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The European Union Carbon Border Adjustment Mechanism as a Green Tax Policy Instrument

Abstract

This article aims to analyse the conformity of the European Union's Carbon Border Adjustment Mechanism (CBAM), considering tax principles as an environmental and fiscal policy instrument and its role in promoting a healthy environment and global decarbonisation.

Literature highlights reasons for the CBAM's relevance, promoting carbon leakage risk reduction and encouraging less advanced countries to lower emissions through carbon diplomacy. This mechanism is expected to significantly impact the EU's partner economies, particularly developing ones reliant on exports. Thus, the paper's goal is to advance academic research and understand its role in achieving environmental neutrality.

The study applies the legal research method to tax principles, and Regulation (EU) No 2023/956 was examined for this purpose.

The results show that CBAM is presented as an instrument that promotes tax neutrality, being in line with tax principles. Furthermore, CBAM promotes legal certainty, allowing companies to make investment decisions on decarbonising industrial processes in the long term. In addition, this mechanism is a step towards guaranteeing the promotion of a healthy environment, a right recognised by the United Nations.

This study highlights the importance of CBAM as an environmental policy instrument and a fiscal mechanism that promotes fiscal justice and environmental sustainability.

Keywords

Environmental Policies | Green Taxation | Green Tax Agenda | Taxation | Tax Principles

JEL Codes

K20, K33, K34, K41

1. Introduction

The environmental problem has a global dimension, and different stakeholders have been promoting initiatives aligning global strategies; an example is the United Nations Global Compact (Berliner & Prakash, 2012, 2014; Brown, Clark, & Buono, 2018; Kourula, 2013). Thus, jurisdictions have implemented several measures to achieve sustainability objectives, such as the border carbon adjustment (BCA) (Brauch, Arnold, Klonsky, & Everard, 2021). BCAs are policy instruments that allow a government to impose a carbon price at the border on certain carbon-intensive goods imported from other jurisdictions (Stockdale, 2009; Zhang, 2010). Martin (2023) explains the relevance of BCAs, believing that these mechanisms can play an essential role in reducing

the economic costs of greenhouse-gas mitigation, and explaining that these instruments can help overcome political and economic obstacles to using carbon taxes or equivalent measures. Ladly (2012), however, argues that the imposition of BCAs by developed countries may shift environmental compliance costs onto the developing world.

The E.U. has also been increasing its climate ambitions (Gergondet, 2021). This motivation has not always been matched in third countries, which frequently have less stringent environmental and climate policies. Therefore, there is a substantial risk of "carbon leakage", which could transfer emissions outside Europe and seriously jeopardise the E.U.'s, and the world's, climate efforts. The leakage occurs when (1) industries replace polluting production in other

nations with less stringent climate policies or (2) when more carbon-intensive imports replace E.U. products. Therefore, the E.U. advocates a new green mechanism for importing goods from third countries, particularly a system that puts a fair price on the carbon emitted during production and encourages cleaner industry in third countries. Consequently, the European bloc approved the Carbon Border Adjustment Mechanism (CBAM).

Regulation (EU) 2023/956, establishing CBAM, was published on May 16, 2023. This mechanism is part of the “Goal 55” legislative package, and should be essential to the Union’s toolbox to achieve the E.U.’s climate neutrality objective by 2050. It seeks to address the risk of carbon leakage during the implementation of the Union’s increased climate goals. Between October 1, 2023, and December 31, 2025 (the proposed transitional period), the importer’s obligations under CBAM are limited to reporting obligations. As of January 1, 2026, however, CBAM will be fully implemented. At that time, E.U. importers of goods covered by CBAM will have to buy CBAM certificates. The price of these certificates will be calculated according to the average weekly price of the ETS (European Emissions Trading Scheme) allowance auctions, expressed in euros/tonnes of CO₂ emitted. In addition, EU importers must declare, by May 31 of each year, the quantity of goods imported into the E.U. and the quantity of emissions incorporated into those goods for the previous year.

Consequently, importers deliver the number of CBAM certificates corresponding to the amount of greenhouse gas emissions incorporated into the imported goods. CBAM, therefore, covers the most carbon-intensive goods with the highest risk of carbon leakage, such as cement, iron and steel, aluminium, fertilizers, hydrogen and electricity. That the scope of CBAM is also intended to be reviewed by 2030 to assess the feasibility of including other products already covered by the E.U. ETS (Ismer & Haussner, 2016), and that are also susceptible to carbon leakage. For tax researchers, practitioners and policymakers, CBAM presents an intriguing and complex case (Klotz, Probst, & Hulliger, 2022). Although the European Union presents CBAM as an environmental policy instrument, it has specific features that allow it to be characterised as a fiscal policy instrument.

Previous literature has shown particular attention to the economic and legal aspects. In the legal domain, Leonelli (2022b) compares the E.U.’s proposed CBAM with the U.S. BCA, framing both as

“defensive” policies for economic and environmental factors. The CBAM is more practical and compatible with WTO regulations than the U.S. BCA, despite its narrow focus on price-based policies and trade intensity. The author suggests improving the global steel and aluminium arrangement (GSAA) during the regulatory design phase for a more eco-friendly and WTO law-compliant approach. An installation-based approach, emission limit values, and product standards can help achieve these objectives but may face significant political hurdles (Leonelli, 2022a).

Buissing (2022) analyses the challenges of applying CBAM to air-service trade outside the E.U., including political sensitivity and legal concerns. Magacho, Espagne, and Godin (2023) study the socio-economic impact of CBAM adoption by the E.U. on its trading partners, focusing on job losses, tax revenues, and export earnings. Pirlot (2022) argues that CBAM can reduce climate change and benefit trade, climate leadership, and public finance, detailing how the current E.U. design does not promote fair competition and climate mitigation in line with the Paris Agreement. Selicato (2022) explains that the European Union uses customs taxation to promote environmentally-friendly choices among its trading partners. However, the full impact of this approach is not yet clear, and could also affect the European budget’s resources.

