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POTENTIAL CARBON TAX IN INDONESIA: A LITERATURE REVIEW

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Abstract:

This study is study literature on policy tax carbon in Indonesia based on regulation legislation. The purpose of the study literature is to review a way more profound and structured policy tax carbon in Indonesia that is beneficial for realm academics and practitioners. Theoretical studies This is made based on a collection of statements, theoretical bases, and draft fundamentals about tax carbon in Indonesia. The writer converted and adapted several existing articles and readings by thinking about the author and the situation. The results of the study literature find that Indonesia's carbon exchange has launched the so-called IDXCarbon. However, implementation tax cannot yet be implemented. Carbon tax: No For search acceptance, but for an alternative for the business world To meet net zero emissions. Currently, carbon or carbon tax in Indonesia is Still termed levy carbon because carbon tax Has various shapes, taxation, and nontax. Imposition tax Carbon in Indonesia is regulated in Constitution Number 7 of 2021 Harmonization Regulation Taxation. The regulation became the first for the carbon tax in Indonesia.

Keywords: Tax Carbon, IDX carbon, Net Zero Emissions, Energy Renewable

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INTRODUCTION

Climate change has become a national and global issue, which is crucial later. Several sector industry moments. This, of course, can become a reason for a changed environment. Moreover, one form of undertaking that can reduce risk from problem climate, including the risk of global warming and increased house gas emissions glass, is mitigation change climate (Hassett et al., 2009; Meng et al., 2013). One effort made by countries in the world to reduce the impact of climate change is the Birth Convention Framework. The United Nations Framework Convention on Climate Change (UNFCCC) was agreed upon in Rio de Janeiro in 1992 (Horowitz et al., 2017; Williams III et al., 2015).

Indonesia, as one of the member countries of the United Nations Framework Convention on Climate Change (UNFCCC), committed to lower level emissions by as much as 29 % -41% in 2030 with cooperation outlined internationally in the document Nationally Determined Contributions (NDC) appropriate with Paris Agreement or Paris Agreement and so on At the same time, Indonesia is committed For increase resilience to impact change climate (Lin & Li, 2011; Metcalf, 2009). There are five main sectors to be focused on declining house gas emissions glass in this NDC, i.e., waste, energy and transportation, forests and land including peat, industrial well as agriculture (Hoel, 1996; Lin & Li, 2011).

Respond change is increasingly climate problematic. The government, along with individuals and organizations, love/observe the environment together to find a solution or proper mitigation, one of which is reducing carbon emissions (Fremstad & Paul, 2019; Ulph & Ulph, 1994). Indonesia

is also predicted to be one of the most significant contributors to carbon emissions, with roles and responsibilities. The answer is a significant and profound movement to change climate, including carbon subtraction and global warming mitigation (Metcalf, 2019; Zhang et al., 2016).

Based on previous research mapping results, Irama (2019) has counted the potency of Indonesian state revenues if policy tax carbon is applied using emissions data from Trucost, Bloomberg, and Reuters/Refinitiv. Saputra (2021) reviews potency state revenue from tax carbon in Indonesia using tariff benchmarks from application tax carbon in South Africa. Temporarily, the research reviewed tax carbon as potency state revenue while still using Indonesian data Not yet found. At the moment, the article Is written, but not yet. There is a certainty that the imposition of taxing carbon in Indonesia. Barus and Wijaya (2022) review the application tax carbon in Sweden and Finland to compare possibilities. Its implementation in Indonesia is based on the HPP Law. Temporary research on application tax carbon and its connections with the declining amount of emission carbon has been carried out at the international level, including by Tseng (2022) using Singapore country data, Gugler et al. (2022) using UK country data, and Andersson (2019) with using Swedish country data.

Applying carbon tax in Indonesia is not easy. This becomes the reason behind postponing its application tax carbon until 2025. A carbon tax is one instrument for mitigating the enhanced emission of carbon or CO₂ in Indonesia (Marron & Toder, 2014). When a country experiences a high-growth economy, at the moment, it also produces lots of CO₂. The people of Indonesia do Not yet value the emission of carbon. Many parties do not care About deciding on its implementation. As a result, the Government's market mechanisms are one condition important for everyone to realize that the quality of the environment of this world has already started to worsen (Metcalf, 2017; Metcalf & Weisbach, 2009). That is why there is mark pollution; principle payment pollution must be introduced. That is why Indonesia introduced a carbon market. Despite this, when introducing and 'selling' the carbon market to the industry, the Government finds it difficult to translate it (Hájek et al., 2019).

Meanwhile, the carbon market, or in matter, This tax carbon. How you see and calculate the CO₂ must Be accepted healthily by many societies (Saputra, 2023; Watto et al., 2020). How can we prove that it indeed reduces CO₂?

