sector can also transition business processes in line with the shift in energy utilization to renewable sources.

CONCLUSION

Climate change is a phenomenon that is currently receiving attention from various parties. Numerous studies reveal that climate change can negatively impact the environment and human activities worldwide. Therefore, countries in the world agree to encourage the realization of sustainable development as a form of mitigation and prevention of the impact of climate change that occurs. To realize sustainable development, all public and private parties must also be involved in this program. In connection with this, the government, as a policy maker, needs to make a policy that can encourage private sector participation in realizing sustainable development. One form of policy that the government can implement is the provision of tax incentives in the form of green tax credits.

Green tax credit is a tax incentive in the form of a credit to reduce income tax payable given to taxpayers based on the amount of electricity from renewable energy generated by the taxpayer. Unlike various incentives such as tax holidays and investment allowances that have previously existed in Indonesia, which are usually only aimed at certain sectors, this green tax credit scheme is more universal. The universal nature in question is that this incentive can later be utilized by all taxpayers, individuals and entities from all business sectors if they meet the renewable energy production requirements. To utilize this incentive, taxpayers must submit a claim to the DGT in the form of an electrical energy production report. The DGT then verifies the report and provides a tax credit to the taxpayer.

The implementation of the green tax credit policy has numerous benefits. This policy has a universal nature so that it can complement the policies implemented in Indonesia. The green tax credit policy can also be implemented easily, and there is no minimum investment value requirement, making it easier for taxpayers to utilize this facility. This incentive can also encourage sustainable development in the long term and provide incentives for companies to improve sustainability disclosures through sustainability reports. Apart from the numerous benefits that can be obtained from the green tax credit policy, there are also several challenges that the government must consider in implementing this policy. These challenges include decreased tax revenue, monitoring schemes, and resistance from certain parties.

Recommendations and Limitations of Study

Based on the results and findings of this study, there are several suggestions that this research can provide. Future research on applying tax incentives to encourage sustainable development can use methods other than literature studies, such as interviews and focus group discussions, to obtain more varied data. In addition, future studies can also examine the quantitative aspects of this green tax credit policy to provide an empirical picture of its potential impact.

Furthermore, for the government, especially the Directorate General of Taxes (DGT) as the policy-making authority in the field of taxation in Indonesia, this research suggests that a study be conducted immediately to implement a green tax credit policy in Indonesia. This policy can provide benefits for the government to encourage private sector participation in realizing sustainable development in Indonesia. DGT also needs to prepare various necessary resources so that the implementation of the green tax credit policy can run well.



This research cannot be separated from several limitations. The data source of this research only comes from secondary data in the form of literature such as articles, books, and other publications. This research also only presents the taxation aspects of the qualitative side of the green tax credit scheme. In addition, the comparative country data used in this study is also still limited.

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