Klotz et al. (2022) address the background of CBAM, its purpose, how it works and who will be affected in what way, and consider whether or not CBAM is a disguised tax. Finally, Durán (2023) states that the proposed CBAM must be modified, as it does not follow the principle of Common but Differentiated Responsibilities and Respective Capabilities.

Therefore, it is possible to conclude that although there are some studies about this issue, it still needs to be explored. In particular, there is a need to understand better how this mechanism is legally classified. Klotz et al. (2022)’s work, about whether CBAM is a tax in disguise, was even published before the publication of Regulation (EU) 2023/956. Nevertheless, the authors do not relate the question to the tax principles.

With this existing scholarship in mind, this paper aims to understand the legal basis underpinning Regulation (EU) 2023/956, which introduces the European Union Carbon Border Adjustment mechanism. It addresses this knowledge gap by studying the tax principles. The guiding principles give the legal order a sense of unity and logic (Pereira,

2015). Principles allow for a systematisation, ordering and weighting of the evaluative aspects underlying the legal order's regimes. In this way, the principles of law justify specific rules, forming their basis and explaining the reasons for their existence and content (Pereira, 2010). In this sense, they are essential for analysing and understanding measures such as CBAM. For this purpose, the most relevant literature and legal provisions were examined, specifically the Regulation (EU) 2023/956. The results indicate that the environmental policy instrument under analysis conforms to several tax law principles. Despite not being classified as a tax by the European Union, this mechanism also aligns with the principles of neutrality, legal certainty, and the polluter pays principle. Additionally, the proposed CBAM could play a crucial role in upholding the fundamental rights of citizens, particularly with regard to safeguarding the right to a healthy environment, which is recognized as a basic human right by the United Nations.

This research paper adds value to the existing literature by providing a deeper insight into the role of the CBAM figure in the European legal system. The study adopts tax law principles to critically examine the legal basis of the measure. By exploring these foundations, the paper also helps to structure the instrument effectively. The study of the foundations helps framework the instrument.

The remainder of this article is organised into four more sections: section II, the literature review; Section III, presenting the methodology applied; section IV, explaining to what extent CBAM indicates compliance with tax principles; section V, connecting the human right to a healthy environment to CBAM; and finally, section VI – the conclusion.

2. State of the art

Although the mechanism under analysis is recent, a vast body of literature in various areas has already addressed the topic. The economic impact of the CBAM measure and the study of potential proposals to mitigate these impacts are the main themes this existing economic literature addresses.

The equity question has also been addressed in the legal literature. In particular, Leonelli (2022b) examines the European Union's proposed CBAM and the U.S. proposal for a BCA. The author characterises both proposals as “defensive” policies, aimed at creating

a level playing field for economic and environmental factors. However, from an environmental-law perspective, the CBAM's narrow focus on distortions of competition, price-based policies, and trade intensity is unsatisfactory. Despite this, the E.U. CBAM is more practical and likely compatible with the World Trade Organization (WTO) regulations than the U.S. proposal for a BCA.

In a second study, the same author explores the possibility of improving the GSAA (General Services Administration Act) during the regulatory design phase to create a more environmentally friendly and WTO-law-compliant approach. The analysis suggests that adopting an installation-based approach, implementing emission limit values, and enforcing product standards could help achieve these objectives. However, implementing this strategy would likely face significant political hurdles (Leonelli, 2022a).

Buissing (2022) highlights the problem of applying CBAM to trade in air services; its application beyond E.U. borders is politically sensitive and questionable from a legal point of view. This article takes stock of the different interests at stake and analyses CBAM in the context of different legal regimes. Magacho et al. (2023) analyse the impact of adopting the CBAM on the E.U.'s trading partners, focusing in particular on its potential socio-economic consequences. The analysis draws attention to potential social repercussions of introducing this mechanism, particularly the loss of jobs, tax revenue, and export earnings.

Pirlot (2022) recognises that carbon border adjustment measures can help reduce climate change and benefit trade, climate leadership, and public finance, but also argues that the E.U. CBAM's current design is inconsistent with promoting fair competition and climate mitigation in line with the Paris Agreement. Instead, it mainly serves as an instrument of climate leadership. However, its design may not achieve the E.U.'s main objectives.

Selicato (2022) recognises that the European Union is taking steps to combat climate change and is using customs taxation to encourage its trading partners, including major world economies, to make more environmentally-friendly choices. However, the full impact of this approach is not yet clear due to the precautions being taken and the long transitional period before it is fully implemented. It could also affect European budgetary resources.