The government will enforce carbon tax for sector transportation, buildings, and sector-based land 2025. Generally, a carbon tax is a tax imposed for the use of material-burning fossil. The main goal of imposing a carbon tax is to change the perpetrator's economy's behavior and to switch to an activity economy with low green carbon (Al-Abdullah, 1999; Jia & Lin, 2020). This is in line with the effort of the government to achieve the reduction target of house gas emissions glass by 29 percent with ability alone and 41 percent with support international by 2030. Implementing carbon tax in Indonesia will later use a cap and tax scheme (Jia & Lin, 2020) where a tariff of IDR 30 per kilogram of carbon dioxide equivalent is applied to the emissions exceeding the specified cap (Metcalf & Weisbach, 2009). In Indonesia's mechanism imposition of tax carbon, mandatory tax can utilize certificate carbon purchased on the carbon market as a reduction obligation tax (Zhang et al., 2016).

Viewed from policy tax carbon applied in several countries, taxes proven can lower emissions from these countries in a way effective simultaneously with increase state income from reception tax. As stated by the Ministry of Energy and Mineral Resources, it is hoped that the funds collected from tax carbon will be used For mitigation change climate, increasing development funds, investment-friendly environment / green investment such as developing source energy new

renewable (EBT) sector which can also lower emission carbon (Al-Abdullah, 1999; Baranzini et al., 2000).

Definition of Carbon Tax. A carbon tax is a tax imposed on using material-based carbon, that is, products such as processed oil, natural gas, and coal (Green, 2008). A carbon tax may also become an effort for the Government To reduce emissions and assess carbon potential. To support the development of innovative energy, new renewable or new national renewable energy (Callan et al., 2009). Simultaneously with the COVID-19 pandemic that occurred globally, policy on tax carbon trust can be one source of state revenue (Tol, 2007). A carbon tax can also add cost to fossil production energy like current coal (Ulph & Ulph, 1994; Zhang et al., 2016). This becomes the cheapest source of energy for generator electricity. With existing tax carbon, price energy new renewable or new renewable energy can compete with price energy fossils and materials burn-based carbon (Hájek et al., 2019; Marron & Toder, 2014).

Energy Renewable. Renewable energy is a source of energy that is available by nature and not finished because it is formed from sustainable natural processes, as quoted by the Ministry of Education and Culture (Saputra et al., 2021). This is similar to a statement from the International Energy Agency (IEA) stating that renewable energy originates from charged natural processes that Keep going continuously, as reported from page Institute PLN Technology (Saputra et al., 2022). Although energy renewable alternative. No will finish; however, we still must make savings in its use (Baranzini et al., 2000; Fremstad & Paul, 2019; Metcalf & Weisbach, 2009).

Carbon Exchange. President of the Republic of Indonesia, Joko Widodo, officially launched the Indonesian Carbon Exchange (IDXCcarbon) (Jia & Lin, 2020). By OJK Regulation (POJK) Number 14 of 2023 concerning Carbon Trading Through the Carbon Exchange, IDXCcarbon, as a Carbon Exchange organizer, provides a system of transparent, orderly, fair, and efficient trading (Baranzini et al., 2000). Apart from giving price transparency, trade IDXCcarbon also delivers mechanisms for easy transactions. Currently, there are 4 (four) mechanisms of trading IDXCcarbon: Auction, Regular Trading, Negotiated Trading, and Marketplace (Callan et al., 2009). IDXCcarbon is connected with System National Registry of Control Climate Change (SRN-PPI) and belongs to the Ministry of Environment and Forestry (KLHK), so it makes it easier to administration carbon unit displacement and avoidance double counting (Metcalf, 2019; Metcalf & Weisbach, 2009).

Business actors are companies that own obligations and commitments. In a way, volunteers lower greenhouse gas emissions, can become IDXCcarbon Service Users and can purchase available carbon units (Hájek et al., 2019). The company can also register with fil,l in Form Registration Users of IDXCcarbon Services available on the website www.idxcarbon.co.id. Additionally, the owner's existing projects have carbon units recorded in SRN-PPI; you can sell its carbon units through IDXCcarbon (Al-Abdullah, 1999).

METHODS

This research method uses a literature review, meaning that the step that needs to be taken into account is to create a synthesis of conceptual or empirical articles that are relevant to the study to be conducted. When writing a literature review, there are two things that are mandatory for referring to previous publications or publications, namely the introduction and discussion. By providing references, they will support the argument and can also serve as references to the literature used as a basis for the analysis presented. Synthesising articles resulting from thoughts or research results begins with analyzing articles that are relevant to the topic to be reviewed. This means discussing/reviewing articles by identifying and classifying them based on the elements to be reviewed from several articles that discuss almost the same topic. Synthesizing is the process of

integrating the results of analysis of articles based on the similarities and differences of each article and making conclusions based on the similarities and differences of each article in the form of a collective conclusion from several articles analyzed.