Klotz et al. (2022) address the background of CBAM, its purpose, how it works, who will be affected,

Table 1. Economic literature concerning CBAM

Authors	Research Methodology	Conclusions
Yang, Zou, and Li (2023)	Investigates the impact of carbon tariffs on China's agricultural trade.	The research concludes that (1) carbon tariffs can suppress international demand for agricultural products and increase prices on the international market; and (2) CBAM reduces the negative impact of carbon tariffs through trade facilitation and decreases the effectiveness of reducing carbon emissions due to the substantial commercial demand, while also encouraging countries to develop ecologically sound and low-carbon agriculture.
Bellora and Fontagné (2023)	Reviews the various economic and environmental repercussions of various design options.	The research reveals that CBAM is a successful measure in curbing carbon leakage. However, its implementation will lead to a rise in carbon prices within the European Emissions Trading Scheme. It is anticipated that downstream industries not encompassed by the CBAM and European exporters of high-emitting industries will experience a decline in competitiveness in export markets, despite the availability of rebates.
Clora, Yu, and Corong (2023)	Assesses how alternative designs of the E.U.'s CBAM, within various international reactions, affect global and regional GHG emissions, outputs and trade flows.	The findings highlight the significant carbon leakages and output reductions experienced by the E.U.'s emissions-intensive trade-exposed (EITE) sectors when implementing the Green Deal.
Lestan, Kabiraj, and George (2023)	Evaluates the potential impact of CBAM policy on the Russian economy.	Findings indicate that implementing CBAM could lead to higher import costs for ACEFIS industries in Russia. This could result in increased expenses for exporters, and thus lost market share and importers, due to the shift in demand for ACEFIS products or a search for more favourable suppliers in other regions.
Perdana and Vielle (2023)	Quantifies the distributional impacts of jointly implementing CBAM within a climate alliance or club consisting of the E.U., the U.S., and China.	Acknowledges that while the E.U. has committed to introducing CBAM as part of its green climate agreement, further climate efforts to limit global warming require collective implementation involving the main emitters – China and the U.S. The authors argue that a coalition would reduce leakage, improve production in energy-intensive industries, and increase the clubs' welfare compared to scenarios with non-CBAM and unilateral implementation.
Jakob (2023)	Analyses CBAM's impact on domestic and foreign interest groups.	The evidence presented makes a case that CBAM should be utilised to aid national mitigation efforts within an open climate alliance, rather than extending E.U. climate policy to other nations. Moreover, the gradual implementation of CBAM can help alleviate political pushback from domestic and foreign industries.
Ambec and Yang (2024)	The authors explore (1) how CBAM can limit renewable energy penetration by raising the cost of imported power or discouraging imports and (2) the implications of network pricing and investments in interconnection capacity.	The study's findings suggest that a higher price on carbon can lead to increased interconnection investment, which in turn would diminish the efficacy of carbon pricing. The author concludes that to bolster renewable energy generation beyond domestic consumption, the CBAM should be accompanied by a subsidy for renewables.
Perdana, Vielle, and Oliveira (2024)	Analyses the potential impacts of CBAM on Brazil's economy, considering different scenarios for the implementation of CBAM as a climate policy by the E.U. and Brazil.	Brazilian industries may not face significant losses or competitiveness issues.

Continued **Table 1.** Economic literature concerning CBAM

Authors	Research Methodology	Conclusions
Wolff (2024)	Identifies non-E.U. countries that have a stake in the success of the CBAM, comparing three different perspectives to create a comprehensive list of countries.	Understanding these perspectives can help the E.U. ensure the CBAM's success.
Borodin, Zaitsev, Mamedov, Panaedova, and Kulikov (2022)	Proposes a system for regulating carbon emissions for countries that export products to the E.U.	This work makes a significant contribution to stimulating the reduction of CO ₂ emissions by producers with the proposed tax mechanism, as well as preventing the leakage of greenhouse gases on the territory of third countries according to the CBAM policy.
Boute (2024)	This article seeks to add nuance to the allegations of discrimination against countries that do not follow the E.U.'s climate model and therefore violate international trade and climate law.	It concludes that calculating actual emissions (rather than default values) under the E.U.'s CBAM allows exporters to reflect compliance with foreign emission standards, thus respecting the right of states to pursue reduced emissions through traditional regulation.
Zhong and Pies (2024)	This study carries out a literature review of the most recent economic studies on CBAM and presents an exhaustive synthesis of this literature.	The text discusses the potential impacts of CBAM on three key policy objectives: fair competition, carbon leakage reduction, and minimizing overall welfare costs. It highlights the influence of policy design and economic characteristics on the effectiveness of CBAM and compares alternative policy designs concerning these objectives.

and in what way – and whether or not CBAM is a disguised tax.

Durán (2023) evaluates whether the proposed CBAM is compatible with two multilateral legal regimes, finding that the CBAM does not follow the principle of Common but Differentiated Responsibilities and Respective Capabilities and needs to be modified. That can be accomplished by exempting least-developed countries and Small Island Developing States, and using CBAM-generated revenue to support decarbonisation efforts in other affected developing countries. This modification should be allowed under WTO law, as it does not discriminate between countries with the same conditions.

Gehring (2023) examines the possibility of strengthening collaboration within the framework of cooperation provisions in current E.U.-America FTAs. The study suggests utilising cooperation and corporate social responsibility commitments in E.U. trade agreements to promote closer collaboration with trading partners, instead of just informing them about these provisions.

The U.K. has recently been paying attention to the intensity of emissions in its oil and gas operations. This

has become a focal point in justifying the Rosebank decision, which would increase domestic North Sea production over imported oil and gas. The government and the oil and gas industry use climate-related rationales to back this policy. Hilson (2024) delves into these arguments in light of the Rosebank decision and explores why emission intensity matters for legal professionals. One significant reason identified is its impact on trade: without a carbon border adjustment mechanism or equivalent on imports of oil and gas from countries with poor records on electrification, flaring, and vented emissions, domestic oil and gas production could face unfair climate competition.

Wettestad (2024) highlights the importance of adopting an up-to-date a “shifting Multi-Level Reinforcement” MLR) perspective to gain insights into various E.U. processes. It underscores the increasing significance of policy packages and trilogies as decision-making tools, suggesting a potentially enhanced role for the Commission in the decision-making phase.

Shum (2024) analyses policy dynamics related to imposing burdens on powerful producer interests and identifies potential obstacles to policy change in carbon border adjustments (CBAs). Key insights include potential policy conflicts along unfamiliar

geopolitical or sectoral lines, with significant trading partners signalling a willingness to align their emissions trading policies with the E.U. Domestically, E.U. industries have expressed reservations about the CBAM proposal. Targeted domestic sectors may receive assurances that the burdens it poses are minimal or compensated for by subsidies. This potentially raises concerns about international trade law principles.

3. Methodology

In conclusion, despite various efforts to clarify the legal and economic framework for the CBAM, there are still issues that have not been studied. In particular, it is necessary to understand better the legal basis underpinning Regulation (EU) 2023/956, which introduces the European Union Carbon Border Adjustment mechanism. The research question tackled by this study is the following:

RQ₁: To what extent does CBAM indicate compliance with tax principles, considering its classification as an environmental policy instrument?

The legal research method thoroughly analyses various data sources related to a specific legal matter. Its primary objective is to examine the development of legal concepts, theories, principles, and the application of the law (Chacha, Ramos, & Sanchez, 2021). This method scrutinises laws, statutes, regulations, and accompanying guidance to determine the boundaries of the legal subject (S. Aldeia & Lopes, 2022).

Additionally, this method involves a comprehensive analysis of case law. The legal research method employs a qualitative approach, utilising the hermeneutic method and critical analysis of domestic and international legal dispositions (Chacha et al., 2018). It also involves empirical legal research, analysing the role of legislation, legal policies, and other legal procedures in society. Empirical legal and case law-based research are applied to achieve the goals of legal research, with case law-based research being instrumental in identifying and selecting relevant court decisions.

4. To what extent does CBAM indicate compliance with tax principles, considering its classification as an environmental policy instrument?

4.1. CBAM and the E.U. Green Tax Agenda

Climate change and ecological degradation are an existential threat to Europe and the world. The European Commission's website¹ clearly shows its concerns. The European Union believes that to overcome the current environmental challenges, and the E.U. must be transformed into a modern economy. To this end, the European Green Deal aims to renovate the E.U. into a modern, resource-efficient and competitive economy. This economy must ensure (1) no net greenhouse gas emissions by 2050; (2) economic growth decoupled from resource use; and (3) that no person and no place is left behind. The European Commission has applied proposals to make E.U. climate, energy, transport and taxation procedures capable of cutting net greenhouse gas emissions by a minimum of 55% by 2030 (compared to 1990 figures). The European Union aims to make Europe the world's first climate-neutral continent and aims to put the E.U. on track to achieve its climate goals by 2030 in a fair, cost-effective and competitive way. To this end, the E.U. has been developing several initiatives to achieve this goal.

The Objective 55 package includes proposals to review and update E.U. legislation and create new initiatives to ensure that E.U. policies align with the climate goals allowed by the Council and the European Parliament². This set of proposals aims to provide a coherent and balanced framework for achieving the E.U.'s climate purposes. Specifically, the framework should (1) ensure a fair and socially just transition; (2) maintain and strengthen innovation and competitiveness of E.U. industry while ensuring a level playing field with economic operators from third countries; and (3) support the E.U.'s leading position

¹ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

² <https://www.consilium.europa.eu/pt/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>

in the global fight against climate change. The designation “Objective 55” arises from the E.U.’s goal of reducing greenhouse gas emissions by a minimum of 55% by 2030. The proposed package aims to align E.U. legislation with this 2030 target.

In fiscal terms, the European Union has a series of initiatives that promote an ambitious green fiscal agenda, specifically (i) the plastics tax; (ii) the Energy Tax Directive (ETD); (iii) the Carbon Border Adjustment Mechanism (CBAM); (iv) the new Emissions Trading Scheme (ETS 2); and the current Emissions Trading Scheme (ETS 1). To give a more detailed look at just one of these items, the plastics tax allows revenue to be collected based on consumption of non-recycled plastic. Each member state may or may not introduce its own plastics tax. For example, in the United Kingdom, beginning on April 1, 2022, any packaging mainly consisting of plastic with less than 30% recycled content is subject to a tax of £0.21083 / kg. In Spain, non-reusable plastic packaging is subject to a tax of €0.45 per kg. This measure was put into force on January 1, 2023.

4.2. CBAM and climate neutrality

The European Union introduced the E.U. Emissions Trading System (E.U. ETS), an emissions cap-and-trade program, in 2005. This program allocates free carbon allowances that can be either traded or used to offset carbon emissions (Klotz et al., 2022). Industries with a high risk of leakage are “allocated free of charge” most, if not all, of the allowances they need to avoid pressure to relocate outside the E.U. (Brauch et al., 2021). The E.U. ETS is being revised as part of the European Green Deal. As soon as the CBAM takes effect, the distribution of free allowances will be gradually discontinued. CBAM will instead be the political mechanism for limiting carbon leakage (Klotz et al., 2022). The CBAM is part of the “Goal 55” legislative package. The goods or processed goods covered by the CBAM should demonstrate the activities covered by the E.U. ETS. This system is based on qualitative and quantitative criteria linked to the sustainability objective of Directive 2003/87/EC. It is the E.U.’s most comprehensive regulatory system for greenhouse gas emissions (EPC, 2023).