This literature is very diverse in form or you could say it's not just books, but also in the form of scientific journals, dissertations, theses, and so on. The more literature that is used as a reference or point of reference for writing scientific papers, the more optimal the resulting scientific papers will be. If scientific writing is done optimally, the content will usually be more complex and still easy to understand.

RESULT AND DISCUSSION

Carbon Exchange vs Carbon tax. IDXCarbon is a milestone important for commitment to decarbonizing Indonesia towards net zero emissions by 2060 or faster. IDXCarbon endeavors to provide transparency, reliability, and security in the best solutions for trading carbon in Indonesia to create orderly, fair, and efficient trading (Callan et al., 2009; Jia & Lin, 2020). Through a provisioning platform that puts it first, experienced users, expected all over perpetrator businesses, can quickly obtain benefits from trading carbon. Carbon Unit Provider on trade prime IDXCarbon is Pertamina New and Renewable Energy (PNRE), which provides Carbon Units from Project Lahendong Unit 5 and Unit 6 PT Pertamina Geothermal Energy Tbk. Companies that play a role as buyers of Carbon Units on trade prime IDXCarbon, including: PT Bank Central Asia Tbk, PT Bank CIMB Niaga Tbk, PT Bank DBS Indonesia, PT Bank Mandiri (Persero) Tbk, PT BNI Securities, PT BRI Danareksa Securities (part from PT Bank Rakyat Indonesia (Persero) Tbk), PT CarbonX Bumi Harmoni, PT MMS Group Indonesia, PT Multi Optimal Research and Education, PT Pamapersada Nusantara, PT Pelita Air Service, PT Pertamina Hulu Energi, PT Pertamina Patra Niaga, PT Truclimate Decarbonization of Indonesia, and PT Air Untuk All (Fairatmos).

However, the government immediately accompanied him by applying a carbon tax for trading (Tol, 2007). Carbon tax made its function not for search acceptance but To give an alternative for the business world To meet net zero emissions. Otherwise, they Want to buy carbon credit and pay just the tax (Chen & Nie, 2016). That means the Government gives options or choices to the business world. It can reduce emissions by subtracting emissions in carbon markets or paying taxes to the Government. Tax carbon became a tool fulfillment of Nationally Determined Contribution with lower gas emissions of 31.89 percent with effort alone and arrived at 43.20 percent with Work. The same will be the case internationally in 2023 (Winkler & Marquard, 2011).

Condition: This signifies the final map of the carbon market path so policy can be implemented. However, the road tax carbon policy map is unfinished (Lu et al., 2010). By Harmonization Law (UU). Regulation Taxation (HPP), map road tax carbon load, reduction strategy, emission carbon, target sector priority, alignment with development energy, new and renewable, and harmony between various policies. So from that, four matters must be observed in the determination map road tax carbon to reach appropriate goals in the HPP Law, namely tax carbon worn on emission carbon that negatively impacts the environment (Jia & Lin, 2020; Metcalf, 2017).

Implementation of Carbon Tax in Indonesia. Currently, carbon taxes in Indonesia are still being submitted and discussed. Central Indonesian Government prepared two schemes or possible alternatives made policy For collecting tax carbon in Indonesia to maximize state income along with existing glass subtraction of house gas emissions (Green, 2008). Plan the listed document Macroeconomic Policy Framework Fiscal (KEM PPKF) in 2022. Two schemes or proposed alternative Government For policy tax carbon: Scheme/ alternative first, that is Government will stage levy tax carbon with use instrument existing taxation available moment this, that starts from

excise, income tax (PPh), value added tax (VAT), sales tax on Luxury Goods (PPnBM), as well as Non- Tax State Revenue PNBP at level center to Vehicle Tax Motor and Vehicle Fuel Tax Motorized at regional level. Scheme/ alternative second, viz with form something new instrument that exists policy separately about tax carbon in Indonesia. However, the instrument will later become a revision of Law (UU) Number 6 of 1983 about General Provisions and Tax Procedures (UU KUP) (Putri & Saputra, 2022).