According to the Regulation, introducing a measure such as CBAM is necessary because many of the E.U.’s international partners have less ambitious strategic approaches to climate than the E.U., resulting

in a risk of carbon leakage. Such leakage occurs if (1) companies in some industrial sectors or sub-sectors move production to other countries or (2) imports from those sectors replace equivalent products that have lower greenhouse gas emissions intensity. These companies may be motivated to relocate due to costs related to climate policies (EPC, 2023). Thus, Regulation (EU) 2023/956 defines CBAM as a climate measure that should support decreasing global greenhouse gas emissions and avoid the risk of carbon leakage while ensuring compatibility with World Trade Organization legislation (EPC, 2023). It is therefore an instrument for preventing carbon outflow and reducing greenhouse gas emissions (EPC, 2023). CBAM is also a transnational carbon adjustment mechanism and can thus affect international energy trade and influence political and regulatory changes concerning carbon pricing at the international level (Hancock & Wollersheim, 2021). X. Chen (2023) also argues that this instrument stimulates growth in demand for green electricity and entrenches the authentication of low- and zero-carbon products.

Considering the fact that CBAM replaces the E.U. ETS, it shares its objective of pricing greenhouse gas emissions incorporated in the same sectors and goods through specific permits or certificates. Both policies are justified by the need to reduce greenhouse gas emissions, promoting compliance with the environmental target set by Regulation (EU) 2021/1119. (EPC, 2023). Therefore, the CBAM mechanism aims to create a level playing field between the E.U.’s imports and internal markets, and to encourage the least-developed countries to reduce emissions through “carbon diplomacy” (Hancock & Wollersheim, 2021). It focuses on the potential impact of the new CBAM creating incentives for fossil fuel-exporting countries to transition to renewable green energies (Hancock & Wollersheim, 2021). Paragraph 31 of the Regulation clarifies the three relevant conditions for selecting goods to which the legal disposition should be applied, namely (1) the relevance of the sectors in terms of emissions; (2) the exposure of the sector to a significant risk of carbon leakage within the framework of Directive 2003/87/E; and (3) the need to balance the wide range of products covered in terms of greenhouse gas emissions, while limiting complexity and administrative burdens (EPC, 2023).

The first criterion identifies the following industrial sectors regarding cumulative emissions: cast iron, iron and steel, refineries, cement, aluminium, basic organic chemicals, hydrogen and fertilizers

(EPC, 2023). The Regulation justifies the inclusion of aluminium products in the CBAM because they are highly susceptible to carbon leaks and directly compete with steel products due to their similar characteristics (EPC, 2023).

Like any other product, electricity has unique characteristics that make it different from other goods. Therefore, the new carbon border tax being discussed will need a slightly different design for electricity compared to other products (EPC, 2023). The same document argues that integrating third countries into the E.U.'s electricity market will also contribute to the security of electricity supply in those countries and neighbouring Member States (EPC, 2023). The Commission's current proposal for reforming the ETS stresses the importance of directing funding from the Innovation Fund towards projects in sectors covered by the CBAM, particularly industries with high emissions and a high risk of carbon leakage (Borodin et al., 2022).

In absolute terms, Ukraine, Turkey, Russia and China are the E.U.'s main trading partners in CBAM products. This fact makes them the most exposed countries to carbon leakage in both external and socio-economic terms. The degree of exposure of economies that export CBAM products to the E.U. varies considerably, with many developing markets having more than 2% of their exports and 1% of their production affected by this measure. Economies such as Mozambique, Zimbabwe, Cameroon, Morocco and Tajikistan are the most exposed in terms of external trade (Magacho et al., 2023). It is essential to understand how CBAM works, as it must apply to products imported into the customs territory of the E.U. from third territories. This provision does not apply where goods have already been subject to the E.U. ETS, through its imposition on third countries, or its carbon pricing system (EPC, 2023). CBAM equalizes the carbon price between domestic products and imports and ensures that the E.U.'s climate goals are not damaged by the relocation of production to countries with less-ambitious policies. It also encourages industries outside the E.U. and its intercontinental partners to take steps in the same direction (Hancock & Wollersheim, 2021).

4.3. CBAM: A disguised tax?

The mechanism for adjusting carbon emissions at borders raises severe doubts about its framework, mainly whether it is a proper adjustment mechanism

or merely a tax in disguise (Klotz et al., 2022). It is referred to as a sustainability policy instrument because, from a legislative point of view, CBAM is treated as a regulation, not a tax. The CBAM proposal's legal basis is Article 192(1), which is based on a qualified majority rather than unanimity (Brauch et al., 2021). However, this framework has underlying political reasons. As a regulation, CBAM falls under the E.U.'s ordinary legislative procedure, whereby Parliament and the Council decide jointly on a legislative proposal presented by the Commission and adopt it by a qualified majority in the Council.

Nevertheless, this would not be the case if CBAM were treated as a tax policy instrument. Being classified as a tax, it would be subject to a particular legislative procedure, through which unanimity would be required. This union of wills is potentially more difficult to achieve (Klotz et al., 2022).

Thus, the proponents of CBAM conceived it as a complement to existing regulatory measures precisely to circumvent the legal restrictions accompanying tax measures (Brauch et al., 2021). Nonetheless, it seems challenging to disregard CBAM as a tax. On July 16, 2019, Ursula von der Leyen, the then-future President of the European Commission, stated in her Political Guidelines that she would introduce a carbon tax to prevent carbon leakage. This option would ensure that European companies can compete on a level playing field. She emphasized that this tax should be fully compatible with World Trade Organization rules, and would start with a select group of sectors and before gradually being extended (Klotz et al., 2022). Von der Leyen's intention, presented in 2019, matches what eventually came into force – except for the question of the name, since in the speech, it was presented as a tax, and today, it is designated as an adjustment mechanism. The literature, and various economic operators, in fact recognise it as a tax.³

Klotz et al. (2022) argue that although CBAM is not called a tax, in practical terms, it is disguised as a tax on importing companies. X. Chen (2023) calls it a carbon tax and recognises that it promotes an accelerated and healthy carbon market, while also acknowledging that the introduction of the tax, and its practical application, still face many obstacles. Paragraph 13 of the Regulation acknowledges that the price of carbon is rising, and companies need clarity, predictability and long-term legal certainty to decide

3 <https://www.iisd.org/system/files/2023-06/future-of-resource-taxation-pt.pdf>.

on investing in the decarbonisation of industrial processes. Therefore, to strengthen the legal regime to combat carbon leakage, a clear strategy should be provided for a gradual extension of the scope of CBAM to products, sectors and sub-sectors at risk of carbon leakage (EPC, 2023).

Hancock and Wollersheim (2021) consider CBAM's diplomatic objective. A border tax on imports of carbon-intensive products is one of the four options for the CBAM policy mechanism (Klotz et al., 2022). According to Klotz et al. (2022), CBAM will be a tax on importing carbon-intensive products into the European Union, such as cement, aluminium, fertilisers, electricity, iron and steel. In practice, the companies who report these imports will face additional costs for collecting detailed data from all their suppliers of carbon-intensive goods outside the European Union. In addition, operators will have to bear additional context costs, as they need more time to calculate and report embodied emissions. In addition, operators may incur potential tax penalties for non-compliance (Klotz et al., 2022). Pointing out these issues makes a case for a strong moral dimension to the E.U.'s CBAM and its ambitions for global climate diplomacy. It has adopted more ambitious targets for the E.U.'s climate change policies. Therefore, CBAM is more than just an import tax; it has a diplomatic purpose.

According to Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023, the use of diplomacy here goes beyond standard definitions such as “managing relations between countries” (EPC, 2023). The Regulation clarifies that it resorts to an expanded definition of diplomacy as “the method established to influence the behaviour and decisions of foreign governments and peoples through dialogue, negotiation and measures other than war or violence” (EPC, 2023). Thus, the scope of CBAM is not limited to trade and commercial/economic benefits for the E.U. It also has global diplomatic aspirations, seeking to influence the emissions policies of the E.U.'s trading partners. The E.U.'s CBAM is the first supranational border measure that obliges exporting third countries to consider their carbon policy and supply-chain compatibility.

CBAM aims to equalise the price of carbon between imports and domestic products. It ensures that the E.U.'s climate objectives are supported by the relocation of production to countries with less-ambitious policies. It also seeks to further industry outside the E.U. and its intercontinental

partners, encouraging them to take steps toward the same objective. To date, the E.U. CBAM currently incorporates a border tax/tariff on carbon emissions in supply chains to combat (global) climate change and global insecurity, and a carbon/emissions certification system with a broader international mandate. The combined and transitional application of the ETS license is granted free of charge, and the CBAM should in no case result in more beneficial treatment for E.U. goods than for goods imported into its customs territory. The price of carbon is rising, and companies need clarity, predictability and long-term legal certainty to make decisions about investing in the decarbonisation of industrial processes.

4.4. CBAM under tax principles

4.4.1. Neutrality Tax Principle

Neutral tax systems that do not involve investment decisions are often thought desirable from a fiscal policy point of view (Niemann & Sureth, 2004). Gries et al. (2012) considers neutrality to exist if a marginal change in the tax rate does not affect the investment threshold (the point at which project investment is triggered). Therefore, neutrality occurs if a favourable tax level reproduces the same level of investment that would occur if all taxes were zero (Lopez, Cubillos, & Figueroa, 2020). Fiscal neutrality is not attributed to a specific tax, although it can be reflected in legal solutions (Skrodzka, 2017), as with CBAM. The principle of a tax-neutral system has been defined as one that does not influence taxpayers' commercial decisions (S.-C. J. Chen, 2019). In practice, achieving tax neutrality in the current global tax system has proved problematic, because it is essential to balance the relationship between efficiency and fairness (Guo & Li, 2023). The “lack of simplicity and neutrality invites tax avoidance” (Cathala, 2022). Vanistendael (2020) applies the principles of freedom of movement and neutrality to taxation in the light of the main objectives of the E.U., as formulated in the TEU and the TFEU – i.e. the establishment of an internal market.

The carbon border adjustment mechanism determined by the European Union is a fiscal instrument that promotes non-financial ends. In particular, CBAM promotes global climate diplomacy and has an ethical dimension (Hancock & Wollersheim, 2021). It seeks to influence the decisions and behaviour of economic operators in the

European Union and government entities, promoting new laws that force climate neutrality (EPC, 2023). It also strives to encourage industries outside the European Union and its international allies to take steps in the same direction (EPC, 2023). The United States of America, for example, has been trying to set up a mechanism similar to the one implemented by the European Union (Sarfo, 2023; Smith, 2023). In addition to being an instrument for promoting climate neutrality, the CBAM is also an instrument for fiscal neutrality. Adopting the adjustment mechanism is justified because many of the European Union's international partners have less-ambitious approaches to sustainability than the European Union. In this sense, there is a risk of carbon leakage through the transfer of production to other countries and imports that replace equivalent products (EPC 2023).

The principle of fiscal neutrality is defined as the ability of tax systems not to affect investment decisions (Niemann & Sureth, 2013). Neutrality is not correctly attributed to a tax, but to legal solutions (Skrodzka, 2017). The CBAM is a legal solution that promotes neutrality. It could prevent companies in the carbon sector from being tempted to relocate their production, or economic operators from importing substitute products. Avoiding this measure influences taxpayers' economic decisions (S.-C. J. Chen, 2019) and tax evasion (Cathala, 2022). This measure, therefore, balances efficiency and tax justice (Guo & Li, 2023).