Tax or carbon tax in Indonesia is still termed levy carbon because carbon tax owns various shapes, reasonable taxation, and nontax (Elkins & Baker, 2001). Moreover, related to the practice later, object potential that will wear in tax carbon covers material burn fossils and emissions released by factories or motorized vehicles. Moreover, object potential Is not far different from practices carried out in other countries (Al-Abdullah, 1999; Callan et al., 2009). Related to the use of emissions in the activity economy, the Indonesian Government will focus On wearing tax carbon in the industry of pulp and paper, cement, power plants, electricity, and petrochemicals (Horowitz et al., 2017; Metcalf, 2009). The revision of the Constitution has also entered the legislative program, ll prioritized year. As of November 2021, carbon in Indonesia is moderate in the trial preparation process after the regulations patented through Law No. 7 of 2021 concerning Harmonization Regulation Taxation. As stage initial, tax carbon This will worn sector generator electricity power steam (PLTU) Coal on April 1, 2022, with tariff carbon Rp. 30 per kg carbon.

When does the Carbon Tax apply? According to the government, there is not yet an urgent priority or application for a carbon tax in the sector. Trading through the carbon exchange Already has the potency to support the national economy (Fremstad & Paul, 2019; Ulph & Ulph, 1994). For that, the Government will monitor the formerly effective implementation of the carbon exchange while continuing to study map road application tax carbon. Determination tax Indonesia uses a carbon cap and tax scheme based on emission limits. Two possible mechanisms are used in Indonesia, namely setting permissible emission limits For every industry or determining tariff taxes are mandatory paid for every unit specific (Marron & Toder, 2014; Zhang et al., 2016). Generally, this cap and tax scheme takes the middle road between ordinary carbon tax and cap-and-trade schemes used in many countries. Modification scheme tax carbon is required because there are different ecosystem industries between regions, including the public's response to rule new (Fremstad & Paul, 2019; Metcalf, 2019).

During this, in part, significant tax carbon-shaped excise is okay as source reception general nor allocated for objective specific (Zhang et al., 2016). For example, excise on raw and product oil to overcome damage from spilled oil on earth. Imposition tax Carbon in Indonesia is regulated in Constitution Number 7 of 2021 Harmonization Regulation Taxation (HPP Law) (Marron & Toder, 2014; Metcalf & Weisbach, 2009). The HPP Law indeed became the base First for the application tax carbon in Indonesia, apart from several other regulations, which are Carbon Tax regulations as rule derivative of the HPP Law (Elkins & Baker, 2001; Horowitz et al., 2017; Williams III et al., 2015).

Apart from the HPP Law as the base main, there is several rule derivative from the HPP Law which also regulates tax carbon; it is still in the stage of preparation by the Ministry of Finance (Metcalf, 2019; Zhang et al., 2016). Rule technical implementation tax carbon intended like rates and base imposition, manner calculation, collection, payment or depositing, reporting, and map road tax carbon (Marron & Toder, 2014). Meanwhile, technical rules, such as Upper Emission Limits For the PLTU subsector and procedures implementing the Economic Value of Carbon in power plants, will determined by the Ministry of Energy and Mineral Resources (ESDM) (Metcalf, 2017). The central goal of imposing a carbon tax is to add APBN revenues alone and control the climate to reach a sustainable growth economy by polluter pay (polluter pays principle). Imposing tax carbon can

change the behavior of the perpetrator's economy. For the switch to an activity economy, low green carbon (Al-Abdullah, 1999; Jia & Lin, 2020; Metcalf, 2017). The government will notice an appropriate transition for implementing a carbon tax. This is still consistent with the recovery momentum of the economy post-pandemic. Imposition of tax carbon in Indonesia will gradually be done with notice priority in achieving NDC targets, carbon market development, readiness sectors, and conditions of the Indonesian economy (Marron & Toder, 2014; Metcalf, 2019; Zhang et al., 2016). This thing aimed at implementing tax carbon in Indonesia can fulfill the principle of justice (just) and affordability while prioritizing society's interest.

CONCLUSION

The government has to step up in realizing the development of low carbon emissions by applying a Pigouvian tax in the form of taxing carbon to reduce the negative externality from the production of carbon emissions. In organizing the imposition of a carbon tax, the government has published Constitution Number 7 of 2021 concerning Harmonization Regulation Taxation (HPP Law). The rules mentioned taxing carbon on purchases containing goods carbon or productive activity emission carbon (RI Law, 2021). Imposition tax carbon aims to change society and industry behavior and switch to an activity economy with low green emission carbon. Rule the is form seriousness government in achieving net zero emissions by 2050. Based on data collected by the Directorate General Control of Climate Change, Ministry of Environment and Forestry, in 2019, the total emission of Carbon in Indonesia is at the level of 1,866,552 gigagrams of carbon dioxide equivalent (Ministry of Environment and Forestry, 2021). There is an implementation tax on carbon on transactions containing goods carbon or productive activity emission carbon, which has a high potential for state revenue. Besides the potential enhancement of state acceptance, a carbon tax can also reduce carbon production. Carbon emission from the energy sector is one of Indonesia's highest contributors to carbon levels.

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