In the same way, this mechanism introduces environmental taxation as an instrument to prevent, recover and combat pollution (S. C. R. Aldeia, 2023). The most polluting sectors bear the pollution costs (Weingertner, 2009). Taxpayers are aware of the financial consequences of taxation (Mohdali, Isa, & Yusoff, 2014). This instrument also guarantees the principle of fairness, since the transitional application of the current licenses (which are free), to CBAM licenses should promote equal treatment of goods from the E.U. and from outside the E.U. In other words, it should promote fair treatment for economic operators from different countries.

4.4.2. Legal Certainty Principle

Legal certainty is a requirement for the operational needs of market interactions. It is inherently a characteristic of the rule of law (Portuese, Gough, & Tanega, 2017). This principle has three aspects, in particular (1) the determinacy of legal language; (2)

non-retroactivity; and (3) the notion of *res judicata*, according to which a judicial decision by which a dispute has been resolved cannot be relitigated (Portuese et al., 2017). Hartley (2010) argues that predictability is the ultimate goal of the principle of legal certainty. Portuese et al. (2017) emphasize the importance this for those who are subject to that law. The principle of legitimate expectations can also be understood as a corollary of the legal certainty principle (Schwarze, 1992).

Consequently, the principle of legitimate expectations can be considered the “predictability aspect” of legal certainty (Raitio, 2003). In European Union law, legal certainty plays a structural role as a guiding, fundamental⁴ (Salviejo, 2003) and multifaceted principle (Raitio, 2003). It has infiltrated E.U. secondary law with many directives and regulations. The ECJ recognises legal certainty and legitimate expectations as “overriding rules of law.”⁵ Applying this principle implies that “Community legislation must be unambiguous and its application foreseeable for those subject to it.”⁶

European Union instruments must comply with structuring principles, and the legal certainty principle should not be ignored (Raitio, 2003; Salviejo, 2003). Paragraph 13 of the Regulation asserts that companies need long-term legal certainty to make decisions regarding investment in the decarbonisation of industrial processes (EPC, 2023). Thus, like other directives and regulations, the CBAM Regulation also expressly invokes the principle of legal certainty. In this sense, the European Union considers predictability in the law to be essential to decision making process of the companies decisions, regarding the carbon adjustment mechanism (Hartley, 2010). In particular, the principle of legitimate expectations regarding the laws applicable to the economic decisions of corporate taxpayers is expected to be verified (Raitio, 2003). The various actors in this process expect legislation regulating carbon adjustment at borders that is unambiguous and predictable.

Moreover, the European Union's climate neutrality objectives have been met through legislative actions that respect the principle of legal certainty and other principles, such as the polluter-pays principle.

⁴ C-323/88 (1990) *Sermes*, I-3027; C-234/89 (1991) *Delimitis v. Henninger Brau*, I-935.

⁵ C-74/74 *CNTA*, 533.

⁶ C-70/83 (1984) *Kloppenberger/Commission*, 1075 to §11

4.4.3. Polluter-Pays Principle

Applying the polluter-pays principle necessarily leads to environmental taxation as an instrument to prevent, recover and combat pollution (S. C. R. Aldeia, 2023). This taxation is carried out using fiscal methods – for example, using the adequacy of tax values to raise funds for environmental protection (S. C. R. Aldeia, 2023). From this perspective, the principle of taxation requires that the pollution costs be borne by those responsible for it (Weingertner, 2009). Taxation is also carried out in an extra-fiscal way by encouraging a conservative operating environment and combating polluting behaviour (Pozzetti, Souza, & Araújo, 2018). The literature indicates that the taxpayer has an ability to develop insights into the financial consequences of the effects of taxation (Mohdali et al., 2014). For this reason, the decisions made by company managers will take into account the tax burden associated with them (Fochmann, Kiesewetter, & Sadrieh, 2012).

This tax principle is provided for in Article 191(2) of the Treaty on the Functioning of the European Union (TFEU). This legal provision states that the European Union must develop environmental policy aimed at achieving a high level of protection. These measures must take into account the specific characteristics of the different regions of the Union. They must also be based on principles such as precaution; preventive action; correction of damage to the environment; and the aforementioned polluter-pays principle.

In May 2021, the European Commission announced the E.U. Action Plan “Towards Zero Pollution for Air, Water and Soil: Pathway to a Healthy Planet for All,” which provides for the promotion of relevant instruments and incentives for better implementation of the polluter-pays principle provided for in the TFEU.

Compliance with this principle entails promoting the progressive elimination of “free pollution” and maximizing the synergies between decarbonization and the zero-pollution ambition. The preparation of Regulation 2023/956 highlighted this fact, and it was mentioned in the first paragraph of the CBAM Regulation. Although Regulation 2023/956 mentions the polluter-pays principle only once at the beginning of the legal disposition, there is evidence of its application throughout the text that was approved by the European Parliament and Council.

CBAM was created to control imports of carbon-intensive products and prevent the transfer

of production and emissions to regions with less-stringent decarbonization rules. The E.U. expects to charge for greenhouse gas emissions in intensive imports. European importers will have to declare yearly the quantity of goods that have entered the E.U. and the greenhouse gases incorporated within them.

Electronic CBAM certificates will come into force from then on, representing the carbon emissions embedded in the products imported into the European Union. Each certificate is equivalent to one ton of CO₂ emissions. European importers will have to buy these certificates according to the emissions of each item they procure from abroad. In this sense, this measure will be used as an extra-fiscal measure, particularly as an instrument to combat pollution.

As a result, products with more harmful effects on the environment face higher costs in acquiring these certificates (Lestan et al., 2023). Penalizing and discouraging the import of the most polluting goods would promote the achievement of the E.U. goal of climate neutrality by 2050. According to Yang et al. (2023), CBAM could also prompt countries to adopt ecological and low-carbon agricultural practices to stay competitive in the market.

4.5. Parallel measures to CBAM in the United States

The adoption of border carbon adjustment mechanisms by the European Union has also led the United States of America to consider this possibility. The European Union’s new Carbon Border Adjustment Mechanism (CBAM) will begin taxing U.S. exports in carbon-intensive sectors in 2026. Since the initial consideration of CBAM, its economic, political and legal aspects have been widely discussed (Brauch et al., 2021). The United States has indicated that it will begin developing a program to protect borders from high-carbon products (Brauch et al., 2021). U.S. lawmakers introduced legislation during the 117th Congress to tax carbon-intensive sectors, but the issue is still widely debated. However, the proposed legislation must comply with the United States’ international trade commitments, notably the World Trade Organization (WTO) rules. If Congress fails to consider WTO commitments, the United States could face retaliation from trading partners (Smith, 2023). Therefore, any U.S. CBAM proposal should be subject to greater scrutiny, especially since such measures have yet to be tested at the WTO (Smith, 2023).

Recently, a bipartisan group presented the “Providing Reliable, Objective, Verifiable Emissions Intensity and Transparency Act of 2023” or the so-called “PROVE IT Act of 2023” (S.1863).⁷ The lack of alignment between Republicans and Democrats on various issues, including climate, is well-known. Despite this, the bill’s strong bipartisan support has been impressive (Sarfo, 2023). The document lists 22 product categories: aluminium and iron, crude oil, natural gas, copper, cobalt, uranium, refined petroleum, solar panels, and wind turbines. It wants the Department of Energy (DOE) to analyse the carbon emissions of products made in the United States, as well as in other countries. The DOE will publish a study comparing the carbon output of American products, such as aluminium, cement, crude oil, fertilizers, iron, steel, and plastic, with products made in other countries. The PROVE IT Act is an encouraging development for US climate action (Pomerleau, 2023).

5. The Right to a Healthy Environment

The right to a healthy environment was officially recognised in October 2021, when the United Nations adopted a resolution recognising access to a sustainable environment and health as a universal right (Alston, 2023). The document calls for joint work towards a more sustainable world and concern for future generations (Cima, 2022).

The state monitors compliance with environmental rules by citizens, companies and state bodies, and the legislature can influence conduct through the non-fiscal function of taxes (Motta, Freitas, & Freitas, 2021). In addition, jurisdictions have felt the need to bet on green growth, pushing ahead with “green tax reforms” that have recognised international value (Machado, 2022).

Various international agreements have sought to promote a healthy environment, such as the Paris Agreement and the Glasgow Climate Pact. These efforts have also been felt at the European level, such as the European Green Deal and E.U. Regulation 2021/1119. The Green Deal seeks to conserve the European Union’s natural capital and protect the health

and well-being of its citizens against risks and impacts related to the environment, while the Regulation defines the objectives for climate neutrality. In this way, the European Union is enforcing the guarantee of a healthy environment citizens recently established by the United Nations (U.N.) as a human right.

The European Union introduced the CBAM to ensure that the climate objectives set out in internal and external agreements (Paris Agreement) are achieved. An analysis of Regulation 2023/956 reveals several indications of this concern, such as paragraphs 7, 8, 10 and 14:

Para. 7: “The Union has been pursuing an ambitious policy on climate action and has put in place a regulatory framework...”

Para. 8: “The Union has a responsibility to continue playing a leading role in global climate action.”

Para. 10: “The CBAM is to serve as an essential element of the Union’s toolbox for meeting the objective of a climate-neutral Union The CBAM is expected to also contribute to promoting decarbonisation in third countries.”

Para. 14: “... this Regulation would also encourage producers from third countries to use technologies that are more efficient in reducing greenhouse gases so that fewer emissions are generated.”

In conclusion, the carbon adjustment mechanism set up by the European Union and any instruments that other countries may approve are undoubtedly essential steps towards guaranteeing this vital human right.

6. Conclusion

Although CBAM has been referred to as a tariff or a tax at the international level⁸ (Smith, 2023) in the media (Sarfo, 2023) and in research literature (X. Chen, 2023; Klotz et al., 2022), the Council of the European Union classifies it as “an environmental policy instrument, not a tax or a tariff”. The results of this study show that, in its various dimensions, this figure observes and promotes the principles of tax law. The principles of international tax law, such as tax

⁷ S.1863 - 118th Congress (2023-2024): PROVE IT Act of 2023 | Congress.gov | Library of Congress

⁸ https://portal.apexbrasil.com.br/relacoes_comerciais/o-que-e-a-carbon-border-tax-planejada-pela-uniao-europeia/; <https://taxfoundation.org/blog/cbam-eu-carbon-border-tax/>

neutrality, fairness, polluter-pays, and legal certainty, are essential in the legal organisation of markets. In addition, CBAM is a mechanism that could prove essential in fulfilling citizens' fundamental rights, such as the right to a healthy environment, which qualifies as a human right. The qualification of the instruments is essential for a better understanding of the process, which is why the European Union must clarify this framework.

This research has several practical implications at a professional and governmental level. On a professional level, it helps tax advisors and lawyers better understand the CBAM mechanism and the contours of its operationalisation. On a governmental level, it provides governments with ideas on critical aspects to consider when considering mechanisms similar to that of the European Union.

CBAM is a figure that has only recently been introduced into the European legal system. For this reason, the existing literature related to the topic is scarce, bringing some limitations and difficulties to the research process. It is vital to continue research in this field. In particular, it is essential to assess how the other partners in the European Union have responded to this decision, and whether the objective of speeding up the legislative process in other countries is being achieved.

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